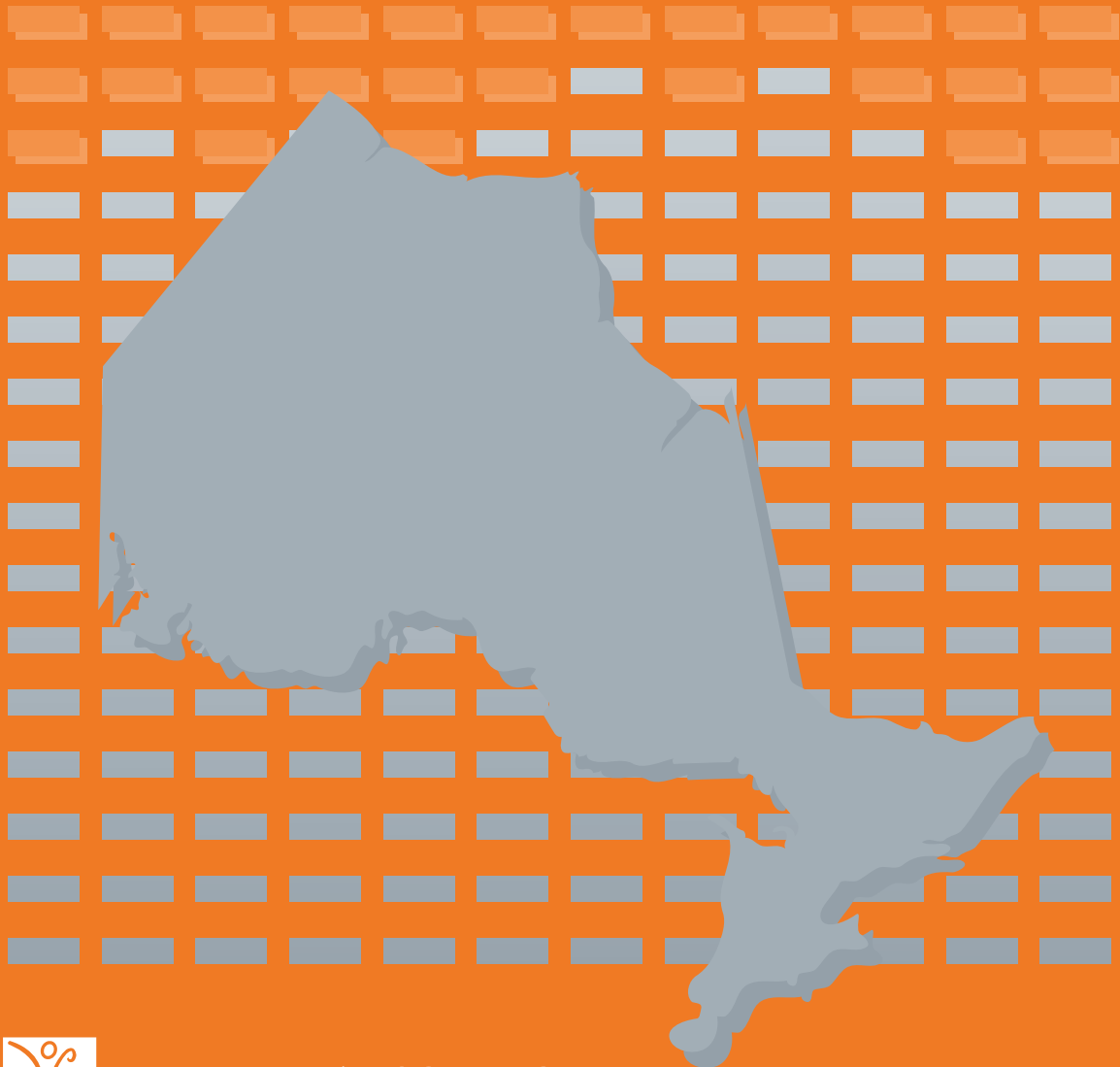


The Mental Health and Well-Being of Ontario Students 1991- 2009



camh

Centre for Addiction and Mental Health
Centre de toxicomanie et de santé mentale

OSDUHS

Ontario Student Drug Use
and Health Survey

OSDUHS HIGHLIGHTS

The Mental Health and Well-Being of Ontario Students 1991-2009

CAMH RESEARCH DOCUMENT SERIES
No. 30

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Centre for Addiction and Mental Health
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A Pan American Health Organization /
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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.

Most importantly, the high level of cooperation by Ontario school boards, school board research ethics committees, school principals, parents and students has played a major role in ensuring the representativeness and success of this project. We gratefully acknowledge the support of all.

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INTRODUCTION

The purpose of the Ontario Student Drug Use and Health Survey (OSDUHS) is to identify epidemiological trends in student substance use, mental health, physical health, and risk behaviours, as well as identifying risk and protective factors. The OSDUHS, now spanning over 30 years, is the longest ongoing study of a youthful population in Canada, and the second-longest in North America.

In this Highlights Report, we summarize current physical and mental health indicators and risky behaviour among Ontario students enrolled in grades 7 to 12, using data from the 2009 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 depression and low self-esteem. By 'externalizing indicators' we mean overt risky behaviours such as aggression. Also presented are trend data spanning back to 1991, where possible. New indicators in this report include estimates of overweight and obese students, and sedentary behaviour (also called "screen time").

It is important to note that the mental health indicators in the OSDUHS generally assess moderate functional impairment, rather than psychiatric disorders based on clinical criteria. Restricting attention to those experiencing current psychiatric disorders would underestimate the extent of mental health problems, since a sizeable percentage experience impaired functioning without meeting the clinical criteria for a diagnosis. Moreover, restricting attention to psychiatric disorders would overlook the fact that mental well-being exists as a continuum, spanning optimum mental health to mental illness to severe disorders. Further, monitoring broad mental health indicators provides more useful information 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, 1991-2009: Detailed OSDUHS Findings* (available in PDF format at: www.camh.net/research/osdus.html). The 2009 OSDUHS drug use report is also available on the website.

History of the OSDUHS

The OSDUHS is the longest ongoing school survey in Canada, and the second-longest in North America. 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 Reginald Smart, four surveys from 1968 to 1974 monitored the extent of alcohol, tobacco and other drug use among Toronto students in grades 7, 9, 11 and 13. In 1977, the study was expanded to include students throughout the province of Ontario. In 1999, the study was again expanded to include students in grades 7 through to 13 (OAC). Starting in 2003, the study excluded grade 13 (because it was eliminated in the province of Ontario), and increased the number of classes surveyed in secondary schools.

Since 1977, the study has surveyed thousands of students every two years and, to date, has surveyed over 80,000 students in Ontario.

During the 1990s, the content of the OSDUHS was expanded to include an array of health measures, in addition to substance use. Expanded areas of study include mental well-being, physical health, and health care utilization.

METHOD

Sampling Design

For all OSDUHS surveys, the target population is all students enrolled in the public and Catholic school systems. Thus, it excludes those enrolled in private schools, special education classes, those institutionalized for correctional or health reasons, those on Indian reserves and Canadian Forces bases, and those in the far northern regions of Ontario (a total of about 7% of Ontario students). The 2009 OSDUHS employed a stratified (region and school type) two-stage (school, class) cluster sample design, and over-sampled schools in northern Ontario and in six public health regions. Since 1981, this survey has been administered in schools by staff at the Institute for Social Research (ISR), York University.

School Selection

The 2009 school sample is based on a longitudinal sample commencing in 2001. The school sample selection occurred as follows:

- a) To select the initial 2001 sample, schools were drawn from Ontario's Ministry of Education and Training's enrolment data, and were stratified according to the four design regions.
- b) Within each regional stratum, 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 have a greater probability of being selected). The schools that participated in 2001 were invited to participate in cycles since then, including the 2009 cycle. In addition, in 2009 new schools were also selected for specific public health region over-samples.
- c) If a selected school could not participate, or if it had closed, a replacement school from the same region was selected. The sampling frame for new schools and replacement schools was based on the Ministry of Education and Training's 2006/2007 enrolment data (most recently available).

Class Selection

Within each school, classes were randomly selected by ISR. 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). All students in the selected classes were eligible to be surveyed. Special education classes, English as a Second Language (ESL) classes, and classes in which there were fewer than five students were excluded from selection. If a selected class was unable to participate, a replacement class was randomly selected whenever possible.

Procedure

All participating schools were sent copies of the active parental consent form in advance of the survey date. Only those students who returned a signed consent form could participate. The survey was administered by trained ISR field staff in the classrooms between November 2008 and June 2009. 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 32 minutes.

Sample

The final sample size in 2009 was 9,112 students in grades 7 to 12 (65% of selected students) from 47 school boards, 181 schools and 573 classes. This sample represents about 1,023,900 Ontario students in grades 7 to 12. All survey estimates were weighted, and variance and statistical tests were corrected for the sampling design.

Survey Design Regions

This report describes regional differences according to the following four regions: 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 Climate

Students 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.
- Most teachers in my school are excellent.
- Most classes offered in my school are challenging.
- I feel safe in my school.

In addition, students were asked “*At school, how worried are you that someone will harm you, threaten you, or take something from you?*” (response options: very worried, somewhat worried, not very worried, not worried at all). We present the percentage responding that they are either ‘very worried’ or ‘somewhat worried’.

School Attachment

● A majority of students feel close to people at their school (89%), and feel like they are part of their school (86%).

Academic Rating

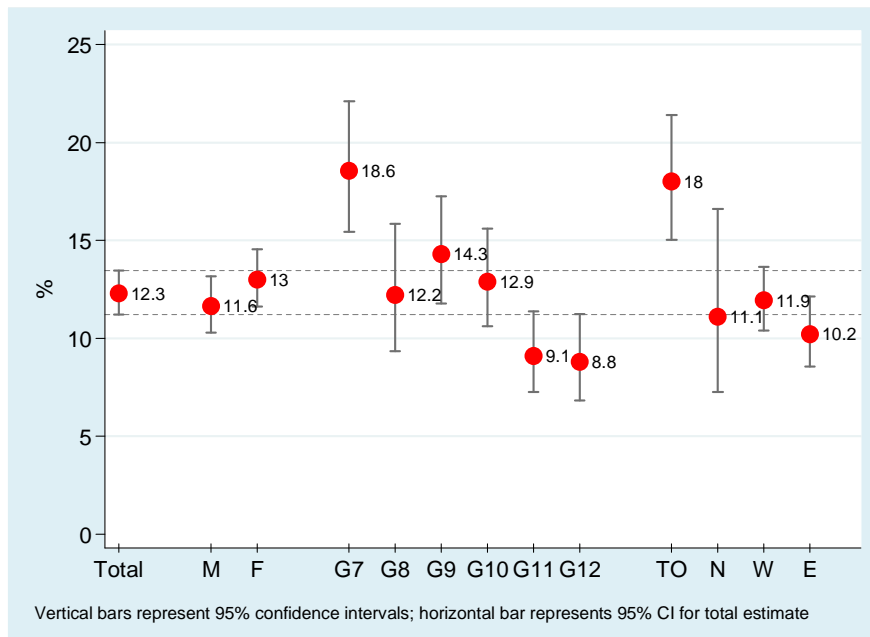
● Overall, 82% of students rate their teachers as excellent, and 72% feel that the classes offered are challenging.

School Safety

● An overwhelming majority (94%) of students feel safe in their school. However, 12% (95% CI: 11%-14%)* are worried about being harmed or threatened at school. This percentage represents about 125,000 students in Ontario.

● Males (12%) and females (13%) are equally likely to be worried about their personal safety at school. Younger students are more likely to be worried than older students (e.g., 19% of 7th-graders vs 9% of 12th-graders). There is a significant regional effect, with students in Toronto (18%) most likely to report being worried about being harmed or threatened at school, compared with students in the other three regions (10%-12%).

Figure 1. Percentage Reporting They Are “Very Worried” or “Somewhat Worried” About Being Harmed or Threatened at School by Sex, Grade and Region, 2009 OSDUHS



* 95% CI is the confidence interval around the estimate, i.e., the probable range in the total population.

Physical Health

Self-Rated Physical Health

One of the more frequently used measures of a person's current physical health is perceived or self-rated health. Despite its simplicity, this global assessment of health has been shown to be a reliable measure and a valid predictor of physical health and emotional well-being among adolescents.

Self-rated health was measured with the question: "*How would you rate your physical health?*" The response options are: poor, fair, good, very good, or excellent. We use the term "poor health" to reflect responses of poor or fair.

- Over half of students perceive their health as excellent (21%) or very good (32%). At the risk end, about one-in-seven (14%; 95% CI: 13%-16%) report poor health. This estimate represents about 146,000 Ontario students who rate their health as poor.
- Females are statistically significantly more likely than males to report poor health (18% vs. 11%, respectively).
- Poor health significantly increases with grade: 7th-graders (6%) are the least likely to report poor health, whereas 12th-graders (20%) are the most likely.
- Reports of poor health significantly vary by region: students in the Eastern region (12%) are least likely to report poor health, whereas students in Toronto (18%) are most likely.

