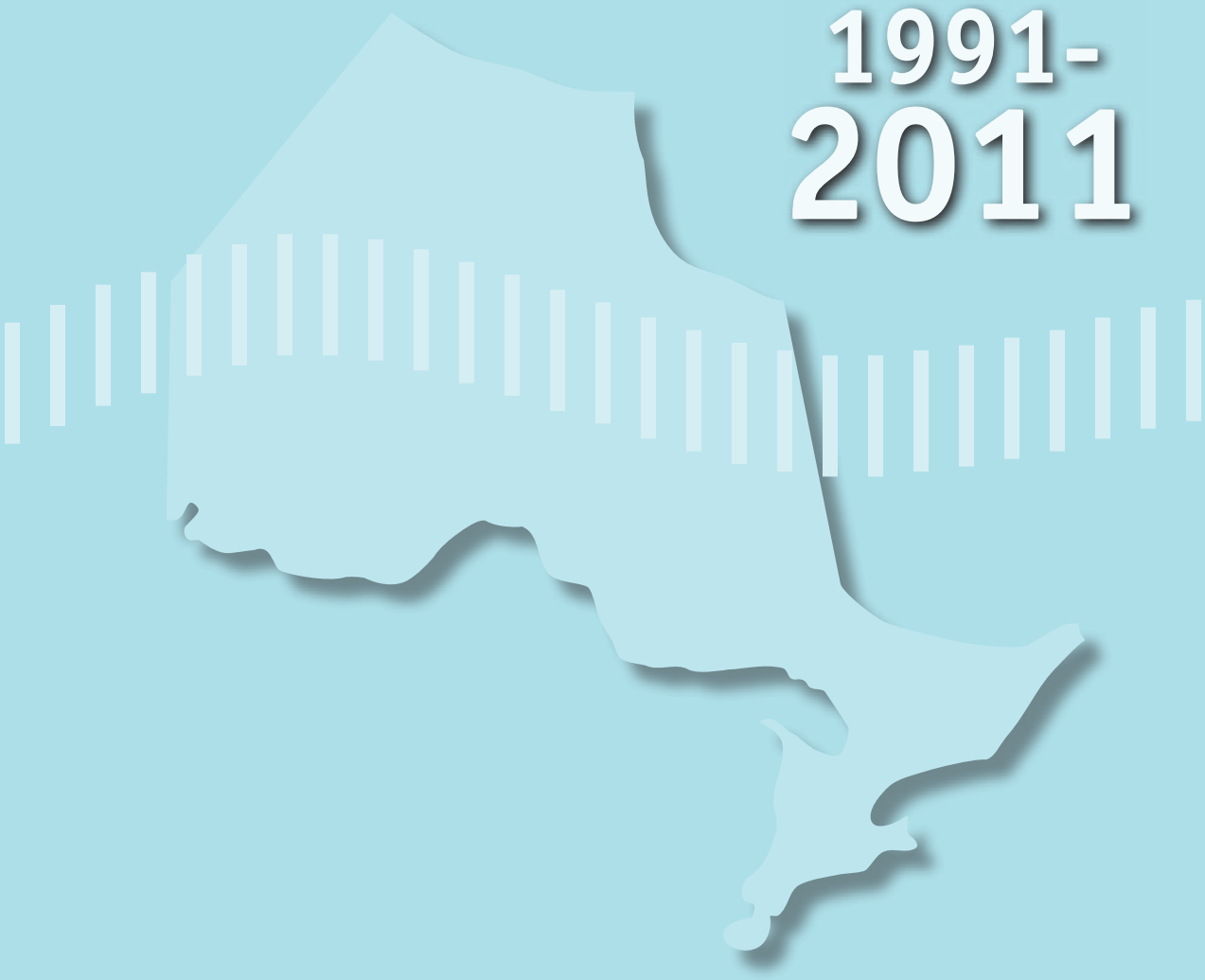
OSDUHS Highlights

The Mental Health and Well-Being of Ontario Students

1991-2011



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Centre for Addiction and Mental Health
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OSDUHS
Ontario Student Drug Use and Health Survey

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1991-2011

CAMH Research Document Series
No. 35

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A Pan American Health Organization / World Health Organization Collaborating Centre
Fully affiliated with the University of Toronto

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We also owe a debt of gratitude to a pioneer. Indeed, we would not be in the enviable position of having such rich historical data without the work and foresight of Reginald G. Smart.

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Introduction

The purpose of the Ontario Student Drug Use and Health Survey (OSDUHS) is to examine epidemiological trends in student drug use, mental health, physical health, and risk behaviours, as well as identifying risk and protective factors. The OSDUHS, now spanning over 34 years, is the longest ongoing study of a youthful population in Canada, and one of the longest in the world.

In this Highlights Report, we summarize current physical and mental health indicators and risk behaviours among Ontario students in grades 7 through 12 using data from the 2011 cycle of the OSDUHS. The mental health indicators are divided into internalizing and externalizing indicators. By internalizing indicators, we mean emotional health problems such as symptoms of anxiety/depression and suicide ideation. By externalizing indicators, we mean overt risk behaviours such as aggression, theft, gambling, and drug use. We also present trend data spanning back to 1991, where available. New indicators in this report include estimates of asthma prevalence, seatbelt use, vehicle collisions, and cyber-bulling victimization.

Mental health indicators in the OSDUHS generally assess moderate functional impairment, rather than psychiatric disorders based on clinical criteria and diagnosis. Restricting attention to those experiencing current psychiatric disorders would underestimate the extent of mental health problems, since a sizeable percentage experience distress or impaired functioning without meeting the clinical criteria for a psychiatric diagnosis. Moreover, restricting attention to psychiatric disorders would overlook the mental well-being continuum, spanning from optimum mental health to mental disorders. Further, monitoring broad mental health indicators provides more useful information, including an early warning system for service planners and providers.

A more comprehensive analysis of the survey's mental health and well-being findings, as well as a complete description of the methodology, can be found in the detailed report entitled *The Mental Health and Well-Being of Ontario Students, 1991-2011: Detailed OSDUHS Findings* (available to download at: www.camh.ca/research/osduhs.aspx). Readers should also note that there is an associated publication based on the 2011 OSDUHS detailing the extent of licit and illicit drug use among Ontario students since 1977. This report is also available on our website.

History of the OSDUHS

The OSDUHS is the longest ongoing survey of elementary and secondary school students in Canada. In **1967**, several Toronto school boards approached the former Addiction Research Foundation (now CAMH) for assistance in determining the extent of drug use among their students. Under the direction of Dr. Reginald Smart, four biennial surveys from 1968 to 1974 monitored alcohol, tobacco and other drug use among Toronto students in grades 7, 9, 11 and 13.

In **1977**, the study extended to students across Ontario. In **1999**, the OSDUHS was again expanded to include students in grades 7 through to 13/OAC. In **2003**, 13th-graders were removed from the sampling plan (because this grade was eliminated by the province of Ontario), and the number of classes surveyed in secondary schools was increased.

During the past three decades, the OSDUHS has surveyed thousands of students every two years, and to date, almost 100,000 students in Ontario have participated. The study's history is underscored by noting that most of the 12th-graders interviewed in 1977 are now in their 50s. Since its inception, the OSDUHS has not only produced numerous scientific publications on an array of adolescent health issues, but has evolved into one of the most important school surveys globally.

All OSDUHS surveys since 1977 were institutionally funded with support from the Ontario Ministry of Health and Long-Term Care.

Method

Sampling Design

The target population is 7th- to 12th-graders enrolled in publicly funded schools in Ontario. It excludes those enrolled in private schools or home-schooled, those institutionalized for correctional or health reasons, those schooled on native reserves, military bases, or in the remote northern region of Ontario. These excluded groups represent a small proportion of the Ontario adolescent population (about 7%). The 2011 OSDUHS employed a stratified (region by school level), two-stage (school, class) cluster sample design, and over-sampled schools in northern Ontario and in five public health regions. This survey has been administered in schools by staff at the Institute for Social Research (ISR), York University since 1981.

School Selection (Stage 1)

The 2011 OSDUHS school sample selection occurred as follows:

a) Schools were drawn from Ontario's Ministry of Education and Training's 2007/2008 enrolment database (most recently available at the time), and were stratified according to the nine design regions.

b) Within each of the nine regional strata, a random selection of schools was chosen, separately for elementary/middle schools and secondary schools. Schools were selected with probability proportional to enrolment size (meaning that larger schools had a greater probability of being selected).

c) If a selected school could not participate, or if it had closed, a replacement school from the same stratum was randomly selected.

Class Selection (Stage 2)

Within each school, one class per grade was randomly selected with equal probability. In elementary/middle schools, two classes were randomly selected – one 7th-grade and one 8th-grade. In secondary schools, four classes were randomly selected, one in each grade between 9 and 12 from either a list of classes in a required subject (e.g., English), or a required period (e.g., homeroom).

If a selected class was unable to participate, a replacement class from the same school and same grade was randomly re-selected, time permitting. Classes excluded as out of scope were special education classes, English as a Second Language (ESL) classes, and classes with fewer than five students. All students in the selected classes were eligible to participate.

Procedures

The 2011 OSDUHS protocol was approved by the Research Ethics Boards at CAMH, and York University, as well as 27 school board research review committees.

All participating schools were provided with copies of the active parental consent form. Well in advance of the survey date, each school distributed the consent forms to students, who, in turn, sought the signature of one parent/guardian if they were under age 18 (students aged 18 and older did not require parental consent). Only those students who returned a signed consent form could participate. The survey was administered by trained ISR field staff in the classrooms between October 2010 and June 2011. Participation was voluntary and anonymous. All students recorded their responses directly on the questionnaires, and were instructed not to write their names anywhere on the form. The average completion time was 30 minutes.

Sample

The final sample size in 2011 was **9,288 students** in grades 7–12 (62% of eligible students in participating schools) from 40 school boards, 181 schools, and 581 classes. This sample represents about 1,009,900 Ontario students in grades 7–12. All survey estimates were weighted, and variance and statistical tests were accommodated for characteristics of the complex sampling design.

Regions

This report describes regional differences according to the following four regions: City of **Toronto**; **Northern** Ontario (Parry Sound District, Nipissing District and farther north); **Western** Ontario (Peel District, Dufferin County and farther west); and **Eastern** Ontario (Simcoe County, York County and farther east).

Results

School Life

The OSDUHS includes many questions about students' school experiences including school grades usually received, time spent on homework, and suspensions.

- About half (52%) of Ontario students in grades 7–12 report usually receiving grades over 80% in their subjects; 36% report grades between 70% and 79%; 9% report grades between 60% and 69%; and about 2% report usually receiving grades below 60%.
- One-quarter (25%) of students report spending less than one hour on homework per week, outside of school. One-tenth (10%) report spending seven hours or more on homework weekly, outside of school.
- Overall, 6% of students report being suspended from school at least once during the 2010/2011 academic year.

School Climate

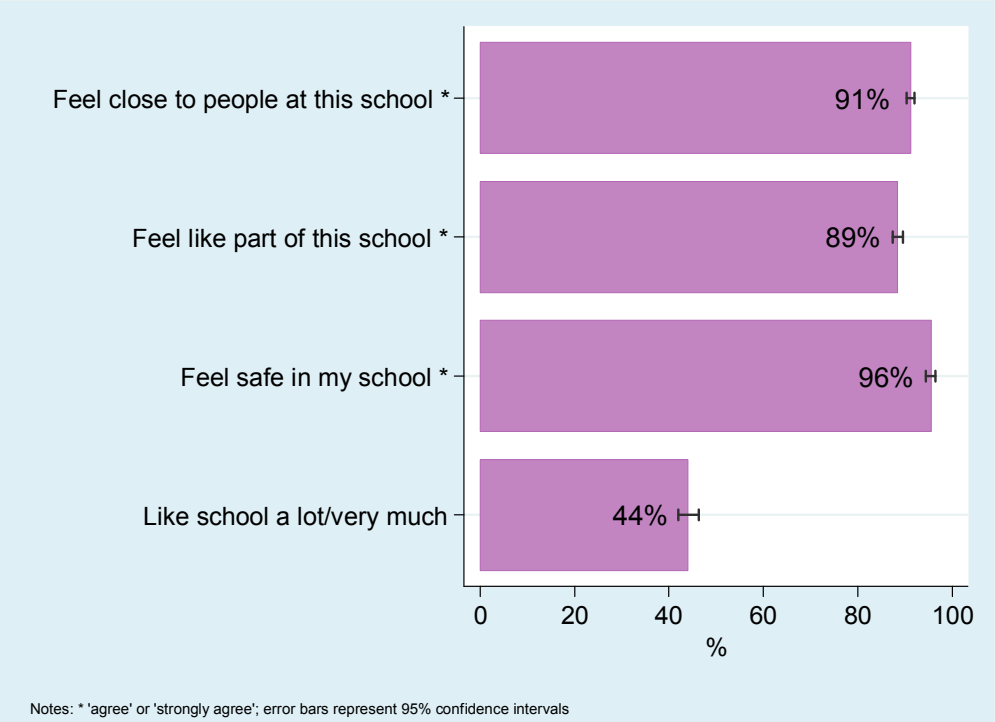
Students were asked how much they liked school, in general, and they were asked to indicate their level of agreement (ranging from strongly agree to strongly disagree) with the following statements:

- I feel close to people at this school
- I feel like I am part of this school
- I feel safe in my school

Students were also asked, "*At school, how worried are you that someone will harm you, threaten you, or take something from you?*" We present the percentage of students who are "very worried" or "somewhat worried."

- Almost half (44%) of students report liking school very much or quite a lot. In contrast, one-in-seven (14%) report not liking school very much or at all.
- A majority of students feel close to people at their school (92%), and feel like they are part of their school (89%).

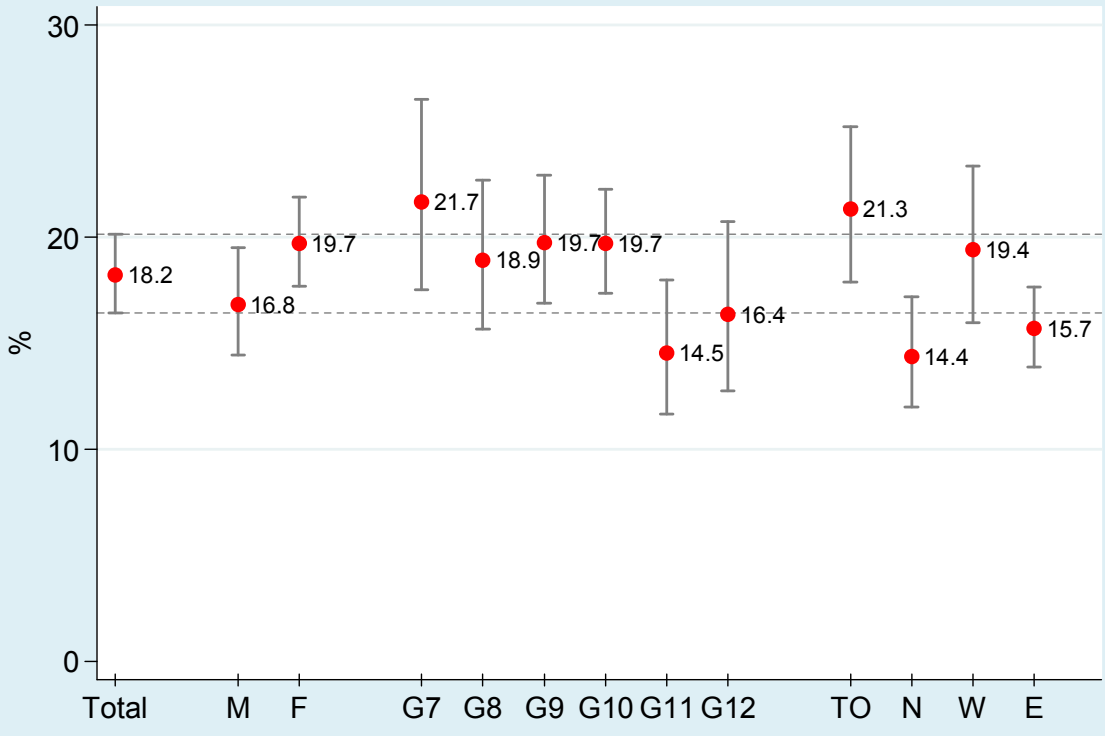
Figure 1.
School Climate Indicators, 2011 OSDUHS (Grades 7–12)



School Safety

- Most students (96%) generally feel safe in their school. On the other hand, when asked specifically how worried they are about being harmed, threatened, or being a victim of theft at school, 18% (95% CI: 16%-20%)* of students report that they are either very or somewhat worried. This percentage represents about 183,700 Ontario students.
- Females (20%) are significantly more likely than males (17%) to express worry about being harmed or threatened at school.
- Younger students are more likely to be worried than older students (e.g., 22% of 7th-graders vs. 16% of 12th-graders).
- There are significant regional differences, with students in Toronto (21%) most likely to report being worried about being harmed or threatened at school, whereas students in the North (14%) are least likely.

