

1991–
2015

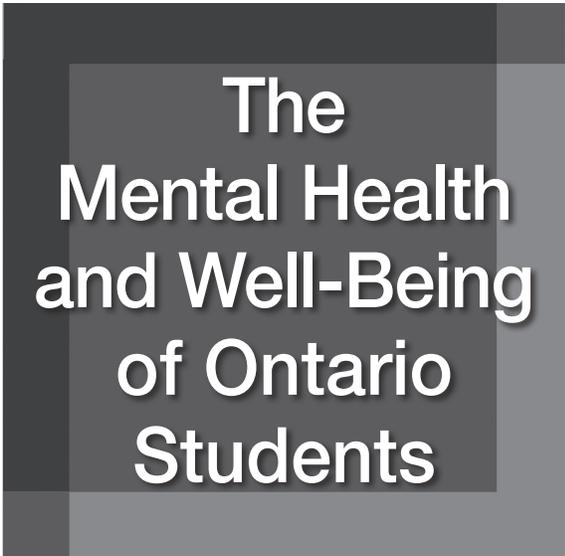
**The
Mental Health
and Well-Being
of Ontario
Students**

Detailed OSDUHS Findings

avec résumé en français à l'intérieur
with French summary within

camh OSDUHS
Ontario Student Drug
Use and Health Survey

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Mental Health
and Well-Being
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Detailed OSDUHS Findings

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Angela Boak
Hayley A. Hamilton
Edward M. Adlaf
Joanna L. Henderson
Robert E. Mann

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The 2015 OSDUHS Mental Health and Well-Being Report

Executive Summary

The Study

The Centre for Addiction and Mental Health's Ontario Student Drug Use and Health Survey (OSDUHS) is the longest ongoing school survey of adolescents in Canada, and one of the longest in the world. The study has been conducted every two years since 1977, consisting of 20 survey cycles to date. A total of 10,426 students (59% of selected students in participating classes) in grades 7 through 12 from 43 school boards, 220 schools, and 750 classes participated in the 2015 OSDUHS, which was administered by the Institute for Social Research, York University.

This report describes mental health, physical health, and risk behaviours among Ontario students in 2015 and changes since 1991, where available. Although the OSDUHS began in 1977, most physical health and mental health indicators were introduced in the survey in the early 1990s. In this report, trend results are provided for two analytical groups of students: those in grades 7 through 12, and those in grades 7, 9, and 11 only. The first group is used to assess 2015 estimates and relatively **recent trends (1999–2015)**, and the second is used to assess **long-term trends (1991–2015)**. All data are based on self-reports derived from anonymous questionnaires administered in classrooms between November 2014 and June 2015.

New indicators in this report include subjective social status at school, usual number of hours of sleep on a school night, going to bed or school hungry, elevated stress, and symptoms of attention-deficit/hyperactivity disorder (ADHD).

Home Life

- One-in-five (20%) Ontario students report living with a single parent or no parent (birth, adoptive, or step).
- One-in-eight (13%) students report splitting their time between two or more homes.
- Nearly half (44%) of secondary school students have a part-time job. Five percent work more than 20 hours per week.
- The majority (86%) of students visit social media sites daily. About one-in-six (16%) students spend five hours or more on social media daily.
- The percentage of students who report spending five or more hours on social media per day significantly increased between 2013 and 2015, from 11% to 16%.

School Life

- One-third (32%) of students report liking school very much or quite a lot. Half (50%) of students like school to some degree. About 18% do not like school very much or at all.
- One-quarter (24%) of students report spending less than one hour per week doing homework, outside of school.
- One-in-seven (15%) students report being suspended or expelled from school at least once in their lifetime.

- Although most students feel safe in their school, one-in-eight (12%) express worry about being harmed or threatened at school.
- The percentage of students who express worry about being harmed or threatened at school in 2015 (12%) is similar to estimates observed during the past decade (about 12%-14%).
- About 5% of students report low subjective social status at school (i.e., feeling that other students exclude them and do not respect them).
- About two-thirds (63%) of students spend three hours or more per day in front of a TV or tablet/computer in their free time (“screen time” sedentary behaviour).
- The percentage of students who are screen time sedentary has significantly increased since 2009, which was the first year of monitoring, from 57% to 63%.
- One-quarter (26%) of students are classified as overweight or obese (an estimated 239,600 students in Ontario).
- The percentage of students classified as overweight or obese has significantly increased since 2007, which was the first year of monitoring, from 23% to 26%.

Physical Health

- Although the majority (66%) of students rate their health as excellent or very good, about 8% (an estimated 72,200 Ontario students in grades 7–12) report fair or poor physical health.
- One-in-twelve (8%) students report that they have a current asthma diagnosis (an estimated 71,900 students in Ontario).
- Only one-in-five (22%) students met the recommended daily physical activity guideline (defined as a total of at least 60 minutes of moderate-to-vigorous activity per day) during the past seven days. At the other extreme, 6% were physically inactive on each of the past seven days.
- Less than half (42%) of students do not engage in physical activity (defined as a total of at least 20 minutes of moderate-to-vigorous activity per day) in a physical education class at school.
- Less than half (41%) of students report that they usually get eight or more hours of sleep on an average school night. Therefore, most students (59%) are not getting at least eight hours of sleep.
- About 5% of students report always or often going to bed or school hungry. This percentage represents about 43,800 students in Ontario.
- About 4% of students (an estimated 32,300) used an indoor tanning device (e.g., sunbed, tanning booth, sunlamp) at least once in the past year.

Body Image

- Two-thirds (67%) of students are satisfied with their weight. About one-in-five (22%) believe they are too fat, and one-in-ten (10%) believe they are too thin.
- One-third (34%) of students are not attempting to change their weight. Another 28% are attempting to lose weight, 25%

want to keep from gaining weight, and 13% want to gain weight.

- Females are twice as likely as males to believe they are too fat (30% vs. 15%, respectively), whereas males are twice as likely as females to believe that they are too thin (15% vs. 6%, respectively).
- More females today (30%) believe they are too fat compared with their counterparts in 2001 (24%), the first year of monitoring. There has been no comparable increase among males.

Injuries and Related Behaviours

- Almost half (44%) of all students were treated for an injury at least once during the past year (represents about 390,500 students in Ontario).
- The percentage of students reporting a medically treated injury significantly increased between 2003 (35%), the first year of monitoring, and 2015 (44%).
- Among bicyclists, over three-quarters (77%) report that they do not always wear a helmet while cycling. Half (50%) of bicyclists report rarely or never wearing a helmet.
- One-quarter (24%) of students report that they do not always wear a seatbelt when in a motor vehicle (about 219,100 students in Ontario).
- One-third (35%) of drivers in grades 10–12 report texting while driving at least once in the past year. This percentage represents an estimated 103,400 adolescent drivers.
- The percentage of adolescent drivers reporting texting and driving has not significantly changed since 2013 (36%), the first year of monitoring.

- Among drivers in grades 10–12, one-in-eleven (9%; about 25,200 drivers) report being involved in a collision as a driver at least once in the past year.

Health Care Utilization

Physician Health Care Visit

- Over one-quarter (29%) of students did not visit a doctor for their physical health, not even for a check-up, during the past year.

Mental Health Care Visit

- One-in-five (21%) students visited a mental health care professional (such as a doctor, nurse or counsellor) for a mental health matter at least once during the past year.
- The percentage of students reporting visiting a mental health professional is significantly higher today (21%) than in 1999 (12%), the first year of monitoring.

Use of Drugs for Medical Reasons

- One-in-five (21%) students report using a prescribed opioid pain reliever (e.g., Tylenol #3, Percocet) in the past year. About 3% of students used a prescribed drug for ADHD (e.g., Ritalin, Adderall, Concerta) in the past year. About 3% of secondary school students used a prescribed tranquilizer/sedative (e.g., Valium, Ativan, Xanax) in the past year.
- The percentage of students reporting being prescribed an opioid pain reliever in the past year has significantly decreased since 2007, the first year of monitoring, from 41% to 21%.

- Six percent of secondary school students report that they were prescribed medication for anxiety, depression, or both conditions, during the past year.
- The percentage of secondary school students who report being prescribed medication for anxiety, depression, or both conditions is higher today (6%) than in 2001 (3%), the first year of monitoring.

Seeking Support for a Mental Health Problem

- Three percent of students report seeking help either by calling a telephone counselling helpline or over the Internet at least once in the past year. This estimate represents about 29,200 Ontario students.
- Over one-quarter (28%) of students report that, in the past year, there was a time they wanted to talk to someone about a mental health problem, but did not know where to turn. This estimate represents about 280,400 Ontario students.

Internalizing Indicators

Self-Rated Mental Health

- One-in-six (17%) students rate their mental health as fair or poor.
- The percentage of students who rate their mental health as fair or poor today is significantly higher than in 2007 (11%), the first year of monitoring.

Low Self-Esteem

- Seven percent of students report low self-esteem. Low self-esteem is significantly higher among females than males (10% vs. 5%, respectively).

Elevated Stress

- Over one-quarter (29%) of students report experiencing an elevated level of stress or pressure in their lives (representing about 283,500 students).

Psychological Distress

- One-third (34%) of students indicate a moderate-to-serious level of psychological distress (symptoms of anxiety and depression). One-in-seven (14%) students indicate a serious level of psychological distress (representing about 137,000 students).
- Both measures of psychological distress are significantly higher in 2015 compared with the previous survey in 2013, the first year of monitoring.

Suicidal Ideation and Suicide Attempt

- One-in-eight (12%) students had serious thoughts about suicide in the past year (an estimated 113,500 students), and 3% (an estimated 27,000 students) report a suicide attempt in the past year.
- The percentage reporting suicidal ideation today is similar to the estimate from 2001 (11%), the first year of monitoring. There has been no change over time in the percentage reporting a suicide attempt.

Symptoms of ADHD

- One-in-six (16%) students report symptoms of ADHD. This percentage represents about 152,700 Ontario students.

Externalizing Indicators

Antisocial Behaviour

- Five percent of students engaged in antisocial behaviour (defined as three or more of nine specific behaviours) during the past year.
- The percentage of students engaging in antisocial behaviour is significantly lower today than in the early 1990s.

Violent Behaviour

- About 5% of students report that they assaulted someone at least once during the past year, and a similar percentage (5%) report carrying a weapon (a knife or gun).
- Since the early 1990s, there have been significant declines in the percentage of students reporting assaulting someone and carrying a weapon.

School Violence

- One-in-ten (10%) students report physically fighting on school property at least once during the past year (representing about 102,200 students).
- Six percent of students were threatened or injured with a weapon on school property at least once during the past year (representing about 56,900 students).

Bullying at School

- One-quarter (24%) of students report being bullied at school since the beginning of the school year (representing about 231,200 students). By far, the most prevalent form of bullying victimization at school is verbal (21%), while 1% report that they are primarily bullied physically, and 2% of students are victims of theft/vandalism.

- One-in-eight (13%) students report bullying others at school since September. The most prevalent form of bullying others at school is through verbal attacks (12%), followed by physical attacks (1%), and theft/vandalism (less than 1%).
- The percentage of students reporting being bullied at school shows a significant linear decline between 2003 and 2015, from 33% to 24%.
- Similarly, the percentage reporting bullying others at school significantly declined between 2003 and 2015, from 30% down to 13%.

Victim of Cyberbullying

- One-in-five (20%) students report being bullied over the Internet in the past year. This estimate represents about 194,200 students.
- The percentage reporting being cyberbullied has remained stable since 2011 (22%), the first year of monitoring.

Gambling and Video Gaming

Gambling Activities

- Of the 10 gambling activities surveyed in 2015, the most prevalent among all students is betting in sports pools (10%), and betting at card games (10%). A further 11% gambled money at “other activities” not measured in the survey. The least prevalent activity is casino gambling (less than 1%).
- Gambling over the Internet on any game is reported by 4% of students.

- One-third (32%) of students report gambling at one or more activities in the past year (about 308,200 students in Ontario).
- Two percent of students gambled at five or more activities in the past year (about 16,700 students in Ontario).
- The percentage of students reporting any gambling in 2015 (32%) is significantly lower than the estimate from 2003 (57%), the first year of monitoring. Similarly, multi-gambling activity is significantly lower in 2015 (2%) than in 2003 (6%).
- The percentage reporting Internet gambling has remained stable since 2003.

Gambling Problem

- About 4% of secondary school students indicate symptoms of a low-to-moderately severe gambling problem. About 1% indicate a high-severity gambling problem (representing about 7,500 secondary school students in Ontario).

Video Gaming Problem

- One-quarter (26%) of students play video games daily or almost daily, with males being almost four times more likely than females to do so (40% vs. 11%, respectively). One-in-ten (10%) students play video games for five hours or more per day.
- One-in-eight (13%) students (an estimated 122,600 in Ontario) report symptoms of a video gaming problem (preoccupation, tolerance, loss of control, withdrawal, escape, disregard for consequences, disruption to family/school).

- The percentage of students indicating a video gaming problem in 2015 (13%) is significantly higher than the percentage in 2007 (9%), the first year of monitoring.

Coexisting Problems

- About half (49%) of secondary school students report none of the following four problems: psychological distress, antisocial behaviour, hazardous/harmful drinking, or a drug use problem. About 33% of secondary school students report one of these problems, about 10% report two of these problems, 6% report three, and 2% report all four problems.

Sex Differences

- There are many differences between males and females regarding mental health and well-being. Males are significantly more likely than females to:
 - engage in daily physical activity
 - be classified as overweight/obese
 - get at least eight hours of sleep
 - engage in antisocial behaviour
 - carry a weapon
 - fight at school
 - be harmed/threatened at school
 - gamble money
 - have a gambling problem
 - play video games daily
 - have a video gaming problem.
- Females are significantly more likely than males to:
 - rate their physical health as fair/poor
 - be physically inactive
 - use prescription opioid pain relievers medically
 - seek mental health counselling

- have an unmet need for mental health support
- use prescription tranquilizers medically
- be prescribed medication for anxiety/depression or both
- rate their mental health as fair/poor
- have low self-esteem
- feel stressed
- feel psychological distress
- contemplate and attempt suicide
- have symptoms of ADHD
- be bullied at school
- be cyberbullied
- spend more hours daily on social media
- have coexisting problems.

Grade Differences

- Grade is also significantly related to mental health and well-being. Generally, poor physical health indicators (e.g., inactivity, sedentary behaviour), health risk behaviours (e.g., not wearing a helmet or seatbelt, texting while driving), internalizing problems (e.g., fair/poor self-rated mental health, stress, psychological distress), antisocial behaviour, gambling, and coexisting problems significantly increase with grade. Physical fighting at school is more prevalent in the younger grades and declines in later adolescence.

Regional Differences

Historically, the survey design has divided the province into 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).

The following regional differences were found:

- Compared with the provincial average, **Toronto** students are significantly *more* likely to report not always wearing a helmet while bicycling, and to indicate a video gaming problem. Compared with the average, they are significantly *less* likely to report sustaining a serious injury, texting and driving, medical use of prescription opioids, and being cyberbullied.
- Compared with the provincial average, **Northern** Ontario students are *more* likely to report sustaining a serious injury, medical use of an ADHD drug, and being cyberbullied.
- Students in **Western** Ontario and **Eastern** Ontario do not significantly differ from the average on any indicator.

Readers should note that an overview of results according to Ontario's Local Health Integration Networks is provided in the report on page 120, and results for the Greater Toronto Area (GTA) are provided on page 123.