Daily Physical Activity

The OSDUHS asked students about physical activity during the seven days before the survey. For the first time in 2009, 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." In this section, we present the percentage of students who reported this level of activity on all seven days.

- About 21% (95% CI: 20%-22%) report being physically active on a daily basis.
- Males (26%) are significantly more likely than females (15%) to be active daily.
- Daily physical activity significantly decreases as grade increases, from a high of 28% among 7th-graders to a low of 14% among 12th-graders.
- There are no significant regional differences.

Physical Inactivity

This section presents the percentage of students who reported no days of physical activity (defined as at least 60 minutes in total per day) during the seven days before the survey.

- About one-in-twelve (8.5%; 95% CI: 8%-10%) students was not physically active on at least one day during the seven days before the survey. This estimate represents about 85,000 Ontario students.
- Males (8%) and females (9%) are equally likely to be inactive.
- Students in grade 12 (11%) are significantly more likely to be inactive compared with the younger grades (about 7%-8%).
- Students in Toronto (11%) are most likely to be inactive compared with students in the other three regions (about 7%-8%).

Physical Inactivity at School

Students were also asked about physical activity 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?*” In this section we present the percentage of students 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 were coded as no days of activity).

- Almost half (46%; 95% CI: 43%-48%) of all students are not physically active at school.
- Females are significantly more likely than males to be inactive at school (49% vs 42%, respectively).
- Inactivity at school significantly varies by grade, ranging from 13%-15% among 7th- and 8th-graders up to 66% among 12th-graders.
- There are no significant regional differences.

Sedentary Behaviour (“Screen Time”)

For the first time in 2009, 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?*” We present the percentage who reported that they spent seven or more hours a day, on average, either watching TV or at a computer.

- About 10% (95% CI: 9%-11%) of students spend at least seven hours a day in front of a TV or computer. This percentage represents about 93,000 Ontario students.
- Males (11%) are significantly more likely than females (8%) to spend at least seven hours a day in front of a TV or computer daily.

- There is significant variation by grade, with 11th- and 12th-graders (about 13%) most likely to report at least seven hours of screen time daily.
- Among the four regions, Toronto students (14%) are most likely to be sedentary.

Overweight/Obese

Students were asked to report their current height and weight, using closed-ended response options. From these responses, body mass index (BMI) was calculated as weight in kilograms divided by height in metres squared. Students without valid height and weight responses (n=537, or 5% 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-and-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.

- Among the total sample, 18% (95% CI: 17%-19%) are considered to be overweight, while 7% (95% CI: 6%-8%) are considered obese. Putting the two together, 25% (95% CI: 24%-27%) of students are either overweight or obese. This percentage represents about 246,000 students in Ontario.
- Males (30%) are significantly more likely than females (20%) to be overweight or obese.
- There are no significant differences among the grades with respect to the proportion overweight or obese.
- Students in the North (31%) are significantly more likely to be overweight or obese compared with students in the other three regions (about 24%-26%).

Figure 2.
Percentage Estimated to be Normal Weight, Overweight, and Obese, 2009 OSDUHS
(Grades 7 to 12)

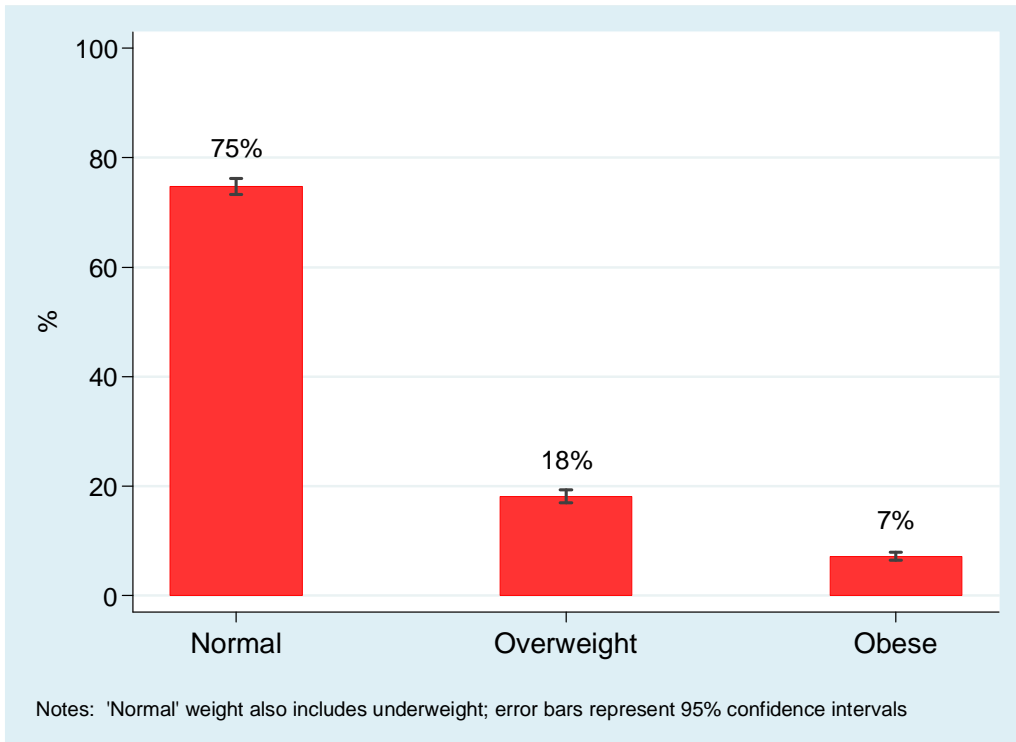
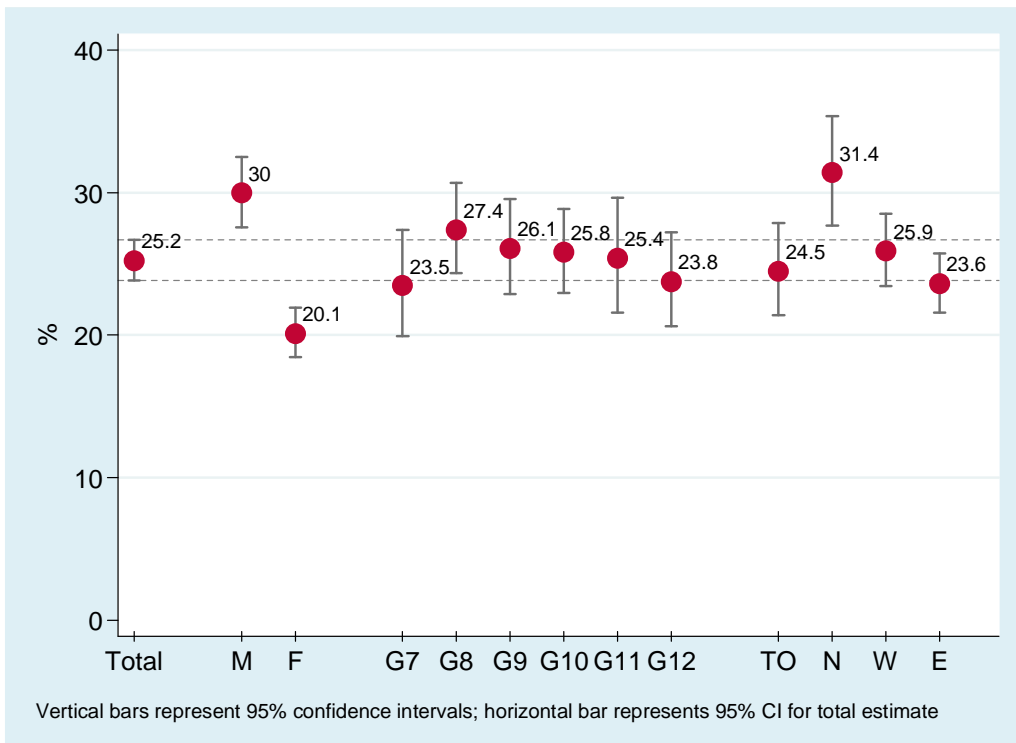


Figure 3.
Percentage Overweight or Obese by Sex, Grade, and Region, 2009 OSDUHS
(Grades 7 to 12)



Health Care Utilization

Physical Health Doctor 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?*” In this section, we present the proportion of students who reported not visiting a doctor in the past 12 months.

- Among the total sample, 34% (95% CI: 31%-36%) did not see a doctor, not even for a check-up, in the past year. This estimate represents about 306,000 students.
- Males (39%) are significantly more likely than females (27%) to report no doctor visits.
- There are no significant differences among the grades, or among the regions.

- About 40% (95% CI: 38%-42%) of students were treated for an injury at least once in the past year. This represents about 386,000 students in Ontario. More specifically, 23% were treated just once, 10% were treated twice, 4% were treated three times, and 3% were treated four or more times.
- Males (43%) are significantly more likely than females (38%) to report being treated for an injury at least once in the past year.
- There is no significant grade variation.
- There is significant regional variation, with students in the East (43%) most likely to report being treated for an injury.

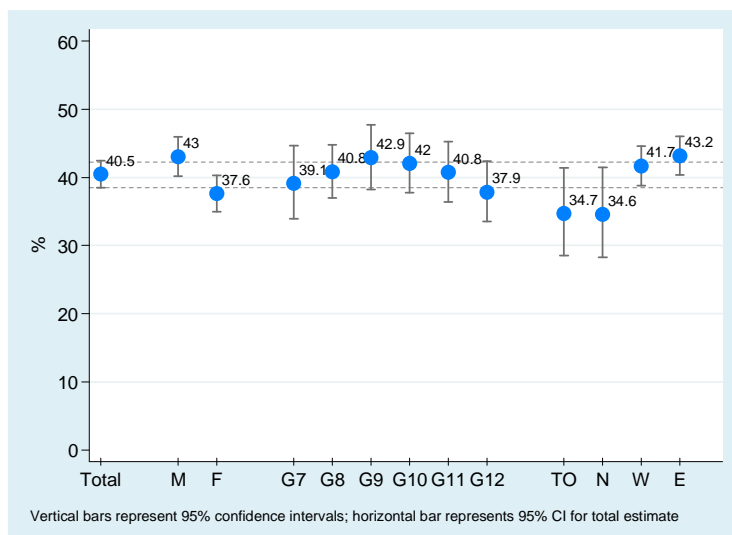
Treated for a Physical Injury

Students were asked about physical injuries during the past 12 months. The question was: “*In the last 12 months, how many times were you hurt or injured, and had to be treated by a doctor or nurse?*” Response options were: not treated for an injury in the last 12 months, one time, two times, three times, four or more times.

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

- About 3% (95% CI: 2%-4%) of students used an ADHD drug with a prescription in the past year. This percentage represents about 28,000 students in Ontario.
- Males are significantly more likely than females to report using an ADHD drug medically (4% vs 1%, respectively).
- There are no significant differences among the grades, or among the regions.

Figure 4. Percentage Reporting Being Treated for a Physical Injury at Least Once During the Past Year by Sex, Grade, and Region, 2009 OSDUHS (Grades 7 to 12)



Mental Health Professional Visit

Students were asked whether they had consulted a professional about a mental health issue in the past year: “*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 visit in the past year.

- Among the total sample 24% (95% CI: 22%-26%) report visiting a professional for a mental health issue at least once in the past year. This estimate represents about 253,000 students in Ontario.
- Females (26%) and males (22%) are equally likely to report a mental health visit.
- There are no significant differences among the grades, or among the regions.

Prescription Medication to Treat Anxiety or Depression

Students were asked about prescription medication for anxiety or depression: “*In the last 12 months, have you been prescribed medicine to treat anxiety or depression?*” The four response options were: yes for anxiety only, yes for depression only, yes for both, no.

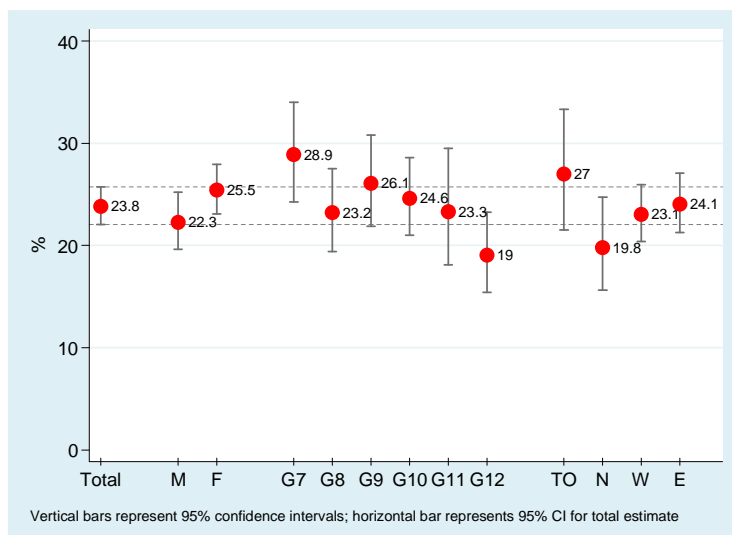
- About 3% (95% CI: 3%-4%) report they were prescribed medication to treat anxiety, depression, or both of these problems. This percentage represents about 34,000 students in Ontario.
- There is no significant difference between males and females.
- The likelihood of being prescribed medication to treat anxiety/depression significantly increases with grade, peaking among 12th-graders at 5%.
- There is no significant regional variation.