Figure 2.
Percentage Expressing Worry About Being Harmed or Threatened at School by Sex, Grade, and Region, 2011 OSDUHS



Notes: (1) vertical bars represent 95% confidence intervals; (2) horizontal bar represents 95% CI for total estimate; (3) significant differences by sex, by grade, and by region (p<.05)

* 95% CI is the design-based confidence interval around the percentage. The "true" population value would be expected to be within this range in 95 of 100 survey samples.

Physical Health

Self-Rated Physical Health

- Over half of Ontario students rate their health as either excellent (20%) or very good (33%). At the risk end, one-in-six (16%; 95% CI: 14%-17%) report fair or poor health. This estimate represents roughly 155,100 Ontario students.
- Females are significantly more likely than males to report fair/poor health (19% vs. 12%, respectively).
- Fair/poor health significantly increases with grade, rising from 6% among 7th-graders to 22% among 11th-graders and 20% among 12th-graders.
- Reports of fair/poor health significantly vary by region, with students in the East (13%) least likely to rate their health as fair/poor.

Asthma Diagnosis

For the first time in 2011, students were asked whether a doctor or nurse has ever diagnosed them with having asthma. Here we present the percentage who reported that they currently have asthma, as diagnosed by a doctor or nurse.

- About 9% (95% CI: 7%-11%) of students report that they currently have asthma. This estimate represents about 86,700 Ontario students in grades 7–12.
- Females (12%) are significantly more likely than males (6%) to report currently having asthma.
- There is no significant grade variation.
- There is no significant regional variation.

Daily Physical Activity

Students were asked to report on how many days of the past seven they were physically active "*for a total of at least 60 minutes each day. Please add up all the time you spent on any kind of physical activity that increased your heart rate and made you breathe hard some of the time. (Some examples are brisk walking, running, rollerblading, biking, dancing, skateboarding, swimming, soccer, basketball, football.) Please include both school and non-school activities.*" Here we present the percentage of students who reported meeting the 60-minute daily recommendation of moderate to vigorous activity on all of the past seven days.

- Among 7th- to 12th-graders, 21% (95% CI: 20%-23%) report meeting the 60-minute daily activity recommendation. This estimate represents about 212,000 Ontario students.
- Males (27%) are significantly more likely than females (15%) to be active daily.
- Daily physical activity significantly decreases with grade, from a high of about 28% among 7th- and 8th-graders to a low of about 15% among 11th- and 12th-graders.
- There are no significant regional differences.

Physical Inactivity

Here we presents the percentage of students who reported no days of moderate to vigorous physical activity (at least 60 minutes daily) during the seven days before the survey.

- One-in-twelve (8%; 95% CI: 7%-10%) students were not physically active on at least one day during the seven days before the survey. This estimate represents about 83,600 students.
- Males (9%) and females (8%) are equally likely to be inactive.
- Students in grades 11 and 12 (about 11%) are significantly more likely than students in the lower grades to be inactive.
- Students in Toronto (13%) are most likely to be inactive than students in the other three regions (about 7%-8%).

Physical Inactivity at School

Students were also asked about physical activity at school, specifically in physical education class. The question was "*On how many of the last 5 school days did you participate in physical activity for at least 20 minutes that increased your heart rate and made you breathe hard some of the time in physical education class in your school?*" Here we present the percentage who reported no days of physical activity at school. Note that this estimate includes those students who reported that they were not enrolled in physical education class at the time of the survey (these students were assigned to the no days of activity group).

- About half (48%) of all students do not engage in physically activity at school.
- Females are significantly more likely than males to be inactive at school (54% vs. 43%, respectively).
- Inactivity at school significantly varies by grade, ranging from a low of about 10% to 14% among 7th- and 8th-graders to 69% among 12th-graders.
- There are no significant regional differences.

"Screen Time" Sedentary Behaviour

Students were asked about the usual amount of time they spend in front of a computer or television (i.e., "screen time"). The question was "*In the last 7 days, about how many hours a day, on average, did you spend: watching TV/movies, playing video/computer games, on a computer chatting, emailing, or surfing the Internet?*" Here we focus on the percentage who reported that they spent seven or more hours a day, on average, either watching TV or using a computer.

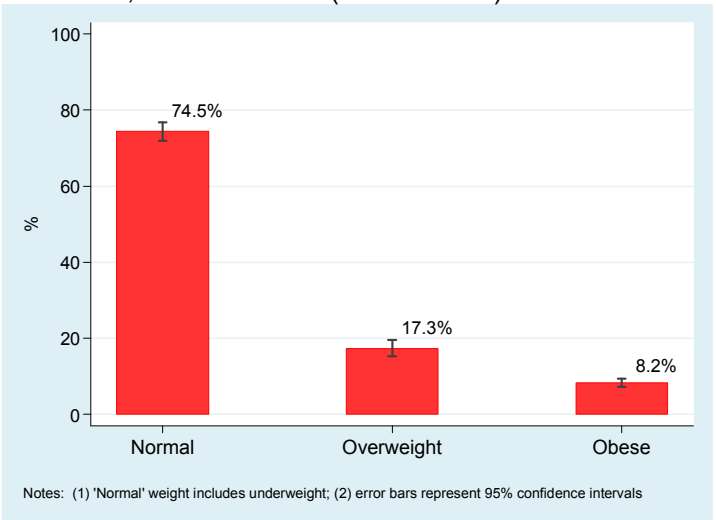
- 10% (95% CI: 9%-12%) of students spend at least seven hours a day in front of a TV or computer (about 97,100 Ontario students).
- Males (12%) are significantly more likely than females (8%) to be sedentary.
- Students in grades 10 through 12 are most likely to be sedentary (about 12%).
- Toronto students (14%) are most likely to be sedentary.

Overweight or Obese

Students reported their current height and weight, using pre-coded response options. Using the mid-point of the responses, body mass index (BMI) was calculated as weight in kilograms divided by height in metres squared. Students without valid height or weight responses (n=427, or 4.8% of the total sample) were excluded from the analysis. BMI is the most commonly used indicator to measure adiposity status among children and adolescents. The age-by-sex specific BMI cut-off points created by Cole and colleagues, and recommended by the International Obesity Task Force, were used. It should be noted here that BMI based on self-reported height and weight usually underestimates the true percentage overweight and obese.

- An estimated 17% (95% CI: 15%-20%) are considered to be overweight, while 8% (95% CI: 7%-9%) are considered obese. Combining the two, 26% (95% CI: 23%-28%) of students are either overweight or obese. This estimate represents about 245,600 students in Ontario in grades 7 through 12.
- Males (30%) are significantly more likely than females (21%) to be overweight or obese.
- There is significant grade variation, with students in grade 9–12 (about 27%) more likely to be overweight or obese than students in grades 7 and 8 (about 20%).
- There are no significant regional differences.

Figure 3.
Percentage Estimated to be Normal Weight, Overweight, and Obese, 2011 OSDUHS (Grades 7–12)



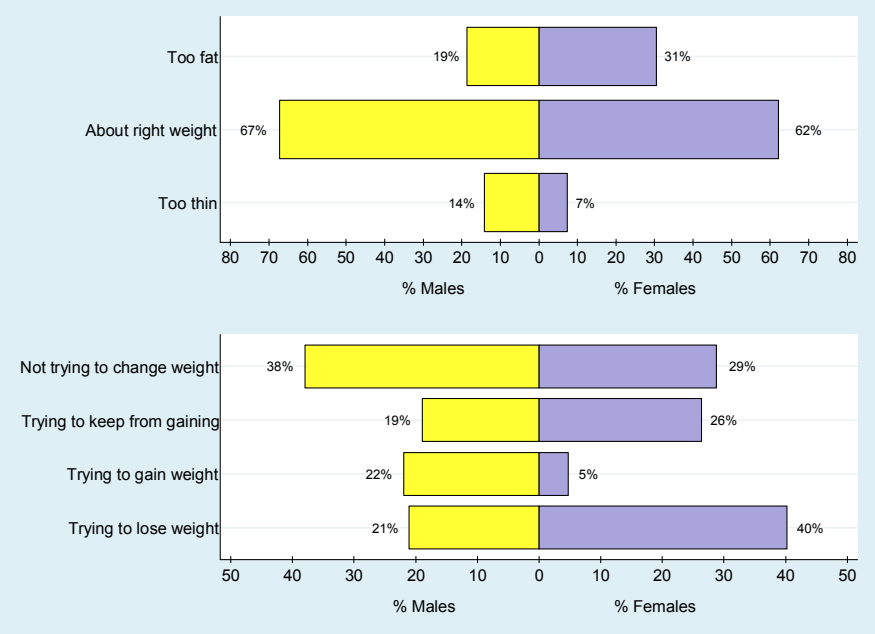
Body Image and Weight Control

- About two-thirds (65%) of students are satisfied with their weight. One-quarter (24%) believe they are too fat, and one-tenth (11%) believe they are too thin.
- Females are significantly more likely than males to believe that they are too fat, (31% vs. 19%, respectively), whereas males are more likely than females to believe that they are too thin (14% vs. 7%, respectively).
- Satisfaction with weight significantly decreases with grade level: about 70% of students in grades 7 and 8 are satisfied with their weight and this percentage declines to about 60% to 62% in grades 10, 11, and 12.
- One-third (34%) of students are not attempting to change their weight. Another 30% are attempting to lose weight, 22% want to keep from gaining weight, and 14% want to gain weight.
- Females are significantly more likely than males to report they are attempting to lose weight (40% vs. 21%, respectively); whereas males are more likely than females to report that they are attempting to gain weight (22% vs. 5%, respectively).
- The desire to change one's weight significantly differs by grade level, however the direction is dependent on the sex of respondents. Among males, reports of attempts to gain weight increase with grade, from about 9% of 7th- and 8th-graders up to 18% of 12th-graders. Among females, reports of attempts to lose weight significantly increase, from 24% of 7th-graders up to 50% of 11th-graders, followed by a small decrease to 37% among 12th-grade females.

Medically-Treated Injury

- About 42% (95% CI: 39%-44%) of students were injured and had to be treated by a doctor or nurse at least once in the 12 months before the survey. This represents about 402,800 students across Ontario. More specifically, 22% were treated once, 10% were treated twice, 6% three times, and 4% four or more times.
- Males (44%) are significantly more likely than females (39%) to report at least one medically-treated injury in the past year.
- There is no significant grade variation.
- There is significant regional variation, with students in Toronto (35%) least likely, and students in the North most likely (49%), to report at least one medically-treated injury.

Figure 4.
Body Image and Weight Control by Sex, 2011 OSDUHS (Grades 7–12)



Seatbelt Use

For the first time in 2011, the OSDUHS asked students how often they wear a seatbelt when they ride in a vehicle. Here we present the percentage of students who do *not always* wear a seatbelt when they are in a vehicle.

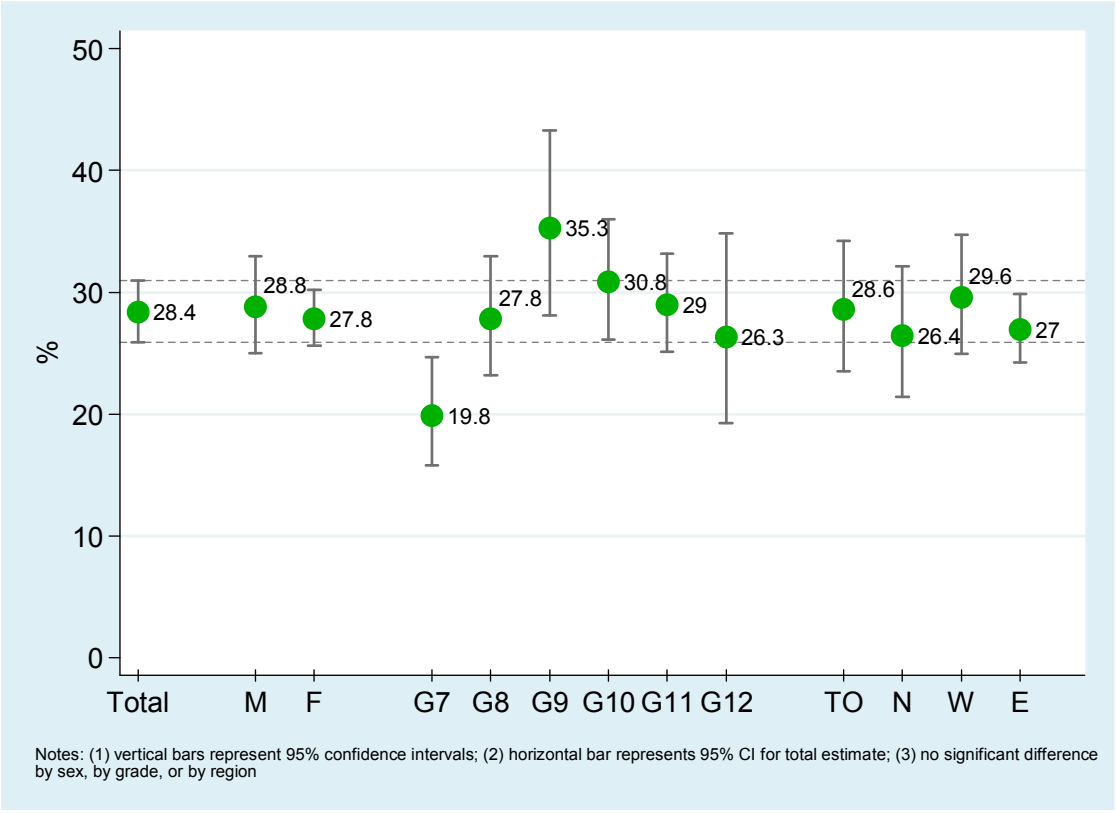
- About 28% (95% CI: 26%-31%) of students in grades 7–12 report that they do not always wear a seatbelt. This estimate represents about 280,100 students in Ontario.
- Males (29%) and females (28%) are equally likely to report that they do not always wear a seatbelt.
- Despite some variation, there are no significant differences by grade or by region.

Vehicle Collision as a Driver

For the first time in 2011, the OSDUHS asked students about being involved in a collision as a driver. The question used was *"In the last 12 months, how often were you in a car accident involving any kind of injury to you or to another person, or damage to the vehicle, while you were driving?*" We present the percentage of drivers in grades 10, 11, and 12 who report being involved in a collision, as a driver, at least once in the past year.