Percentage Reporting Selected Mental Health and Well-Being Indicators by Sex, 2015 OSDUHS (Grades 7–12)

Indicator	Total (95% CI) %	Estimated Number [†]	Males %	Females %
fair/poor self-rated physical health	7.6 (6.8-8.5)	72,200	6.4	8.9 *
asthma diagnosis (current)	8.0 (6.8-9.4)	71,900	7.4	8.7
no physician health care visit (past year)	28.6 (26.6-30.8)	256,600	31.9	25.1
daily physical activity (60 mins. activity daily past week)	22.3 (20.7-23.9)	210,600	27.0	17.2 *
physically inactive (no days of activity in past week)	6.4 (5.5-7.5)	60,400	5.4	7.4 *
sedentary behaviour (3+ hours of screen time daily)	62.6 (60.7-64.4)	570,300	61.6	63.6
overweight or obese	26.4 (24.9-28.0)	239,600	30.0	22.5 *
8 or more hours of sleep on an average school night	41.0 (38.9-43.2)	388,800	44.9	36.9 *
often/always go to bed or school hungry (food insecurity)	4.6 (3.9-5.5)	43,800	5.0	4.2
use of an indoor tanning device (past year)	3.6 (2.9-4.6)	32,300	4.1	3.1
medically treated injury (past year)	43.7 (41.0-46.3)	390,500	45.4	41.8
used an opioid pain reliever medically (past year)	21.1 (19.2-23.2)	193,000	19.3	23.1 *
not always wear a bike helmet (among bicyclists)	76.9 (74.3-79.4)	541,800	78.6	74.9
not always wear a seatbelt when in motor vehicle	23.9 (21.8-26.3)	219,100	22.5	25.5
texting while driving (past year, among drivers)	35.3 (31.0-39.9)	103,400	35.5	35.1
vehicle collision as a driver (past year, among drivers)	8.6 (6.5-11.4)	25,200	10.0	7.0
mental health care visit (past year)	20.9 (18.9-23.0)	205,300	17.1	24.9 *
sought counselling over phone or Internet (past year)	3.0 (2.3-3.7)	29,200	1.8	4.2 *
unmet need for mental health support	28.4 (26.1-30.9)	280,400	18.6	39.0 *
used tranquilizers/sedatives medically (past year) ^{††}	3.3 (2.9-3.7)	22,800	1.8	4.9 *
used an ADHD drug medically (past year)	2.6 (2.1-3.3)	26,000	2.9	2.4
prescribed medication for depression/anxiety/both ^{††}	5.6 (4.4-6.9)	39,300	2.8	8.4 *
fair/poor self-rated mental health	16.5 (14.5-18.9)	163,800	10.3	23.2 *
low self-esteem	7.0 (5.7-8.5)	68,700	4.7	9.5 *
elevated stress	28.7 (26.1-31.4)	283,500	19.8	38.2 *
moderate-to-serious psychological distress (past month)	34.0 (31.5-36.7)	328,600	22.7	45.9 *
serious psychological distress (past month)	14.2 (12.5-16.0)	137,000	7.0	21.7 *
suicidal ideation (past year)	12.4 (10.9-14.1)	113,500	8.2	16.9 *
suicide attempt (past year)	3.0 (2.2-3.9)	27,000	1.5	4.5 *
symptoms of ADHD (past 6 months)	15.8 (14.0-17.6)	152,700	13.6	18.1 *
antisocial behaviour (3+/9 behaviours in past year)	5.2 (4.2-6.4)	50,700	6.4	4.1 *
carried a weapon (past year)	5.1 (4.1-6.4)	49,600	7.8	2.3 *
physical fight at school (past year)	10.4 (9.1-11.9)	102,200	15.9	4.5 *
threatened/injured with weapon at school (past year)	5.8 (4.8-6.9)	56,900	7.9	3.6 *
worried about being harmed or threatened at school	12.1 (10.2-14.4)	120,300	11.4	12.9
bullied others at school (since September)	13.1 (11.5-14.8)	127,700	14.6	11.5
been bullied at school (since September)	23.6 (21.5-25.8)	231,200	19.6	27.8 *
been cyberbullied (past year)	19.8 (18.0-21.7)	194,200	14.0	25.8 *
any gambling activity (past year)	31.8 (29.3-34.5)	308,200	40.3	22.9 *
multi-gambling activity (5+ activities in past year)	1.7 (1.3-2.3)	16,700	3.2	s *
high gambling problem severity (past 3 months) ^{††}	1.1 (0.7-1.8)	7,500	1.9	s *
video gaming problem (past year)	12.5 (11.1-14.1)	122,600	20.2	4.5 *
3 or all 4 coexisting problems ^{††}	7.8 (6.5-9.5)	56,100	6.0	9.8 *

Notes: the survey sample size is 10,426 students; some estimates are based on a random half sample; CI=confidence interval; [†] the estimated number of students is based on a student population of about 961,500 in Ontario (numbers have been rounded down); * indicates a significant sex difference ($p < .05$) *not* controlling for other factors; ^{††} among grades 9–12 only; medical drug use is defined as use with a prescription; “coexisting problems” refers to the following four problems: psychological distress, antisocial behaviour, hazardous/harmful drinking, and drug use problem.

Percentage Reporting Selected Mental Health and Well-Being Indicators by Grade, 2015 OSDUHS

Indicator	G7	G8	G9	G10	G11	G12
fair/poor self-rated physical health	4.4	5.8	7.5	7.4	9.0	9.6
asthma diagnosis (current)	9.3	8.1	7.1	8.5	9.9	6.4
no physician health care visit (past year)	29.8	28.1	25.5	28.9	29.6	29.6
daily physical activity (60 mins. activity daily past week)	28.3	19.0	28.0	21.5	19.7	19.4 *
physically inactive (no days of activity in past week)	2.1	4.1	4.0	6.5	9.1	9.6 *
sedentary behaviour (3+ hours of screen time daily)	45.7	56.3	66.0	66.4	65.8	67.7 *
overweight or obese	21.9	24.8	24.1	26.7	29.8	28.3
8 or more hours of sleep on an average school night	72.3	65.6	46.4	33.7	23.7	23.7 *
often/always go to bed or school hungry (food insecurity)	3.8	3.9	4.2	5.9	4.2	5.2
use of an indoor tanning device (past year)	3.7	s	3.8	3.2	4.1	3.4
medically treated injury (past year)	40.1	48.0	41.5	44.9	43.5	43.8
used an opioid pain reliever medically (past year)	13.6	14.1	17.9	19.3	28.2	27.0 *
not always wear a bike helmet (among bicyclists)	58.2	65.5	76.7	80.0	84.9	86.1 *
not always wear a seatbelt when in motor vehicle	17.3	18.9	25.3	25.3	24.2	27.9 *
texting while driving (past year, among drivers)	--	--	--	s	24.7	44.4 *
vehicle collision as a driver (past year, among drivers)	--	--	--	s	4.0	12.4 *
mental health care visit (past year)	26.5	21.9	16.8	20.0	19.5	21.3
sought counselling over phone or Internet (past year)	1.1	3.2	3.6	3.3	4.5	2.1 *
unmet need for mental health support	17.6	28.7	24.6	33.5	32.6	30.9 *
used tranquilizers/sedatives medically (past year) ^{††}	--	--	3.0	3.4	2.6	3.8
used an ADHD drug medically (past year)	s	3.3	s	3.4	3.4	s
prescribed medication for depression/anxiety/both ^{††}	--	--	3.3	4.9	5.8	7.4
fair/poor self-rated mental health	7.7	13.4	14.2	18.8	23.2	18.9 *
low self-esteem	2.1	s	6.8	6.6	10.0	5.9 *
elevated stress	10.9	16.2	20.0	32.8	39.5	42.2 *
moderate-to-serious psychological distress (past month)	18.7	30.7	27.6	37.2	42.4	40.8 *
serious psychological distress (past month)	6.4	11.7	11.1	14.6	19.1	18.3 *
suicidal ideation (past year)	6.4	10.1	9.6	15.4	16.4	14.6 *
suicide attempt (past year)	s	s	1.9	3.0	5.3	2.5
symptoms of ADHD (past 6 months)	8.2	10.9	14.8	16.7	22.0	18.6 *
antisocial behaviour (3+/9 behaviours in past year)	s	4.0	4.8	6.6	6.2	7.3 *
carried a weapon (past year)	3.8	4.3	4.5	5.6	4.6	6.9
physical fight at school (past year)	17.9	18.5	8.9	8.9	7.0	5.5 *
threatened/injured with weapon at school (past year)	4.2	9.4	4.6	4.8	6.3	5.8
worried about being harmed or threatened at school	16.0	15.6	12.7	12.0	10.9	8.3
bullied others at school (since September)	7.6	16.9	11.4	14.6	10.8	15.7 *
been bullied at school (since September)	26.3	27.2	21.1	25.3	18.5	23.8
been cyberbullied (past year)	19.0	19.0	19.7	21.3	19.7	19.7
any gambling activity (past year)	23.7	27.6	25.6	31.3	36.3	40.5 *
multi-gambling activity (5+ activities in past year)	s	s	s	1.9	2.0	2.5
high gambling problem severity (past 3 months) ^{††}	--	--	s	s	s	s
video gaming problem (past year)	8.4	11.8	12.8	14.1	14.7	12.7
3 or all 4 coexisting problems ^{††}	--	--	2.2	7.0	8.7	11.6 *

Notes: * indicates a significant grade difference ($p < .05$) not controlling for other factors; 's' indicates estimate suppressed due to unreliability; ^{††} among grades 9–12 only; medical drug use is defined as use with a prescription; "coexisting problems" refers to the following four problems: psychological distress, antisocial behaviour, hazardous/harmful drinking, and drug use problem.

Percentage Reporting Selected Mental Health and Well-Being Indicators by Region, 2015 OSDUHS (Grades 7–12)

Indicator	Toronto	North	West	East
fair/poor self-rated physical health	9.4	6.1	6.9	8.0
asthma diagnosis (current)	6.3	11.4	9.2	6.8
no physician health care visit (past year)	26.3	31.2	28.8	29.3
daily physical activity (60 mins. activity daily past week)	22.3	24.4	20.8	23.8
physically inactive (no days of activity in past week)	8.4	6.3	5.9	6.0
sedentary behaviour (3+ hours of screen time daily)	66.4	58.9	61.3	62.9
overweight or obese	26.2	28.3	25.0	28.1
8 or more hours of sleep on an average school night	40.2	48.2	41.1	40.1
often/always go to bed or school hungry (food insecurity)	5.5	4.3	4.6	4.3
use of an indoor tanning device (past year)	2.9	3.7	3.2	4.6
medically treated injury (past year)	33.5	50.8	45.1	46.1 *
used an opioid pain reliever medically (past year)	16.3	17.3	21.9	23.2 *
not always wear a bike helmet (among bicyclists)	82.2	65.4	75.7	78.0 *
not always wear a seatbelt when in motor vehicle	26.7	20.7	22.1	25.6
texting while driving (past year, among drivers)	21.7	40.8	33.8	41.1 *
vehicle collision as a driver (past year, among drivers)	4.1	8.8	9.3	9.3
mental health care visit (past year)	20.5	23.9	20.1	21.6
sought counselling over phone or Internet (past year)	3.0	3.4	3.2	2.5
unmet need for mental health support	27.6	27.5	28.2	29.3
used tranquilizers/sedatives medically (past year) ^{††}	s	4.3	4.1	3.2
used an ADHD drug medically (past year)	s	4.0	2.3	3.5 *
prescribed medication for depression/anxiety/both ^{††}	s	6.5	6.0	6.4
fair/poor self-rated mental health	12.2	20.0	18.0	16.2
low self-esteem	5.3	7.5	8.0	6.5
elevated stress	30.0	29.3	27.8	29.1
moderate-to-serious psychological distress (past month)	36.1	35.9	33.1	33.8
serious psychological distress (past month)	13.7	15.2	14.3	14.1
suicidal ideation (past year)	9.3	13.4	12.8	12.6
suicide attempt (past year)	s	3.5	3.4	2.6
symptoms of ADHD (past 6 months)	17.3	13.9	15.4	15.9
antisocial behaviour (3+/9 behaviours in past year)	5.1	6.3	3.9	6.8
carried a weapon (past year)	5.6	7.4	4.2	5.7
physical fight at school (past year)	8.5	14.5	9.5	11.7
threatened/injured with weapon at school (past year)	4.5	6.6	5.3	7.0
worried about being harmed or threatened at school	14.4	10.7	11.6	12.0
bullied others at school (since September)	14.2	14.1	12.0	13.7
been bullied at school (since September)	21.9	27.7	23.2	24.1
been cyberbullied (past year)	14.3	27.3	19.6	21.3 *
any gambling activity (past year)	29.2	42.5	31.1	32.0
multi-gambling activity (5+ activities in past year)	s	3.0	1.4	1.4
high gambling problem severity (past 3 months) ^{††}	s	s	s	s
video gaming problem (past year)	18.5	12.1	12.0	10.4 *
3 or all 4 coexisting problems ^{††}	5.6	8.1	7.0	10.0

Notes: * indicates a significant region difference ($p < .05$) not controlling for other factors; 's' indicates estimate suppressed due to unreliability; ^{††} among grades 9–12 only; medical drug use is defined as use with a prescription; “coexisting problems” refers to the following four problems: psychological distress, antisocial behaviour, hazardous/harmful drinking, and drug use problem.

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	1991–2015	Stable
% daily physical activity (60 mins. per day)	7–12	2009–2015	Stable
% sedentary behaviour (3+ hours screen time daily)	7–12	2009–2015	Increased from 57% to 63%
% overweight/obese	7–12	2009–2015	Increased from 23% to 26%
% medically treated injury	7–12	2003–2015	Increased from 35% to 44%
% not always wear a seatbelt in vehicle	7–12	2011–2015	Decreased from 28% to 24%
% texting and driving (students with a licence)	10–12	2013–2015	Stable
% 1+ mental health care visit (past year)	7–12	1999–2015	Increased from 12% to 21%
% medical use of ADHD prescription drugs	7–12	2007–2015	Stable
% prescription for depression/anxiety/both	9–12	2001–2015	Increased from 3% to 6%
% fair/poor self-rated mental health	7–12	2007–2015	Increased from 11% to 17%
% moderate-to-serious psychological distress	7–12	2013–2015	Increased from 24% to 34%
% serious psychological distress	7–12	2013–2015	Increased from 11% to 14%
% suicidal ideation (past year)	7–12	2001–2015	Stable
% suicide attempt (past year)	7–12	2007–2015	Stable
% antisocial behaviour (past year)	7, 9, 11	1993–2015	Decreased from 16% to 4%
% carried a weapon (past year)	7, 9, 11	1993–2015	Decreased from 16% to 4%
% physical fighting at school (past year)	7–12	2001–2015	Decreased from 17% to 10%
% threatened/injured with a weapon at school	7–12	2003–2015	Stable
% worried about being harmed/threatened at school	7–12	1999–2015	Stable
% been bullied at school (since September)	7–12	2003–2015	Decreased from 33% to 24%
% been cyberbullied (past year)	7–12	2011–2015	Stable
% any Internet gambling (past year)	7–12	2003–2015	Stable
% any gambling activity (past year)	7–12	2003–2015	Decreased from 57% to 32%
% multi-gambling activity (past year)	7–12	2003–2015	Decreased from 6% to 2%
% video gaming problem (past year)	7–12	2007–2015	Increased from 9% to 13%

Note: trend analyses are based on a p-value of <0.01.

Résumé du rapport de 2015 sur la santé mentale et le bien-être selon le SCDSEO

L'étude

Le Sondage sur la consommation de drogues et la santé des élèves de l'Ontario (SCDSEO), réalisé par le Centre de toxicomanie et de santé mentale, est la plus ancienne étude menée auprès des adolescents en milieu scolaire au Canada et l'une des plus longues dans le monde. Menée tous les deux ans depuis 1977, l'étude compte jusqu'à présent 20 cycles de sondages. Un total de 10 426 élèves (59 % des élèves sélectionnés dans les classes participantes) de la 7^e à la 12^e année répartis dans 43 conseils scolaires, 220 écoles et 750 classes ont participé au SCDSEO 2015, qui a été administré par l'Institut de recherche sociale de l'Université York.