Use of a Telephone Crisis Helpline

Students were asked whether they have used any telephone crisis helpline. Specifically, the question was: “*In the last 12 months, have you phoned any telephone crisis helpline (for example, Kids Help Phone) because you needed to talk to someone about a problem?*” Response options were yes or no.

- Two percent (95% CI: 1%-3%) of students report using a crisis helpline to discuss a problem during the past year. This percentage represents about 20,000 students across Ontario.
- Females are more likely than males to use a crisis helpline (3% vs 1%, respectively).
- There are no significant grade or region differences in the use of a crisis helpline.

Figure 5.
Percentage Reporting at Least One Mental Health Care Visit During the Past Year by Sex, Grade and Region, 2009 OSDUHS



Internalizing Indicators

Internalizing mental health indicators are emotional states or psychological traits that can adversely affect all life areas. Some examples include low self-esteem, depression and anxiety.

Self-Rated Mental Health

Students were asked to rate their mental health using the question: “How would you rate your emotional or mental health?” Response options were: poor, fair, good, very good, excellent. We use the term “poor mental health” to reflect responses of poor or fair.

- About 12% (95% CI: 10%-13%) of students report poor mental health. This estimate represents about 122,000 students in Ontario.
- Females (15%) are significantly more likely than males (8%) to rate their mental health as poor.
- Reports of poor mental health significantly increase with grade, ranging from a low of 7% among 7th-graders to a high of 15% among 12th-graders.
- There is no significant regional variation.

Low Self-Esteem

Low self-esteem, or self-worth, has been shown to be associated not only with risky health behaviours such as illicit drug use, but also with poor physical and mental health, and poor school and personal achievement.

The OSDUHS used six items to measure self-esteem, adapted from the Rosenberg Self-Esteem Scale. An overall indicator for low self-esteem is defined here as responding negatively (lower esteem) to at least three of the six items.

- Under one-in-ten (8%; 95% CI: 7%-10%) students indicate low self-esteem.
- Females (10%) are significantly more likely than males (6%) to indicate low self-esteem.

- There are no significant differences among the grades, or among the regions.

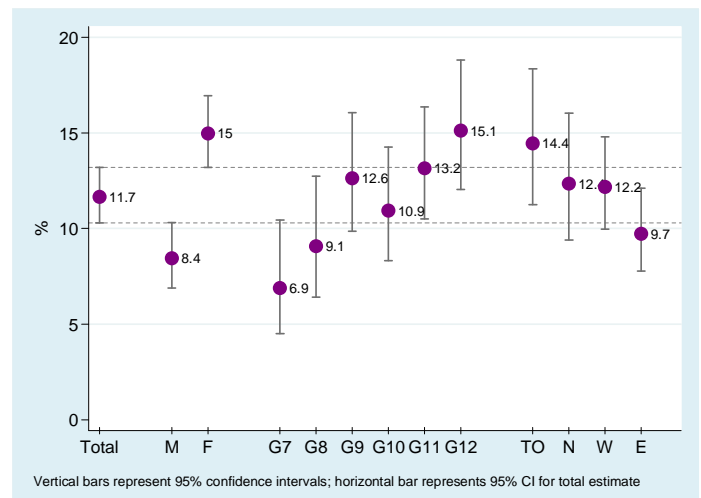
Depressive Symptoms

Depressed mood is a relatively common occurrence during adolescence and is characterized by pervasive feelings of sadness and worthlessness, loss of interest in activities, and disturbances in sleep, appetite, and concentration. Depression can range from mild to severe, and can adversely affect all areas of life. Typically, the onset of depression occurs during adolescence, affecting more females than males.

The Center for Epidemiologic Studies Depression (CES-D) subscale is a self-report scale used to screen for depressive symptomatology in the general population. Note that this is a screening tool and cannot be used for a clinical diagnosis of depression.

- About 5% (95% CI: 4%-7%) of students report depressive symptoms (this represents about 56,000 Ontario students).
- Females (8%) are significantly more likely than males (3%) to report depressive symptoms.
- There are no significant differences among the grades, or among the regions.

Figure 6. Percentage Reporting Poor Mental Health by Sex, Grade and Region, 2009 OSDUHS

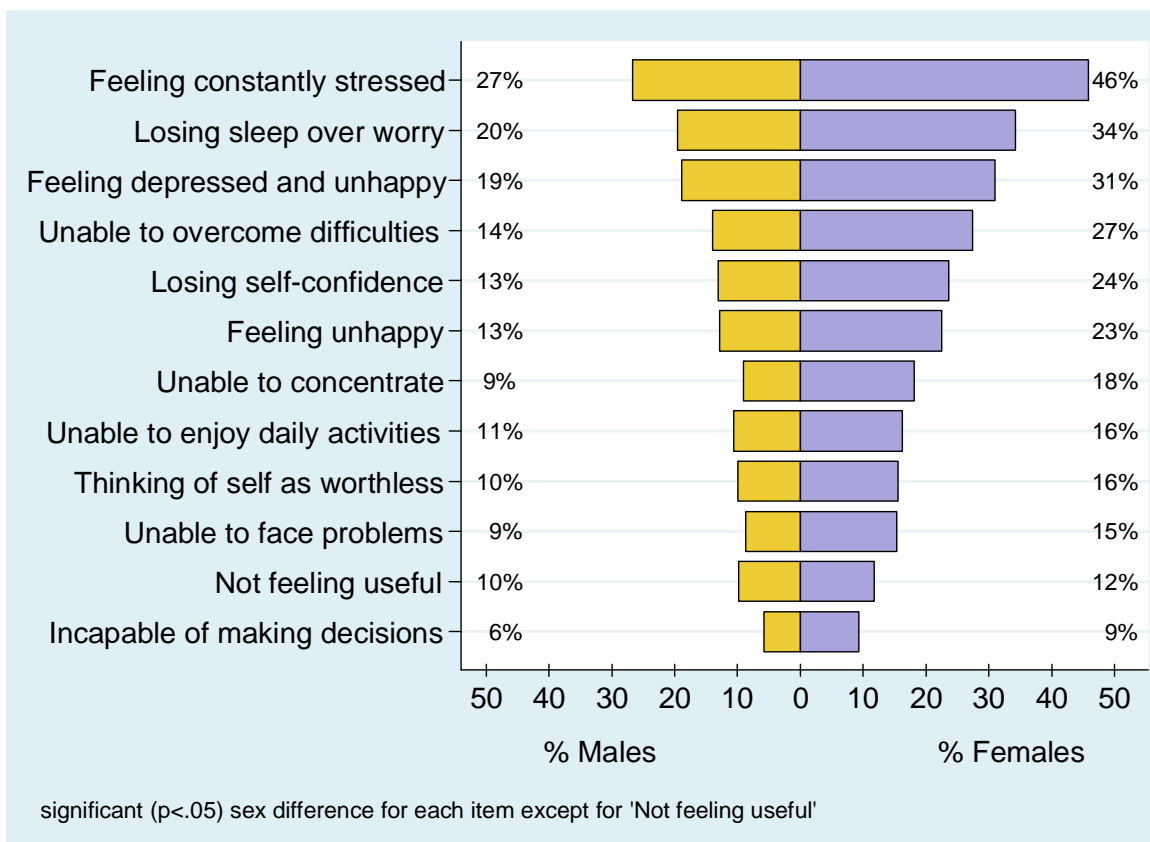


Elevated Psychological Distress

The General Health Questionnaire (GHQ) is a screening instrument used to identify current psychological distress. The GHQ-12 uses 12 items to screen for three overarching problems: depressed mood, anxiety, and problems with social functioning. Note that this instrument is used as a screener and not for clinical diagnoses. A summary measure was calculated to estimate the percentage experiencing elevated psychological distress, defined as reporting at least 3 of the 12 symptoms.

- Of the 12 symptoms, the three most common symptoms experienced by students are: feeling constantly under stress (36%), followed by losing sleep because of worrying (27%), and feeling unhappy and depressed (25%).
- Elevated psychological distress is reported by 31% (95% CI: 29%-33%) of students. This percentage represents about 327,000 Ontario students.
- Females are more likely to report elevated psychological distress compared with males (39% vs 23%, respectively). Indeed, females are significantly more likely to report 11 of the 12 symptoms.
- Psychological distress significantly increases with grade, peaking in the 11th- and 12th-grade (about 38%).
- There is no significant regional variation regarding elevated psychological distress.

Figure 7.
GHQ Symptoms Experienced Over the Past Few Weeks by Sex, 2009 OSDUHS (Grades 7 to 12)

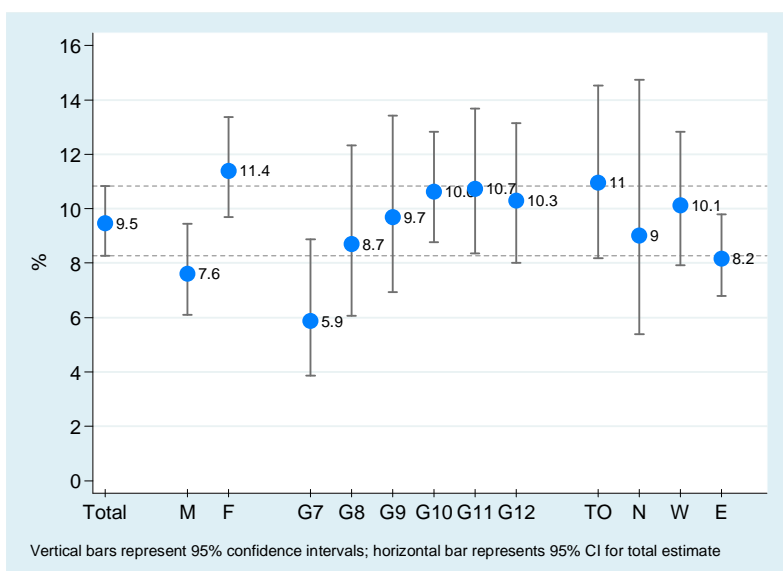


Suicide Ideation and Attempt

The OSDUHS includes a question about suicide ideation. Students were asked: “*In the last 12 months, did you ever seriously consider attempting suicide?*” Students were also asked about attempts: “*In the last 12 months, did you actually attempt suicide?*” Response options to both questions were yes or no.

- About 10% (95% CI: 8%-11%) of students report that they had seriously considered suicide in the past year. This percentage represents about 99,000 Ontario students. About 3% (95% CI: 2%-4%) report attempting suicide in the past year. This represents about 29,000 Ontario students.
- Females are significantly more likely than males to report suicide ideation (11% vs 8%, respectively). However, no significant sex difference was found regarding a reported suicide attempt (3% of females, 2.5% of males).
- Neither of the two measures significantly differs by grade.
- Neither of the two measures significantly differs by region.

Figure 8.
Percentage Reporting Suicide Ideation in the Past Year by Sex,
Grade and Region, 2009 OSDUHS



Body Image

Students were asked two questions regarding personal weight and desired change in weight: (1) “*Do you think of yourself as being too thin, about the right weight, or too fat?*” and (2) “*Which of the following are you doing about your weight: not doing anything, trying to lose weight, trying to keep from gaining weight, or trying to gain weight?*”

- Just over two-thirds (67%) of students are satisfied with their weight. About 23% believe they are too fat, while 10% believe they are too thin.
- Females (29%) are significantly more likely than males (17%) to believe that they are too fat. Males (14%) are more likely than females (5%) to believe that they are too thin.
- Three-quarters of students in grades 7 and 8 are satisfied with their weight, but this percentage declines to about 64% by 11th- and 12th-grade.
- About one-third (35%) of students are not trying to do anything about their weight. Another 29% are trying to lose weight, 23% want to keep from gaining weight, and 13% want to gain weight.
- As grade increases, so does the desire to change one’s weight: reports of trying to gain weight increase with grade, from about 8% of 7th- and 8th-graders up to about 16% to 19% of 11th- and 12th-graders. However, further analysis that controlled for sex, showed that this grade effect is only evident among males, and not females.
- There are no significant regional differences for these two items.

Externalizing Indicators

This section examines externalizing problem indicators that are risky behaviours or conduct problems, such as delinquency, violence, and bullying. These behaviours have a negative impact not only on the individuals involved, but also on society as a whole.

Delinquent Behaviour

Since 1991, the OSDUHS has asked students about engaging in violent and non-violent delinquent behaviours. The 2009 survey asked students whether they had engaged in 13 delinquent behaviours. This section looks at the percentage of students engaging in these behaviours at least once during the past year. In addition, we present an overall measure of delinquency based on the 11 questions in the survey since 1991 (excluded is setting something on fire and carried a handgun). Overall delinquent behaviour is defined here as participating in 3 or more of the 11 acts at least once during the past year.