- Among drivers in grades 10–12, about one-in-ten (10%; 95% CI: 7%-14%) report being involved in a collision as a driver at least once in the past year. This percentage represents about 30,200 adolescent drivers.
- Male drivers (11%) and female drivers (9%) are equally likely to report involvement in a collision at least once in the past year.
- There are no significant differences by grade or by region

Figure 5.
Percentage Reporting Not Always Wearing a Seatbelt When in a Vehicle by Sex, Grade, and Region, 2011 OSDUHS



Notes: (1) vertical bars represent 95% confidence intervals; (2) horizontal bar represents 95% CI for total estimate; (3) no significant difference by sex, by grade, or by region

Health Care Utilization

Physician Health Care Visit

Students were asked "*In the last 12 months, how many times have you seen a doctor about your physical health or for a check-up?*" We present the percentage of students who reported not visiting a doctor during the past 12 months.

- About 33% (95% CI: 30%-35%) of students did not visit a doctor, not even for a check-up, in the past year. This estimate represents about 305,900 students in Ontario.
- Males (36%) are significantly more likely than females (29%) to report no doctor visits.
- There are no significant differences by grade or by region.

Mental Health Care Visit

Students were asked "*In the last 12 months, how often have you seen a doctor, nurse, or counsellor about your emotional or mental health?*" We present the percentage who reported at least one mental health care visit during the past 12 months.

- About 15% (95% CI: 13%-18%) of students report visiting a professional about a mental health matter at least once in the past year. This estimate represents about 154,100 students in Ontario.
- Females (19%) are significantly more likely than males (11%) to report a mental health care visit.
- There are no significant differences by grade or by region.

Medical Use of an Attention-Deficit-Hyperactivity Disorder (ADHD) Drug

- About 2.5% (95% CI: 2%-3%) of students used an ADHD drug with a prescription in the past year. This percentage represents about 25,500 Ontario students.
- Males (3%) and females (2%) are equally likely to report the medical use of an ADHD drug.
- ADHD drug use does not significantly differ by grade or by region.

Prescription Medication to Treat Anxiety or Depression

The OSDUHS asked students about using prescription medication for anxiety or depression. The question used was "*In the last 12 months, have you been prescribed medicine to treat anxiety or depression?*"

- Roughly 3% (95% CI: 3%-4%) report being prescribed medication to treat anxiety, depression, or both conditions. This represents about 33,400 students in Ontario.
- Females (4%) are significantly more likely than males (2%) to report being prescribed medication to treat anxiety, depression, or both conditions.
- The likelihood of being prescribed medication to treat anxiety/depression significantly increases with grade.
- There are no significant regional differences.

Sought Counselling Over the Telephone or the Internet

Students were asked "*In the last 12 months, have you phoned a telephone crisis helpline or gone on a website (such as 'KidsHelpPhone.ca') because you needed to talk to a counsellor about a problem?*"

- 2% (95% CI: 2%-3%) report using a helpline or a website or both to seek counselling (roughly 21,500 students).
- There are no significant differences according to sex, grade, or region.

Internalizing Indicators

Self-Rated Mental Health

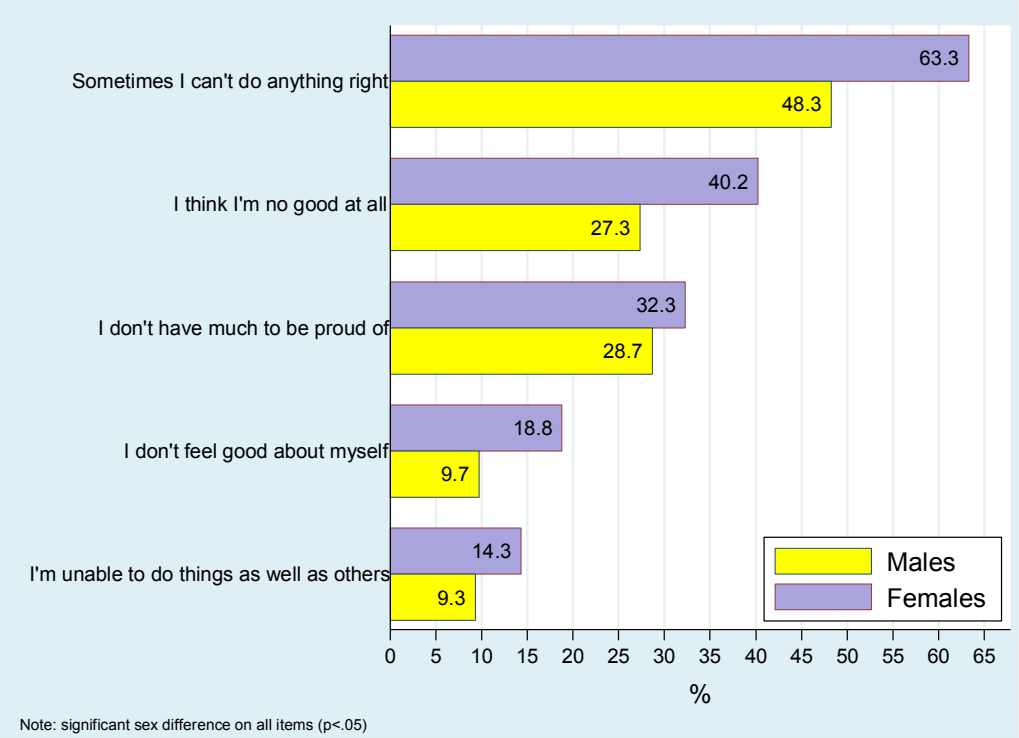
- Almost two-thirds of Ontario students rate their mental health as either excellent (25%) or very good (39%). At the risk end, 14% (95% CI: 12%-16%) report fair or poor mental health. This estimate represents about 138,300 students in grades 7–12 in Ontario.
- Females (18%) are significantly more likely than males (9%) to rate their mental health as fair or poor.
- Ratings of fair/poor mental health significantly increase with grade, ranging from 8% among 7th-graders to about 15% to 17% among 10th- to 12th-graders.
- There are no significant differences by region.

Low Self-Esteem

Students were asked five questions about their self-esteem. We present the results for these five items as well as an overall indicator for low self-esteem, defined here as negative responses (lower esteem) on all five of the items.

- A majority (55%) of students agree that sometimes they can't do anything right; 30% agree that they do not have much to be proud of; 33% agree that they are no good at all; 14% do not feel good about themselves; and 12% do not agree that they can do things as wells as others.
- About 3% (95% CI: 2.5%-4%) of students express low self-esteem – that is, report low esteem on all five items.
- Females (4%) are significantly more likely than males (2%) to report low self-esteem.
- There are no significant differences by grade or by region.

Figure 6.
Self-Esteem Items (% Agree) by Sex, 2011 OSDUHS (Grades 7–12)



Elevated Psychological Distress

The 12-item *General Health Questionnaire* (GHQ12) is a screening instrument designed to assess overall psychological well-being and to detect non-psychotic psychiatric symptomology. The GHQ12 screens for depressed mood, anxiety, and problems with social functioning. Note that this instrument is used as a screener and not for clinical diagnoses. The GHQ12 yields a summated measure to estimate the percentage experiencing elevated psychological distress, defined as reporting three or more of the 12 symptoms.

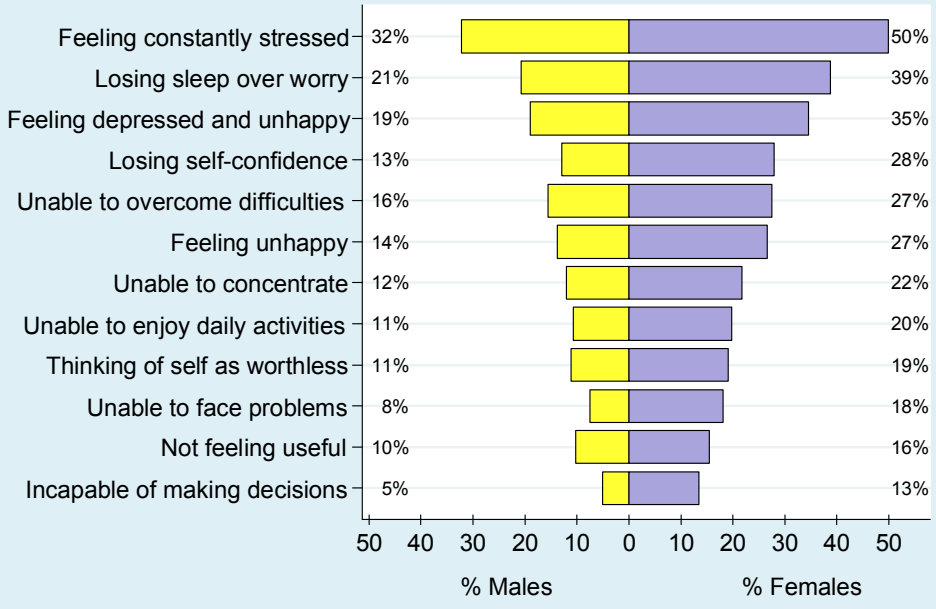
- Of the 12 symptoms, the three most common among all students are feeling constantly under stress (41%), followed by losing sleep because of worrying (30%), and feeling unhappy and depressed (27%).
- Elevated psychological distress is reported by 34% (95% CI: 31%-36%) of students. This represents about 341,200 Ontario students in grades 7–12.
- Females are more likely than males to report elevated psychological distress (43% vs. 24%, respectively). Indeed, females are significantly more likely than males to report each of the 12 symptoms.
- Psychological distress significantly increases with grade, peaking in the 11th- and 12th-grade (about 40%).
- There are no significant regional differences.

Symptoms of Anxiety and Depression

To estimate anxiety and depression symptoms among students, we conducted a factor analysis on the 12 GHQ items. We found that a two- factor structure fit the data well. Here, we present results for one factor that appears to measure symptoms of anxiety and/or depression.

- About one-in-sixteen (6%; 95% CI: 5%-8%) students report anxiety and depression symptoms (this represents an estimated 61,100 Ontario students in grades 7–12).
- Females (9%) are three times more likely than males (3%) to report symptoms of anxiety and depression.
- There are significant differences among the grades, with the prevalence varying from 3% of 8th-graders to 9% of 11th-graders.
- There are no significant regional differences.

Figure 7.
GHQ12 Symptoms Experienced Over the Past Few Weeks by Sex, 2011 OSDUHS (Grades 7–12)



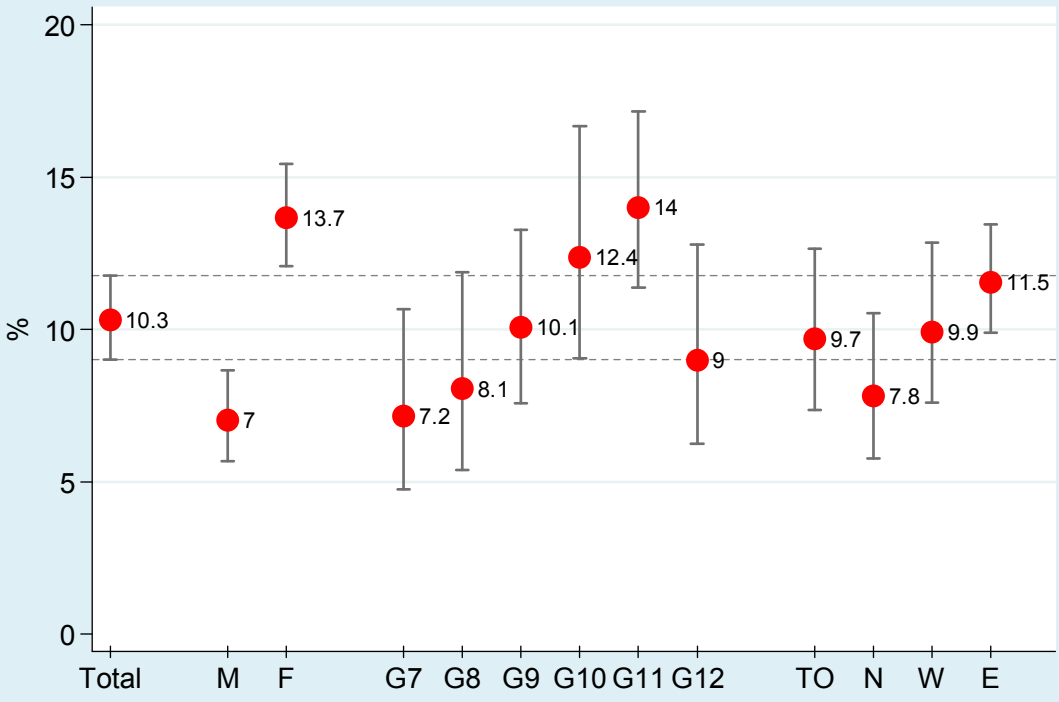
Note: significant sex difference for each item (p<.05)

Suicide Ideation and Attempt

The OSDUHS asked students "*In the last 12 months, did you ever seriously consider attempting suicide?*" and "*In the last 12 months, did you actually attempt suicide?*" Response options to both questions were yes or no.

- One-in-ten (10%; 95% CI: 9%-12%) students report that they had seriously contemplated suicide in the past year. This percentage represents an estimated 103,800 Ontario students. Roughly 3% (95% CI: 2%-4%) of students report attempting suicide in the past year. This represents about 28,000 Ontario students.
- Females are significantly more likely than males to report suicide ideation (14% vs. 7%, respectively), as well as a suicide attempt (4% vs. 2%, respectively).
- Suicide ideation significantly differs by grade, varying from 7% of 7th-graders to 14% of 11th-graders. However, suicide attempt does not significantly differ by grade.
- Despite some variation, there are no significant regional differences for either item.

Figure 8.
Percentage Reporting Suicide Ideation in the Past Year by Sex, Grade, and Region, 2011 OSDUHS



Notes: (1) vertical bars represent 95% confidence intervals; (2) horizontal bar represents 95% CI for total estimate; (3) significant difference by sex and by grade (p<.05), no significant difference by region

Externalizing Indicators

Antisocial Behaviour

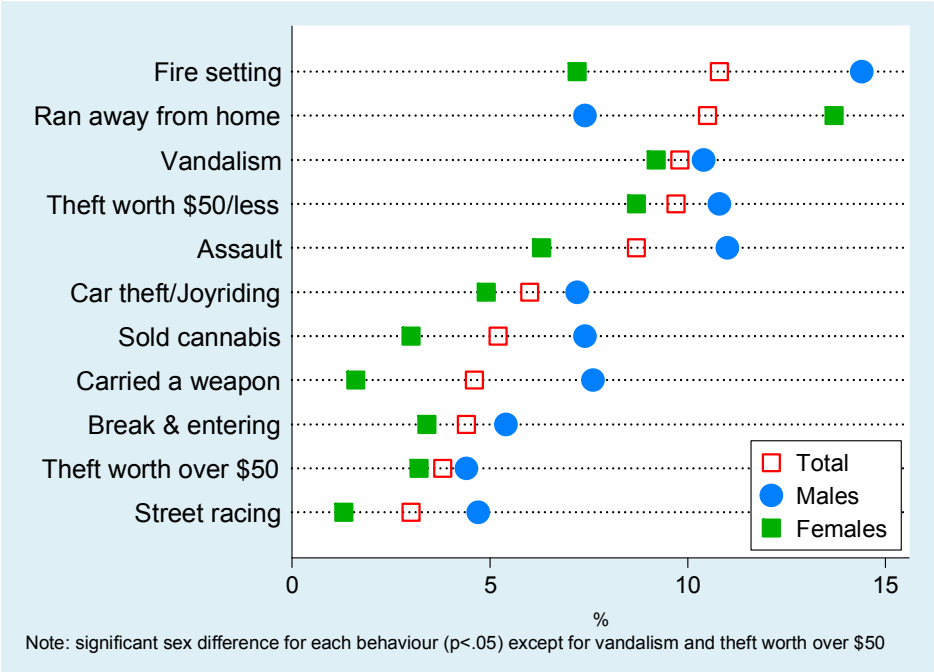
For decades, the OSDUHS has asked students about engaging in violent and non-violent antisocial behaviours. The 2011 OSDUHS asked about 11 antisocial behaviours. Here we look at the percentage of students who reported these behaviours at least once during the past 12 months. In addition, we present an overall index of antisocial behaviour defined as participating in three or more of the nine behaviours consistently asked about in past survey cycles.