Le rapport décrit la santé physique et mentale et les comportements à risque des élèves ontariens en 2015 ainsi que, le cas échéant, les changements survenus depuis 1991. Bien que le SCDSEO ait commencé en 1977, la plupart des indicateurs de la santé physique et mentale ont été inclus pour la première fois au début des années 1990. Les résultats présentés dans le rapport sont fournis pour deux groupes d'élèves analysés : ceux de la 7^e à la 12^e année et ceux des 7^e, 9^e et 11^e années uniquement. Le premier groupe sert à évaluer les comportements actuels et les **tendances relativement récentes (de 1999 à 2015)** tandis que le second est utilisé pour évaluer les **tendances à long terme (de 1991 à 2015)**.

Toutes les données proviennent de questionnaires anonymes que les élèves ont remplis en classe entre novembre 2014 et juin 2015.

Parmi les **nouveaux indicateurs** figurant dans le rapport, citons le statut social subjectif à l'école, le nombre habituel d'heures de sommeil par nuit d'avant l'école, le fait d'aller au lit ou à l'école le ventre vide, un niveau de stress élevé,

et des symptômes de trouble déficitaire de l'attention avec ou sans hyperactivité (TDAH).

Vie familiale

- Un élève ontarien sur cinq (20 %) déclare habiter avec un seul parent ou ne pas avoir de tuteur parental (parent biologique, adoptif ou beau-parent).
- Un élève ontarien sur huit (13 %) déclare qu'il partage son temps entre deux foyers ou plus.
- Près de la moitié des élèves du secondaire (44 %) ont un emploi à temps partiel et 5 % travaillent plus de 20 heures par semaine.
- La majorité des élèves (86 %) consultent les sites de médias sociaux tous les jours. Environ un élève sur six (16 %) y passe au moins cinq heures par jour.
- Entre 2013 et 2015, le pourcentage d'élèves qui déclarent passer au moins cinq heures par jour à consulter les médias sociaux est passé de 11 % à 16 %, une augmentation significative.

Vie scolaire

- Le tiers (32 %) des élèves déclarent qu'ils aiment vraiment ou beaucoup l'école. La moitié (50 %) disent qu'ils aiment l'école dans une certaine mesure, et environ 18 % n'aiment pas vraiment ou pas du tout l'école.

- Le quart des élèves (24 %) déclarent qu'ils consacrent moins d'une heure par semaine à leurs devoirs à l'extérieur de l'école.
- Un élève sur sept (15 %) déclare avoir été exclu ou renvoyé de l'école au moins une fois dans sa vie.
- Même si la majorité des élèves se sentent en sécurité à l'école, un sur huit (12 %) craint d'être blessé ou menacé à l'école.
- Le pourcentage d'élèves qui craignaient d'être blessés ou menacés à l'école en 2015 (12 %) est comparable aux estimations faites au cours des 10 dernières années (de 12 % à 14 % environ).
- Environ 5 % des élèves déclarent qu'ils ont un statut social subjectif inférieur à l'école (sentiment d'être exclu et de ne pas être respecté par les autres élèves).

Santé physique

- Bien que la majorité des élèves (66 %) se disent en excellente ou en très bonne santé, environ 8 % des élèves ontariens de la 7^e à la 12^e année (72 200 élèves selon les estimations) jugent leur santé passable ou médiocre.
- Un élève sur douze (8 %) déclare qu'on a diagnostiqué de l'asthme chez lui (71,900 élèves ontariens selon les estimations).
- Seulement un élève sur cinq (22 %) a suivi les lignes directrices relatives à l'activité physique quotidienne (définie comme au moins 60 minutes d'activité physique modérée à vigoureuse par jour) au cours des sept derniers jours. À l'opposé, 6 % des

élèves sont classés comme physiquement inactifs pour toute la période des sept jours.

- Près de la moitié des élèves (42 %) ne font aucune activité physique (définie comme au moins 20 minutes d'activité physique modérée à vigoureuse par jour) lors d'un cours d'éducation physique à l'école.
- Environ les deux tiers des élèves (63 %) passent au moins trois heures de leur temps libre par jour devant un téléviseur, un ordinateur ou une tablette (comportement sédentaire devant un écran).
- Le pourcentage d'élèves ayant un comportement sédentaire devant un écran est passé de 57 % à 63 %, une augmentation significative depuis 2009, première année de surveillance de cet indicateur.
- Le quart des élèves ontariens (26 %) sont considérés comme ayant un excès de poids ou comme étant obèses (239 600 élèves selon les estimations).
- Le pourcentage d'élèves considérés comme ayant un excès de poids ou comme étant obèses est passé de 23 % à 26 %, une augmentation significative depuis 2007, première année de surveillance de cet indicateur.
- Moins de la moitié des élèves (41 %) déclarent qu'ils dorment habituellement huit heures ou plus pendant une nuit moyenne d'avant l'école. Donc, la plupart des élèves (59 %) dorment moins de huit heures par nuit.
- Environ 5 % des élèves (soit environ 43 800 élèves ontariens) déclarent qu'ils vont à l'école ou au lit le ventre vide souvent ou toujours.

- Environ 4 % des élèves (32 300 selon les estimations) ont utilisé un appareil de bronzage à l'intérieur (p. ex., lit ou autre appareil de bronzage, lampe solaire) au moins une fois au cours de l'année écoulée.

Image corporelle

- Les deux tiers (67 %) des élèves se disent satisfaits de leur poids. Environ un élève sur cinq (22 %) estime être trop gros, et un dixième (10 %) estiment être trop maigres.
- Un tiers des élèves (34 %) déclarent ne pas vouloir changer de poids, tandis que 28 % déclarent qu'ils veulent perdre du poids, 25 % veulent éviter de prendre du poids et 13 % veulent prendre du poids.
- Les filles sont deux fois plus susceptibles que les garçons de penser qu'elles sont trop grosses (30 % contre 15 %), tandis que les garçons sont deux fois plus susceptibles que les filles de se trouver trop maigres (15 % contre 6 %).
- Actuellement, davantage de filles (30 %) qu'en 2001 (24 %), première année de surveillance de cet indicateur, estiment qu'elles sont trop grosses. On n'a pas observé une telle augmentation chez les garçons.

Blessures et comportements connexes

- Près de la moitié des élèves (44 %) ont été soignés pour blessures au moins une fois au cours de l'année écoulée (soit environ 390 500 élèves ontariens).
- Le pourcentage d'élèves ayant déclaré avoir reçu des soins médicaux pour une blessure a nettement augmenté entre 2003 (35 %), première année de surveillance de cet indicateur, et 2015 (44 %).

- Plus des trois quarts des élèves cyclistes (77 %) déclarent qu'ils ne portent pas toujours de casque à vélo. La moitié (50 %) déclarent qu'ils portent rarement un casque ou n'en portent jamais.

- Le quart des élèves (24 %, soit environ 219 100 élèves ontariens) déclarent qu'ils ne portent pas toujours de ceinture de sécurité lorsqu'ils sont à bord d'un véhicule automobile.
- Le tiers des élèves conducteurs (35 %) de la 10^e à la 12^e année déclarent avoir envoyé des textos au volant au moins une fois au cours de l'année écoulée. Ce pourcentage représente environ 103 400 conducteurs adolescents.
- Le pourcentage de conducteurs adolescents qui déclarent avoir envoyé des textos au volant n'a pas changé de façon significative depuis 2013 (36 %), première année de surveillance de cet indicateur.
- Parmi les élèves conducteurs de la 10^e à la 12^e année, un sur onze (9 %, soit 25 200 conducteurs selon les estimations) déclare avoir été impliqué dans une collision pendant qu'il était au volant, au moins une fois au cours de l'année écoulée.

Recours aux services de santé

Consultation d'un médecin

- Plus du quart des élèves (29 %) n'ont pas consulté de médecin au sujet de leur santé physique, pas même pour un examen régulier au cours de l'année écoulée.

Consultations de professionnels de la santé mentale

- Un élève sur cinq (21 %) a consulté un professionnel de la santé mentale (médecin, infirmière ou conseiller) pour des raisons de santé mentale au moins une fois au cours de l'année écoulée.
- Le pourcentage d'élèves qui déclarent avoir consulté un professionnel de la santé mentale est nettement plus élevé actuellement (21 %) qu'en 1999 (12 %), première année de surveillance de cet indicateur.

Usage de médicaments en raison de problèmes de santé

- Un élève sur cinq (21 %) déclare avoir consommé des analgésiques opioïdes sur ordonnance (p. ex., Tylenol 3, Percocet) au cours de l'année écoulée. Environ 3 % des élèves ont pris un médicament prescrit pour trouble déficitaire de l'attention avec ou sans hyperactivité (TDAH) (p. ex., Ritalin, Adderall, Concerta) au cours de l'année écoulée. Environ 3 % des élèves du secondaire ont pris un tranquillisant ou un sédatif sur ordonnance (p. ex., Valium, Ativan, Xanax) au cours de l'année écoulée.
- Le pourcentage d'élèves ayant déclaré avoir consommé des analgésiques opioïdes sur ordonnance au cours de l'année écoulée est passé de 41 % à 21 %, une baisse significative depuis 2007, première année de surveillance de cet indicateur.
- Six pour cent des élèves du secondaire déclarent qu'on leur avait prescrit un médicament contre l'anxiété ou la dépression ou contre ces deux troubles au cours de l'année écoulée.

- Le pourcentage d'élèves du secondaire ayant déclaré qu'on leur avait prescrit un médicament contre l'anxiété ou la dépression ou contre ces deux troubles est plus élevé actuellement qu'en 2001 (3 %), première année de surveillance de cet indicateur.

Demande de soutien pour un problème de santé mentale

- Trois pour cent des élèves déclarent avoir utilisé une ligne d'aide téléphonique ou Internet pour obtenir du counseling au cours de l'année écoulée. Ce pourcentage représente environ 29 200 élèves ontariens.
- Plus du quart des élèves (28 %) déclarent qu'au cours de l'année écoulée, ils ont voulu parler d'un problème de santé mentale à quelqu'un, mais qu'ils ne savaient pas à qui s'adresser. Ce pourcentage représente environ 280,400 élèves ontariens.

Indicateurs d'intériorisation

Santé mentale autoévaluée

- Un élève sur six (17 %) qualifie sa santé mentale de passable ou médiocre.
- Le pourcentage d'élèves qui qualifient leur santé mentale de passable ou médiocre est nettement plus élevé actuellement qu'en 2007 (11 %), première année de surveillance de cet indicateur.

Faible estime de soi

- Sept pour cent des élèves déclarent qu'ils ont une faible estime de soi. Les filles sont nettement plus susceptibles que les garçons d'avoir une faible estime de soi (10 % contre 5 %).

Niveau de stress élevé

- Plus du quart des élèves (29 %, soit environ 283 500 élèves) déclarent avoir ressenti un niveau de stress ou de pression élevé à un moment de leur vie.

Détresse psychologique

- Le tiers des élèves (34 %) signalent un niveau de détresse psychologique modéré ou grave (symptômes de dépression et d'anxiété). Un élève sur sept (14 %, soit environ 137 000 élèves) signale un niveau de détresse psychologique grave.
- Ces deux mesures de détresse psychologique sont nettement plus élevées en 2015 qu'en 2013, année du précédent sondage et première année de surveillance de cet indicateur.

Idées suicidaires et tentatives de suicide

- Un élève sur huit (12 %) déclare avoir songé sérieusement à se suicider au cours de l'année écoulée (113 500 élèves selon les estimations), et 3 % des répondants (27 000 élèves selon les estimations) signalent avoir fait une tentative de suicide pendant la même période.
- Le pourcentage d'élèves qui ont envisagé de se suicider en 2015 est comparable à l'estimation de 2001 (11 %), première année de surveillance de cet indicateur. Le pourcentage d'élèves ayant signalé une tentative de suicide n'a pas changé.

Symptômes de TDAH

- Un élève sur six (16 %) signale des symptômes de TDAH. Ce pourcentage représente environ 152 700 élèves ontariens.

Indicateurs d'extériorisation

Comportement antisocial

- Cinq pour cent des élèves ont eu un comportement antisocial (c.-à-d. ont commis au moins trois actes antisociaux sur neuf comportements possibles) au cours de l'année écoulée.
- Le pourcentage d'élèves qui commettent des actes antisociaux est nettement plus faible actuellement qu'il ne l'était au début des années 1990.

Comportement violent

- Environ 5 % des élèves déclarent avoir agressé quelqu'un au moins une fois au cours de l'année écoulée, et 5 % déclarent qu'ils portent une arme (pistolet ou couteau).
- Depuis le début des années 1990, il y a eu une baisse importante du pourcentage d'élèves ayant déclaré avoir agressé quelqu'un ou porté une arme.

Violence scolaire

- Un élève sur dix (10 %, soit environ 102 200 élèves) dit s'être battu à l'école au moins une fois au cours de l'année écoulée.
- Six pour cent des élèves (soit environ 56 900 élèves) ont été menacés ou blessés avec une arme à l'école au moins une fois au cours de l'année écoulée.

Intimidation à l'école

- Le quart des élèves (24 %, soit environ 231 200 élèves) déclarent avoir été victimes d'intimidation à l'école depuis le début de l'année scolaire. La principale forme en est, de loin, l'intimidation verbale (21 %), tandis que 1 % des élèves déclarent avoir été

victimes surtout d'intimidation physique, et 2 %, de vol ou de vandalisme.

- Un élève sur huit (13 %) déclare avoir intimidé d'autres élèves à l'école depuis septembre. En général, l'intimidation se faisait sous forme d'attaques verbales (12 %), d'attaques physiques (1 %) ou de vol ou de vandalisme (moins de 1 %).
- La proportion d'élèves ayant déclaré avoir été victimes d'intimidation a diminué de façon linéaire significative entre 2003 et 2015, passant de 33 % à 24 %.
- De même, le pourcentage d'élèves ayant déclaré avoir intimidé d'autres élèves à l'école a nettement diminué pendant cette période, passant de 30 % à 13 %.

Victimes de cyberintimidation

- Un élève sur cinq (20 %) déclare avoir été victime d'intimidation sur Internet au cours de l'année écoulée (194 200 élèves selon les estimations).
- Le pourcentage d'élèves ayant déclaré avoir été victimes de cyberintimidation n'a pas beaucoup changé depuis 2011 (22 %), première année de surveillance de cet indicateur.

Jeux de hasard et d'argent et jeux vidéo

Activités de jeu

- Parmi les 10 jeux de hasard et d'argent étudiés lors du sondage de 2015, les plus fréquents pour tous les élèves sont les paris sportifs (10 %) et les jeux de cartes (10 %). Par ailleurs, 11 % des élèves déclarent s'adonner à d'« autres activités » de jeu non évaluées dans le sondage. Les jeux de

casino sont l'activité la moins courante (moins de 1 %).

- Quatre pour cent des élèves déclarent s'adonner à des jeux de hasard et d'argent sur Internet.
- Le tiers des élèves (32 %, soit environ 308 200 élèves ontariens) déclarent s'être livrés à au moins une activité de jeu au cours de l'année écoulée.
- Deux pour cent des élèves (soit environ 16 700 élèves ontariens) déclarent s'être adonnés à au moins cinq jeux de hasard et d'argent au cours de l'année écoulée.
- Le pourcentage d'élèves ayant déclaré s'être adonnés à des jeux de hasard et d'argent en 2015 (32 %) est nettement inférieur à l'estimation faite en 2003 (57 %), première année de surveillance de cet indicateur. De même, le pourcentage d'élèves s'adonnant à de multiples jeux est nettement inférieur en 2015 (2 %) à ce qu'il était en 2003 (6%).
- Le pourcentage d'élèves ayant déclaré s'être adonnés à des jeux de hasard et d'argent sur Internet est resté stable depuis 2003.