- Males are significantly more likely than females to report 12 of the 13 behaviours. Females are more likely to report running away from home.
- Overall, 11% (95% CI: 9%-12%) of students report delinquent behaviour (defined as 3 or more of 11 behaviours asked about over time). This percentage represents about 113,000 students.
- Males are significantly more likely than females to engage in delinquent behaviour (14% vs 7%, respectively).
- Students in grades 10 to 12 are the most likely to engage in delinquent behaviour (about 14%-15%).
- Despite some minor variation, there are no significant differences among the regions.

- Among all students, the 13 behaviours ranked in the following manner, from most to least prevalent:

Fire setting.....	14%
Theft of goods \$50/less.....	14%
Vandalism.....	14%
Assault	10%
Ran away	10%
Carried a weapon	7%
Car theft/Joyride	7%
Sold cannabis.....	6%
Theft of goods > \$50	5%
Break and entering	4%
Gang fighting	3%
Sold other drugs.....	2%
Carried a handgun.....	1%

Figure 9.
Percentage Reporting Engaging in Delinquent Behaviours at Least Once During the Past Year by Sex, 2009 OSDUHS

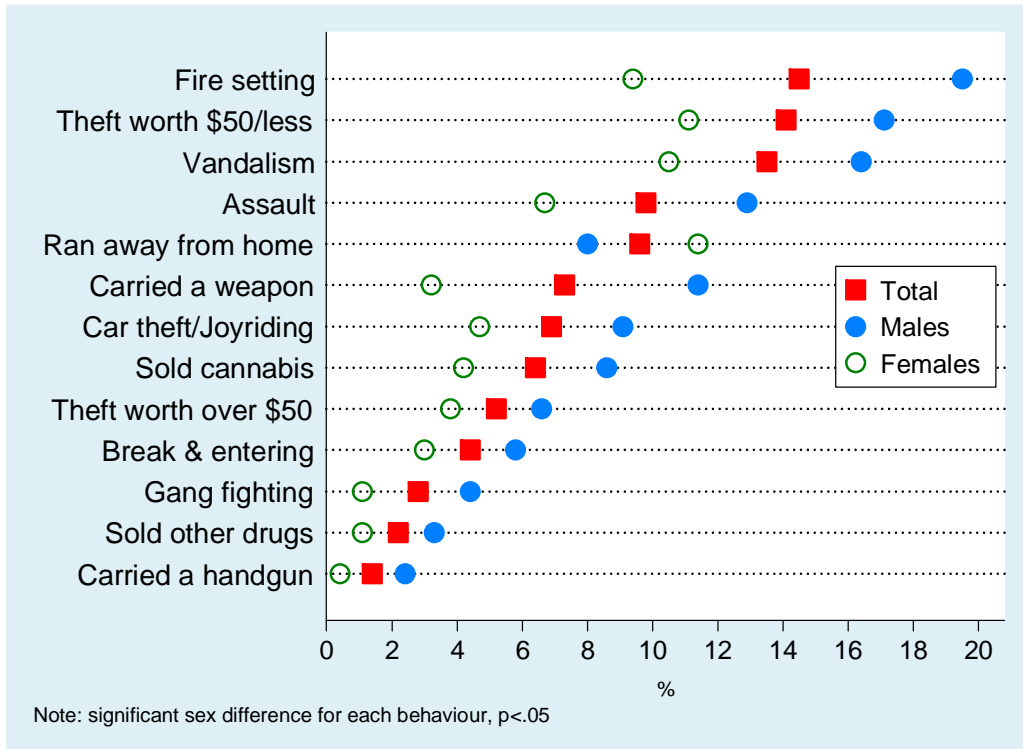
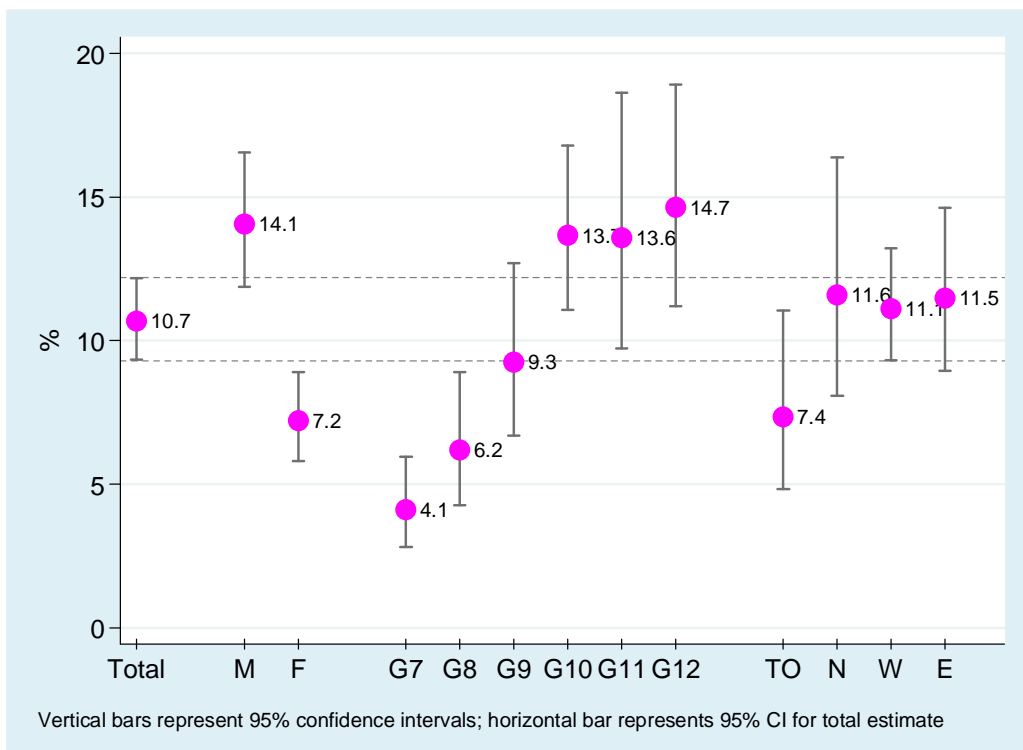


Figure 10.
Percentage Reporting Delinquent Behaviour (3+ of 11 Behaviours) During the Past Year by Sex, Grade, and Region, 2009 OSDUHS



Violence on School Property

The OSDUHS includes a question about fighting on school property: “*During the last 12 months, how many times were you in a physical fight on school property?*” Students were also asked about being threatened with a weapon on school property. The question 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?*” For both questions, we present the percentage reporting at least one occasion during the past year.

Physical Fighting

- Among the total sample, 15% (95% CI: 13%-17%), representing about 156,000 students, report fighting on school property at least once in the past year (9% report one time only, while 6% report two or more times).
- There is a significant sex difference, with males much more likely to report fighting at school than females (23% vs 7%, respectively).
- Fighting at school significantly decreases with grade. Students in grades 7 and 8 (about 22%) are most likely to fight at school, whereas 12th-graders are the least likely (10%).
- There are no significant differences among the regions.

Threatened or Injured with a Weapon

- Seven percent (95% CI: 6%-8%), representing about 70,000 students, report being threatened or injured with a weapon on school property at least once in the past year (4% report that this occurred only one time, while 3% report two or more times).
- Males (8%) are significantly more likely than females (5%) to report being threatened or injured with a weapon at school.
- There is a significant grade effect, with 7th-graders (4%) least likely to report being

threatened with a weapon on school property.

- There are no significant differences among the regions.

Bullying at School

The OSDUHS includes four questions about bullying at school. 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 rates for bullying victim and perpetrator are based on these modal questions.

Students were also asked about the frequency of bullying with the questions: “*Since September, how often have you been bullied at school?*” and “*Since September, how often have you taken part in bullying other students at school?*” The response options were: was not bullied at school; daily or almost daily; about once a week; about once a month; or less than once a month.

Bullying Victims

- Over one-quarter (29%; 95% CI: 27%-31%) of students report being bullied at school since September. This percentage represents about 300,000 students in grades 7 to 12.
- The most prevalent form of victimization is verbal (24%), while 3% are mainly bullied physically, and 2% are mainly victims of theft or vandalism.

- About 8% of students report being bullied on a daily or weekly basis, and about 20% are bullied monthly or less often.
- Females (31%) are more likely than males (26%) to report being bullied in any manner. Females are more likely to be bullied verbally than males (28% vs 19%, respectively), while males are more likely to be bullied physically than are females (4% vs 2%). Both are equally likely to be victims of theft or vandalism (2% for females, 3% for males).
- There is significant grade variation, with students in grades 7 to 10 most likely to be bullied (about one-third) in any manner, while 12th-graders (23%) 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%).
- Among the regions, Toronto students (23%) are the least likely to report being bullied at school compared with students in the other three regions (about 30%).

Bullying Perpetrators

- One-quarter (25%; 95% CI: 23%-27%) of students report bullying other students at school since September. This represents about 260,000 students in grades 7 to 12.
- The most prevalent form of bullying others is through verbal attacks (21%), followed by physical attacks (4%). Theft or damage to others' property is reported by less than 1% of students.
- About 6% of students report bullying others on a daily or weekly basis, and 19% report doing so monthly or less often.
- Males (28%) are significantly more likely than females (22%) to report bullying others.
- There are no significant differences among the grades, or among the regions.

Figure 11.
Percentage Reporting the Most Common Way They Were Bullied at School by Sex, 2009 OSDUHS (Grades 7 to 12)

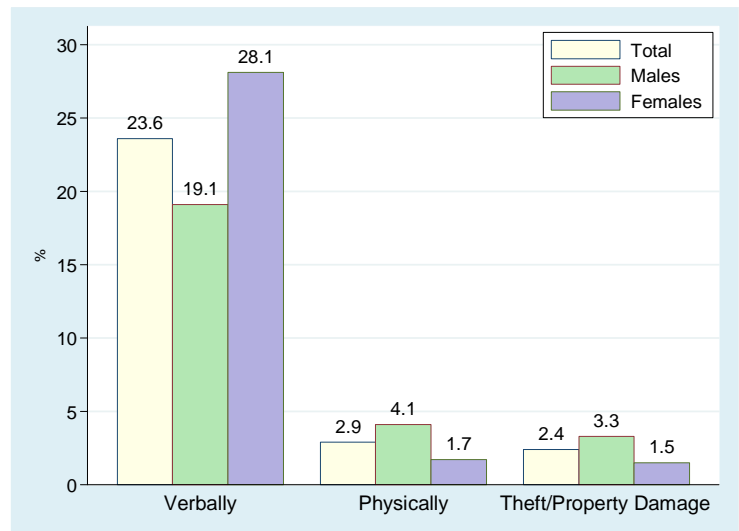
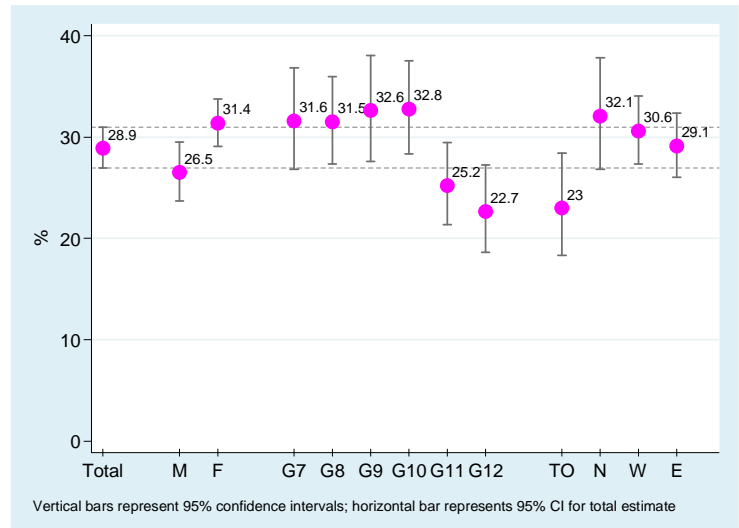


Figure 12.
Percentage Reporting Being Bullied at School (in Any Manner) Since September by Sex, Grade, and Region, 2009 OSDUHS



Gambling and Video Gaming

Individual Gambling Activities

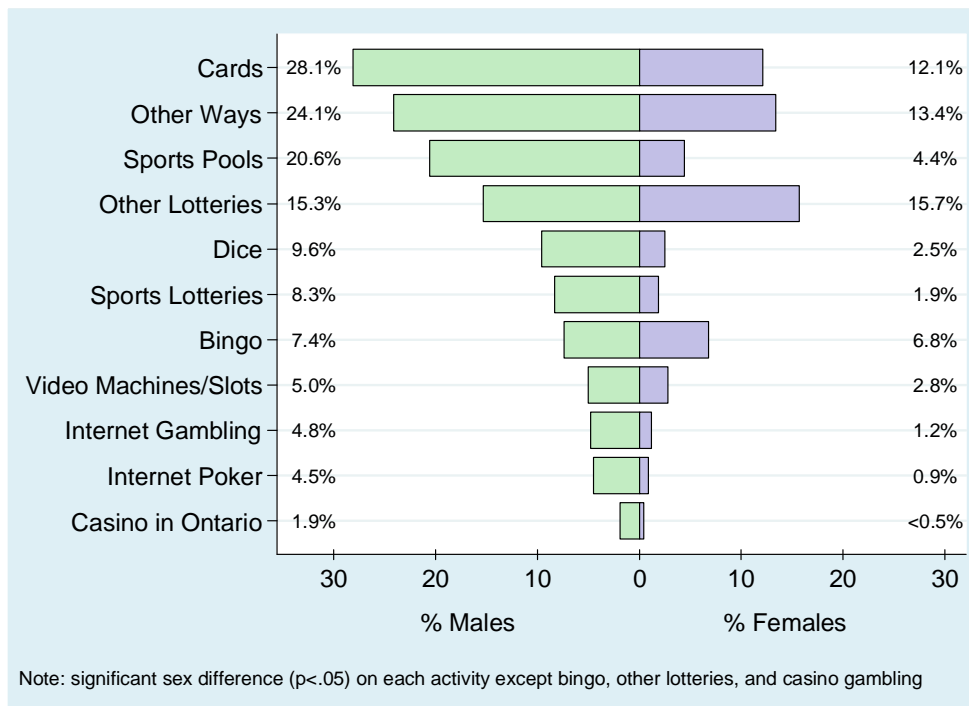
The 2009 survey asked students how often, during the 12 months before the survey, they gambled money at 11 gambling activities. We present the percentage of students who report gambling money on each activity at least once in the past 12 months.