- Among all students, the 11 behaviours ranked in the following manner, from most to least prevalent:

  Fire setting 11%
  Ran away 11%
  Vandalism 10%
  Theft of goods worth $50/less.....10%
  Assault 9%
  Car theft/joyride.....6%
  Sold cannabis 5%
  Carried a weapon.....5%
  Break and entering.....4%
  Theft of goods worth > $50 .....4%
  Street racing.....3%

- Males are significantly more likely than females to report eight of the 11 behaviours. Females are more likely to report running away from home. Vandalism and theft of goods worth more than $50 show no significant sex differences.
- About 8% (95% CI: 7%-9%) of students engage in antisocial behaviour (defined as three or more of nine behaviours asked about over time). This percentage represents about 78,700 students.
- Males are significantly more likely than females to engage in antisocial behaviour (9% vs. 7%, respectively).
- Students in grades 11 and 12 are the most likely to engage in antisocial behaviour (about 10% to 13%).
- There are no significant regional differences.

Figure 9.
Percentage Reporting Engaging in Antisocial Behaviours at Least Once in the Past Year by Sex, 2011 OSDUHS (Grades 7–12)



Note: significant sex difference for each behaviour (p<.05) except for vandalism and theft worth over $50

Violence on School Property

The OSDUHS asked students about fighting on school property with the question: "*During the last 12 months, how many times were you in a physical fight on school property?*" Also asked was "*During the last 12 months, how many times has someone threatened or injured you with a weapon, such as a gun, knife or club on school property*?" Here we present the percentage who reported experiencing each at least once in the past year.

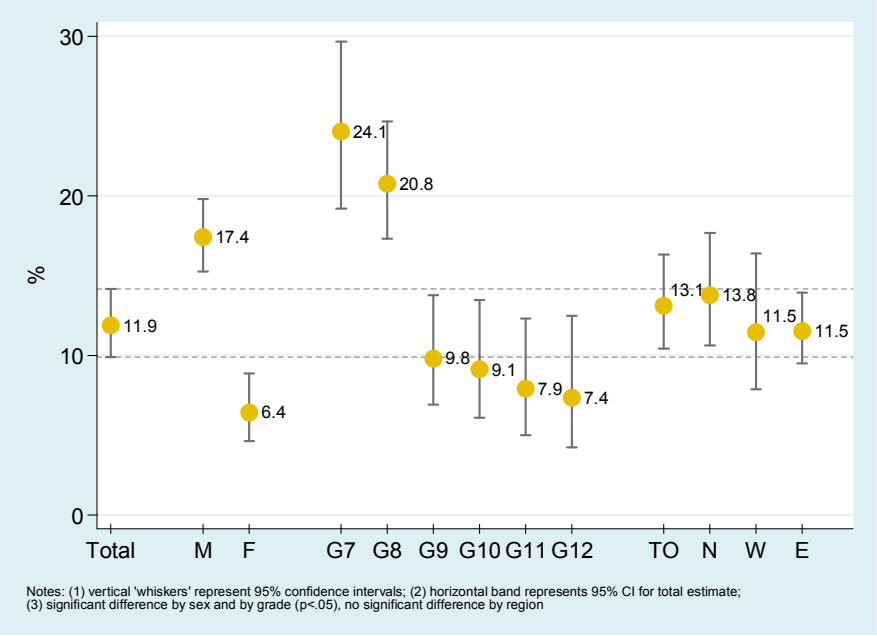
Physical Fighting

- Among all students, 12% (95% CI: 10%-14%) – an estimated 115,900 students – report fighting on school property at least once in the past year (8% report one time only, while 4% report two or more times).
- Males are significantly more likely than females to report fighting at school at least once (17% vs. 6%, respectively).
- Fighting at school significantly decreases with grade. Students in grade 7 (24%) are most likely to fight at school, whereas 11th- and 12th-graders are the least likely (7% to 8%).
- There are no significant regional differences.

Threatened or Injured with a Weapon

- Among all students, 7% (95% CI: 5%-8%) – an estimated 65,100 students – report being threatened or injured with a weapon on school property at least once in the past year (4% report this occurred only once, while 3% report two or more times).
- Males (7%) and females (6%) are equally likely to report being threatened or injured with a weapon at school.
- There are no significant differences among the grades.
- There are no significant regional differences.

Figure 10.
Percentage Reporting Fighting at School at Least Once in the Past Year by Sex, Grade, and Region, 2011 OSDUHS



Bullying at School

The OSDUHS included four questions about bullying. Bullying was defined in the questionnaire as "*...when one or more people tease, hurt or upset a weaker person on purpose, again and again. It is also bullying when someone is left out of things on purpose.*" Students were asked about the typical way they were bullied at school, and the typical way they bullied others, if at all. The questions were: "*In what way were you bullied the most at school?*" and "*In what way did you bully other students the most at school?*" For each of these questions, students were asked to choose only one among the following four response options: *Was not involved in bullying at school; Physical attacks (for example, beat up, pushed or kicked); Verbal attacks (for example, teased, threatened, spread rumours); or Stole or damaged possessions*. The prevalence estimates for bullying victim and perpetrator are based on these modal questions. Students were also asked about the frequency of being bullied and bullying others.

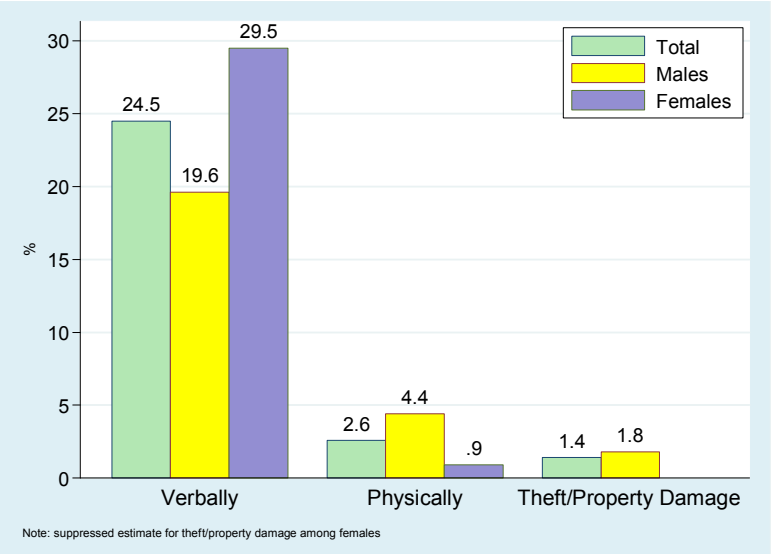
Bullying Victims

- Among all students, 29% (95% CI: 26%-32%) report being bullied at school since September. This represents about 288,000 students in Ontario.
- The most prevalent form of victimization is verbal (25%), while 3% are mainly bullied physically, and 1% are mainly victims of theft or vandalism.
- Nine percent of students report being bullied on a daily or weekly basis, and about 18% are bullied monthly or less often.
- Females are more likely than males to report being bullied in any manner (31% vs. 26%, respectively). Females are more likely to be bullied verbally than are males (30% vs. 20%, respectively), whereas males are more likely to be bullied physically than are females (4% vs. 1%, respectively). Both are equally likely to be victims of theft or vandalism (about 1% to 2%).
- There is significant grade variation, with students in grades 7 through 10 most likely to be bullied (about one-third) in any manner, while 12th-graders (22%) are least likely. Grade 7 and 8 students are the most likely to be bullied physically. These youngest grades are also most likely to be bullied on a daily/weekly basis (about 12% to 16%).
- Toronto students (22%) are the least likely to report being bullied compared with students in the other three regions (about 30%).

Bullying Perpetrators

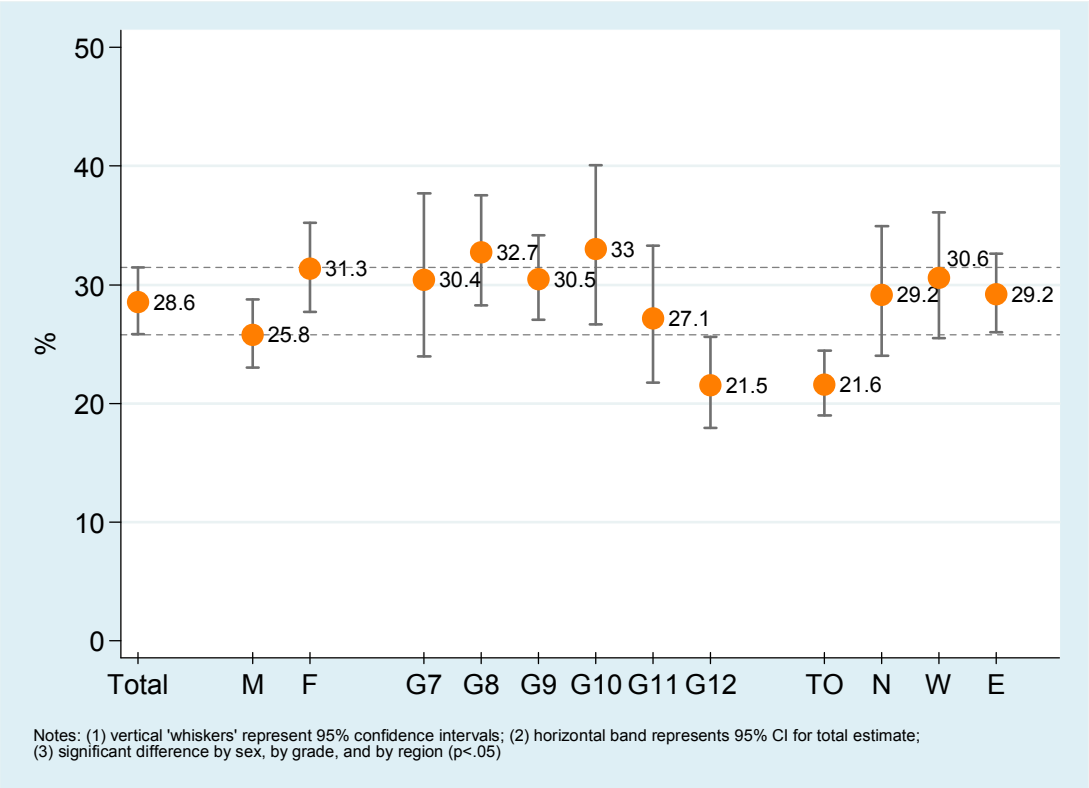
- Among all students, 21% (95% CI: 17%-25%) report bullying other students at school. This represents about 208,000 students in Ontario.
- The most prevalent form of bullying others is through verbal attacks (18%), followed by physical attacks (3%). Theft or damage to others' property is reported by less than 1% of students.
- About 5% of students report bullying others on a daily or weekly basis, and 16% report bullying others monthly or less often.
- Males (19%) and females (23%) are equally likely to report bullying others at school.
- There are no significant differences among the grades, or among the regions.

Figure 11.
Percentage of All Student Reporting the Most Common Way They Were Bullied at School by Sex, 2011 OSDUHS (Grades 7–12)



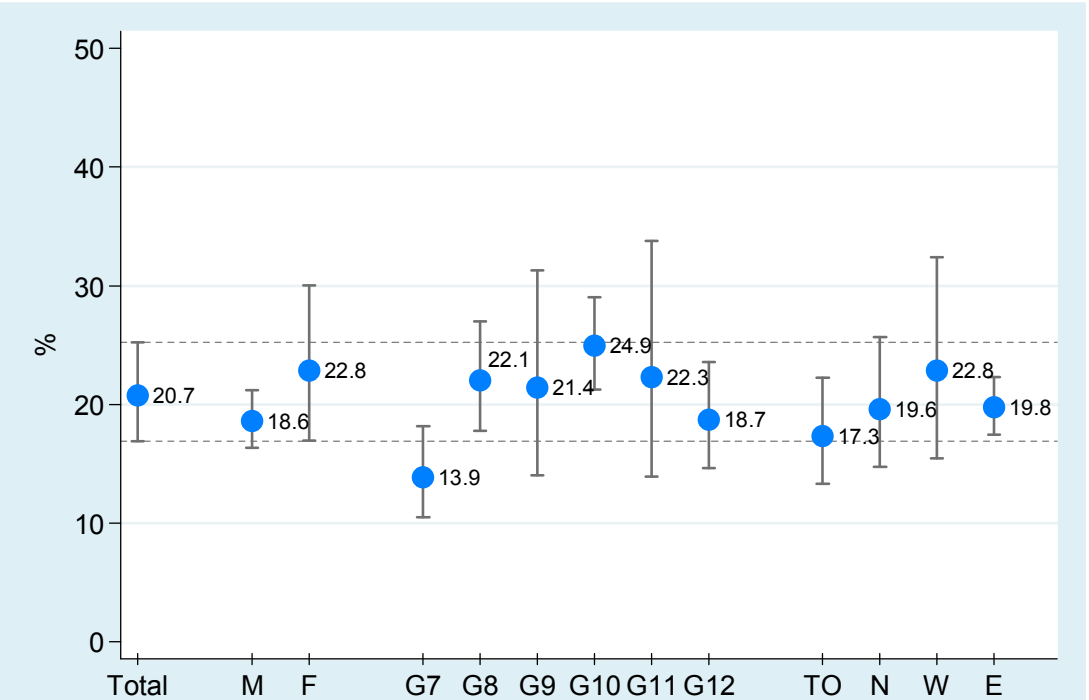
Note: suppressed estimate for theft/property damage among females

Figure 12.
Percentage Reporting Being Bullied at School (in Any Manner) Since September by Sex, Grade, and Region, 2011 OSDUHS



Notes: (1) vertical 'whiskers' represent 95% confidence intervals; (2) horizontal band represents 95% CI for total estimate;
(3) significant difference by sex, by grade, and by region (p<.05)

Figure 13.
Percentage Reporting Bullying Others at School (in Any Manner) Since September by Sex, Grade, and Region, 2011 OSDUHS



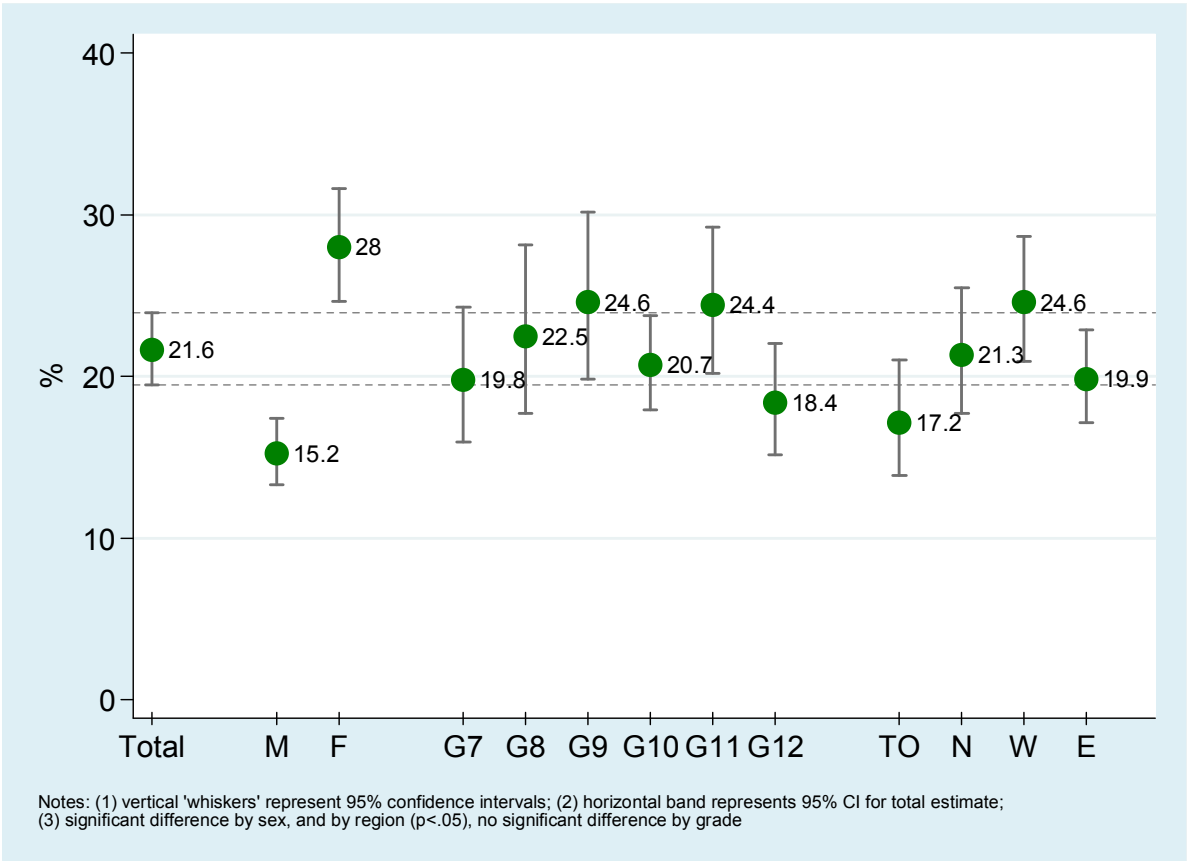
Notes: (1) vertical 'whiskers' represent 95% confidence intervals; (2) horizontal band represents 95% CI for total estimate;
(3) no significant difference by sex, by grade, or by region

Victim of Cyber-Bullying

For the first time in 2011, the OSDUHS included a question about being victimized over the Internet. The question was *"In the last 12 months, how many times did other people bully or pick on you through the Internet?"* We present the percentage of students who report they were bullied over the Internet at least once in the previous 12 months.