Problème de jeu

- Environ 4 % des élèves du secondaire (environ 7 500 élèves ontariens) signalent des symptômes de problème de jeu peu ou modérément grave, tandis qu'environ 1 % signalent un problème de jeu grave.

Problème lié aux jeux vidéo

- Le quart (26 %) des élèves s'adonnent à des jeux vidéo tous les jours ou presque, et presque quatre fois plus de garçons que de filles jouent à ces jeux (40 % contre 11 %).

Un élève sur dix (10 %) consacre au moins cinq heures aux jeux vidéo chaque jour.

- Un élève sur huit (13 %, soit environ 122 600 élèves ontariens) déclare avoir des symptômes de problème lié aux jeux vidéo (préoccupation, tolérance, perte de contrôle, état de manque, fuite, indifférence quant aux conséquences, ennuis avec la famille et à l'école).
- Le pourcentage d'élèves ayant signalé un problème lié aux jeux vidéo en 2015 (13 %) a nettement augmenté par rapport à 2007 (9 %), première année de surveillance de cet indicateur.

Problèmes concomitants

- Près de la moitié (49%) des élèves du secondaire déclarent n'avoir aucun des quatre problèmes suivants : détresse psychologique, comportement antisocial, consommation dangereuse ou nocive d'alcool, trouble lié à l'usage de drogues. Environ 33 % des élèves du secondaire déclarent avoir un de ces problèmes ; environ 10 % déclarent en avoir deux ; 6 % déclarent en avoir trois ; et 2 % déclarent avoir les quatre problèmes.

Variation selon le sexe

- Il existe de nombreuses différences entre les garçons et les filles en matière de santé mentale et de bien-être. Les garçons sont nettement plus susceptibles que les filles :
 - de faire de l'activité physique tous les jours ;
 - d'avoir un excès de poids ou d'être obèses ;
 - de dormir au moins huit heures par nuit ;

- d'avoir un comportement antisocial ;
- de porter une arme ;
- de se bagarrer à l'école ;
- de se faire blesser ou menacer à l'école ;
- de jouer de l'argent ;
- d'avoir un problème de jeu ;
- de jouer des jeux vidéo tous les jours ;
- d'avoir un problème lié aux jeux vidéo.

- Les filles sont nettement plus susceptibles que les garçons :
 - de qualifier leur santé physique de passable ou médiocre ;
 - d'être physiquement inactives ;
 - d'utiliser des opioïdes analgésiques sur ordonnance pour des raisons médicales ;
 - de chercher un counseling pour un problème de santé mentale ;
 - de ressentir un besoin de soutien non comblé pour un problème de santé mentale ;
 - d'utiliser des tranquillisants sur ordonnance pour des raisons médicales ;
 - de se faire prescrire des médicaments contre l'anxiété, la dépression ou les deux ;
 - de qualifier leur santé mentale de passable ou médiocre ;
 - d'avoir une faible estime de soi ;
 - de se sentir stressées ;
 - d'éprouver une détresse psychologique ;
 - d'avoir des pensées suicidaires ou de faire une tentative de suicide ;
 - d'avoir des symptômes de TDAH ;
 - d'être victime d'intimidation à l'école ;
 - d'être victime de cyberintimidation ;
 - de passer davantage d'heures par jour à consulter les médias sociaux ;
 - d'avoir des problèmes concomitants.

Variation selon l'année d'études

- L'année d'études est significativement liée à la santé mentale et au bien-être. En général, les indicateurs d'une santé

médiocre (p. ex., inactivité, comportement sédentaire), comportements à risque pour la santé (p. ex., ne portant pas toujours de casque à vélo ou de ceinture de sécurité, avoir envoyé des textos au volant), les indicateurs d'internalisation (p. ex., déclarer un état de santé mentale passable ou médiocre, stress, détresse psychologique), un comportement antisocial, les jeux de hasard et d'argent et les problèmes concomitants augmentent nettement avec l'année d'études. Les bagarres à l'école sont plus fréquentes chez les plus jeunes, et ont tendance à diminuer plus tard à l'adolescence.

- Comparativement à la moyenne provinciale, les élèves du **Nord** de l'Ontario sont *plus* susceptibles d'avoir une blessure grave, de prendre un médicament contre le TDAH pour des raisons médicales et d'être victimes de cyberintimidation.
- Les élèves de l'**Ouest** et de l'**Est** de l'Ontario ne diffèrent pas de façon significative de la moyenne pour quelque indicateur que ce soit.

On trouvera à la page 120 du rapport un aperçu des résultats par réseau local d'intégration des services de santé de l'Ontario, et à la page 123 les résultats pour la région du grand Toronto.

Variations régionales

La province a été divisée en quatre régions pour les besoins du sondage : Toronto, le Nord de l'Ontario (district de Parry Sound, district de Nipissing et régions situées plus au nord), l'Ouest de l'Ontario (district de Peel, comté de Dufferin et régions situées plus à l'ouest) et l'Est de l'Ontario (comté de Simcoe, comté de York et régions situées plus à l'est).

On a relevé les différences suivantes entre les régions :

- Comparativement à la moyenne provinciale, les élèves de **Toronto** sont nettement *plus* susceptibles de déclarer qu'ils ne portent pas toujours de casque lorsqu'ils sont à vélo et qu'ils ont un problème lié aux jeux vidéo. Pourtant, ils sont nettement *moins* susceptibles d'avoir une blessure grave, d'envoyer des textos au volant, d'utiliser des opioïdes sur ordonnance pour des raisons médicales ou d'être victimes de cyberintimidation.

Pourcentage d'élèves ayant déclaré présenter certains indicateurs de santé mentale et de bien-être, selon le sexe, lors du SCDSEO 2015 (de la 7^e à la 12^e année)

Indicateur	Total (IC de 95 %) %	Nombre estimatif [†]	Garçons Filles		
			%	%	
Santé physique jugée passable ou médiocre par l'élève	7,6 (6,8-8,5)	72 200	6,4	8,9	*
Asthme diagnostiqué (l'élève en souffre actuellement)	8 (6,8-9,4)	71 900	7,4	8,7	
Aucune consultation médicale (année écoulée)	28,6 (26,6-30,8)	256 600	31,9	25,1	
Activité physique/jour (60 min./jour, semaine écoulée)	22,3 (20,7-23,9)	210 600	27	17,2	*
Inactivité physique (chaque jour de la semaine écoulée)	6,4 (5,5-7,5)	60 400	5,4	7,4	*
Comportement sédentaire (3 h+/jour devant un écran)	62,6 (60,7-64,4)	570 300	61,6	63,6	
Excès de poids ou obésité	26,4 (24,9-28)	239 600	30	22,5	*
8h+ de sommeil par nuit moyenne d'avant l'école	41 (38,9-43,2)	388 800	44,9	36,9	*
Aller au lit ou à l'école le ventre vide, souvent ou toujours	4,6 (3,9-5,5)	43 800	5	4,2	
Usage d'un appareil de bronzage intérieur (année écoulée)	3,6 (2,9-4,6)	32 300	4,1	3,1	
Blessure ayant nécessité un traitement médical (année écoulée)	43,7 (41-46,3)	390 500	45,4	41,8	
Usage médical d'un opioïde analgésique (année écoulée)	21,1 (19,2-23,2)	193 000	19,3	23,1	*
Ne porte pas toujours de casque (parmi élèves cyclistes)	76,9 (74,3-79,4)	541 800	78,6	74,9	
Ne porte pas toujours de ceinture à bord d'un véhicule automobile	23,9 (21,8-26,3)	219 100	22,5	25,5	
Envoi de textos au volant (parmi élèves conducteurs)	35,3 (31-39,9)	103 400	35,5	35,1	
Collision automobile, en tant que conducteur (année écoulée)	8,6 (6,5-11,4)	25 200	10	7	
Consultation en santé mentale (année écoulée)	20,9 (18,9-23)	205 300	17,1	24,9	*
Demande de counseling par téléphone/Internet (année écoulée)	3 (2,3-3,7)	29 200	1,8	4,2	*
Soutien en santé mentale non obtenu	28,4 (26,1-30,9)	280 400	18,6	39	*
Usage médical de tranquillisants/sédatifs (année écoulée) ^{††}	3,3 (2,9-3,7)	22 800	1,8	4,9	*
Usage médical d'un médicament TDAH (année écoulée)	2,6 (2,1-3,3)	26 000	2,9	2,4	
Médicaments prescrits pour la dépression, l'anxiété ou les deux ^{††}	5,6 (4,4-6,9)	39 300	2,8	8,4	*
Santé mentale jugée passable ou médiocre par l'élève	16,5 (14,5-18,9)	163 800	10,3	23,2	*
Faible estime de soi	7 (5,7-8,5)	68 700	4,7	9,5	*
Niveau de stress élevé	28,7 (26,1-31,4)	283 500	19,8	38,2	*
Détresse psychologique modérée ou grave (mois écoulé)	34 (31,5-36,7)	328 600	22,7	45,9	*
Détresse psychologique grave (mois écoulé)	14,2 (12,5-16)	137 000	7	21,7	*
Idées suicidaires (année écoulée)	12,4 (10,9-14,1)	113 500	8,2	16,9	*
Tentative de suicide (année écoulée)	3 (2,2-3,9)	27 000	1,5	4,5	*
Symptômes de TDAH (6 mois écoulés)	15,8 (14-17,6)	152 700	13,6	18,1	*
Comportement antisocial (3 actes antisociaux ou plus sur 9)	5,2 (4,2-6,4)	50 700	6,4	4,1	*
Port d'armes (année écoulée)	5,1 (4,1-6,4)	49 600	7,8	2,3	*
Bagarre à l'école (année écoulée)	10,4 (9,1-11,9)	102,200	15,9	4,5	*
Menace/blessure avec arme à l'école (année écoulée)	5,8 (4,8-6,9)	56,900	7,9	3,6	*
Crainte d'être blessé ou menacé à l'école	12,1 (10,2-14,4)	120 300	11,4	12,9	
Auteur d'actes d'intimidation à l'école (depuis septembre)	13,1 (11,5-14,8)	127 700	14,6	11,5	
Victime d'intimidation à l'école (depuis septembre)	23,6 (21,5-25,8)	231 200	19,6	27,8	*
Victime de cyberintimidation (année écoulée)	19,8 (18-21,7)	194 200	14	25,8	*
Jeux de hasard et d'argent (année écoulée)	31,8 (29,3-34,5)	308 200	40,3	22,9	*
Plusieurs activités de jeu (5 et plus, année écoulée)	1,7 (1,3-2,3)	16 700	3,2	s	*
Problème de jeu grave (3 mois écoulés) ^{††}	1,1 (0,7-1,8)	7 500	1,9	s	*
Problème lié aux jeux vidéo (année écoulée)	12,5 (11,1-14,1)	122 600	20,2	4,5	*
3 problèmes concomitants ou tous les 4 ^{††}	7,8 (6,5-9,5)	56 100	6	9,8	*

Nota : 10 426 élèves ont participé au sondage ; certaines estimations reposent sur un demi-échantillon aléatoire ; IC = intervalle de confiance ; [†] le nombre estimatif d'élèves repose sur une population d'environ 961 500 élèves ontariens (arrondis au nombre entier inférieur) ; * indique une différence significative entre les garçons et les filles ($p < 0,05$) sans contrôle d'autres facteurs ; ^{††} chez les élèves de la 9^e à la 12^e année seulement ; usage médical d'un médicament signifie usage d'un médicament prescrit ; problèmes concomitants : les quatre indicateurs de problèmes suivants : détresse psychologique, comportement antisocial, consommation dangereuse ou nocive d'alcool et problème d'usage de drogues.

Pourcentage d'élèves ayant déclaré présenter certains indicateurs de santé mentale et de bien-être, selon l'année d'études, lors du SCDSEO 2015

Indicateur	7 ^e	8 ^e	9 ^e	10 ^e	11 ^e	12 ^e
Santé physique jugée passable ou médiocre par l'élève	4,4	5,8	7,5	7,4	9	9,6
Asthme diagnostiqué (l'élève en souffre actuellement)	9,3	8,1	7,1	8,5	9,9	6,4
Aucune consultation médicale (année écoulée)	29,8	28,1	25,5	28,9	29,6	29,6
Activité physique/jour (60 min./jour, semaine écoulée)	28,3	19	28	21,5	19,7	19,4 *
Inactivité physique (chaque jour de la semaine écoulée)	2,1	4,1	4	6,5	9,1	9,6 *
Comportement sédentaire (3 h+/jour devant un écran)	45,7	56,3	66	66,4	65,8	67,7 *
Excès de poids ou obésité	21,9	24,8	24,1	26,7	29,8	28,3
8h+ de sommeil par nuit moyenne d'avant l'école	72,3	65,6	46,4	33,7	23,7	23,7 *
Aller au lit ou à l'école le ventre vide, souvent ou toujours	3,8	3,9	4,2	5,9	4,2	5,2
Usage d'un appareil de bronzage intérieur (année écoulée)	3,7	s	3,8	3,2	4,1	3,4
Blessure ayant nécessité un traitement médical	40,1	48	41,5	44,9	43,5	43,8
Usage médical d'un opioïde analgésique (année écoulée)	13,6	14,1	17,9	19,3	28,2	27 *
Ne porte pas toujours de casque (parmi élèves cyclistes)	58,2	65,5	76,7	80	84,9	86,1 *
Ne porte pas toujours de ceinture à bord d'un véhicule automobile	17,3	18,9	25,3	25,3	24,2	27,9 *
Envoi de textos au volant (parmi élèves conducteurs, année écoulée)	--	--	--	s	24,7	44,4 *
Collision automobile, en tant que conducteur (année écoulée)	--	--	--	s	4	12,4 *
Consultation en santé mentale (année écoulée)	26,5	21,9	16,8	20	19,5	21,3
Demande de counseling par téléphone/Internet	1,1	3,2	3,6	3,3	4,5	2,1 *
Soutien en santé mentale non obtenu	17,6	28,7	24,6	33,5	32,6	30,9 *
Usage médical de tranquillisants/sédatifs (année écoulée) ^{††}	--	--	3	3,4	2,6	3,8
Usage médical d'un médicament TDAH (année écoulée)	s	3,3	s	3,4	3,4	s
Médicaments prescrits pour la dépression, l'anxiété ou les deux ^{††}	--	--	3,3	4,9	5,8	7,4
Santé mentale jugée passable ou médiocre par l'élève	7,7	13,4	14,2	18,8	23,2	18,9 *
Faible estime de soi	2,1	s	6,8	6,6	10	5,9 *
Niveau de stress élevé	10,9	16,2	20	32,8	39,5	42,2 *
Détresse psychologique modérée ou grave (mois écoulé)	18,7	30,7	27,6	37,2	42,4	40,8 *
Détresse psychologique grave (mois écoulé)	6,4	11,7	11,1	14,6	19,1	18,3 *
Idées suicidaires (année écoulée)	6,4	10,1	9,6	15,4	16,4	14,6 *
Tentative de suicide (année écoulée)	s	s	1,9	3	5,3	2,5
Symptômes de TDAH (6 mois écoulés)	8,2	10,9	14,8	16,7	22	18,6 *
Comportement antisocial (3 actes antisociaux ou plus sur 9)	s	4	4,8	6,6	6,2	7,3 *
Port d'armes (année écoulée)	3,8	4,3	4,5	5,6	4,6	6,9
Bagarre à l'école (année écoulée)	17,9	18,5	8,9	8,9	7	5,5 *
Menace/blessure avec arme à l'école (année écoulée)	4,2	9,4	4,6	4,8	6,3	5,8
Crainte d'être blessé ou menacé à l'école	16	15,6	12,7	12	10,9	8,3
Auteur d'actes d'intimidation à l'école (depuis septembre)	7,6	16,9	11,4	14,6	10,8	15,7 *
Victime d'intimidation à l'école (depuis septembre)	26,3	27,2	21,1	25,3	18,5	23,8
Victime de cyberintimidation (année écoulée)	19	19	19,7	21,3	19,7	19,7
Jeux de hasard et d'argent (année écoulée)	23,7	27,6	25,6	31,3	36,3	40,5 *
Plusieurs activités de jeu (5 et plus, année écoulée)	s	s	s	1,9	2	2,5
Problème de jeu grave (3 mois écoulés) ^{††}	--	--	s	s	s	s
Problème lié aux jeux vidéo (année écoulée)	8,4	11,8	12,8	14,1	14,7	12,7
3 problèmes concomitants ou tous les 4 ^{††}	--	--	2,2	7	8,7	11,6 *

Nota : * indique une différence significative selon l'année d'études ($p < 0,05$) sans contrôle d'autres facteurs ; « s » indique que l'estimation a été supprimée parce qu'elle n'est pas fiable ; †† chez les élèves de la 9^e à la 12^e année seulement ; usage médical d'un médicament signifie usage d'un médicament prescrit ; problèmes concomitants : les quatre indicateurs de problèmes suivants : détresse psychologique, comportement antisocial, consommation dangereuse ou nocive d'alcool et problème d'usage de drogues.