- Among all students, the 11 activities ranked as follows:

Cards	20%
Gambled in other ways	19%
Lottery tickets.....	16%
Sports pools	13%
Bingo.....	7%
Dice.....	6%
Sports lottery tickets	5%
Video gambling machines	4%
Any internet gambling	3%
Internet poker.....	3%
Ontario casinos.....	1%

- Eight of the 11 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 at internet poker; and to gamble in other ways not listed. The activities that do not significantly differ by sex are playing bingo, buying lottery tickets, and betting in casinos.
- There are significant grade differences for 6 of the 11 gambling 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 12.
- Only two gambling activities significantly vary by region. Toronto students are least likely to gamble at sports pools compared with students in the other regions. Northern students and Western students are most likely to gamble at video gaming machines.

Figure 13.
Percentage Reporting Gambling Activities in the Past Year by Sex, 2009 OSDUHS (Grades 7 to 12)



Any Gambling Activity

Here we present the percentage of students who report gambling money at 1 or more of 10 activities (excludes internet poker) in the past 12 months.

- Among all students, 43% (95% CI: 40%-45%) report at least one gambling activity during the past 12 months. This percentage represents about 452,000 students across Ontario.
- Males (50%) are more likely to report any gambling activity than females (34%).
- There is significant variation by grade, with 12th-graders (56%) most likely to report any gambling activity.
- There are no significant differences among the regions.

Multi-Gambling Activity

Here we present the percentage of students who report gambling at 5 or more of 10 activities (excludes Internet Poker) in the past 12 months.

- Three percent (95% CI: 2%-4%) of students gambled at five or more activities during the past year. This percentage represents about 32,000 students across Ontario.

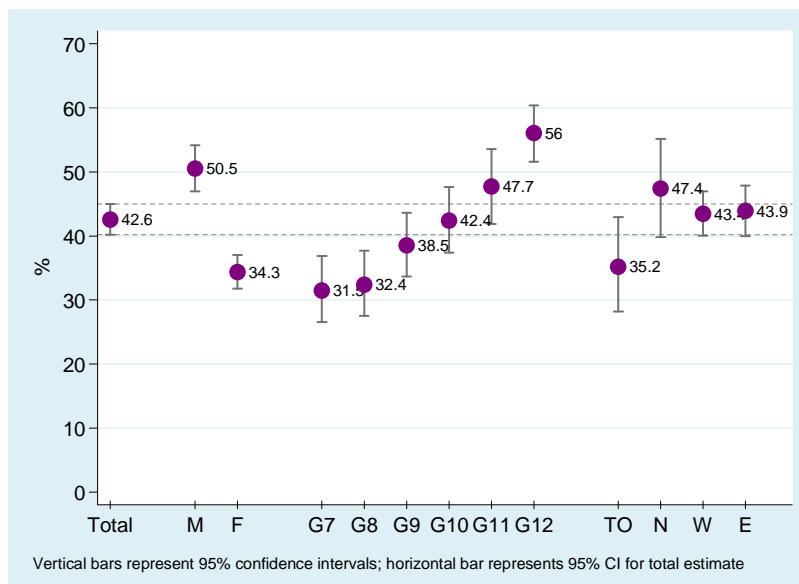
- Males are more likely to report multi-gambling activity than females (4% vs 2%, respectively).
- There are no significant differences among the grades, or among the regions.

Gambling Problem

A reduced version of the South Oaks Gambling Screen Revised for Adolescents (SOGS-RA) was used to measure a gambling problem. To identify those who may have a gambling problem, we examined the percentage that answered positive to two or more of the six questions in the reduced SOGS-RA. The screener measures the dimensions of loss of control, problems with family/friends due to one's gambling, and disruption to school.

- Overall, 3% (95% CI: 2%-4%) of students have a gambling problem. This percentage represents about 29,000 Ontario students.
- Males (4%) are more likely than females (1%) to report a gambling problem.
- There are no significant differences among the grades, or among the regions.

Figure 14.
Percentage Reporting Any Gambling Activity (of 10 Activities) in the Past Year by Sex, Grade, and Region, 2009 OSDUHS

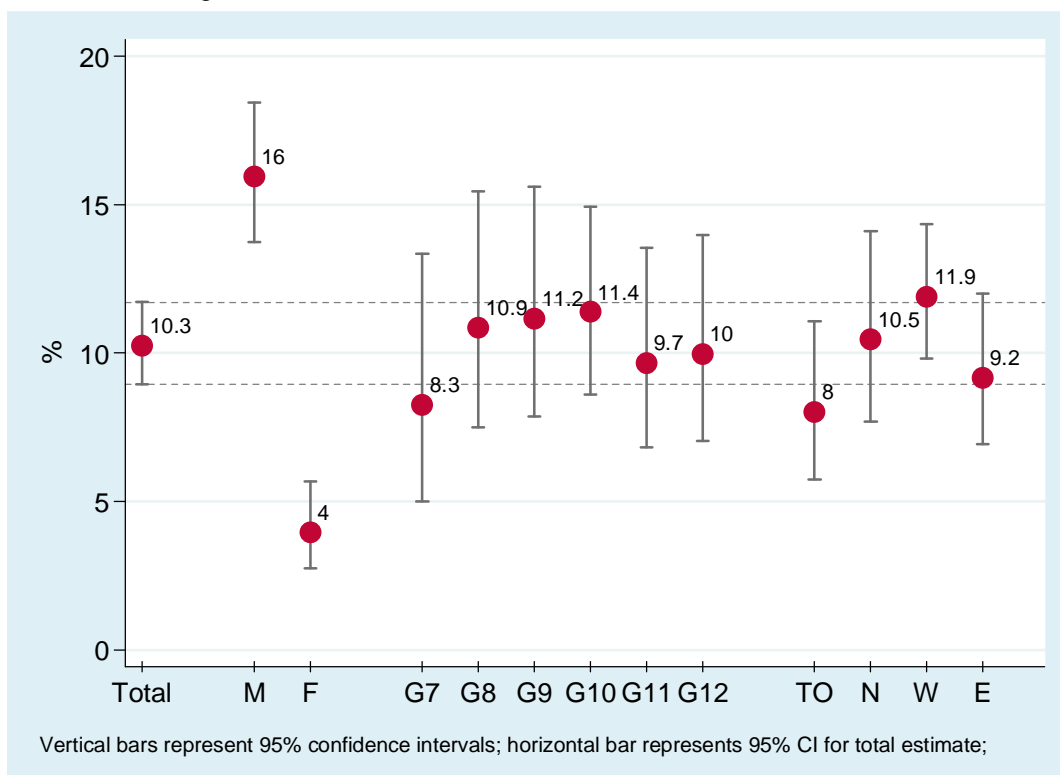


Video Game Playing and Problems

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 experienced during the past 12 months. Reporting five or more of the nine problems was used to indicate a video gaming problem.

- Among the total sample, 11% report that they do not play video games; 29% report playing about 3 times a month or less often; 11% play once a week; 16% play 2 to 3 times a week; 13% play 4 to 5 times a week; and 20% play daily or almost daily.
- Males are significantly more likely than females to play video games daily (32% vs. 6%, respectively).
- There is no significant variation by grade regarding daily video game playing.
- There are significant regional differences, with students in Toronto (17%) least likely to play daily, whereas Northern students (26%) are most likely. Students in the West and East regions fall in between (about 20%).
- Among the total sample, 10% (95% CI: 9%-12%) have a video gaming problem. This represents about 97,000 students.
- Males are significantly more likely than females to indicate a problem with video gaming (16% vs 4%, respectively)
- There are no significant differences among the grades, or among the regions.

Figure 15.
Percentage of All Students Indicating a Video Gaming Problem (PVP Scale) by Sex, Grade, and Region, 2009 OSDUHS

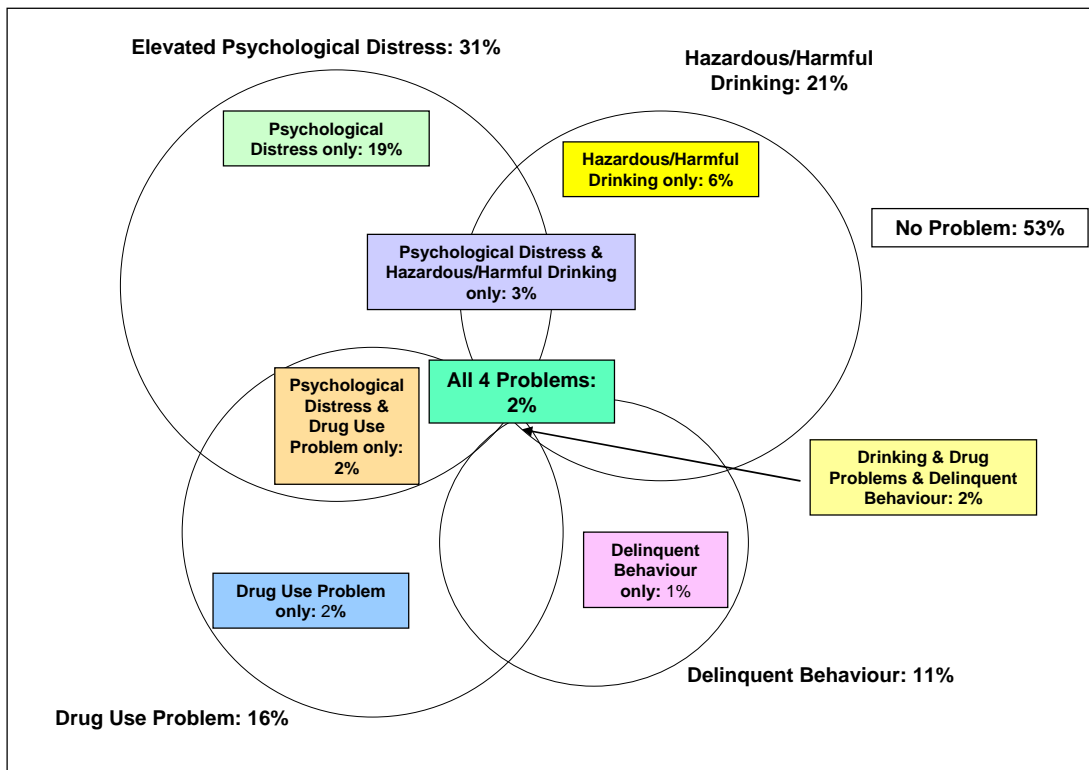


Co-existing Problems

This section examines the overlap between substance use problems, mental health problems, and delinquent behaviour. Specifically, we present the degree of overlap among the following four problems: (1) elevated psychological distress (as indicated by a score of 3 or more on the GHQ-12 screener); (2) hazardous/harmful drinking (indicated by a score of 8 or more on the AUDIT screener); (3) a drug use problem (indicated by a score of 2 or more on the CRAFFT-D screener); and (4) delinquent behaviour (engaging in 3 or more of 11 delinquent acts). We also present the percentage who report three or all four of these problems.

- A majority (53%) of students report none of the four problems. About 28% report one problem, 11% report two problems, 6% report three problems, and 2% report all four problems.
- The most prevalent configuration is psychological distress only, reported by 19% of students. The remaining configurations, such as hazardous/harmful drinking only or drug problem only, are reported by 6% or less of students.
- The percentage reporting three or all four problems is 8% (95% CI: 7%-10%). This percentage represents about 89,000 students.
- There is no significant sex difference in the likelihood of experiencing three or all four of these problems (9% for males, 8% for females).
- There is significant grade variation, with 12th-graders (16%) most likely to indicate three or all four of these problems.
- There are no significant differences among the regions.