- Among students in grades 7 through 12, 22% (95% CI: 20%-24%) report being bullied over the Internet in the past year. This represents about 217,500 students in Ontario.
- Females (28%) are significantly more likely than males (15%) to report being a victim of cyber-bullying.
- There are no significant differences among the grades.
- There is a significant regional difference, with students in the Western region (25%) most likely to report being a victim of cyber-bullying whereas students in Toronto are least likely (17%).

Figure 14.
Percentage Reporting Being a Victim of Cyber-Bullying in the Past Year by Sex, Grade, and Region, 2011 OSDUHS



Notes: (1) vertical 'whiskers' represent 95% confidence intervals; (2) horizontal band represents 95% CI for total estimate; (3) significant difference by sex, and by region (p<.05), no significant difference by grade

Gambling and Video Gaming

Individual Gambling Activities

Students were asked how often, during the past 12 months, they gambled money at 10 activities. We present the percentage who reported gambling money on each activity at least once in the past year.

- The activities ranked as follows:

  Gambled in other ways 18%
  Cards.....16%
  Sports pools 13%
  Lottery tickets..... 13%
  Dice..... 5%
  Bingo.....5%
  Sports lottery tickets..... 4%
  Video gambling machines..... 3%
  Any Internet gambling..... 2%

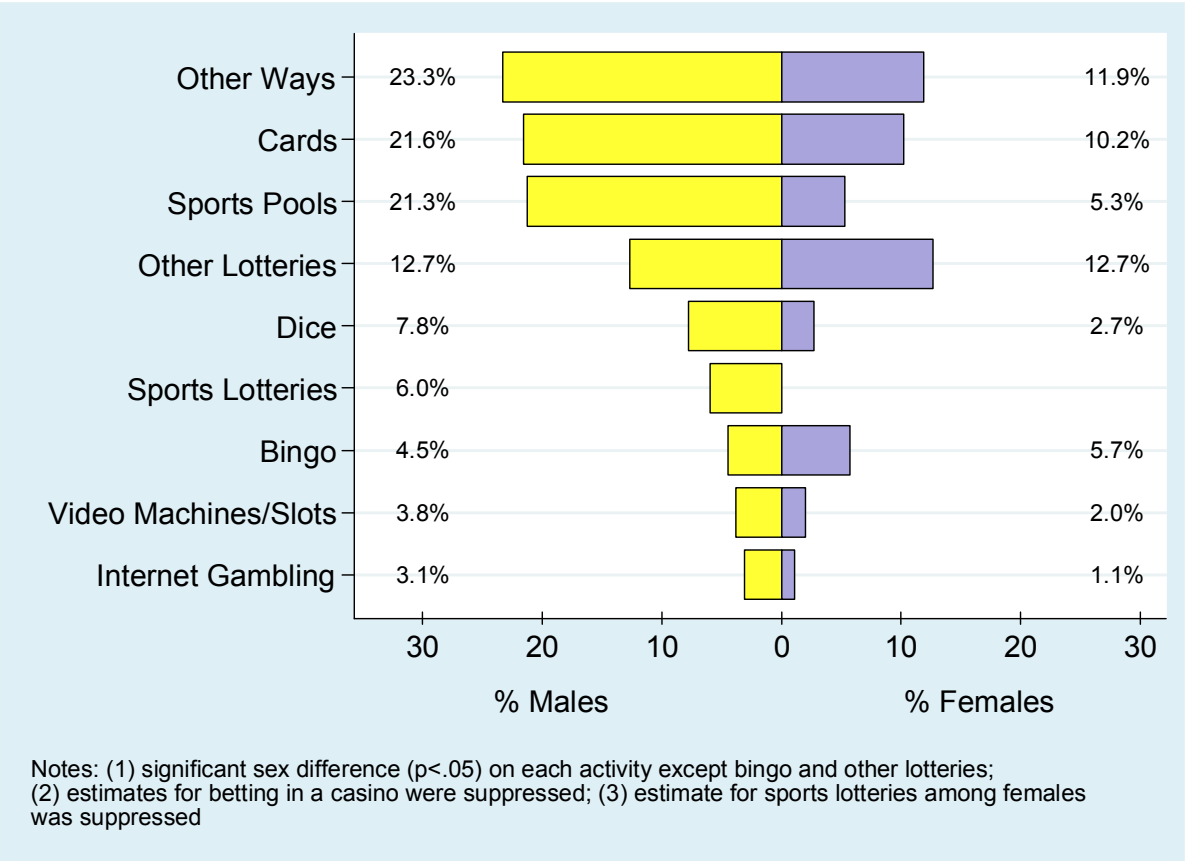
  The estimate for the percentage of students reporting gambling in an Ontario casino was suppressed (less than 1%).

- Eight of the 10 gambling activities significantly vary by sex. Males are significantly more likely than females to play cards for money; play dice for money; bet in sports pools; buy sports lottery tickets; play video gambling machines or slots; bet over the Internet; bet in a casino; and to gamble in other ways not listed. The activities that do not differ by sex are playing bingo and buying lottery tickets (other than sports lottery tickets).

- There are significant grade differences for six of the 10 activities: playing cards, sports pools, sports lottery tickets, other lottery tickets, casino gambling, and playing dice. Generally, these activities increase with grade and peak in grade 11 or grade 12.

- None of the gambling activities significantly varies by region.

Figure 15.
Percentage Reporting Gambling Activities in the Past Year by Sex, 2011 OSDUHS (Grade 7–12)



Notes: (1) significant sex difference (p<.05) on each activity except bingo and other lotteries; (2) estimates for betting in a casino were suppressed; (3) estimate for sports lotteries among females was suppressed

Any Gambling Activity

- Among all students, 38% (95% CI: 36%-41%) report at least one gambling activity (of 10) during the past 12 months. This percentage represents about 380,200 students across Ontario.
- Males (47%) are more likely to report any gambling activity than females (30%).
- Gambling significantly increases with grade, peaking in 11th- or 12th-grade (about 43% to 48%).
- There are no significant differences among the four regions.

Multi-Gambling Activity

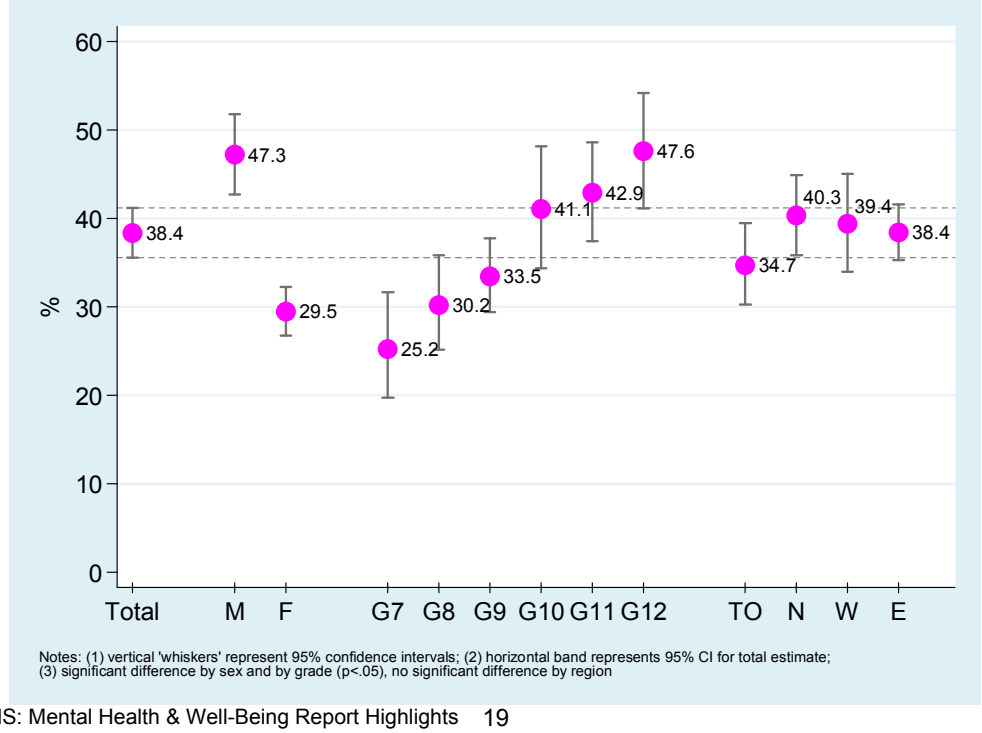
- About 3% (95% CI: 2%-4%) of students gambled at five or more of 10 activities during the past 12 months. This percentage represents about 26,300 students across Ontario.
- Males are significantly more likely to report multi-gambling activity than females (4% vs. 2%, respectively).
- There is a significant difference among the grades, with students in 11th-grade most likely to report multi-gambling activity.
- There are no significant regional differences.

Gambling Problem

A reduced version of the *South Oaks Gambling Screen Revised for Adolescents* was use to assess a gambling problem. This screener measures the dimensions of loss of control, problems with family/friends due to one's gambling, and disruption to school.

- Among all students, 2% (95% CI: 1%-3%) may have a gambling problem. This percentage represents about 17,300 Ontario students. When we look only among students who report gambling at one or more activities in the past year, 4% (95% CI: 3%-6%) may have a gambling problem.
- Males (2%) are more likely than females (1%) to have a gambling problem.
- There are no significant differences by grade or by region.

Figure 16.
Percentage Reporting Any Gambling Activity (of 10 Activities) in the Past Year by Sex, Grade, and Region, 2011 OSDUHS



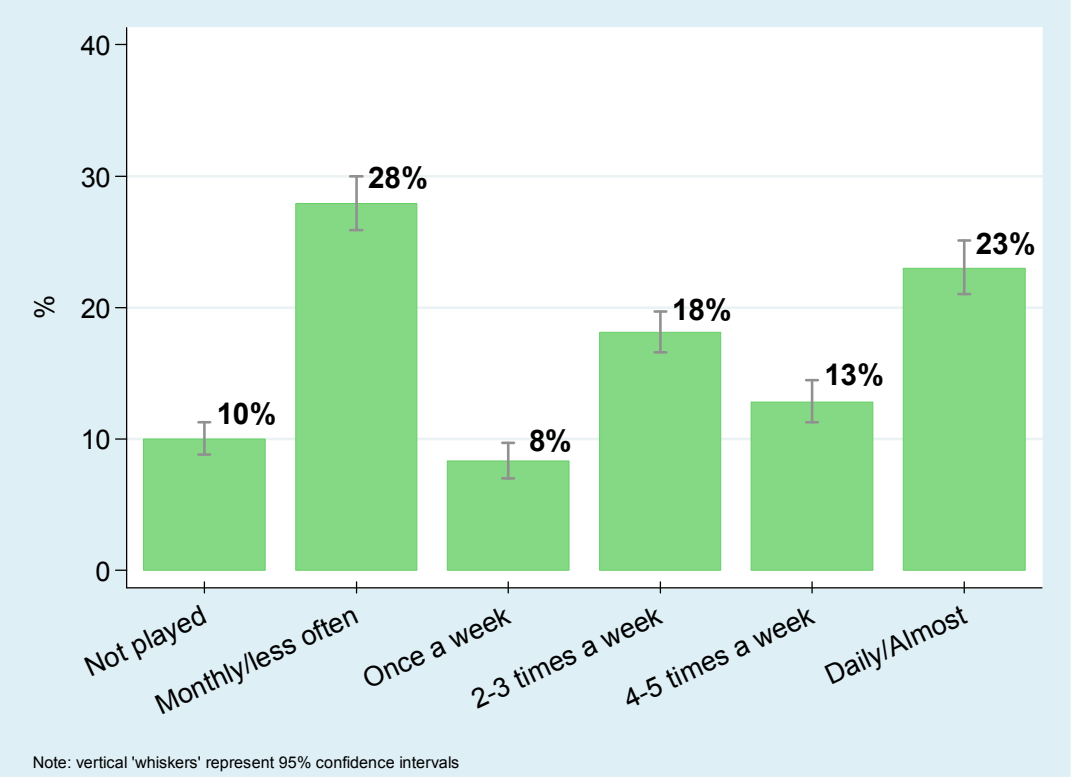
Notes: (1) vertical 'whiskers' represent 95% confidence intervals; (2) horizontal band represents 95% CI for total estimate; (3) significant difference by sex and by grade (p<.05), no significant difference by region

Video Game Playing and Problems

Students were asked about video game playing (either on a computer, TV, or in an arcade) and related problems using the 9-item *Problem Video Playing (PVP*) scale. The scale measures the dimensions of preoccupation, tolerance, loss of control, withdrawal, escape, disregard for consequences, and disruption to family/school.

- One-tenth of students report that they do not play video games; 28% report playing about 3 times a month or less often; 8% play once a week; 18% play 2 to 3 times a week; 13% play 4 to 5 times a week; and 23% play daily or almost daily.
- Males (37%) are significantly more likely than females (9%) to play video games daily.
- There are no significant differences among the grades regarding the percentage that play daily.
- There are no significant regional differences regarding the percentage that play daily.
- Among all students, 12% (95% CI: 9%-15%) indicate a video gaming problem. This represents about 119,800 students.
- Males (19%) are significantly more likely than females (5%) to indicate a video gaming problem.
- There are no significant differences among the grades, or among the regions.