Pourcentage d'élèves ayant déclaré présenter certains indicateurs de santé mentale et de bien être, selon la région (de la 7^e à la 12^e année), lors du SCDSEO 2015

Indicateur	Toronto	Nord	Ouest	Est
Santé physique jugée passable ou médiocre par l'élève	9,4	6,1	6,9	8
Asthme diagnostiqué (l'élève en souffre actuellement)	6,3	11,4	9,2	6,8
Aucune consultation médicale (année écoulée)	26,3	31,2	28,8	29,3
Activité physique/jour (60 min./jour, semaine écoulée)	22,3	24,4	20,8	23,8
Inactivité physique (chaque jour de la semaine écoulée)	8,4	6,3	5,9	6
Comportement sédentaire (3 h+/jour devant un écran)	66,4	58,9	61,3	62,9
Excès de poids ou obésité	26,2	28,3	25	28,1
8h+ de sommeil par nuit moyenne d'avant l'école	40,2	48,2	41,1	40,1
Aller au lit ou à l'école le ventre vide, souvent ou toujours	5,5	4,3	4,6	4,3
Usage d'un appareil de bronzage intérieur (année écoulée)	2,9	3,7	3,2	4,6
Blessure ayant nécessité un traitement médical (année écoulée)	33,5	50,8	45,1	46,1 *
Usage médical d'un opioïde analgésique (année écoulée)	16,3	17,3	21,9	23,2 *
Ne porte pas toujours de casque (parmi élèves cyclistes)	82,2	65,4	75,7	78 *
Ne porte pas toujours de ceinture à bord d'un véhicule automobile	26,7	20,7	22,1	25,6
Envoi de textos au volant (parmi élèves conducteurs, année écoulée)	21,7	40,8	33,8	41,1 *
Collision automobile, en tant que conducteur (année écoulée)	4,1	8,8	9,3	9,3
Consultation en santé mentale (année écoulée)	20,5	23,9	20,1	21,6
Demande de counseling par téléphone/Internet (année écoulée)	3	3,4	3,2	2,5
Soutien en santé mentale non obtenu	27,6	27,5	28,2	29,3
Usage médical de tranquillisants/sédatifs (année écoulée) ^{††}	s	4,3	4,1	3,2
Usage médical d'un médicament TDAH (année écoulée)	s	4	2,3	3,5 *
Médicaments prescrits pour la dépression, l'anxiété ou les deux ^{††}	s	6,5	6	6,4
Santé mentale jugée passable ou médiocre par l'élève	12,2	20	18	16,2
Faible estime de soi	5,3	7,5	8	6,5
Niveau de stress élevé	30	29,3	27,8	29,1
Détresse psychologique modérée ou grave (mois écoulé)	36,1	35,9	33,1	33,8
Détresse psychologique grave (mois écoulé)	13,7	15,2	14,3	14,1
Idées suicidaires (année écoulée)	9,3	13,4	12,8	12,6
Tentative de suicide (année écoulée)	s	3,5	3,4	2,6
Symptômes de TDAH (6 mois écoulés)	17,3	13,9	15,4	15,9
Comportement antisocial (3 actes antisociaux ou plus sur 9)	5,1	6,3	3,9	6,8
Port d'armes (année écoulée)	5,6	7,4	4,2	5,7
Bagarre à l'école (année écoulée)	8,5	14,5	9,5	11,7
Menace/blessure avec arme à l'école (année écoulée)	4,5	6,6	5,3	7
Crainte d'être blessé ou menacé à l'école	14,4	10,7	11,6	12
Auteur d'actes d'intimidation à l'école (depuis septembre)	14,2	14,1	12	13,7
Victime d'intimidation à l'école (depuis septembre)	21,9	27,7	23,2	24,1
Victime de cyberintimidation (année écoulée)	14,3	27,3	19,6	21,3 *
Jeux de hasard et d'argent (année écoulée)	29,2	42,5	31,1	32
Plusieurs activités de jeu (5 et plus, année écoulée)	s	3	1,4	1,4
Problème de jeu grave (3 mois écoulés) ^{††}	s	s	s	s
Problème lié aux jeux vidéo (année écoulée)	18,5	12,1	12	10,4 *
3 problèmes concomitants ou tous les 4 ^{††}	5,6	8,1	7	10

Nota : * indique une différence significative selon la région ($p < 0,05$) sans contrôle d'autres facteurs ; « s » indique que l'estimation a été supprimée parce qu'elle n'est pas fiable ; ^{††} chez les élèves de la 9^e à la 12^e année seulement ; usage médical d'un médicament signifie usage d'un médicament prescrit ; problèmes concomitants : les quatre indicateurs de problèmes suivants : détresse psychologique, comportement antisocial, consommation dangereuse ou nocive d'alcool et problème d'usage de drogues.

Aperçu des tendances relatives à certains indicateurs de santé mentale et de bien-être dans l'ensemble de l'échantillon des élèves, SCDSO

Indicateur	Années d'études	Période	Variation
% d'élèves qui déclarent avoir une santé physique passable ou médiocre	7 ^e , 9 ^e , 11 ^e	1991–2015	Stable
% d'élèves physiquement actifs tous les jours (60 min. par jour)	7 ^e –12 ^e	2009–2015	Stable
% d'élèves sédentaires (3h. ou plus par jour devant un écran)	7 ^e –12 ^e	2009–2015	En hausse, de 57 % à 63 %
% d'élèves qui ont un excès de poids ou sont obèses	7 ^e –12 ^e	2009–2015	En hausse, de 23 % à 26 %
% d'élèves qui ont subi une blessure nécessitant un traitement	7 ^e –12 ^e	2003–2015	En hausse, de 35 % à 44 %
% d'élèves qui ne portent pas toujours de ceinture à bord d'un véhicule	7 ^e –12 ^e	2011–2015	En baisse, de 28 % à 24 %
% d'élèves qui envoient des textos au volant (élèves avec permis de conduire)	10 ^e –12 ^e	2013–2015	Stable
% d'élèves qui ont consulté un spécialiste de la santé mentale au moins une fois (année écoulée)	7 ^e –12 ^e	1999–2015	En hausse, de 12 % à 21 %
% d'élèves qui déclarent prendre des médicaments prescrits pour le TDAH	7 ^e –12 ^e	2007–2015	Stable
% d'élèves qui déclarent prendre des médicaments prescrits pour la dépression, l'anxiété ou les deux	9 ^e –12 ^e	2001–2015	En hausse, de 3 % à 6 %
% d'élèves qui déclarent avoir une santé mentale passable ou médiocre	7 ^e –12 ^e	2007–2015	En hausse, de 11 % à 17 %
% d'élèves qui ont ressenti une détresse psychologique allant de modérée à grave	7 ^e –12 ^e	2013–2015	En hausse, de 24 % à 34 %
% d'élèves qui ont ressenti une détresse psychologique grave	7 ^e –12 ^e	2013–2015	En hausse, de 11 % à 14 %
% d'élèves ayant eu des idées suicidaires (année écoulée)	7 ^e –12 ^e	2001–2015	Stable
% d'élèves qui ont fait une tentative de suicide (année écoulée)	7 ^e –12 ^e	2007–2015	Stable
% d'élèves qui ont eu un comportement antisocial (année écoulée)	7 ^e , 9 ^e , 11 ^e	1993–2015	En baisse, de 16 % à 4 %
% d'élèves qui ont porté une arme (année écoulée)	7 ^e , 9 ^e , 11 ^e	1993–2015	En baisse, de 16 % à 4 %
% d'élèves qui se sont battus à l'école (année écoulée)	7 ^e –12 ^e	2001–2015	En baisse, de 17 % à 10 %
% d'élèves qui ont été menacés ou blessés avec une arme à l'école	7 ^e –12 ^e	2003–2015	Stable

(suite à la page suivante)

Indicateur	Années d'études	Période	Variation
% d'élèves qui craignent d'être menacés ou blessés à l'école	7 ^e -12 ^e	1999-2015	Stable
% d'élèves qui ont été victimes d'intimidation à l'école (depuis septembre)	7 ^e -12 ^e	2003-2015	En baisse, de 33 % à 24 %
% d'élèves qui ont été victimes de cyberintimidation (année écoulée)	7 ^e -12 ^e	2011-2015	Stable
% d'élèves qui ont joué à des jeux de hasard et d'argent sur Internet (année écoulée)	7 ^e -12 ^e	2003-2015	Stable
% d'élèves qui ont joué à un jeu de hasard et d'argent (année écoulée)	7 ^e -12 ^e	2003-2015	En baisse, de 57 % à 32 %
% d'élèves qui ont joué à plusieurs jeux (année écoulée)	7 ^e -12 ^e	2003-2015	En baisse, de 6 % à 2 %
% d'élèves qui ont eu un problème de jeu (année écoulée)	7 ^e -12 ^e	2007-2015	En hausse, de 9 % à 13 %

Nota : L'analyse des tendances est fondée sur une valeur de $p < 0,01$.

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Angela Boak
Hayley Hamilton
Edward Adlaf
Joanna Henderson
Robert Mann

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1. INTRODUCTION

The World Health Organization defines optimum health as “*physical, mental, and social well-being, and not merely the absence of disease and infirmity*” (World Health Organization, 1948). Thus, well-being should convey not only the absence of impairments and disabilities, but also the presence of positive personal and interpersonal resources that foster a better quality of life.

The physical, mental, and social well-being of youth are important matters for several reasons, not the least of which is their long-lasting effects over the life course (Sawyer et al., 2012). Childhood and adolescence are pivotal developmental stages during which many life-long health behaviours, beliefs, and attitudes become established. Therefore, healthy children have a better chance to become healthy adults.

The need to address mental health and addiction challenges to better promote healthy children and youth has been prioritized within the Ontario mental health strategy, *Open Minds, Healthy Minds* (Government of Ontario, 2011). Mental health promotion and early intervention for mental health problems among children and youth have also been prioritized within the mental health strategy for Canada (Mental Health Commission of Canada, 2012). Both strategies contend that greater attention to child and adolescent mental health and well-being will contribute to enduring benefits to individuals and families as well as long-term economic benefits to larger sectors such as the health, social service, and justice systems, and the country as a whole.

Physical Health

Generally, adolescence is a period of optimal physical health. Despite this positive health status, many health-compromising behaviours and their consequent health problems originate

in adolescence. Poor physical health, obesity, physical inactivity, sedentary behaviour, lack of sleep, and poor diet among children and adolescents are especially concerning given that these health states and behaviours are likely to continue into adulthood, leading to future morbidity or mortality (Hallal, Victora, Azevedo, & Wells, 2006; Sawyer et al., 2012; Singh, Mulder, Twisk, van Mechelen, & Chinapaw, 2008). Further, poor physical health is associated with concurrent negative school experience, lower academic performance, and poor mental health (Busch et al., 2014; Ortega, Ruiz, Castillo, & Sjöström, 2008).

The percentage of Canadian children and adolescents who are obese has tripled during the past three decades (Shields, 2006; Tremblay et al., 2010). Epidemiological estimates indicate that between 4% and 10% of Canadian adolescents are classified as obese, and 12% to 21% as overweight (Janssen, 2008; Roberts, Shields, de Groh, Azis, & Gilbert, 2012; Shields, 2006). Moreover, the prevalence of childhood-adolescent obesity in Canada is one of the highest internationally (Inchley et al., 2016). This is a public health concern because obesity during childhood significantly increases the likelihood of obesity during adulthood, a host of illnesses, and premature mortality (Cali & Caprio, 2008; Reilly, 2006). Furthermore, youth who are overweight/obese are more likely to experience concurrent psychosocial difficulties, such as low self-esteem, bully victimization, or frequent substance use (Farhat, Iannotti, & Simons-Morton, 2010; Zametkin, Zoon, Klein, & Munson, 2004).

Injuries are the leading cause of morbidity and mortality among Canadian adolescents, with motor vehicle crashes being the primary cause (Pan et al., 2007; Public Health Agency of Canada, 2009; Statistics Canada, 2015). Injury may serve as a marker for a high-risk lifestyle that may include engaging in health risk

behaviours such as binge drinking and driving after using alcohol or other drugs (Adlaf, Mann, & Paglia, 2003). Canadian statistics show that about 40% of adolescents report experiencing an injury that needed medical treatment in the past year (Inchley et al., 2016). Recent research has found that one-in-five Ontario adolescents has experienced a traumatic brain injury (TBI) in their lifetime (Ilie, Boak, Adlaf, Asbridge, & Cusimano, 2013). TBI has been linked with school and mental health problems in adolescence (Ilie et al., 2014) and can also negatively impact one's quality of life in adulthood (Anderson, Brown, Newitt, & Hoile, 2011; Rosema et al., 2015).

“Risks for cancer and cardiovascular disease in later life commonly start in adolescence (e.g., tobacco and alcohol use), or intensify during these years (e.g., overweight and obesity, physical inactivity, and poor diet). Most mental disorders begin before age 25 years. Numbers of injuries rise sharply in individuals during their early teenage years, and these account for a higher proportion of deaths in adolescents than in any other age group.” (Patton et al., 2014b, p. 385)

Mental Health

The past decade has seen a growing interest in the state of adolescent mental health (e.g., Government of Ontario, 2011; Mental Health Commission of Canada, 2012). This interest has partly grown due to some disturbing statistics. There is increasing evidence showing that the burden caused by mental illness and addiction exceeds that of many other conditions. For example, the burden of mental illness and addictions in Ontario is more than 1.5 times that

of all cancers and more than seven times that of all infectious diseases.¹

The prevalence of mental health problems is also an issue for adolescents. Significant life transitions occur during adolescence, such as puberty, entering and exiting high school, and the transition from school-to-work, and for most it is a stressful and emotionally turbulent period. These transitions can lead to academic, behavioural, and emotional difficulties for some (Patton & Viner, 2007). Mental health problems may lead to difficulties in other areas of life, such as family relationships, peer relationships, and in school.

The onset of most mental disorders occurs during adolescence or young adulthood (Health Canada, 2002; Kessler et al., 2005b; Merikangas et al., 2010; Patel, Flisher, Hetrick, & McGorry, 2007; Patton et al., 2014a), and most cases go unrecognized and untreated. For many, these conditions endure into adulthood and, in turn, result in elevated markers of health problems, such as years of life lost (YLL) and health-adjusted life years (HALYs) (Ratnasingham, Cairney, Rehm, Manson, & Kurdyak, 2012). Mental health impairments during the formative years can also adversely affect social, legal, and financial outcomes in adulthood (Copeland, Wolke, Shanahan, & Costello, 2015). For these reasons, the need to address mental health problems early in life has been identified as a priority within Canada's first mental health strategy (Mental Health Commission of Canada, 2012).