Figure 16.
Co-existing Problems: Elevated Psychological Distress, Hazardous/Harmful Drinking, Drug Use Problem, and Delinquent Behaviour, 2009 OSDUHS (Grades 7 to 12)



Notes: (1) based on a random half sample (N=4,851); (2) not all combinations are shown

Overview by the Ontario Local Health Integration Networks (LHINs)

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 (for more information, please see www.lhins.on.ca). This section provides the 2009 estimates for selected mental health and well-being indicators among high school students only (grades 9 to 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 11 LHIN areas presented here are:

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

Table 1. Percentage of Secondary School Students (**Grades 9 to 12**) Reporting Mental Health and Well-Being Indicators, by Ontario Local Health Integration Network, 2009 OSDUHS

	Erie St. Clair + South West	Waterloo Wellington	Hamilton Niagara Haldimand Brant	Central West	Mississauga Halton	Toronto Central	Central	C. East + N. Simcoe Muskoka	South East	Champlain	N. East + N. West	Ontario
<i>(Student N)</i>	<i>(308)</i>	<i>(457)</i>	<i>(496)</i>	<i>(230)</i>	<i>(436)</i>	<i>(226)</i>	<i>(741)</i>	<i>(1,040)</i>	<i>(256)</i>	<i>(1,156)</i>	<i>(437)</i>	<i>(5,783)</i>
<i>(School N)</i>	<i>(6)</i>	<i>(6)</i>	<i>(12)</i>	<i>(4)</i>	<i>(6)</i>	<i>(4)</i>	<i>(10)</i>	<i>(22)</i>	<i>(6)</i>	<i>(16)</i>	<i>(9)</i>	<i>(101)</i>
Poor Self-Rated Physical Health	16.2 (12.6-20.7)	17.5 (13.2-22.9)	15.5 (11.8-20.1)	20.8 (12.5-32.6)	16.3 (12.9-20.5)	15.7 (11.4-21.2)	14.4 (9.1-22.1)	21.2* (17.3-25.8)	12.8** (11.4-14.3)	12.5** (10.7-14.5)	19.3 (14.7-24.8)	16.8 (15.2-18.5)
Inactive (past week)	7.1 (5.0-10.0)	11.0 (6.3-18.6)	5.8* (4.0-8.3)	12.2 (5.9-23.6)	9.4 (7.3-11.9)	13.7* (8.8-20.7)	7.8 (4.6-13.2)	10.4 (8.2-13.1)	† (4.6-14.3)	8.8 (7.3-10.7)	7.4 (5.6-9.6)	9.0 (7.9-10.3)
Sedentary Behaviour (Screen Time)	7.9 (5.8-10.8)	12.1 (8.4-17.1)	10.3 (8.3-12.8)	10.0 (6.2-15.6)	9.5 (6.4-14.1)	15.2 (9.8-22.9)	11.6 (8.5-15.6)	13.5* (11.4-15.8)	16.4 (9.4-26.9)	5.8** (3.6-9.2)	9.2 (6.0-13.7)	11.0 (9.8-12.3)
Overweight or Obese	23.4 (17.3-30.9)	28.2 (20.4-37.7)	27.1 (23.2-31.5)	25.2 (19.4-32.1)	20.4 (14.9-27.4)	19.7 (13.0-28.8)	24.1 (20.1-28.6)	26.5 (23.4-30.0)	21.3* (19.1-23.7)	24.8 (21.6-28.4)	32.0** (28.4-35.8)	25.2 (23.5-26.9)
Treated for Injury	40.5 (31.7-49.9)	40.5 (35.0-46.3)	47.4 (39.8-55.1)	34.9* (29.2-41.0)	44.0 (36.4-51.9)	47.7* (41.2-54.3)	40.8 (34.4-47.6)	34.6* (29.4-40.2)	48.7** (43.2-54.2)	39.7 (36.0-43.6)	32.4* (25.0-40.8)	40.6 (38.2-43.1)
No Physical Health Doctor Visits	30.1 (18.4-45.1)	28.5 (24.4-33.1)	41.2* (33.5-49.4)	41.7* (33.7-50.1)	29.4 (25.1-34.0)	27.2 (18.0-38.9)	28.7 (22.7-35.6)	36.1 (31.5-41.0)	36.8 (18.4-60.0)	26.6 (19.5-35.1)	38.3 (26.8-51.3)	33.6 (30.7-36.7)
Medical Use of Opioid Pain Relievers	38.6 (31.1-46.7)	31.5 (23.5-40.7)	37.2 (33.0-41.5)	27.5* (22.9-32.5)	31.8 (27.1-37.0)	25.0 (17.8-34.1)	35.9 (32.9-39.0)	33.2 (29.6-37.1)	35.4 (30.4-40.7)	38.7* (35.5-42.0)	32.2 (26.6-38.3)	33.9 (32.2-35.7)
Medical Use of Sedatives/Tranqs	† (3.3-5.6)	† (3.3-5.6)	8.2 (4.3-15.2)	† (3.3-5.6)	† (3.3-5.6)	† (3.3-5.6)	† (3.3-5.6)	4.4 (3.0-6.4)	† (3.3-5.6)	6.8* (5.3-8.8)	† (3.3-5.6)	4.3 (3.3-5.6)
“Choking Game” in Lifetime	† (4.8-7.1)	7.8 (4.1-14.2)	7.6 (4.9-11.6)	† (4.8-7.1)	7.8 (4.2-14.3)	† (4.8-7.1)	3.1 (1.7-5.6)	6.8 (4.4-10.3)	† (4.8-7.1)	6.3 (4.5-8.7)	7.7 (3.8-15.0)	5.8 (4.8-7.1)
1+ Mental Health Professional Visits	22.5 (13.6-34.8)	22.2 (16.2-29.4)	21.0 (17.3-25.3)	25.2 (20.1-31.2)	21.9 (17.4-27.1)	24.6 (21.6-27.9)	22.3 (17.6-27.8)	23.6 (17.1-31.7)	20.3 (14.5-27.7)	27.3 (21.8-33.5)	17.8 (12.1-25.5)	23.0 (20.8-25.2)
Poor Self-Rated Mental Health	16.3 (11.8-22.1)	12.5 (8.8-17.6)	15.9 (11.3-22.0)	11.4 (6.3-19.7)	12.8 (6.7-22.9)	17.9 (12.4-25.1)	10.0 (6.3-15.6)	14.0 (11.0-17.6)	12.6 (5.1-27.9)	8.3 (4.7-14.3)	16.0 (13.6-18.8)	13.1 (11.4-15.1)
Depressive Symptoms	† (4.6-7.5)	† (4.6-7.5)	10.0* (5.9-16.5)	† (4.6-7.5)	6.6 (4.1-10.4)	† (4.6-7.5)	4.4 (3.2-6.1)	6.6 (4.6-9.4)	† (4.6-7.5)	3.2* (2.0-5.1)	4.6 (2.5-8.2)	5.9 (4.6-7.5)
Psychological Distress	35.0 (31.0-39.2)	28.3* (22.4-35.0)	36.4 (30.0-43.3)	35.3 (27.0-44.5)	39.0 (32.7-45.6)	34.7 (24.8-46.0)	33.9 (28.6-39.7)	36.7 (31.3-42.4)	44.5 (25.8-64.9)	29.9 (24.7-35.8)	39.6 (35.7-43.7)	35.1 (32.7-37.6)
Suicide Ideation	† (8.8-12.0)	8.9 (7.0-11.2)	14.4** (10.9-18.7)	† (8.8-12.0)	19.4** (12.5-28.9)	16.0** (11.0-22.8)	8.3 (5.8-11.8)	9.0 (6.8-11.9)	† (8.8-12.0)	8.9 (7.4-10.7)	9.9 (5.2-18.2)	10.3 (8.8-12.0)
Suicide Attempt	† (2.4-4.1)	† (2.4-4.1)	4.0 (2.3-6.8)	† (2.4-4.1)	4.8* (2.5-9.0)	† (2.4-4.1)	† (2.4-4.1)	4.0 (1.8-8.7)	† (2.4-4.1)	4.1 (2.4-6.9)	† (2.4-4.1)	3.1 (2.4-4.1)
Delinquent Behaviour (3+/11)	11.6 (8.5-15.6)	11.6 (7.1-18.4)	15.9 (11.8-21.2)	7.7 (2.9-18.8)	16.5 (11.0-23.8)	9.5 (4.7-18.0)	14.8 (8.1-25.4)	10.2 (7.2-14.1)	17.3** (15.3-19.4)	13.2 (9.4-18.2)	14.2 (10.0-19.6)	12.9 (11.1-15.0)
Carried a Weapon (gun or knife)	13.8 (7.3-24.5)	10.2 (6.6-15.4)	10.6 (7.3-15.1)	† (7.3-15.1)	† (7.3-15.1)	8.7 (3.5-19.7)	5.2* (3.9-6.9)	7.0 (4.2-11.5)	16.8** (13.9-20.1)	7.7 (6.0-9.9)	9.0 (4.8-16.2)	8.1 (6.8-9.8)

(Continued...)

	Erie St. Clair + South West	Waterloo Wellington	Hamilton Niagara Haldimand Brant	Central West	Mississauga Halton	Toronto Central	Central	C. East + N. Simcoe Muskoka	South East	Champlain	N. East + N. West	Ontario
<i>(Student N)</i>	<i>(308)</i>	<i>(457)</i>	<i>(496)</i>	<i>(230)</i>	<i>(436)</i>	<i>(226)</i>	<i>(741)</i>	<i>(1,040)</i>	<i>(256)</i>	<i>(1,156)</i>	<i>(437)</i>	<i>(5,783)</i>
<i>(School N)</i>	<i>(6)</i>	<i>(6)</i>	<i>(12)</i>	<i>(4)</i>	<i>(6)</i>	<i>(4)</i>	<i>(10)</i>	<i>(22)</i>	<i>(6)</i>	<i>(16)</i>	<i>(9)</i>	<i>(101)</i>
1+ School Fights	9.0 (4.1-18.6)	16.6 (8.7-29.4)	11.7 (7.2-18.5)	13.3 (9.8-17.9)	14.1 (11.0-17.8)	19.3 (10.9-31.9)	14.8 (9.7-22.1)	10.4 (6.6-16.1)	8.3 (7.4-9.3)	10.2 (7.4-13.7)	13.0 (9.2-18.1)	12.6 (10.7-14.8)
Threatened/Injured with Weapon at School	7.2 (3.9-13.1)	7.6 (3.3-16.4)	5.2 (2.6-10.2)	†	9.2 (6.8-12.4)	13.4 (5.9-27.4)	6.2 (3.5-10.8)	8.6 (4.5-15.8)	†	4.8 (3.2-7.1)	8.6 (5.2-13.8)	7.4 (5.9-9.2)
Been Bullied	38.6** (31.0-46.8)	26.3 (22.3-30.7)	36.4** (28.9-44.7)	25.6 (20.1-32.0)	24.9 (19.4-31.3)	15.9** (12.9-19.5)	22.6 (18.8-26.9)	29.6 (23.6-36.3)	22.0 (12.6-35.7)	26.6 (23.4-30.0)	30.8 (23.6-39.1)	27.9 (25.4-30.5)
Bullied Others	38.3** (30.0-47.4)	27.0 (19.1-36.7)	30.4 (23.2-38.7)	25.5 (18.4-34.2)	28.1 (20.7-36.8)	23.9 (16.3-33.5)	21.1 (15.6-27.9)	23.3 (19.3-27.8)	15.3 (3.4-48.4)	23.3 (19.7-27.4)	27.6 (19.6-37.4)	25.8 (23.4-28.4)
Any Gambling Activity (of 10)	43.6 (35.3-52.3)	46.3 (36.4-56.5)	52.3 (45.1-59.3)	48.2 (35.4-61.2)	49.1 (45.2-53.0)	53.7 (42.2-64.8)	46.7 (36.5-57.2)	39.2* (34.3-44.4)	39.0 (30.1-48.8)	48.2 (41.7-54.8)	52.2 (41.2-63.1)	46.9 (44.0-49.8)
Multi-Gambling Activity (5+/10)	†	†	4.3 (2.6-7.0)	†	†	†	5.3 (1.9-14.0)	2.3 (1.3-3.9)	†	†	4.9 (1.9-11.9)	3.5 (2.5-4.9)
Gambling Problem	†	†	†	†	†	†	†	3.9 (1.8-8.2)	†	2.7 (1.9-3.8)	†	3.3 (2.2-4.9)
Video Gaming Problem	13.3 (8.2-20.9)	11.0 (6.5-18.0)	11.7 (7.7-17.4)	8.9 (4.9-15.6)	15.6* (10.8-22.1)	8.8 (4.7-15.9)	11.9 (9.0-15.6)	6.0* (4.0-8.9)	14.3 (8.4-23.3)	7.9 (5.6-10.9)	9.3 (6.7-12.8)	10.5 (9.0-12.2)
3 or All 4 Coexisting Problems	9.0 (6.2-13.0)	12.1 (7.7-18.6)	13.2 (9.4-18.3)	†	13.3 (8.9-19.3)	9.0 (5.9-13.6)	13.6 (8.4-21.4)	9.5 (6.2-14.2)	9.8 (7.8-12.3)	10.9 (8.9-13.3)	16.6** (13.0-21.1)	11.1 (9.6-12.8)

Notes: (1) due to small sample sizes, the Erie St. Clair LHIN (n=84) was merged with the South West LHIN, the North Simcoe Muskoka LHIN (n=14) was merged with the Central East LHIN, and the North West LHIN (n=130) was merged with the North East LHIN; (2) entries in brackets are 95% confidence intervals; (3) † estimate suppressed due to unreliability; (4) for indicator definitions, please see Appendix Table A1; (5) many of the indicators are based on a random half-sample; (6) *p<.05, **p<.01 significant difference, LHIN vs. Ontario.