Figure 17.
Frequency of Playing Video Games in the Past Year, 2011 OSDUHS (Grades 7–12)

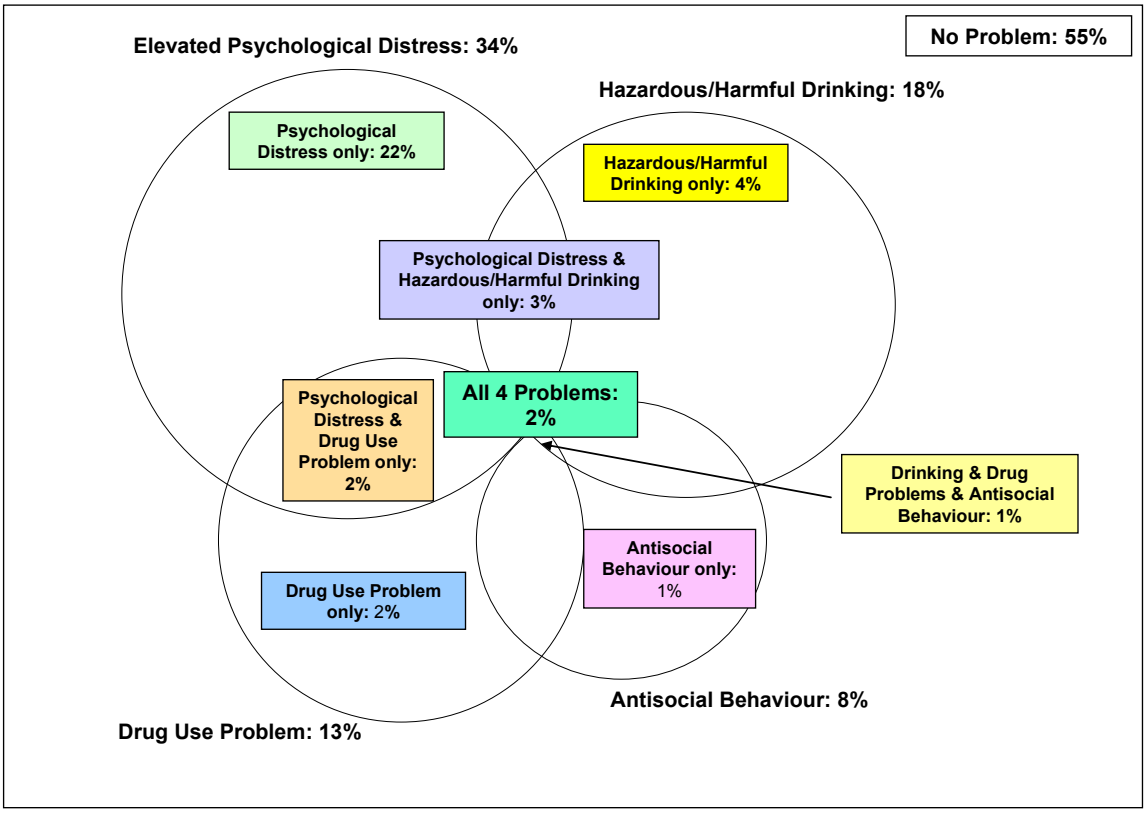


Co-Existing Problems

This section presents the overlap between substance use problems, mental health problems, and antisocial behaviour. Specifically, we look at the overlap of the following four problems: (1) elevated psychological distress (as indicated by a score of three or more on the GHQ12 screener); (2) antisocial behaviour (indicated by engaging in three or more of nine antisocial acts); (3) hazardous/harmful drinking (indicated by a score of eight or more on the AUDIT screener); and (4) a drug use problem (indicated by a score of two or more on the CRAFFT-D screener). Also presented is the percentage who report three or all four of these problems.

- A majority (55%) of students report none of the four problems. About 29% report one problem, 10% report two problems, 5% report three problems, and 2% report all four problems.
- By far, the most prevalent configuration is psychological distress only, reported by 22% of students. The remaining configurations, such as hazardous/harmful drinking only or drug problem only, are reported by 4% or less.
- The percentage reporting three or all four problems is 7% (95% CI: 6%-8%), representing about 70,300 students.
- There is no significant sex difference in the likelihood of experiencing three or all four of these problems (6% for males, 8% for females).
- There is significant grade variation, with 11th- and 12th-graders most likely to indicate three or all four of these problems (about 12%).
- There are no significant regional differences.

Figure 18.
Co-Existing Problems: Elevated Psychological Distress, Antisocial Behaviour, Hazardous/Harmful Drinking, and Drug Use Problem, 2011 OSDUHS (Grades 7–12)



Notes: (1) based on a random half sample (N=4,816); (2) not all combinations are shown

Overview by Ontario Local Health Integration Networks (LHIN) Areas

In 2006, the province designated 14 geographic areas each to function as health systems that plan, integrate and fund local health services. These areas are called Local Health Integration Networks or LHINs (see http://www.lhins.on.ca).

This section provides the 2011 estimates for most mental health and well-being indicators **among high school students only (grades 9 through 12)** according to the LHINs. Students in grade 7 and 8 were excluded from the analysis because of a considerable imbalance of the number of elementary/middle schools across the LHINs. For the present analysis, students were assigned to LHINs using the six-digit postal code of the school. Due to small sample sizes, some adjacent LHINs were merged. The nine LHIN areas presented here are:

- Erie St. Clair & Waterloo Wellington (merged)
- Hamilton Niagara Haldimand Brant
- Central West & Mississauga Halton (merged)
- Toronto Central
- Central
- Central East
- South East & Champlain (merged)
- North Simcoe Muskoka
- North East & North West (merged)

Table 1. Percentage of Secondary School Students **(Grades 9–12)** Reporting Mental Health and Well-Being Indicators, by Ontario Local Health Integration Network (LHIN) Areas, 2011 OSDUHS

	Erie St. Clair + Waterloo Wellington	**Hamilton Niagara Haldimand Brant**	**Central West + Mississauga Halton**	**Toronto Central**	**Central**	**Central East**	**South East + Champlain**	**North Simcoe Muskoka**	**North East + North West**	**Ontario**
(Student N) *(School N)*	*(222)* *(3)*	*(1,354)* *(23)*	*(263)* *(4)*	*(332)* *(5)*	*(1,230)* *(17)*	*(901)* *(14)*	*(800)* *(13)*	*(205)* *(3)*	*(1,076)* *(21)*	*(6383)* *(103)*
Fair/Poor Self-Rated Physical Health	**20.8** (15.4-27.3)	**17.9** (14.1-22.1)	**21.0*** (17.9-24.5)	**17.9** (14.4-22.1)	**18.4** (15.6-21.5)	**18.4** (13.6-24.5)	**16.6** (12.9-21.0)	**9.1**** (6.0-13.6)	**17.7** (13.7-22.5)	**18.1** (16.6-19.8)
Asthma Diagnosis	**9.5** (5.0-17.3)	†	**7.8** (6.8-8.9)	**8.9** (7.4-10.6)	**7.9** (5.7-10.7)	**8.5** (6.4-11.3)	**10.3** (6.2-16.6)	†	**10.2** (7.5-13.6)	**9.4** (6.9-12.6)
Physically Inactive (past week)	†	**7.3** (5.8-9.2)	**9.7** (5.4-16.8)	**10.7** (6.7-16.7)	**11.0** (8.6-14.1)	**10.0** (6.9-14.3)	**6.7** (4.9-9.2)	†	**6.0*** (4.6-7.7)	**8.8** (7.6-10.3)
"Screen Time" Sedentary Behaviour	**8.2** (6.2-10.7)	**10.9** (6.2-19.0)	**15.7** (9.4-25.1)	**13.9** (9.4-20.0)	**12.4** (9.3-16.4)	**12.4** (9.7-15.9)	**8.6*** (7.2-10.2)	**6.3**** (4.3-9.2)	**10.3** (7.7-13.7)	**11.3** (9.4-13.6)
Overweight or Obese	**27.0** (23.7-30.5)	**31.0** (23.3-40.0)	**28.8** (21.8-36.8)	**25.7** (19.9-32.5)	**23.3** (18.7-28.7)	**24.9** (22.5-27.5)	**26.2** (21.9-31.1)	**26.3** (24.6-28.1)	**28.7** (23.4-34.7)	**27.3** (24.4-30.3)
Medically-Treated Injury	**40.2** (37.8-42.6)	**51.3**** (48.4-54.2)	**40.2** (33.7-47.0)	**37.9** (30.6-45.8)	**37.4*** (33.3-41.8)	**39.0** (33.8-44.4)	**41.4** (34.8-48.4)	**48.4*** (43.6-53.2)	**51.8**** (46.6-56.9)	**43.2** (40.2-46.3)
Not Always Wear a Seatbelt in Vehicle	**20.4**** (17.6-23.5)	**29.6** (27.5-31.7)	**39.6** (27.0-53.8)	**32.4** (22.8-43.9)	**28.1** (23.3-33.5)	**29.6** (24.1-35.6)	**30.5** (25.8-35.6)	**20.8*** (15.2-27.7)	**29.4** (22.8-37.1)	**30.0** (26.9-33.3)
Collision as a Driver (among drivers in G10-G12)	†	**19.6**** (17.2-22.4)	†	**10.8** (6.7-16.9)	**6.1** (4.1-9.0)	**8.7** (5.1-14.4)	**9.2** (5.8-14.2)	†	**13.8**** (9.5-19.6)	**9.8** (7.0-13.5)
No Physician Health Care Visit	**35.6** (24.5-48.5)	**32.0** (27.7-36.7)	**29.6** (20.0-41.4)	**28.1** (18.4-40.3)	**30.0** (26.5-33.7)	**34.0** (29.1-39.4)	**29.2** (21.3-38.6)	**39.6*** (33.2-46.3)	**41.5** (32.2-51.5)	**32.2** (29.6-34.9)
Medical Use of Prescr. Opioid Pain Reliever	**20.7** (16.0-26.4)	**27.6*** (23.2-32.4)	**23.9** (20.2-28.0)	**17.0**** (13.8-20.7)	**21.2** (19.0-23.6)	**24.3** (18.7-31.0)	**23.7** (19.8-28.2)	**24.2** (19.5-29.6)	**24.7** (21.6-28.0)	**23.7** (21.7-25.9)
Medical Use of Prescr. Tranquillizer/Sedative	**4.4** (3.0-6.4)	†	†	†	**3.5** (2.7-4.5)	**3.4** (2.0-5.5)	**4.8** (3.1-7.2)	**5.9*** (4.0-8.7)	**5.0** (3.8-6.6)	**4.2** (3.4-5.3)
Mental Health Care Visit	**16.3** (12.4-21.2)	**18.6** (10.3-31.4)	**15.7** (12.1-20.1)	**13.5** (8.9-20.0)	**10.1*** (6.9-14.6)	**14.1** (10.3-18.9)	**15.3** (11.0-20.9)	**14.0** (7.6-24.3)	**16.4** (11.3-23.2)	**15.3** (12.5-18.6)
Fair/Poor Self-Rated Mental Health	**11.7** (7.7-17.3)	**16.3** (10.2-24.9)	**14.3** (10.7-19.0)	**20.8** (13.2-31.2)	**15.0** (13.1-17.2)	**12.9** (10.0-16.5)	**17.4** (14.2-21.0)	**16.9** (13.6-20.8)	**16.5** (11.7-22.8)	**15.4** (13.3-17.7)
Elevated Psychological Distress	**35.4** (26.6-45.3)	**38.0** (30.5-46.2)	**32.0** (24.9-40.0)	**40.9** (30.4-52.2)	**38.6** (34.2-43.2)	**41.1** (34.9-47.5)	**36.5** (30.2-43.3)	**34.9** (21.1-51.8)	**36.1** (32.0-40.4)	**37.1** (34.2-40.2)
Symptoms of Anxiety/ Depression	†	**9.5** (5.6-15.6)	†	†	**5.8** (4.3-7.9)	**7.5** (4.5-12.2)	**6.8** (4.4-10.5)	**4.4** (2.5-7.4)	**3.8** (2.3-6.3)	**7.0** (5.2-9.4)
Suicide Ideation	**13.7** (7.7-23.2)	**10.3** (6.6-15.9)	**8.6** (4.9-14.6)	**12.8** (8.5-18.7)	**10.8** (8.3-13.9)	**12.7** (9.4-16.8)	**13.1** (9.9-17.1)	**10.3** (7.0-14.9)	**8.0** (5.5-11.6)	**11.2** (9.7-13.0)
Suicide Attempt	**6.0**** (4.8-7.4)	**2.8** (1.5-5.3)	†	†	**2.8** (1.5-5.2)	**4.5*** (2.5-7.9)	**4.7*** (2.5-8.6)	†	†	**3.1** (2.3-4.2)
Antisocial Behaviour	**11.8*** (10.0-14.0)	**6.5** (3.7-11.1)	**9.4** (7.0-12.6)	**11.8** (9.0-15.3)	**6.1**** (4.9-7.5)	**10.8** (7.7-15.0)	**13.3** (9.4-18.4)	†	**12.5** (7.8-19.4)	**9.4** (8.0-11.1)

(Continued…)

	Erie St. Clair + Waterloo Wellington	Hamilton Niagara Haldimand Brant	Central West + Mississauga Halton	Toronto Central	Central	Central East	South East + Champlain	North Simcoe Muskoka	North East + North West	Ontario
(Student N) *(School N)*	*(222)* *(3)*	*(1,354)* *(23)*	*(263)* *(4)*	*(332)* *(5)*	*(1,230)* *(17)*	*(901)* *(14)*	*(800)* *(13)*	*(205)* *(3)*	*(1,076)* *(21)*	*(6383)* *(103)*
Fire Setting	**11.0** (7.8-15.3)	†	†	†	**9.3** (7.3-11.8)	**12.5** (9.6-16.1)	**15.6** (10.6-22.2)	**11.6** (6.1-20.9)	**10.7** (9.0-12.6)	**12.1** (9.7-15.0)
Carried a Weapon	**4.6** (3.1-6.9)	†	†	**4.4** (2.7-7.1)	**2.6*** (1.7-4.0)	**6.0** (3.8-9.3)	**8.2*** (4.7-14.0)	†	**7.4** (4.5-12.0)	**4.5** (3.4-6.1)
School Fight	**7.2** (5.4-9.6)	†	**11.2*** (9.2-13.6)	**9.4** (5.7-15.1)	**7.1** (5.0-9.8)	**6.3** (4.2-9.4)	**12.9*** (8.6-19.0)	†	**10.1** (6.3-15.8)	**8.4** (6.4-11.1)
Threatened/Injured with Weapon at School	†	†	**11.7*** (8.1-16.6)	†	**3.7*** (2.2-6.0)	**6.6** (4.1-10.4)	**6.7** (4.9-9.2)	**3.2*** (2.4-4.2)	**8.3** (4.7-14.3)	**6.8** (5.2-8.9)
Bullied Someone at School	**26.7*** (22.7-31.0)	**29.3** (15.7-47.9)	**12.5*** (8.1-19.0)	**19.6** (10.4-33.7)	**15.9*** (13.1-19.2)	**21.1** (14.9-29.1)	**23.8** (20.4-27.5)	**15.0*** (12.0-18.6)	**19.3** (13.1-27.5)	**21.6** (16.7-27.5)
Been Victim of Bullying at School	**24.1** (21.2-27.2)	**35.1**** (28.9-41.8)	**24.4** (17.2-33.5)	**18.3**** (14.2-23.4)	**25.0** (21.4-29.0)	**25.0** (18.6-32.8)	**31.7*** (26.0-37.9)	**23.0** (16.9-30.4)	**28.1** (21.5-35.8)	**27.5** (24.1-31.2)
Been Victim of Cyber-Bullying	**22.5** (20.8-24.3)	**27.6*** (21.6-34.6)	**21.0** (14.9-28.7)	**18.2** (10.9-28.8)	**14.8*** (11.4-18.9)	**22.3** (16.9-28.8)	**20.2** (14.8-27.0)	**22.1** (18.0-26.8)	**21.1** (16.6-26.4)	**21.8** (19.1-24.7)
1+ Gambling Activities	**35.1**** (32.9-37.3)	**43.7** (30.6-57.7)	**47.5**** (43.5-51.6)	**34.6** (25.9-44.4)	**43.4** (38.0-48.9)	**42.6** (37.9-47.6)	**43.6** (36.8-5.6)	**28.9**** (26.2-31.7)	**43.9** (38.5-49.5)	**41.8** (38.2-45.5)
Play Video Games Daily	**24.8** (18.4-32.5)	**27.4** (20.2-36.0)	**26.3** (15.7-40.7)	**19.1** (9.7-34.3)	**18.9** (15.9-22.4)	**22.1** (17.4-27.7)	**20.0** (15.3-25.8)	**16.4** (11.3-23.4)	**21.0** (16.2-26.8)	**23.0** (20.5-25.7)
Video Gaming Problem	**7.4** (4.2-12.8)	†	**18.6*** (11.0-29.8)	**8.9** (5.7-13.8)	**13.1** (11.4-15.0)	**15.9** (9.3-25.8)	**10.3** (7.2-14.4)	†	**7.6*** (5.6-10.2)	**12.9** (9.7-17.0)
3 or all 4 Co-Existing Problems	**11.3** (7.1-17.6)	**6.9*** (5.2-8.9)	†	**11.9** (7.9-17.6)	**6.0*** (4.6-7.7)	**8.4** (6.1-11.4)	**11.3** (7.5-16.6)	†	**13.7*** (9.5-19.4)	**9.0** (7.6-10.6)

Notes: (1) no secondary schools from the South West LHIN participated in the survey; (2) due to small sample sizes, the Erie St. Clair and the Waterloo Wellington LHINs were merged, the Central West and the Mississauga Halton LHINs were merged, the South East and the Champlain LHINs were merged, and the North West and the North East LHINs were merged; (3) see Table A1 for indicator definitions; (4) some of the indicators are based on a random half sample; (5) entries in brackets are 95% confidence intervals; (6) † estimate suppressed due to unreliability; (7) *p<.05, **p<.01 significant difference, LHIN area vs. Ontario.