The pervasiveness of mental health disorders and problems in youth underscores their public health importance. An estimated one-in-five to one-in-four (20%–25%) children and adolescents currently has or has had a mental health disorder (Merikangas et al., 2010; Offord, 1995; Offord et al., 1996; Romano, Tremblay, Vitaro, Zoccolillo, & Pagani, 2001; U.S. Department of Health and Human Services, 1999). Emotional and behavioural problems

¹ Data based on health-adjusted life years (HALYs) – calculated by combining years of life lost due to premature death (YLL) and year-equivalents of reduced functioning from living with the disease (YERF). The total HALYs for mental illness and addictions was 600,000 years compared with 350,000 years for all cancers (Ratnasingham et al., 2012).

more broadly defined are more prevalent. In Canada and the U.S., suicide is the second leading cause of death among adolescents, following accidents (Centers for Disease Control and Prevention, 2013; Navaneelan, 2012; Pan et al., 2007; Statistics Canada, 2015). Sex differences are prominent. Females are more likely than males to exhibit mood or anxiety disorders, whereas males are more likely to exhibit behavioural and substance use disorders (Centers for Disease Control and Prevention, 2013; Kessler et al., 2005b; Merikangas et al., 2010; Public Health Agency of Canada, 2011; Romano et al., 2001).

There is some evidence suggesting that the prevalence of mental health problems among children and adolescents may have increased over time. Some examples include the following:

- In Ontario, there was an increase in emergency department visits and in hospital admissions for youth with anxiety and mood disorders between 2006/07 and 2011/12 (MHASEF Research Team, 2015).
- Suicide rates in the U.S. increased between 1999 and 2014 for all age groups, including children and adolescents (Curtin, Warner, & Hedegaard, 2016).
- Suicide rates in Canada increased between 1980 and 2008 for female adolescents, but not males (Skinner & McFaull, 2012).
- A recent systematic, comprehensive review of trend research on adolescent mental health concluded that emotional problems increased during the past 30 years in Western countries (Collishaw, 2015).
- The identification of mental health problems, such as emotional and conduct disorders, diagnosed by family physicians in the U.S. increased between the late 1970s and late 1990s among children aged 4 to 15 (Kelleher, McInerney, Gardner, Childs, & Wasserman, 2000).
- Rates of prescribing antidepressant, anti-anxiety, and antipsychotic medication to adolescents in the U.S. increased between 1993 and 2002, but the reasons for these

increases are not fully understood (Olfson, Blanco, Liu, Moreno, & Laje, 2006; Thomas, Conrad, Casler, & Goodman, 2006).

- In the U.S., researchers found large generational increases in psychopathological symptoms between the 1950s and the early 2000s, suggesting cultural shifts as a possible reason (Twenge et al., 2010).
- Anxiety had increased substantially between the 1950s and the 1990s among children in the U.S., possibly due to a decrease in social connectedness (Twenge, 2000).
- Research on emotional well-being shows no changes between 1976 and 2006 among adolescents regarding happiness, life satisfaction, hopelessness, or narcissism, but shows that later cohorts are less trusting and more cynical than earlier cohorts (Trzesniewski & Donnellan, 2010).
- Researchers found substantial increases over three decades in self-reported and parent-reported emotional and conduct problems among adolescents in the U.K. (Collishaw, Maughan, Goodman, & Pickles, 2004; Collishaw, Maughan, Natarajan, & Pickles, 2010).
- An increase between 1987 and 2006 in psychological distress among adolescents in Scotland (Sweeting, Young, & West, 2009) was attributed to parallel increases in family discord, school disengagement, and stress (Sweeting, West, Young, & Der, 2010).

“Mental health is an integral part of health; indeed, there is no health without mental health.” (World Health Organization, 2014)

“Ontarians experience a high burden of illness related to mental illness and addictions. Individuals may be encumbered by these illnesses at a young age, experiencing the disruption of important life transitions, and challenged by their ongoing burden over a long period of time.” (Ratnasingham et al., 2012, p. 7)

Risk and Problem Behaviours

For most youth, risk behaviour is experimental and ephemeral, and a natural manifestation of emerging independence. Activities such as drug use, gambling, antisocial and violent behaviours and risky driving are typically “adolescent limited” – most likely to emerge during this period and then subside with time as one adopts adult roles² (Moffitt, 1993). Nonetheless, for a minority, these risk behaviours are the catalyst for shaping one’s life-course trajectory leading to problems in adulthood (Gotlib & Wheaton, 1997).

Bullying, whether at school or over the Internet, has become recognized as an important public health issue not only because of the notable prevalence, but more importantly because of the immediate and long-term negative consequences for the bullied victim, the bully perpetrator, and society. Children and adolescents who are bullied are at increased risk for mental health problems, physical health problems, social and school problems, and these problems can endure well into adulthood (Arseneault, Bowes, & Shakoor, 2010; Copeland, Wolke, Angold, & Costello, 2013; Espelage & Holt, 2013; Gini & Pozzoli, 2009; Meltzer, Vostanis, Ford, Bebbington, & Dennis, 2011; Wolke, Copeland, Angold, & Costello, 2013). Yet the consequences of bullying are not restricted to the bullied. Those who bully others are at risk for further aggressive and antisocial behaviour, substance use problems, and criminality (Farrington & Ttofi, 2011; Ttofi, Farrington, & Lösel, 2012).

Gambling among youth is a growing concern given the expanding market and that many North American adolescents gamble. Gambling estimates vary from 20% to 90% with most studies in the 40% to 65% range (Hardoon & Derevensky, 2002; Volberg, Gupta, Griffiths, Olason, & Delfabbro, 2011). More worrisome is

² The nature of adolescence is rapidly changing with youth transitioning to adult roles at an older age. Because marriage and child rearing serve to reduce many risk behaviours, the trend for people to marry and have children at older ages postpones the reduction in drug use and other risk behaviours (Sawyer et al, 2012).

that rates of gambling problems are usually higher among adolescents than adults (Huang & Boyer, 2007; Shaffer & Hall, 2001), and that future gambling disorders likely originate during this period (Gupta & Derevensky, 1998). Estimates of pathological or problem gambling among North American youth range from 2% to 8% (Derevensky, Gupta, & Winters, 2003; Dickson & Derevensky, 2006; Huang & Boyer, 2007) and in Canada range between 2% and 5% among studies conducted since 1999 (Volberg et al., 2011). The harms associated with problem gambling include an increased likelihood of antisocial and criminal activities, problems with family, school and work, and mental health problems (Dickson & Derevensky, 2006; Estevez, Herrero-Fernández, Sarabia, & Jauregui, 2013; Shead, Derevensky & Gupta, 2011).

Video gaming has become a popular and pervasive form of entertainment for children and adolescents, and this underscores the importance of understanding its effects. Video gaming has increased in prevalence and frequency over time with the availability of online gaming and multi-player, role-playing features. Research has shown both positive and negative effects of gaming. The positive effects include improved perceptual skills after playing action games (Green & Bavelier, 2015), increased empathy and helping behaviour after playing prosocial games (Greitemeyer & Mügge, 2014), and physical activity when playing interactive games. Negative effects include increased aggressive thoughts and behaviours after playing violent video games (Anderson et al., 2010; Greitemeyer & Mügge, 2014), attention problems (Gentile, Swing, Lim, & Khoo, 2012), and problem video gaming or addiction (King, Haagsma, Delfabbro, Gradisar, & Griffiths, 2013). The prevalence of problem video gaming among adolescents is estimated to be about 10% (Gentile et al., 2011; Tejeiro, Gomez-Vallecillo, Pelegrina, Wallace, Emberley, 2012). Video game addiction has been linked with other negative effects such as school problems, depression, and conduct problems (Brunborg, Mentzon, & Frøyland, 2014; Gentile et al., 2011).

Social Health

Social well-being is a relatively recent addition to the concept of health. It refers to adequate integration and adjustment in a person's social environment, the extent of social support available, and the quality of one's relationships. Quality of life has become an important area in health research.

A strong social support network is important in its own right, and it appears to be a buffer against physical and mental health problems across the life span. Social support has been correlated with reduced levels of depression and anxiety (Hall-Lande, Eisenberg, Christenson, & Neumark-Sztainer, 2007). Similarly, a strong bond with one or both parents has been associated with better mental and physical health (Viner et al., 2012). School connectedness is another area of increasing study, and may serve as a protective factor against poor mental health and risk behaviours (Bond et al., 2007; Bonny, Britto, Klostermann, Hornung, & Slap, 2000; Faulkner, Adlaf, Irving, Allison, & Dwyer, 2009; Viner et al., 2012).

Most recently, new forms of social media, of which young people are its earliest adopters, have become new drivers of adolescent health by increasing the speed at which sociocultural norms can change (Litt & Stock, 2011; Sawyer et al., 2012). Social media can have a positive influence on adolescent health and well-being by extending one's social support network, increasing engagement with new ideas and like-minded people, providing a vehicle for self-expression, providing health-promoting information, and increasing access to services. On the other hand, social media can elevate anxiety and depressive feelings in adolescents by emphasizing consumer culture and an unattainable lifestyle and body image, by increasing exposure to cyberbullying, and by displacing other pleasurable activities such as sports, extra-curricular activities, or family activities (de Vries, Peter, de Graaf, & Nikken, 2016; O'Keeffe & Clarke-Pearson, 2011; Perren, Dooley, Shaw, & Cross, 2010; Spies Shapiro & Margolin, 2014). The sharing of sexual images, "sexting," amplified social contagion around

self-harm and eating disorders also have the potential to cause harm (O'Keeffe & Clarke-Pearson, 2011; Starcevic & Aboujaoude, 2015).

Why Monitor the Mental Health and Well-Being of Students?

As a population health survey, the OSDUHS informs the "population health approach." The ultimate goal of this approach is to maintain and improve the health of an entire population. The approach is evidenced-based, and as such, necessitates the surveillance of a broad set of health indicators and determinants. In turn, the resulting knowledge is applied to identify impairments and disabilities, and to develop and implement policies and programs to improve the well-being of the population. Survey data are one source of knowledge about health indicators and determinants among the general population. Some objectives of survey monitoring include:

- establishing the current and potential burden of mental health problems arising in early and later adolescence;
- assessing changes in health status, impairment, and disability;
- assessing changes among the determinants of health (e.g., family structure);
- providing scientific, reliable data that can confirm or challenge anecdotal and media reports;
- providing a basis for program and policy evaluation and the assessment of health goals and targets established by governmental and nongovernmental agencies;
- providing surveillance data necessary for the development and monitoring of what we might call "sentinel population events" – population events that are likely to predict current or future impairment. For example, a possible sentinel event would be a recent increase in one or more problem indicators among the 7th graders. This would require monitoring to assess if this behaviour moves

with the cohort, or if it migrates to older or younger adolescents.

Ultimately, we are hopeful that these data and the knowledge provided in this and subsequent research will enrich our ability to enhance the well-being of children and adolescents.

What Student Health Surveys Tell Us

Student health surveys provide essential knowledge that serves as a basis for understanding:

- the relative and absolute size of the adolescent student population currently experiencing physical and mental health problems, and engaging in risk behaviours;
- population and subpopulation changes in health indicators over time;
- the factors that correlate with physical and mental health indicators, such as demographics;
- the identification of various subtypes, especially high-risk groups; and
- the uptake of problem behaviours and states in adolescence, which affect the burden of disease in adults.

We should note that repeated cross-sectional surveys (repeated surveys of *different* students each cycle), such as the OSDUHS, can assess only specific types of change. Because the same students are not surveyed each cycle, repeated cross-sectional surveys cannot evaluate developmental patterns or individual change, nor can they fully resolve issues of causal order (e.g., whether excessive social media use causes depressive symptoms or vice versa). However, repeated cross-sectional surveys are especially efficient at identifying and measuring aggregate period trends (e.g., changes in the percentage of the population rating their health as poor). In comparison to longitudinal follow-up studies, the advantages of repeated cross-sectional studies are, firstly, that each survey takes into account population changes; and secondly, that

estimates combine effects of changing beliefs and behaviours and changing populations, and therefore provide an efficient estimate of net (i.e., population) change.

Why Use a School-Based Survey to Monitor Adolescent Well-Being?

There are important reasons for, and benefits to, estimating and monitoring physical health and mental health indicators among adolescents using a school-based survey:

- School-based surveys are cost efficient, having a low cost per respondent, and are relatively easy to administer. For example, numerous students in a class or school can be interviewed during a single visit.³
- Because administrative data on student enrolment and the number of schools are readily available, constructing a sampling frame is straightforward. Although school samples are not without their difficulties, they tend to have fewer sampling frame difficulties than do other sampling methods (e.g., telephone frames).
- In Ontario, adolescents without a secondary school diploma are legally required to attend school until age 18. Thus, the coverage of the total adolescent population is exceptionally good, especially for the lower grade students (grades 7–10), who represent the larger share of the population.
- A wide scope of developmental periods – early, middle, and late adolescence – is “captured” in a school setting. This wide age range allows one to capture the spectrum of problems experienced during adolescence.
- Response rates for school-based surveys are usually higher than other methods such as household face-to-face surveys or telephone surveys (Hibell et al., 2003).

³ Unfortunately, there is a price to pay for this efficiency – higher design effects and lower precision relative to a simple random sample (see the Methods section for a discussion on this issue).

- The school setting is conducive to eliciting truthful responses by adolescents (rather than in the home, for example). Adolescents feel more comfortable answering sensitive questions about drug use and other behaviours that may be considered stigmatizing or illegal in a school setting than in a less anonymous setting such as the home. Data collected through anonymous, self-completed, school-based surveys often demonstrate higher validity than do data collected through alternative methods (Brener et al., 2006; Harrison, 2001; Hibell et al., 2003).
- In addition to physical and mental health indicators, we can monitor exposure to school-based prevention education and other such program activities in schools.
- Schools themselves are social units worthy of examination. Schools are part of a fundamental hierarchical social structure: students are embedded, or nested, in classes, which, in turn, are nested in schools, nested in neighbourhoods, and nested in larger regional units. The character of these linkages can affect physical and mental health status of students. For example, OSDUHS research has shown that school characteristics, such as school size, policies, school climate, and connectedness are associated with student drug use (Kairouz & Adlaf, 2003; Rehm et al., 2005).
- In addition to monitoring, repeated surveys can also facilitate an array of special studies on adolescent health. One recent example was the collaboration of the OSDUHS investigators with researchers from St. Michael's Hospital in Toronto to conduct a grant-sponsored study on traumatic brain injury among adolescents. This data collection provided the first general population (nonclinical) prevalence estimate in North America (Ilie, Boak, Adlaf, Asbridge, & Cusimano, 2013).

Computer Mode of Administration

The OSDUHS is an in-school, self-administered, paper-and-pencil-instrument (PAPI) survey. The school setting is conducive to maintaining an assurance of anonymity, thereby reducing the likelihood of social desirability bias in reporting sensitive and illegal behaviours. Surveys of adolescents conducted in households, especially with parents at home – regardless of self-administration or interviewer-administration procedures – result in lower prevalence estimates for substance use and other socially stigmatizing behaviours (Brener et al., 2006; Denniston et al., 2010; Kann, Brener, Warren, Collins, & Giovino, 2002; Rootman & Smart, 1985).

The OSDUHS has not adopted an online or computer mode of administration in the school setting because of the complex logistics of coordinating available computers and Internet connectivity with school administrators. Further, not all Ontario schools have the required technical resources. It would be cost-prohibitive and challenging to equip all the survey administrators with the necessary portable devices (i.e., 20-25 tablets/laptops required to survey one class). Although students might prefer to complete the survey electronically rather than in a paper booklet, there is no conclusive evidence showing that a computer mode of administration decreases social desirability bias or improves response rates (Denniston et al., 2010; Dodou & de Winter, 2014; Eaton et al., 2010; Hallfors, Khatapoush, Kadushin, Watson, & Saxe, 2000). However, some advantages of computer administration include speed of data input and decreased missing data.