Source: OSDUHS, Centre for Addiction & Mental Health

SUMMARY

The Public Health Approach to Mental Health and Risk Behaviour Problems

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

The OSDUHS performs several public health functions, namely: identifying the pervasiveness of problem indicators among the general 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 general public.

Some Encouraging Findings

There are many findings in this report that should be viewed as encouraging. The majority of students:

- get along very well with their parents;
- like school and report a positive school climate – that is, a feeling of connectedness to others in their school, feeling that the teachers are excellent, and feeling safe at school;
- rate their health as excellent or very good;
- are satisfied with their weight; and
- do not report internalizing problems (e.g., symptoms of depression or anxiety) or externalizing problems (e.g., violent behaviour).

In addition, we found several improvements over time:

- Delinquent behaviour has been decreasing over the past two decades. More specifically,

fewer students today report behaviours such as vandalism, assaulting others, gang fighting, and weapon carrying compared with their counterparts from the early 1990s.

- Gambling has declined over the past few years, and the proportion of students indicating a problem with gambling shows a decline over the past decade.

- The percentage of students who report visiting a doctor, nurse or counsellor for a mental health issue significantly increased over this decade. This can be construed as a positive finding in that adolescents are seeking assistance and seem to be willing to talk to someone about mental health issues. This interpretation is supported by the observation that our mental health problem measures did not significantly increase over the same time period.

Some 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 17 for an overview).

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

- being bullied at school
- elevated psychological distress
- being treated for one or more physical injuries in the past year
- gambling in the past year

About **one-in-four students** ...

- can be considered overweight or obese

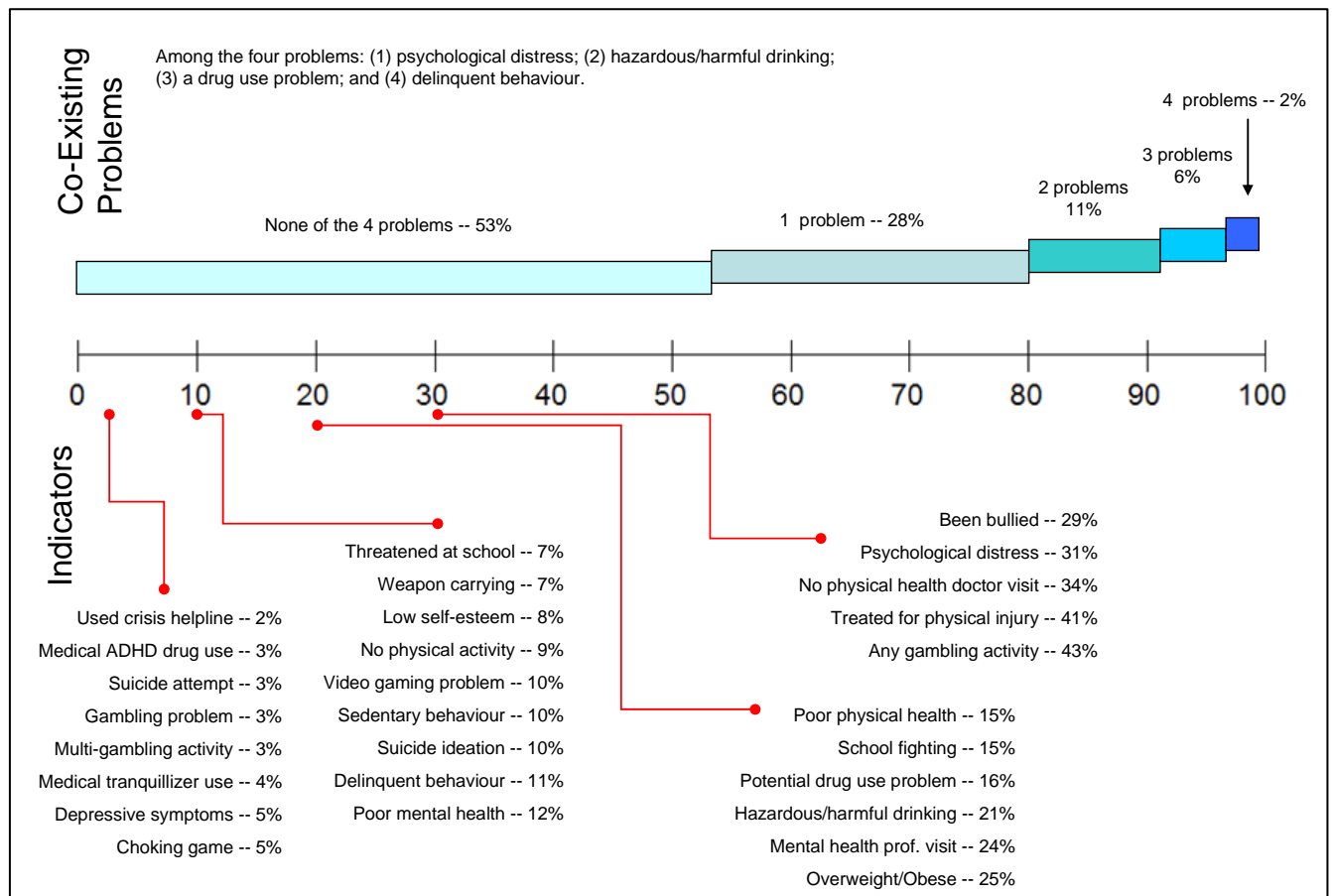
About **one-in-five to one-in-eight students** report...

- hazardous/harmful drinking
- a drug use problem
- fighting at school
- poor physical health
- poor mental health

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

- suicide ideation
- carrying a weapon
- being threatened or injured at school with a weapon
- co-existing problems

Figure 17.
 Overview of Mental Health and Well-Being Indicators, 2009 OSDUHS (Grades 7 to 12)



Some findings point to concerning trends over time:

- Students today are much more likely to rate their physical health as poor compared with their counterparts from about two decades ago.
- Reports of physical injuries have increased over recent years.

Demographic Correlates

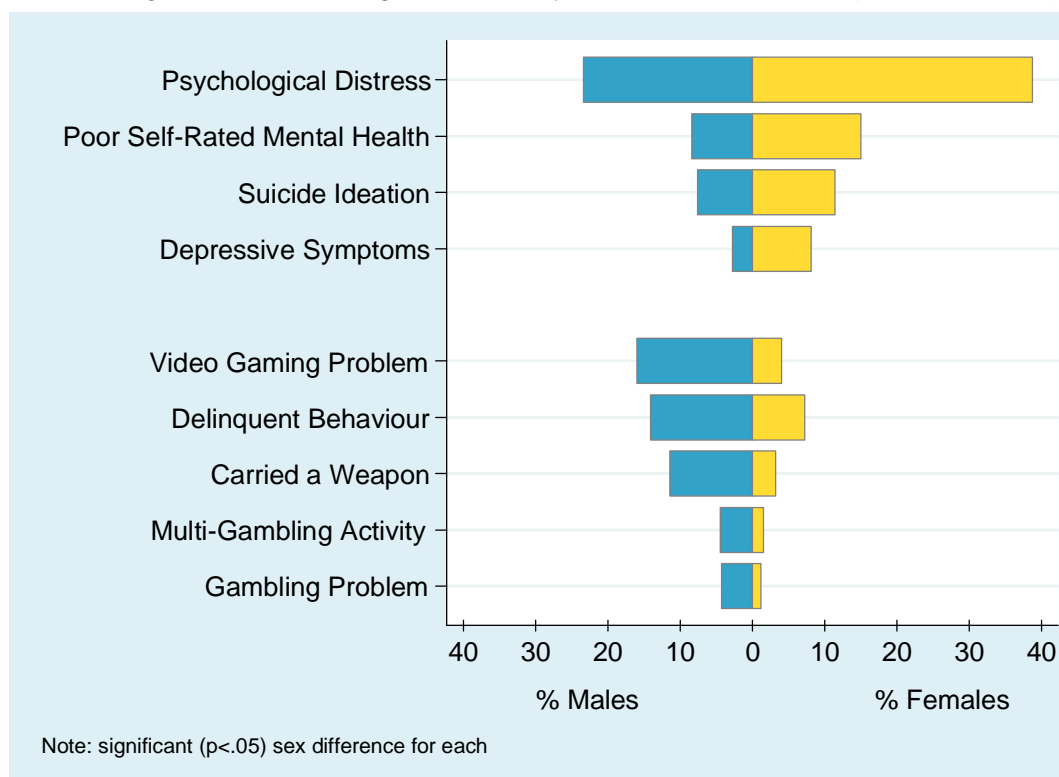
This report found that well-being varies greatly depending on sex, even after controlling for grade and region. As summarized in Figure 18, the general pattern shows that females are more likely to experience internalizing problems (such as depression, psychological distress, and suicide ideation), whereas males are more likely to exhibit risky or externalizing behaviours (such as delinquent behaviour and gambling).

Age/grade is also significantly related to mental health and well-being. Generally, poor physical health indicators (e.g., inactivity, sedentary behaviour, injuries), internalizing problem indicators (e.g., medications for depression/anxiety, psychological distress), delinquent behaviour, gambling, and co-existing problems increase with grade and tend to peak in late adolescence. Bullying behaviour and fighting at school peak among the younger grades studied and tend to subside in later adolescence.

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

- Compared to the provincial average, Toronto students are more likely to be worried over being threatened or harmed at school; to rate their physical health as poor; to engage in no physical activity; and to report a high level of “screen time” (that is, to be sedentary). However, Toronto students are less likely to report medical use of prescription opioid pain relievers, and to report being bullied at school.

Figure 18. Internalizing and Externalizing Indicators by Sex, 2009 OSDUHS (Grades 7 to 12)



- Compared to the provincial average, Northern Ontario students are more likely to be overweight or obese.
- Western Ontario students do not significantly differ from the province on any measure.
- Compared to the provincial average, Eastern Ontario students are more likely to report medical use of prescription opioid pain relievers, and to report sustaining an injury that required treatment. Students in the East are less likely to rate their physical health as poor, and to be overweight or obese.

Future OSDUHS Monitoring

The purpose of this 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. The majority of students report positive indicators of well-being and a minority report negative indicators. However, this minority can be sizeable – for example, about one-in-ten Ontario students (representing about 99,000) report suicide ideation and one-in-twenty (about 56,000) report symptoms of depression. These large magnitudes should remind us of the vulnerability of this age group. Although several recent government initiatives have been made in the area of targeted intervention programs with infants and children (e.g., Better Beginnings, Better Futures; Healthy Babies, Healthy Children), few universal programs have been developed for adolescence, a period known for the onset of emotional difficulties and psychological disorders. Canadian public health policy does not appear to prioritize prevention programs that focus on the spectrum of mental disorders among adolescents, although a national mental health strategy is currently in development.

The 2009 OSDUHS found continuing increases in self-rated poor health and injuries requiring treatment. This report also provided the first OSDUHS estimate of overweight and obese students in Ontario. Generally, the current status of students' physical health is concerning, and some mental health indicators remain elevated, such as suicide ideation and psychological distress. Therefore, continued and enhanced surveillance is warranted. Still, our findings show that some encouraging improvements in well-being have occurred over the past decade or so, in particular declines in delinquency and bullying perpetration. Ongoing monitoring will assess whether these trends continue.