Source: OSDUHS, Centre for Addiction & Mental Health

Summary

The Public Health Approach to Mental Health and Risk Behaviours

Designating mental health problems and risk behaviours as public health issues enables health professionals from various disciplines to work collaboratively on matters of prevention. Preventing problems from occurring, or reducing their risk, is preferable over treating problems, both on an individual and a societal level.

The OSDUHS performs several public health functions, including: identifying the pervasiveness of problem indicators among the student population; tracking changes over time; and identifying risk and protective factors. As well, the OSDUHS provides a knowledge base for designing prevention and health promotion programs; informing public health policy; evaluating the efficacy of a policy or program on a population level; and disseminating information to the public.

Encouraging Findings

There are many findings in this report that should be viewed as encouraging. Indeed, a large majority of Ontario students:

- get along very well with their parents;
- like school and report a positive school climate;
- rate their physical health and mental health as excellent or very good;
- are not overweight or obese;
- are satisfied with their weight;
- are not being bullied; and
- do not report internalizing indicators (e.g., symptoms of depression and anxiety) or externalizing behaviours (e.g., violence).

We also found some **improvements** over time:

- Antisocial behaviour has been decreasing over the past two decades. Indeed, fewer students today report behaviours such as vandalism, theft, breaking and entering, assaulting others, and weapon carrying than in the early 1990s.
- Gambling has declined over the past few years, and the proportion of students identifying difficulties due to their gambling also shows a downturn over the past decade.
- Male students show declines in bullying victimization, bullying perpetration, and fighting at school.

Public Health Concerns

Although the majority of students do not report a problem, a considerable minority report some form of impaired well-being or functioning. (See Figure 19 for an overview.)

About **one-in-three** students report:

- being bullied at school
- elevated distress
- gambling in the past year
- being injured in the past year

About **one-in-four** students:

- are classified as overweight or obese
- report that they do not always wear a seatbelt in a motor vehicle

About **one-in-five** students report:

- being cyber-bullied
- worry about being harmed at school
- hazardous/harmful drinking

About **one-in-six** to **one-in-seven** students report:

- fair/poor physical health
- fair/poor mental health
- a drug use problem

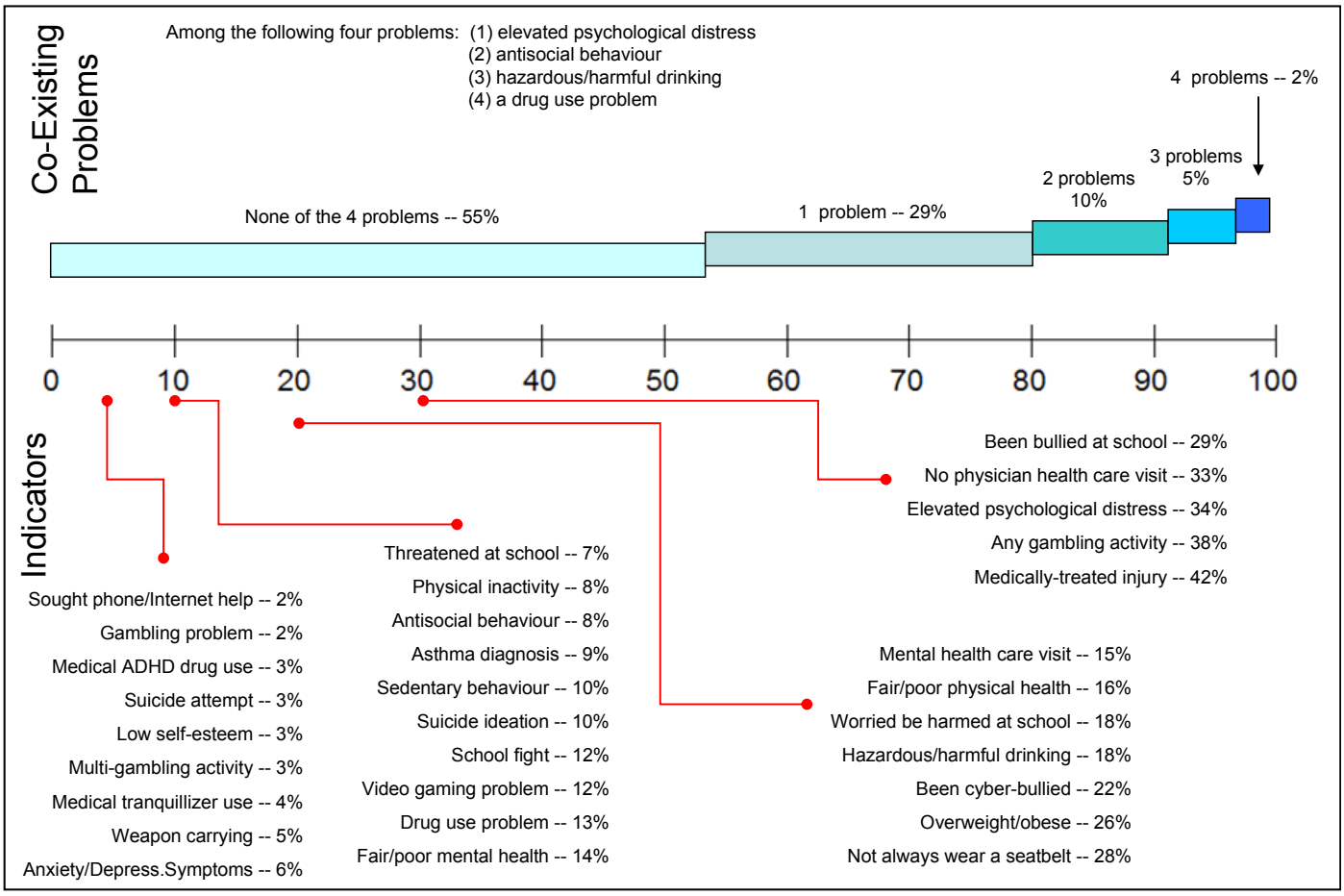
About **one-in-ten** students report:

- a video gaming problem
- fighting at school
- suicide ideation
- "screen time" sedentary behaviour
- antisocial behaviour
- physical inactivity

Some finding point to **concerning trends**:

- Students today are much more likely to rate their physical health as fair or poor than their counterparts two decades ago.
- Reports of injuries requiring treatment have increased over recent years.
- Students today are more likely to express worry about their safety in school than students in the past.
- Female students show increases in elevated distress and poor body image.

Figure 19.
Overview of Mental Health and Well-Being Indicators, 2011 OSDUHS (Grades 7–12)



Demographic Correlates

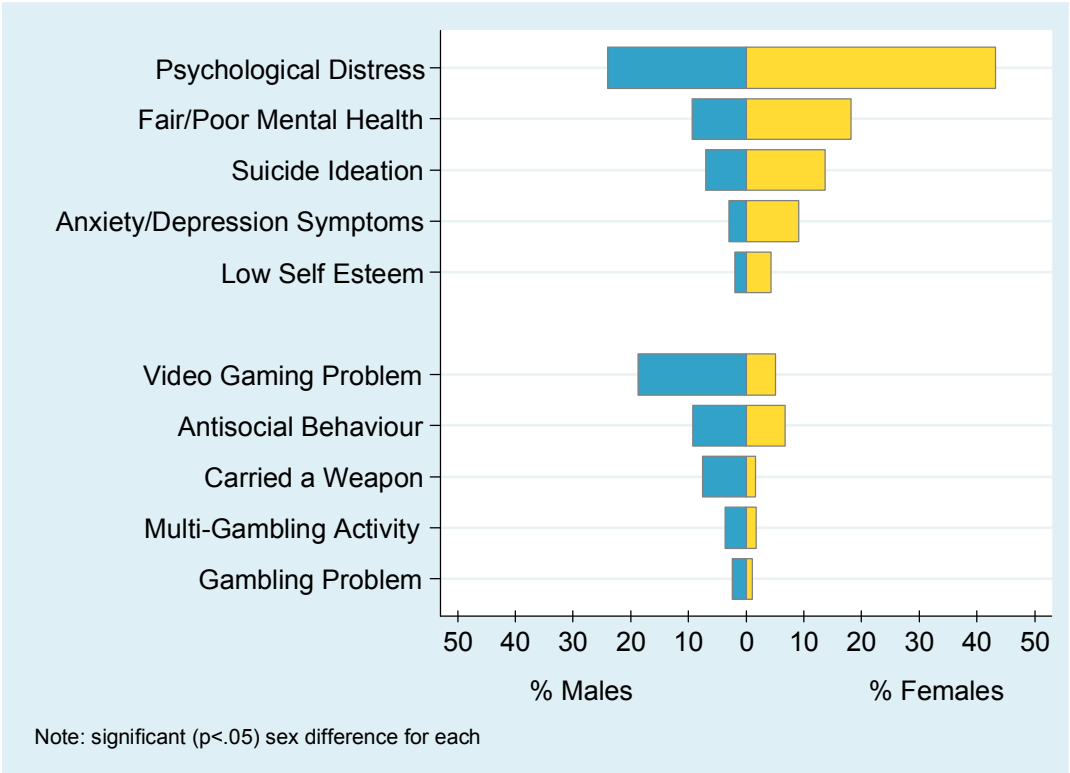
Our report found that mental health and well-being varies greatly by **sex**, even after controlling for grade and region. As seen in Figure 20, the general pattern shows that females are more likely to experience internalizing indicators (elevated psychological distress, suicide ideation), whereas males are more likely to exhibit risk or externalizing behaviours (such as antisocial behaviour, gambling).

Age/grade is also significantly related to mental health and well-being. Generally, poor physical health indicators (e.g., physical inactivity, sedentary behaviour, and injuries), internalizing indicators (e.g., fair/poor self-rated mental health, elevated distress), antisocial behaviour, gambling, and co-existing problems increase with grade. Bullying and fighting at school are more prevalent in the younger grades and tend to decline in later adolescence.

Only a few indicators in the report significantly differ according to **region**:

- Compared with the provincial average, **Toronto** students are more likely to express worry about being threatened or harmed at school, to be physically inactive, and to be screen time sedentary (that is, to report a high level of "screen time" daily). In contrast, Toronto students are less likely to report an injury requiring medical treatment, being bullied at school, and being cyber-bullied.
- Compared with the provincial average, **Northern Ontario** students are more likely to report an injury requiring medical treatment. Northern students are less likely to express worry about being threatened or harmed at school, and less likely to be physically inactive.
- Compared with the provincial average, **Western Ontario** students are more likely to report being cyber-bullied.
- Compared with the provincial average, **Eastern Ontario** students are less likely to rate their physical health as fair/poor, to be physically inactive, and to be screen time sedentary.

Figure 20.
Internalizing and Externalizing Indicators by Sex, 2011 OSDUHS (Grades 7–12)



Note: significant (p<.05) sex difference for each

Conclusion

The purpose of this OSDUHS report was to provide a snapshot of Ontario students' mental and physical well-being and to assess whether changes have occurred over time. A major strength of these data is that they are not based on a selective sample of adolescents already experiencing emotional or other difficulties – rather they are based on a large representative sample of the population. Consequently, our findings should be highly generalizable.

Our findings are consistent with many expectations of the adolescent stage of life. While most Ontario students are in good physical and mental health, a sizeable minority experience an array of functional impairments. Some mental health indicators, such as suicide ideation and elevated distress remain high. One-in-ten Ontario students (an estimated 103,800) report suicide ideation and one-in-twenty-five (about 28,000) report a suicide attempt. These large numbers should remind us of the vulnerability of this age group. Reports of bullying victimization at school have not declined despite the media and political attention this issue has recently received in Ontario. Cyber-bullying is a growing concern as electronic media become predominant in the lives of adolescents. This report showed that one-in-five students are cyber-bullied. Bullying victimization not only causes immediate adverse consequences, it can also have serious, enduring effects on mental health.

In the past, there has been a lack of focus and priority on adolescent mental health in Canada. However, this is shifting with the release of the recent Mental Health Strategy for Canada, which seeks to bring mental health issues "out of the shadows" and into the public health domain. One of the Strategy's priorities is to promote the mental health of children and adolescents. School-based prevention and treatment programs are an ideal way to reach this age group. Systematic reviews of school programs promoting mental health and reducing behavioural problems have found that universal programs can be effective if implemented with fidelity to the program, intensity, and a long-term commitment.

This report also presented some concerning findings about the physical health of Ontario students. We found continuing increases in self-rated fair/poor physical health and medically-treated injuries – in fact almost half of Ontario students report a treated injury in the past year. This is especially worrisome given that injuries are the leading cause of death among Canadian children and adolescents. Related to this, over one-in-four students do not always wear a seatbelt when riding in a vehicle. Our report also showed that the proportion of Ontario students who are overweight or obese remains elevated, at one-in-four. Continued and enhanced surveillance of these health indicators is clearly needed.

Our findings also showed some encouraging improvements in well-being over the past decade or so, in particular declines in antisocial behaviour, gambling, and gambling problems. Ongoing monitoring will assess whether these trends reflect more permanent changes or temporary fluctuations.

The OSDUHS focuses on a wide range of indicators that affect young people's health and well-being. The overarching goal of the study is to stimulate programs and policy that enable youth to experience optimal well-being. We hope the findings presented in this report – whether showing new concerns or long-term trends – help to raise awareness and to identify priority issues.