What Student Health Surveys Do Not Tell Us

Because school-based surveys comprise adolescents attending school, their data cannot fully measure the health and well-being of all adolescents in the population. Student surveys cannot address the following:

- the extent of the health and risk behaviours among nonstudents and institutionalized adolescents, such as youth who are homeless or marginally housed, incarcerated, in group homes, or those exiting school prematurely; and
- the causes of individual changes over time.

The OSDUHS Mental Health and Well-Being Report

In this report, we describe physical and mental health indicators among Ontario students in grades 7 through 12 using data from the 2015 cycle of the OSDUHS. To help organize the material, we classify mental health indicators as internalizing and externalizing indicators. By internalizing indicators, we mean emotional health indicators such as symptoms of anxiety/depression and suicidal ideation. By externalizing indicators, we mean overt risk behaviours such as aggression, theft, gambling, and drug use. We also present trend data spanning back more than a decade to 1991, where possible.

New indicators in this report include subjective social status at school, usual number of hours of sleep on a school night, going to bed or school hungry, elevated stress, and symptoms of attention-deficit/hyperactivity disorder (ADHD).

Mental health indicators in the OSDUHS generally assess moderate functional impairment, rather than psychiatric disorders based on clinical criteria and diagnostic interviews. Restricting attention to those experiencing current psychiatric disorders would

understate the extent of poor mental health because a sizeable percentage of the population experiences 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, ranging from optimum mental health to mental disorder. Further, broad mental health indicators are more sensitive in detecting period change, which can provide an early warning system for service planners and providers.

Readers should note that CAMH publishes a companion report based on the 2015 OSDUHS describing the extent of licit and illicit drug use among Ontario students since 1977. This publication *Drug Use Among Ontario Students, 1977–2015: Detailed OSDUHS Findings* is available electronically at www.camh.ca/research/osduhs.

History of the OSDUHS

The Centre for Addiction and Mental Health's OSDUHS is the longest ongoing survey of elementary and secondary school students in Canada. Beginning in 1977, the OSDUHS surveyed Ontario students in grades 7, 9, and 11. In 1999, the OSDUHS was further expanded to include students in grade 7 through 13/OAC. In 2003, 13th graders were excluded 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 over 100,000 students in Ontario have participated. The study's history is underscored by considering that most of the 12th graders interviewed in 1977 are now in their 50s.

Since its inception, the OSDUHS has not only been the source data for numerous scientific and policy publications on an array of adolescent health issues, but has evolved into a well-recognized school survey globally.

All OSDUHS surveys received primary funding support from the Ontario Ministry of Health and Long-Term Care. The survey has been administered in schools by the Institute for Social Research at York University since 1981.

2. METHODS

Sampling Design

Target and Survey Population

For each of the 20 survey cycles, the target or in-scope population – the population we are attempting to draw conclusions about – comprised all 7th to 12th graders enrolled in Ontario’s four publicly funded school systems (i.e., English language public, English language Catholic, French language public, and French language Catholic). Students excluded from the survey’s target population (out-of-scope) were

those enrolled in private schools, those who were home-schooled, those institutionalized for correctional or health reasons, those schooled on First Nations reserves, military bases, or in the remote northern region of Ontario. These out-of-scope groups represent a small proportion of the Ontario student population (about 8%).

Therefore, although our target population represents students, it captures the vast majority (92%) of Ontario children and adolescents aged 12–18 years, based on Statistics Canada’s population estimate (Statistics Canada, 2014).

Table 2.1 Thirty-Nine Years (20 Cycles) of the OSDUHS

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	
No. School Boards	20	20	31	31	20	24	25	27	25	20	22	38	41	37	42	43	47	40	42	43	
No. Schools	104	87	182	227	193	170	171	179	165	137	168	111	106	126	137	119	181	181	198	220	
No. Classes	196	195	198	261	205	215	224	221	233	223	234	285	272	383	445	385	573	581	671	750	
No. Students	4687	4794	3270	4737	4154	4267	3915	3945	3571	3870	3990	4894	4211	6616	7726	6323	9112	9288	10272	10426	
Participation Rate	70	78	85	85	82	84	81	83	77	76	77	76	71	72	72	68	65	62	63	59	
Design Features	three-stage selection (board; school; class), stratified by grade and region; grades 7, 9, 11 & 13; self-weighted estimates		single-stage selection (board clusters), stratified by grade and region; grades 7, 9, 11 & 13 (OAC); weighted estimates									two-stage cluster selection (school, class), stratified by region and school level; North oversampled; sponsored public health regions oversampled in 2009 (n=6), 2011 (n=5), 2013 (n=7), and 2015 (n=7); weighted estimates									
												grades 7–13 (OAC)		grades 7–12 (OAC eliminated in 2003)							

Notes: (1) participation rate shown is at the student level; (2) entries beginning in 2009 include public health regions’ oversamples; (3) OAC (Ontario Academic Credits) – until 2003, Ontario students matriculating to postsecondary education were required to attend five years of secondary school (grades 9–13). This additional year of secondary school credits was eliminated in 2003.

The OSDUHS Surveillance Program

Data quality is built on the regular redesign of surveys (Biemer & Lyberg, 2003), and the OSDUHS program has strived to maintain its integrity in this regard. Sample design revisions are often required in organizational surveys such as the educational system to adapt to changing structure, policies and governmental change (e.g., removal of grade 13). As seen in Table 2.1, the OSDUHS program is the culmination of three data series: 1977–1979, 1981–1997 and 1999 onward, of which each odd-year survey was based on a random probability design. The 1977 and 1979 surveys were based on a *stratified* (region by grade) *three-stage cluster design* (school board district, school, class).⁴ The proportional allocation of students by grade and region allowed for self-weighted (i.e., unweighted) estimates.⁵ In 1981, the design was modified to a *disproportionally stratified single-stage cluster design* with paired selection (two-per-stratum) of first-stage school board district clusters to improve the precision and efficiency of estimates.⁶ This design resulted in the selection of more school boards and schools.⁷

Since 1981, York University's Institute for Social Research (ISR) has produced, under contract, the OSDUHS data. ISR is responsible for the sample design and selection,

⁴ Sample preparation, fieldwork and data preparation for the 1977 and 1979 surveys were contracted to Ian Sone and Associates.

⁵ The original design of every second grade (grade 7, 9, 11, 13) in every second year (1977, 1979, etc.) allowed for the assessment of population cohorts across time given that the 7th grade population in 1977 would be surveyed again in the 9th grade in 1979, in the 11th grade in 1981, and in the 13th grade in 1983. This earlier 2 × 2 cohort design can also be generated for later surveys.

⁶ This major redesign was developed by Professors P. Peskun and C.M. Lanphier (Departments of Mathematics and Sociology, respectively), both of York University.

⁷ For the 1977, 1981 and 1983 cycles, an additional stratum of 5th graders was also sampled. To ensure cross-time comparability, these data have been excluded. The 5th-grade stratum was eliminated in 1985, largely due to the reticence of school boards to allow surveying of this young cohort.

questionnaire review and production, school recruitment, class selection, field operations, data capture, weighting and initial dataset preparation. The OSDUHS team is responsible for institutional and school board approval, questionnaire content, consent forms, and final dataset development (including any generation of poststratification adjustments to sampling weights) and variable creation.

Current Sampling Design⁸

In 1999, the OSDUHS transitioned to a *disproportionally stratified* (region by school level⁹), *two-stage* (school, class) *cluster design*, which included the oversampling of students in Northern Ontario (to provide more precise estimates for that less populous region).¹⁰ Further, rather than sampling students only in grades 7, 9, and 11 (and grade 13 before it was eliminated in 2003), the revised design samples students in grades 7 through 12, inclusive. This expansion provided greater age variation and more developmentally relevant detail on the relationship between health compromising risk behaviours and age. The revised design also allows for more direct grade comparisons to American and other international studies, thereby enhancing data quality by developing cross-national comparability (Biemer & Lyberg, 2003). Another design revision introduced in 1999 was the probability selection of schools in

⁸ In addition to the authors, the 2015 OSDUHS sample design team included John Pollard, Stella Park, Hugh McCague, and David Northrup, all from the Institute for Social Research (ISR) at York University.

⁹ In Ontario, 7th and 8th graders can be enrolled in elementary schools (JK–G8), middle or senior public schools (G6–G8), or junior high schools (G7–G9). The primary stage stratification of region is disproportional to the enrolled population.

¹⁰ Prior to 1999, the allocation of students from Northern Ontario was proportional to the population, resulting in smaller samples than the other regions. This smaller sample proved problematic because, despite the elevated rates of certain behaviours in the North, the regional comparison tests did not reach significance due to lack of statistical power. This redesign was headed by Professor Michael Ornstein, York University/ISR.

stage 1, rather than selection of school board clusters. In sum, the revised design specifies the sampling of more students per school and a greater geographical dispersion of schools with more precise school-level estimates.¹¹

OSDUHS Base Regions

Since 1977, the sample design has divided Ontario into four regional strata based on the following boundaries: *City of Toronto*;¹² *Northern Ontario* (Parry Sound District, Nipissing District, and areas farther north); *Western Ontario* (Peel District, Dufferin County and areas farther west); and *Eastern Ontario* (Simcoe County, York County and areas farther east).

Sponsored Oversamples by Ontario Public Health Units/Departments in 2015

In addition to the four regional strata of the base design just described, the 2015 OSDUHS included an additional seven regional strata oversamples sponsored by the corresponding Ontario public health unit/department. The oversampling of students in these public health regions was conducted to provide more precise regional estimates for the health units/departments. Schools in the following seven regions of the province were oversampled: Durham Region, York Region, Simcoe Muskoka District, Peel Region, Niagara Region, Brant County, and North Bay Parry Sound District.

¹¹ The disadvantages of greater school dispersion are that (1) it increases the number of school boards and therefore the resources needed for recruitment; and (2) it increases the school fieldwork coordination and travel costs. In contrast, greater school dispersion provides richer, more precise school-level data necessary for multilevel analysis. Recent OSDUHS examples of this work include Rehm et al. (2005), and Kariouz and Adlaf (2003).

¹² Throughout the OSDUHS program, the geographical boundary for Toronto schools remained unchanged despite a municipal amalgamation in 1998.

The addition of these seven regional oversamples resulted in 11 mutually exclusive regions. This created 21 region-by-school level strata ($[4 \times 2] + [7 \times 2] = 22 - 1$ (elementary students were not sampled in one region) = 21 total design-based strata). Mutually exclusive school samples were drawn for each of these 21 strata.¹³

School Selection (Stage 1)

Publicly funded schools represented by four school systems in Ontario – English and French language schools in the public and Catholic school sectors – were eligible to participate.¹⁴ Schools excluded as being out-of-scope were private schools, schools on First Nations reserves, on Canadian Forces Bases, and schools in geographically inaccessible northern areas.

The 2015 OSDUHS school selection proceeded as follows:¹⁵

- 1) The sampling frame used to randomly draw the school sample was the Ontario Ministry of Education's 2011/2012 school enrolment database (most recently available at the time). This frame included all publicly funded schools in Ontario that included the grades in our target. As noted earlier, this comprised schools in four sectors: English language public, English language Catholic, French language public, and French language Catholic. For cost-efficiency reasons and due to estimation difficulties with sparse data, schools with low enrolment (i.e., fewer than 30 students in schools with grades 7 and 8, and fewer than

¹³ Although each oversample was an independent stratum, for our analyses and presentation, oversamples were assigned to one of the four corresponding base regions.

¹⁴ In Ontario, each regional county has both a public and Catholic school board.

¹⁵ Initially designed to enhance cross-time estimation, school selections for the 2003-2009 cycles were based on a longitudinal sample of schools initially drawn in 2001. Starting in 2011, the school selection reverted to a fully independent sample.

80 students in schools with grades 9 through 12), and schools in the remote northern region of the province, were excluded from the sampling frame.

- 2) Within *each* of the 21 region-by-school level primary-stage strata, a probability proportionate-to-size (PPS) selection of schools was drawn (i.e., larger schools had a greater probability of being selected). Following a random start, schools were selected with systematic sampling without replacement (WOR).
- 3) If a selected school declined to participate, or if it had closed, a replacement school from the same region-by-school level stratum was randomly selected, again with PPS/WOR sampling.

Class Selection (Stage 2)

Within each recruited school, a grade-stratified list of all eligible classes (provided by the school) was used to randomly subsample one class per grade with equal probability and without replacement (WOR). In elementary/middle schools, two classes were randomly selected – one 7th-grade class and one 8th-grade class. In secondary schools, four classes were randomly selected, one in each grade from 9 through 12 from either a list of classes in a required subject (e.g., English, math) or a required period (e.g., homeroom).

For the public health region oversamples, the class selection procedure in the secondary schools did not differ from the standard one class per grade selection. In the elementary/middle schools, rather than the standard selection of one class per grade, *two* 7th-grade and *two* 8th-grade classes were selected to participate (or all students in these grades if there was fewer than two classes in each grade).

If a selected class could not participate, a replacement class from the same school and same grade was randomly re-selected, time permitting (otherwise this loss was incorporated

in the class nonresponse adjustments). Classes excluded as being 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 who returned a signed consent form were eligible to participate.

Sample Exclusions

School Exclusions

- private schools
- schools on First Nations reserves
- schools on Canadian Forces bases
- geographically remote schools
- elementary/middle schools with fewer than 30 students enrolled in Grade 7 and Grade 8 (combined)
- secondary schools with fewer than 80 students enrolled in Grades 9–12

Class Exclusions

- special education classes
- English as a Second Language (ESL) classes
- classes with fewer than 5 students

Student Exclusions

- institutionalized or home schooled

Selection of Units

School Selection

- PPS/WOR: probability-proportionate-to-school size via systematic sampling; sampled without replacement

Class Selection

- EPSEM/WOR: Equal probability selection of classes; sampled without replacement

Student Selection

- None: all students in a class with a signed consent form were eligible to participate

Administrative and Recruitment Procedures

The 2015 OSDUHS protocol was approved by the Research Ethics Boards (REBs) at CAMH and York University,¹⁶ as well as 30 school board research review committees (RRC).

Student participation required the approval of school boards, school principals, classroom teachers, parents (if under 18 years) and students themselves. For each school board associated with one or more randomly selected schools, permission to survey students was first requested from the Director of Education. Depending on the school board's policy, agreement to participate was conditional upon approval from the board RRC, as well as school principals, classroom teachers, parents, and students. If a school board was unwilling to have their schools participate, replacement schools from the same stratum were randomly selected and the corresponding board(s) were contacted for permission to approach the replacement schools. Once a school was recruited, the principal provided ISR with a grade-stratified list of classes, from which random selections were drawn.

All participating schools were provided with active (also known as explicit) parental consent forms,¹⁷ which were available in seven languages (English, French, Spanish, Portuguese, Russian, Mandarin, and Korean). Well in advance of the survey date, each selected classroom's teacher 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). Students themselves were also required to provide a signature of assent. Those who did not return a dual-signed consent form on or before the survey date were not allowed to participate. For reasons of cost efficiency, follow-up data collection was not rescheduled for absent students or those not returning a consent form. If a student did not participate, no substitution took place (because all students in the class were invited to participate). Instead, the selection weights were statistically adjusted for this unit nonresponse.

Administration procedures were designed to protect students' privacy by ensuring anonymous and voluntary participation. The survey was administered across the province by 34 trained ISR field staff in the selected classrooms between November 2014 and June 2015.¹⁸ The survey administrators read a standardized script to participating students explaining the history of the study, its purpose, and underscoring the anonymity of the survey.¹⁹ Students were reminded that participation was voluntary and anonymous, and were instructed not to write their names on the questionnaires. They were also instructed to skip any question they did not understand, rather than risk disclosure by asking for assistance. Students recorded their answers directly on the paper-and-pencil instrument (PAPI), printed in a two-column booklet format. Although teachers were not required to remain in the classrooms during administration, most chose to do so, which added a beneficial climate of order during the administration. Teachers were asked to avoid walking around the room so that students would not feel their answers would be observed. No compensation for participation was provided to schools or students.