Please visit our web site to see other OSDUHS reports: www.camh.net/research/osdus.html

APPENDIX TABLES

Table A1. Definitions of Terms Used in the Report

Term	Definition
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
Sedentary Behaviour (Screen Time)	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
No Physical Health Doctor Visits	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 Professional 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 the prescription drug with a doctor's prescription at least once in the 12 months before the survey
Poor Self-Rated Mental Health	Rating one's mental or emotional health as either "fair" or "poor"
Low Self-Esteem	Reporting at least 3 out of 6 items from the Rosenberg Self-Esteem Scale
Depressive Symptoms	Reporting "often" or "always" experiencing all 4 symptoms on the Centre for Epidemiological Studies Depression (CES-D) subscale during the past 7 days
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
Delinquent Behaviour	Reporting at least 3 of the following 11 delinquent 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, sold other drugs, ran away from home, assaulted someone (not a sibling), gang fighting, 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
Bully Victim	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	Reporting bullying others at school since September in any one of the following manners: verbally, physically, or stealing/damaging something of theirs
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 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 out 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
Hazardous/Harmful Drinking	Scoring at least 8 out of 40 (Likert scoring) on the World Health Organization's Alcohol Use Disorders Identification Test (AUDIT) screen, which measures heavy drinking and alcohol-related problems during the 12 months before the survey
Drug Use Problem	Reporting experiencing at least 2 of the 6 items on the "CRAFFT" screener, which measures a drug use problem that may require treatment (in the past 12 months)
3 or All 4 Coexisting Problems	Reporting 3 or all 4 of the following problems: elevated psychological distress, hazardous/harmful drinking problem, drug use problem, and delinquent behaviour

Note: Please see the 2009 OSDUHS Detailed Mental Health and Well-Being Report for details and references associated with the scales and screeners used. It is available in PDF format at: www.camh.net/research/osdus.html.

Table A2. Percentage Reporting Mental Health and Well-Being Indicators Among the Total Sample and by Sex, 2009 OSDUHS (Grades 7 to 12)

Indicator	Total		Estimated Number [†]	Males %	Females %
	%	(95% CI)			
poor self-rated physical health	14.5	(13.3-15.8)	146,000	10.8	18.5 *
physically inactive (no days of activity in past week)	8.5	(7.6-9.5)	85,000	7.9	9.1
sedentary behaviour (7+ hours of screen time daily)	9.7	(8.7-10.7)	93,000	11.4	7.8 *
overweight or obese	25.2	(23.8-26.7)	246,000	30.0	20.1 *
no physical health doctor visits (past year)	33.6	(31.2-36.0)	306,000	39.3	27.2 *
treated for a physical injury (past year)	40.5	(38.5-42.5)	386,000	43.0	37.6 *
used opioid pain reliever medically (past year)	31.8	(30.3-33.3)	320,000	26.7	37.3 *
ever participated in the “choking game”	5.3	(4.4-6.3)	55,000	5.1	5.5
used tranquillizers/sedatives medically (past year)	3.7	(3.0-4.7)	39,000	2.8	4.7 *
used an ADHD drug medically (past year)	2.7	(2.1-3.5)	28,000	3.9	1.4 *
prescribed medication for depression/anxiety/both	3.3	(2.7-4.0)	34,000	2.6	4.0
mental health professional visit (past year)	23.8	(22.0-25.8)	253,000	22.3	25.5
used telephone crisis helpline (past year)	1.9	(1.4-2.6)	20,000	1.1	2.8 *
poor self-rated mental health	11.7	(10.3-13.2)	122,000	8.4	15.0 *
low self-esteem	8.3	(7.3-9.5)	87,000	6.5	10.1 *
depressive symptoms (past week)	5.4	(4.4-6.6)	56,000	2.8	8.1 *
elevated psychological distress (past few weeks)	31.0	(29.1-32.9)	327,000	23.4	38.8 *
suicide ideation (past year)	9.5	(8.3-10.8)	99,000	7.6	11.4 *
suicide attempt (past year)	2.8	(2.2-3.5)	29,000	2.5	3.1
delinquent behaviour (3+/11 behaviours in past year)	10.7	(9.3-12.2)	113,000	14.1	7.2 *
carried a weapon (past year)	7.3	(6.2-8.6)	78,000	11.4	3.2 *
gang fighting (past year)	2.8	(2.2-3.5)	29,000	4.4	1.1 *
belong to a gang currently	2.3	(1.8-3.0)	24,000	3.3	1.3 *
fought at school (past year)	15.1	(13.4-16.9)	156,000	23.3	6.7 *
threatened/injured with weapon at school (past year)	6.8	(5.7-8.1)	70,000	8.5	5.1 *
worried be harmed or threatened at school	12.3	(11.2-13.5)	125,000	11.6	13.0
been bullied at school (since September)	28.9	(26.9-31.0)	300,000	26.5	31.4 *
bullied others at school (since September)	25.1	(23.2-27.2)	260,000	28.1	22.1 *
any gambling activity (1+/10 activities in past year)	42.6	(40.2-45.0)	452,000	50.5	34.3 *
multi-gambling activity (5+/10 activities in past year)	3.0	(2.2-4.0)	32,000	4.5	1.5 *
gambling problem (past year)	2.8	(2.0-3.9)	29,000	4.3	1.2 *
video gaming problem (past year)	10.3	(9.0-11.7)	97,000	16.0	4.0 *
3 or all 4 co-existing problems ^{††}	8.4	(7.3-9.7)	89,000	8.7	8.2

Notes: the survey total sample size was 9,112 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 1,023,900 in Ontario (numbers have been rounded down); * indicates a significant sex difference ($p < .05$); †† among the four problem indicators: elevated psychological distress, hazardous/harmful drinking, a drug use problem, and delinquent behaviour.

Table A3. Percentage Reporting Mental Health and Well-Being Indicators by Grade, 2009 OSDUHS

Indicator	G7	G8	G9	G10	G11	G12
poor self-rated physical health	6.3	10.6	14.3	14.5	17.6	19.8 *
physically inactive (no days of activity in past week)	6.9	7.3	6.8	7.6	9.4	11.4 *
sedentary behaviour (7+ hours of screen time daily)	4.9	7.6	8.1	9.6	12.6	12.8 *
overweight or obese	23.5	27.4	26.1	25.8	25.4	23.8
no physical health doctor visits (past year)	33.6	33.4	31.1	30.3	35.0	36.9
treated for a physical injury (past year)	39.1	40.8	42.9	42.0	40.8	37.9
used opioid pain reliever medically (past year)	23.9	28.7	33.9	33.6	33.9	34.1 *
ever participated in the "choking game"	4.1	3.7	5.3	5.1	5.6	7.0
used tranquilizers/sedatives medically (past year)	2.4	2.4	2.3	4.5	5.4	4.8 *
used an ADHD drug medically (past year)	3.2	2.8	4.2	2.4	2.6	s
prescribed medication for depression/anxiety/both	2.3	1.9	2.3	2.8	4.4	5.0 *
mental health professional visit (past year)	28.9	23.2	26.1	24.6	23.3	19.0
used telephone crisis helpline (past year)	2.6	1.3	2.2	2.1	s	2.2
poor self-rated mental health	6.9	9.1	12.6	10.9	13.2	15.1 *
low self-esteem	7.4	8.2	8.5	7.0	10.2	8.4
depressive symptoms (past week)	4.0	4.5	8.1	5.8	4.8	5.0
elevated psychological distress (past few weeks)	19.5	22.0	29.5	33.4	38.8	37.8 *
suicide ideation (past year)	5.9	8.7	9.7	10.6	10.7	10.3
suicide attempt (past year)	s	2.5	3.4	2.6	3.1	3.4
delinquent behaviour (3+/11 behaviours in past year)	4.1	6.2	9.3	13.7	13.6	14.7 *
carried a weapon (past year)	4.5	6.4	7.7	10.0	5.9	8.7
gang fighting (past year)	2.1	3.0	3.7	3.4	2.2	2.5
belong to a gang currently	2.2	2.7	2.3	1.7	1.9	2.9
fought at school (past year)	21.6	21.4	16.5	11.8	12.8	10.0 *
threatened/injured with weapon at school (past year)	3.9	6.7	8.7	5.5	6.6	8.4 *
worried be harmed or threatened at school	18.6	12.2	14.3	12.9	9.1	8.8 *
been bullied at school (since September)	31.6	31.5	32.6	32.8	25.2	22.7 *
bullied others at school (since September)	21.3	25.3	23.9	26.8	27.0	25.7
any gambling activity (1+/10 activities in past year)	31.5	32.4	38.5	42.4	47.7	56.0 *
multi-gambling activity (5+/10 activities in past year)	1.9	1.7	2.9	2.5	4.6	4.1
gambling problem (past year)	s	s	2.1	2.1	4.2	4.5
video gaming problem (past year)	8.3	10.9	11.2	11.4	9.7	10.0
3 or all 4 co-existing problems [†]	s	2.6	6.2	9.2	12.2	15.5 *

Notes: * indicates a significant grade difference (p<.05); 's' indicates estimate suppressed due to unreliability; medical drug use refers to use with a prescription; [†]among the four problem indicators: elevated psychological distress, hazardous/harmful drinking, a drug use problem, and delinquent behaviour.

Table A4. Percentage Reporting Mental Health and Well-Being Indicators by Region, 2009 OSDUHS (Grades 7 to 12)

Indicator	Toronto	North	West	East
poor self-rated physical health	17.9	16.0	14.7	12.3 *
physically inactive (no days of activity in past week)	11.2	7.4	8.3	7.6 *
sedentary behaviour (7+ hours of screen time daily)	14.5	8.3	8.7	8.8 *
overweight or obese	24.5	31.4	25.9	23.6 *
no physical health doctor visits (past year)	35.8	39.1	33.2	31.7
treated for a physical injury (past year)	34.7	34.6	41.7	43.2 *
used opioid pain reliever medically (past year)	26.9	31.1	31.9	34.1 *
ever participated in the "choking game"	4.3	6.9	5.5	5.2
used tranquilizers/sedatives medically (past year)	2.6	3.7	3.7	4.4
used an ADHD drug medically (past year)	s	s	2.6	3.7
prescribed medication for depression/anxiety/both	2.6	3.0	3.3	3.7
mental health professional visit (past year)	27.0	19.8	23.1	24.1
used telephone crisis helpline (past year)	2.9	2.2	1.6	1.8
poor self-rated mental health	14.4	12.4	12.2	9.7
low self-esteem	9.3	6.2	8.6	8.0
depressive symptoms (past week)	5.9	4.0	5.8	5.0
elevated psychological distress (past few weeks)	33.8	31.0	30.5	30.3
suicide ideation (past year)	11.0	9.0	10.1	8.2
suicide attempt (past year)	2.3	s	2.4	3.7
delinquent behaviour (3+/11 behaviours in past year)	7.4	11.6	11.1	11.5
carried a weapon (past year)	5.8	7.6	7.8	7.5
gang fighting (past year)	3.4	2.8	2.2	3.3
belong to a gang currently	s	s	2.1	3.0
fought at school (past year)	15.0	15.2	14.9	15.2
threatened/injured with weapon at school (past year)	6.3	7.7	6.7	7.0
worried be harmed or threatened at school	18.0	11.1	11.9	10.2 *
been bullied at school (since September)	23.0	32.1	30.6	29.1 *
bullied others at school (since September)	23.8	27.8	27.3	22.8
any gambling activity (1+/10 activities in past year)	35.2	47.4	43.4	43.9
multi-gambling activity (5+/10 activities in past year)	2.7	3.9	3.0	3.0
gambling problem (past year)	3.8	2.2	1.8	3.7
video gaming problem (past year)	8.0	10.5	11.9	9.2
3 or all 4 co-existing problems [†]	5.7	11.9	8.5	8.9

Notes: * indicates a significant region difference ($p < .05$); 's' indicates estimate suppressed due to unreliability; medical drug use refers to use with a prescription; [†]among the four problem indicators: elevated psychological distress, hazardous/harmful drinking, a drug use problem, and delinquent behaviour.

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
% poor self-rated physical health	7, 9, 11	1991-2009	Increased from 6% to 13%
% no physical health doctor visits (past year)	7 to 12	1999-2009	Increased between 1999 (30%) and 2007 (39%), and decreased in 2009 (33%)
% 1+ physical injuries requiring treatment	7 to 12	2003-2009	Increased from 35% to 40%
% 1+ mental health prof. visit (past year)	7 to 12	1999-2009	Increased from 12% to 24%
% poor self-rated mental health	7 to 12	2007-2009	Stable
% low self-esteem	7, 9, 11	1995-2009	Stable
% depressive symptoms (past week)	7 to 12	1999-2009	Stable
% elevated psychological distress	7 to 12	1999-2009	Stable
% suicide ideation (past year)	7 to 12	2001-2009	Stable
% suicide attempt (past year)	7 to 12	2007-2009	Stable
% delinquent behaviour (past year)	7, 9, 11	1993-2009	Decreased from 17% to 9%
% carried a weapon (past year)	7, 9, 11	1993-2009	Decreased from 16% to 6%
% gang fighting (past year)	7, 9, 11	1993-2009	Decreased from 7% to 2%
% threatened/injured with a weapon at school	7 to 12	2003-2009	Stable
% worried be threatened/harmed at school	7 to 12	1999-2009	Stable
% been bullied at school (since September)	7 to 12	2003-2009	Stable
% any Internet gambling (past year)	7 to 12	2003-2009	Stable
% any gambling activity (past year)	7 to 12	2003-2009	Decreased from 57% to 43%
% multi-gambling activity (past year)	7 to 12	2003-2009	Decreased from 6% to 3%
% gambling problem (past year)	7 to 12	1999-2009	Decreased from 7% to 3%
% video gaming problem (past year)	7 to 12	2007-2009	Stable

Notes: the changes presented are based on the total sample of students in the grades shown; subgroup changes are not presented.

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