Please visit our website to see other OSDUHS reports: www.camh.ca/research/osduhs.aspx

Appendix Tables

Table A1. Definitions of Terms Used in the Report

Term	Definition
95% Confidence Interval (CI)	The 95% CI is interpreted as follows: the "true" population value would be expected within this range in 95 of 100 samples. Design-based CIs (presented here) also account for the characteristics of the complex sampling design.
Fair/Poor Self-Rated Physical Health	Rating one's physical health as either "fair" or "poor"
Daily Physical Activity	Reporting 7 days of physical activity (defined as a total of at least 60 minutes of activity per day) during the 7 days before the survey
Physically Inactive	Reporting no days of physical activity (defined as a total of at least 60 minutes of activity per day) during the 7 days before the survey
"Screen Time" Sedentary Behaviour	Reporting watching TV and/or on a computer for 7 hours or more per day, on average, during the 7 days before the survey
Overweight or Obese	Exceeding the age-and-sex-specific body mass index (BMI) cut-off values as established for children and adolescents and recommended by the International Obesity Task Force, based on self-reported height and weight
Asthma Diagnosis	Reporting currently having asthma, as diagnosed by a doctor or nurse. Those who reported "not sure" remained in the analysis and were classified as "no diagnosis."
No Physician Health Care Visit	Reporting no visits to a doctor for physical health reasons, not even for a check-up, during the 12 months before the survey
Mental Health Care Visit	Reporting at least one visit to a doctor, nurse, or counsellor for emotional or mental health reasons during the 12 months before the survey
Medical Drug Use	Reporting use of a prescription drug with a doctor's prescription at least once in the 12 months before the survey
Fair/Poor Self-Rated Mental Health	Rating one's mental or emotional health as either "fair" or "poor"
Low Self-Esteem	Reporting positively (low esteem) to all 5 of 5 items selected from the Rosenberg Self-Esteem Scale
Elevated Psychological Distress	Reporting experiencing at least 3 of the 12 symptoms on the General Health Questionnaire (GHQ). The GHQ measures symptoms of anxiety, depression, and social dysfunction during the few weeks before the survey.
Suicide Ideation	Reporting having seriously considered suicide during the 12 months before the survey
Antisocial Behaviour	Reporting at least 3 of the following 9 antisocial behaviours in the 12 months before the survey: vandalized property, theft of goods worth less than $50, theft of goods worth $50 or more, stole a car/joyriding, break and entering, sold cannabis, ran away from home, assaulted someone (not a sibling), and carried a weapon
Fire Setting Behaviour	Reporting setting something on fire (that they were not supposed to) at least once during the 12 months before the survey
Carried a Weapon	Reporting carrying a weapon, such as a gun, knife, or club, at least once during the 12 months before the survey
Bullying Victim (at School)	Reporting being bullied at school since September in any one of the following manners: verbally, physically, or being a victim of theft/vandalism
Bully Perpetrator (at School)	Reporting bullying others at school since September in any one of the following manners: verbally, physically, or stealing/damaging something of theirs
Cyber-Bullying Victim	Reporting being bullied over the Internet at least once during the 12 months before the survey. Those who reported that they did not use the Internet remained in the analysis and were classified as "not bullied."
Any Gambling Activity	Reporting gambling money at 1 or more of 10 gambling activities during the 12 months before the survey
Multi-Gambling Activity	Reporting gambling money at 5 or more of 10 gambling activities during the 12 months before the survey
Gambling Problem	Reporting at least 2 of 6 items selected from the South-Oaks Gambling Screen Revised for Adolescents (SOGS-RA), which measures problems due to gambling during the 12 months before the survey
Video Gaming Problem	Reporting at least 5 of the 9 items on the Problem Video Playing (PVP) scale, which measures problems with preoccupation, tolerance, and disruption to school/family due to video gaming during the 12 months before the survey

Note: Please see the 2011 OSDUHS detailed mental health and well-being report for specific details and references associated with the scales and screeners used. It is available in PDF format at www.camh.ca/research/osduhs.aspx.

Table A2. Percentage Reporting Selected Mental Health and Well-Being Indicators by Sex, 2011 OSDUHS (Grades 7–12)

Indicator	Total %	(95% CI)	Estimated Number†	Males %	Females %	
fair/poor self-rated physical health	**15.6**	(14.2-17.1)	155,100	12.2	19.2	*
asthma diagnosis (current)	**8.9**	(7.0-11.3)	86,700	6.1	12.1	*
no physician health care visit (past year)	**32.7**	(30.4-35.0)	305,900	36.1	28.9	*
physically inactive (no days of activity in past week)	**8.4**	(7.4-9.6)	83,600	8.9	7.9	
sedentary behaviour (7+ hours of screen time daily)	**10.2**	(8.7-11.8)	97,100	11.9	8.3	*
overweight or obese	**25.5**	(23.2-28.0)	245,600	29.5	21.3	*
medically-treated injury (past year)	**41.9**	(39.4-44.4)	402,800	44.2	39.3	*
not always wear a seatbelt when in motor vehicle	**28.4**	(25.9-31.0)	280,100	28.8	27.8	
vehicle collision as a driver (*among drivers*)	**9.8**	(7.0-13.5)	30,200	10.6	8.7	
mental health care visit (past year)	**15.1**	(12.8-17.6)	154,100	11.1	19.2	*
sought counselling over phone or Internet (past year)	**2.1**	(1.6-2.9)	21,500	1.7	2.5	
used tranquillizers/sedatives medically (past year)	**3.6**	(2.9-4.3)	35,700	3.0	4.2	
used an ADHD drug medically (past year)	**2.5**	(2.1-3.1)	25,500	3.0	2.1	
prescribed medication for depression/anxiety/both	**3.3**	(2.4-4.4)	33,400	2.2	4.4	*
fair/poor self-rated mental health	**13.7**	(12.2-15.7)	138,300	9.4	18.2	*
low self-esteem	**3.1**	(2.4-4.0)	30,100	2.0	4.3	*
elevated psychological distress (past few weeks)	**33.5**	(31.0-36.1)	341,200	24.0	43.2	*
symptoms of anxiety/depression (past few weeks)	**6.0**	(4.6-7.9)	61,100	3.0	9.1	*
suicide ideation (past year)	**10.3**	(9.0-11.8)	103,800	7.0	13.7	*
suicide attempt (past year)	**2.8**	(2.1-3.6)	28,000	1.6	4.0	*
antisocial behaviour (3+/9 behaviours in past year)	**8.0**	(6.9-9.3)	78,700	9.2	6.8	*
carried a weapon (past year)	**4.6**	(3.6-5.8)	44,300	7.6	1.6	*
fought at school (past year)	**11.9**	(9.9-14.2)	115,900	17.4	6.4	*
threatened/injured with weapon at school (past year)	**6.5**	(5.2-8.0)	65,100	7.4	5.5	
worried be harmed or threatened at school	**18.2**	(16.4-20.2)	183,700	16.8	19.7	*
bullied others at school (since September)	**20.7**	(16.9-25.2)	208,000	18.6	22.8	
been bullied at school (since September)	**28.6**	(25.8-31.5)	288,000	25.8	31.3	*
been cyber-bullied (past year)	**21.6**	(19.5-24.0)	217,500	15.2	28.0	*
any gambling activity (1+/10 activities in past year)	**38.4**	(35.6-41.2)	380,200	47.3	29.5	*
multi-gambling activity (5+/10 activities in past year)	**2.7**	(1.9-3.7)	26,300	3.6	1.7	*
gambling problem (past year)	**1.7**	(1.2-2.5)	17,300	2.4	1.0	*
video gaming problem (past year)	**11.9**	(9.4-14.9)	119,800	18.7	5.1	*
3 or all 4 co-existing problems††	**6.9**	(5.8-8.1)	70,300	6.2	7.5	

Notes: the survey sample size was 9,288 students; CI is the confidence interval; medical drug use refers to use with a prescription; † the estimated number of students is based on a student population of about 1,009,900 in Ontario (numbers have been rounded down); * indicates a significant sex difference ($p<.05$) not controlling for other factors; †† among the four problem indicators: elevated psychological distress, antisocial behaviour, hazardous/harmful drinking, and drug use problem.

Table A3. Percentage Reporting Selected Mental Health and Well-Being Indicators by Grade, 2011 OSDUHS

Indicator	G7	G8	G9	G10	G11	G12	
fair/poor self-rated physical health	6.2	10.2	11.4	18.3	22.3	19.8	*
asthma diagnosis (current)	6.3	9.1	9.0	11.5	8.3	8.8	
no physician health care visit (past year)	33.4	34.7	31.2	30.8	34.9	31.9	
physically inactive (no days of activity in past week)	7.9	6.5	6.2	7.4	10.6	10.4	*
sedentary behaviour (7+ hours of screen time daily)	4.4	8.8	9.1	12.7	11.5	11.8	*
overweight or obese	19.7	20.9	27.2	27.7	28.7	25.9	*
medically-treated injury (past year)	34.9	41.0	43.2	45.7	38.5	44.8	
not always wear a seatbelt when in motor vehicle	19.8	27.8	35.3	30.8	29.0	26.3	
mental health care visit (past year)	13.0	13.9	12.1	16.6	17.6	14.9	
sought counselling over phone or Internet (past year)	s	1.8	2.6	1.8	s	1.3	
used tranquillizers/sedatives medically (past year)	1.3	2.2	2.7	4.5	4.9	4.6	*
used an ADHD drug medically (past year)	3.1	3.2	3.0	3.5	s	1.4	
prescribed medication for depression/anxiety/both	s	s	s	s	s	3.8	*
fair/poor self-rated mental health	7.7	10.1	12.6	17.3	14.7	16.5	*
low self-esteem	s	2.7	2.4	4.0	s	2.2	
elevated psychological distress (past few weeks)	20.9	25.2	29.7	35.2	40.6	41.2	*
symptoms of anxiety/depression (past few weeks)	s	3.0	6.1	7.8	8.9	5.6	*
suicide ideation (past year)	7.2	8.1	10.1	12.4	14.0	9.0	*
suicide attempt (past year)	s	s	2.5	3.7	2.3	3.8	
antisocial behaviour (3+/9 behaviours in past year)	2.5	4.7	5.3	8.9	13.1	10.2	*
carried a weapon (past year)	3.1	6.0	3.7	4.6	6.8	3.5	
fought at school (past year)	24.1	20.8	9.8	9.1	7.9	7.4	*
threatened/injured with weapon at school (past year)	6.5	4.4	8.1	8.0	5.0	6.5	
worried be harmed or threatened at school	21.7	18.9	19.7	19.7	14.5	16.4	*
bullied others at school (since September)	13.9	22.1	21.4	24.9	22.3	18.7	
been bullied at school (since September)	30.4	32.7	30.5	33.0	27.1	21.5	*
been cyber-bullied (past year)	19.8	22.5	24.6	20.7	24.4	18.4	
any gambling activity (1+/10 activities in past year)	25.2	30.2	33.5	41.1	42.9	47.6	*
multi-gambling activity (5+/10 activities in past year)	s	s	s	s	5.6	2.4	*
gambling problem (past year)	s	s	s	s	s	2.2	
video gaming problem (past year)	8.7	9.0	9.2	11.9	12.5	16.9	
3 or all 4 co-existing problems[†]	s	s	4.0	7.1	11.8	11.9	*

Notes: * indicates a significant grade difference (p<.05) not controlling for other factors; 's' indicates estimate suppressed due to unreliability; medical drug use refers to use with a prescription; [†]among the four problem indicators: elevated psychological distress, antisocial behaviour, hazardous/harmful drinking, and drug use problem.

Table A4. Percentage Reporting Selected Mental Health and Well-Being Indicators by Region, 2011 OSDUHS (Grades 7–12)

Indicator	Toronto	North	West	East	
fair/poor self-rated physical health	17.9	14.4	16.5	13.4	*
asthma diagnosis (current)	6.5	10.4	9.6	9.1	
no physician health care visit (past year)	31.2	40.7	33.2	31.5	
physically inactive (no days of activity in past week)	13.0	6.8	8.0	6.8	*
sedentary behaviour (7+ hours of screen time daily)	13.8	8.8	10.3	8.3	*
overweight or obese	26.4	27.9	26.1	24.1	
medically-treated injury (past year)	34.6	49.3	43.6	42.3	*
not always wear a seatbelt when in motor vehicle	28.6	26.4	29.6	27.0	
vehicle collision as a driver (*among drivers*)	8.4	13.8	11.4	7.6	
mental health care visit (past year)	13.3	16.5	16.4	13.8	
sought counselling over phone or Internet (past year)	2.9	2.8	s	3.4	
used tranquillizers/sedatives medically (past year)	2.0	4.3	3.8	4.0	
used an ADHD drug medically (past year)	2.0	3.0	2.6	2.7	
prescribed medication for depression/anxiety/both	2.2	4.1	3.6	3.3	
fair/poor self-rated mental health	14.7	14.2	13.2	13.9	
low self-esteem	3.5	3.5	3.1	2.8	
elevated psychological distress (past few weeks)	38.0	31.6	32.2	33.5	
symptoms of anxiety/depression (past few weeks)	8.1	3.7	5.8	5.6	
suicide ideation (past year)	9.7	7.8	9.9	11.5	
suicide attempt (past year)	s	s	2.7	3.5	
antisocial behaviour (3+/9 behaviours in past year)	7.5	10.4	7.6	8.4	
carried a weapon (past year)	4.6	7.0	3.9	5.0	
fought at school (past year)	13.1	13.8	11.5	11.5	
threatened/injured with weapon at school (past year)	7.7	8.0	7.1	4.9	
worried be harmed or threatened at school	21.3	14.4	19.4	15.7	*
bullied others at school (since September)	17.3	19.6	22.8	19.8	
been bullied at school (since September)	21.6	29.2	30.6	29.2	*
been cyber-bullied (past year)	17.2	21.3	24.6	19.9	*
any gambling activity (1+/10 activities in past year)	34.7	40.3	39.4	38.4	
multi-gambling activity (5+/10 activities in past year)	s	4.1	2.6	2.9	
gambling problem (past year)	3.4	1.7	s	1.7	
video gaming problem (past year)	14.6	7.4	12.3	10.7	
3 or all 4 co-existing problems[†]	5.2	10.5	6.6	7.4	

Notes: * indicates a significant region difference (p<.05) not controlling for other factors; 's' indicates estimate suppressed due to unreliability; medical drug use refers to use with a prescription; [†]among the four problem indicators: elevated psychological distress, antisocial behaviour, hazardous/harmful drinking, and drug use problem.

Table A5. Overview of Trends for Selected Mental Health and Well-Being Indicators Among the Total Sample of Students, OSDUHS

Indicator	Among Grades	Period	Change
% fair/poor self-rated physical health	7, 9, 11	1991-2011	Increased from 6% to 14%
% physically inactive	7–12	2009-2011	Stable
% sedentary behaviour (7+ hours daily)	7–12	2009-2011	Stable
% overweight/obese	7–12	2009-2011	Stable
% no physician health care visit (past year)	7–12	1999-2011	Stable
% medically-treated injury	7–12	2003-2011	Increased from 35% to 42%
% 1+ mental health care visit (past year)	7–12	1999-2011	Increased from 12% in 1999 to 24% in 2009 and declined to 15% in 2011
% medical use of ADHD prescription drugs	7–12	2007-2011	Stable
% fair/poor self-rated mental health	7–12	2007-2011	Stable
% elevated psychological distress	7–12	1999-2011	Stable
% symptoms of anxiety/depression	7–12	1999-2011	Stable
% suicide ideation (past year)	7–12	2001-2011	Stable
% suicide attempt (past year)	7–12	2007-2011	Stable
% antisocial behaviour (past year)	7, 9, 11	1993-2011	Decreased from 16% to 8%
% carried a weapon (past year)	7, 9, 11	1993-2011	Decreased from 16% to 5%
% fighting at school (past year)	7–12	2001-2011	Decreased from 17% to 12%
% threatened/injured with a weapon at school	7–12	2003-2011	Stable
% worried be threatened/harmed at school	7–12	1999-2011	Stable between 1999 (14%) and 2009 (12%) and increased in 2011 (18%)
% been bullied at school (since September)	7–12	2003-2011	Stable
% any Internet gambling (past year)	7–12	2003-2011	Stable
% any gambling activity (past year)	7–12	2003-2011	Decreased from 57% to 38%
% multi-gambling activity (past year)	7–12	2003-2011	Decreased from 6% to 3%
% gambling problem (past year)	7–12	1999-2011	Decreased from 7% to 2%
% video gaming problem (past year)	7–12	2007-2011	Stable
% 3 or all 4 co-existing problems[†]	7–12	1999-2011	Decreased from 10% to 7%

Notes: the changes presented are based on the total sample of students in the grades shown; subgroup changes are not presented.
[†]among the four problem indicators: elevated psychological distress, antisocial behaviour, hazardous/harmful drinking, and drug use problem.

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