¹⁶ A protocol review by York University's REB is required for all contractual projects administered by ISR.

¹⁷ The OSDUHS *active/explicit* parental consent requires a clear approval for their child to participate from at least one parent indicated by an "I approve" response with an accompanying signature. In contrast, *passive* consent allows a student to participate as long as a parent does not indicate objection (or opt-out) to their child participating. In practice, active consent results in fewer students participating (Courser, Shamblen, Lavrakas, Collins, & Ditterline, 2009; Jelsma, Burgess, & Henley, 2012). It is the policy of most school boards in Ontario to require active consent for external research studies.

¹⁸ While some data collection predates 2015, we retain the odd-year designation used in previous cycles for simplicity and to reduce possible confusion. The data collection period was expanded to allow for a longer interval in which schools could arrange an acceptable administration date.

¹⁹ The survey administrators also recorded information about the classroom, such as the number of students enrolled, number absent, presence of teacher during administration, and whether the class was randomly selected.

The ISR field staff collected all completed questionnaires, which were then couriered to ISR for editing and data capture by using the Computer-Assisted Survey Execution System (CASES) software. The quality of the data entry was verified by independently re-keying a random sample of 3% of all questionnaires.²⁰ The major editing rule used for processing a valid questionnaire was that at least half of the questions had to be completed. Only 44 questionnaires failed to meet this rule and were withdrawn from data entry.

The OSDUHS Questionnaire

In addition to alcohol and other drug use, the OSDUHS questionnaire covers an array of topics related to mental and physical well-being. The general outline of the topics covered in the survey is as follows: demographics, family and school life, alcohol, tobacco, and other drug use, beliefs and attitudes about drug use, vehicle-related questions, mental health indicators (e.g., suicidality, symptoms of anxiety and depression), physical health indicators (e.g., physical activity, healthy weight, injuries), bullying, gambling and gambling problems, video game playing problems, and aggressive and other problem behaviours.

The objective of the OSDUHS data collection system is to maximize the data to cost ratio – to maximize data usability while minimizing cost and questionnaire length (i.e., respondent burden). To include as many topics as possible in a fixed class period, while minimizing the burden on students, we employed four split ballot versions of the questionnaire,²¹ depending on school level. As in past cycles, we used split ballot modularized questionnaires whose item content was distributed according to

²⁰ The verification rate was reduced from 100% after multiple cycles showed low rates of data entry errors.

²¹ Customized questionnaire forms were created for schools in one board that requested the removal of three questions (two about suicide, one about past school expulsions), and for secondary schools in two other boards for the purpose of piloting a new question about sexual identity.

questionnaire form (Form A vs. Form B).²² We reduced the number of questions in these forms for students in elementary schools (i.e., the 7th and 8th graders). That is, elementary school (ES) students (grades 7 and 8) completed shorter questionnaires than secondary school (SS) students. The elementary school questionnaires excluded the following topics: the use of cocaine, crack, heroin, methamphetamine, hallucinogens, club drugs and new synthetic drugs, prescription tranquillizers, drug use problem screeners, gambling problem screener, and driving-related behaviours. See Table 2.2 for an overview of the questionnaire content across the four forms. The item count was 171 in Form A-SS, 151 in Form B-SS, 127 in Form A-ES, and 116 in Form B-ES. About half of the items in each form were designated as core, that is, items common to all four forms. Because not all questions were in all forms, the number of cases upon which a finding is based may be less than the total sample size. A French version of Form A (ES and SS) was used in French-language schools.²³ The 2015 questionnaires are available at www.camh.ca/research/osduhs.

In each classroom, Form A and Form B were distributed alternately (i.e., A, B, A, B) to achieve two near-equal random samples completing each form.²⁴ The average completion time was 30 minutes (median=27 minutes) for secondary school students, and 31 minutes (median=29 minutes) for elementary school students. By design, item branching (i.e., designated question skips) was not used in the questionnaire to protect students' privacy by

²² Split ballot methods can not only expand the content coverage of the survey, but can also be used in an experimental or evaluative mode to assess methodological and questionnaire development. The disadvantage of the split ballot method is a reduced sample size for analyses based on questions that are not in all forms.

²³ Form B was not translated into French.

²⁴ Such distribution should result in two balanced random samples of students. An assessment of this alternate distribution showed good random characteristics, as there were few differences between the samples completing each form regarding demographics, drug use, and other variables.

ensuring that students in a classroom completed the questionnaires in roughly the same time, thereby reducing the likelihood of identifying drug-using students (or those reporting other sensitive behaviours or problems) who would take longer to complete additional questions.²⁵ This was achieved by having nonusers respond to all questions using the response categories of *never used*, *did not currently use*, or *did not know what a drug was* for the drug-related items. A further advantage of minimizing item branching is a reduced risk of navigational errors (i.e., students skipping ahead to the wrong question).

To maximize validity and to enhance cross-study comparability, many of the OSDUHS questionnaire items were derived from international guidelines (e.g., Hibell, Adlaf, et al., 2003) and recognized student surveys such as NIDA's *Monitoring the Future* (MTF) survey,²⁶ the CDC's *Youth Risk Behavior Survey* (YRBS),²⁷ and the WHO's *Health Behaviour in School-aged Children* (HBSC) survey,²⁸ and have been shown to produce valid responses (Brener et al., 2002; Fosse & Haas, 2009; Inchley et al., 2016; Mawani & Gilmour, 2010; May & Klonsky, 2011; Miech, Johnston, O'Malley, Bachman, & Schulenberg, 2015; O'Malley, Bachman, & Johnston, 1983). There are two principal advantages of employing existing survey questions: first, existing items have typically gone through field collection and testing for validity and reliability and have a demonstrated "fitness for use" (Biemer & Lyberg, 2003) and "usability" (Groves et al., 2009); and second, the capacity for interprovincial and cross-national comparisons extends the utility of the data. Such comparability of measurements is deemed an essential dimension of data quality by national statistical agencies (Biemer & Lyberg, 2003).

The 2015 OSDUHS questionnaire included validated scales and screeners such as the WHO's *Alcohol Use Disorders Identification Test* (AUDIT) assessing hazardous or harmful drinking (Saunders, Aasland, Babor, De La Fuente, & Grant, 1993), the *CRAFFT* screener assessing drug use problems (Knight et al., 1999), the cannabis subscale of the *Severity of Dependence Scale* (SDS) assessing cannabis dependence (Martin, Copeland, Gates, & Gilmour, 2006), the *Kessler 6-Item Psychological Distress Scale* (K6; Kessler et al., 2003) assessing nonspecific psychological distress, the WHO's *ADHD Self-Report Scale Version 1.1* (ASRS; Kessler et al., 2005a, 2007), and the *Problem Video Game Playing* (PVP) scale assessing problems with video gaming (Tejeiro Salguero & Morán, 2002).

All newly introduced items in the 2015 questionnaire were evaluated by both expert review (by ISR and CAMH staff) and pretested by ISR on a small convenience sample of young adolescents. The readability of the 2015 questionnaire showed a 7th-grade reading level according to the Flesch-Kincaid reading score.

At the end of the questionnaire, students were asked to evaluate the comprehension and sensitive nature of the questionnaire. The majority of students indicated positive assessments: 98% of students (97% of 7th graders) indicated that the questionnaire was "fairly" or "very easy" to understand; only 7% of students (6% of 7th graders) indicated that the questionnaire was "much too long"; and only 6% of students (6% of 7th graders) indicated that questions in the survey would make most students "very uncomfortable." This latter finding provides some reassurance that social desirability should not greatly bias our estimates, even among the youngest students.

²⁵ A similar strategy is used in NIDA's *National Survey on Drug Use and Health* (NSDUH) (Biemer & Lyberg, 2003, p. 146).

²⁶ See <http://www.monitoringthefuture.org>

²⁷ See <http://www.cdc.gov/healthyyouth/yrbs>

²⁸ See <http://www.hbsc.org>

Table 2.2 Topic Overview of the Four Questionnaire Forms Used in the 2015 OSDUHS

Grades 7 and 8 (ES)		Grades 9–12 (SS)	
Form A-ES	Form B-ES	Form A-SS	Form B-SS
Demographics			
age, sex, living situation, how long lived in Canada, ethno-racial identity, language spoken at home, hours spent daily on social media		age, sex, living situation, how long lived in Canada, ethno-racial identity, language spoken at home, hours spent daily on social media, hours spent weekly at part-time job	
School Life			
usual marks, hours spent on homework, ever been suspended, attitudes about school, subjective social status at school , school transportation	usual marks, attitudes about school, subjective social status at school , school transportation	usual marks, hours spent on homework, ever been suspended, attitudes about school, subjective social status at school , school transportation	usual marks, attitudes about school, subjective social status at school , school transportation
Family Life			
parents' education, parents born in Canada, parental monitoring, subjective socio-economic status		parents' education, parents born in Canada, parental monitoring, subjective socio-economic status	
Drug Use in the Past Year			
alcohol, cigarettes, cannabis, synthetic cannabis, OTC cough/cold medication, prescription opioid pain relievers, prescription ADHD drugs	alcohol, cigarettes, smokeless tobacco, electronic cigarettes , waterpipe, cannabis, synthetic cannabis, inhalants, salvia, OTC cough/cold medication, prescription opioid pain relievers, prescription ADHD drugs	alcohol, cigarettes, cannabis, synthetic cannabis, OTC cough/cold medication, prescription opioid pain relievers, prescription ADHD drugs	alcohol, cigarettes, smokeless tobacco, electronic cigarettes used to consume cannabis , waterpipe, cannabis, synthetic cannabis, inhalants, salvia, OTC cough/cold medication, prescription opioid pain relievers, prescription ADHD drugs
More Drug Use in the Past Year			
		hallucinogens, cocaine, crack, ecstasy, methamphetamine, heroin, prescription tranquillizers, prescription stay-awake pills	hallucinogens, cocaine, crack, ecstasy, methamphetamine, heroin, synthetic "club" drugs, prescription tranquillizers, prescription stay-awake pills, steroids, any injection drug use
Alcohol			
first use, past month use, heavy episodic drinking, injuries from drinking	first use, past month use, heavy episodic drinking, usual source of alcohol	first use, past month use, heavy episodic drinking, alcohol problem screener, been in treatment, parental permission to drink at home with friends	first use, past month use, heavy episodic drinking, been in treatment, usual source of alcohol, drinking games
Cannabis			
first use, past month use	first use, past month use, usual source of cannabis	first use, past month use, drug use problem screener	first use, past month use, cannabis dependence, usual source of cannabis
Tobacco Cigarettes			
	first use, quitting, source of cigarettes, contraband cigarettes, exposure to second-hand smoke, opinions		first use, quitting, source of cigarettes, contraband cigarettes, exposure to second-hand smoke, opinions
Vehicles			
been passenger with intoxicated driver	seatbelt use, been passenger with intoxicated driver	been passenger with intoxicated driver	seatbelt use, been passenger with intoxicated driver
Driving Behaviours			
		driver's licence, impaired driving	driver's licence, impaired driving, in-class driver training, collisions, texting and driving

(continued...)

Grades 7 and 8 (ES)		Grades 9–12 (SS)	
Form A-ES	Form B-ES	Form A-SS	Form B-SS
Perceptions About Drugs, Education, and Exposure			
	availability and risk perceptions (alcohol, cigarettes, electronic cigarettes , cannabis, prescription pain relievers), recall of drug education, intoxicated at school, exposure to drugs		availability and risk perceptions (alcohol, cigarettes, electronic cigarettes , cannabis, prescription pain relievers, cocaine, ecstasy, LSD), recall of drug education, intoxicated at school, exposure to drugs
Physical Health			
self-rated health, physical activity, sedentary behaviour, height and weight, healthy eating, go to bed/school hungry , energy drinks, hours of sleep on school night , head injuries, context of head injuries	self-rated health, physical activity, sedentary behaviour, height and weight, healthy eating, go to bed/school hungry , energy drinks, hours of sleep on school night , head injuries, context of head injuries , body image, doctor visits, asthma, tanning bed use, helmet use	self-rated health, physical activity, sedentary behaviour, height and weight, healthy eating, go to bed/school hungry , energy drinks, hours of sleep on school night , head injuries, context of head injuries	self-rated health, physical activity, sedentary behaviour, height and weight, healthy eating, go to bed/school hungry , energy drinks, hours of sleep on school night , head injuries, context of head injuries , body image, doctor visits, asthma, tanning bed use, helmet use
Mental Health			
self-rated mental health, psychological distress, self-esteem, perceived stress , suicide ideation and attempt, help-seeking behaviour, ADHD screener		self-rated mental health, psychological distress, self-esteem, perceived stress , suicide ideation and attempt, help-seeking behaviour, prescription medication for anxiety or depression, ADHD screener	
Other Risk Behaviours			
school violence, bullying perpetration and victimization at school, cyberbullying, gambling activities, video gaming and problems, conduct problem behaviours		school violence, bullying perpetration and victimization at school, cyberbullying, gambling activities and problems, video gaming and problems, conduct problem behaviours	
questionnaire evaluation & first three digits of postal code			

Notes: (1) **bolded text** in the table indicates a new topic in 2015; (2) Form A-ES and Form A-SS were translated into French.

Data Quality

2015 Sample Participation and Characteristics

A central objective of the OSDUHS is to generate a representative, unbiased sample of Ontario students in grades 7 through 12. The target sample size for the 2015 OSDUHS was set at about 11,200 students.

Schools

In total, 349 schools (273 initial selections plus 76 replacements) were invited to participate. Of these, **220 schools** (103 elementary/middle – of which four were French language – and 117 secondary – of which three were French language) from 43 school boards participated in the survey, resulting in a school participation rate of 63%. The most common reasons given by nonparticipating schools were that they were too busy, or that they had already committed to other research projects. Each school that was unable to participate was replaced with a randomly selected school from the same stratum and with similar school size in order to maintain representativeness.

Although we could not conduct a systematic follow-up of nonparticipating schools, we do not expect these refusals to have created appreciable bias. Our analysis showed that this group of nonparticipating schools did not discernibly differ from participating schools regarding school level (elementary/middle versus secondary) and language (English versus French). However, there was a larger proportion of public schools that refused relative to the proportion in the participating sample. Further, compared with the regional distribution of the participating schools, there were more refusing schools in the Northern region of the province. As we shall see, such distortions were corrected by adjustments made to the sampling weights. A further analysis was conducted to examine whether replacement schools²⁹ differed from initially selected schools. Results showed no

²⁹ Of the 220 participating schools, 42 were replacements.

substantial differences in demographics or drug use between students in these two groups of schools.

If schools substantially differ with regard to student behaviours, then which schools participate can greatly influence the survey findings. Some research suggests that school-level variables are important and show relationships between variables such as sector (public vs. Catholic), or socioeconomic status, and aggregated student drug use (Kairouz & Adlaf, 2003; O'Malley, Johnston, Bachman, Schulenberg, & Kumar, 2006; Rehm et al., 2005). However, the majority of the variance in students' behaviour may lie within schools, not *between* schools (Kairouz & Adlaf, 2003; O'Malley et al. 2006). Further, much of the between-school variance can be attributed to differences in region/urbanicity (Miech et al., 2015) – a factor that is controlled for in the replacement sampling within the same region-by-school level stratum. This would imply that if schools are fairly similar in drug use and other risk behaviours then which particular schools participate in the survey has a small influence on estimates.

Classes

A total of **750 classes** met the class inclusion criteria and participated in the survey (286 from elementary/middle schools, 464 from secondary schools). The class participation rate was 88%. We must note that 90 (12%) classes were not randomly selected. Rather, these classes were convenient same-grade replacements, typically identified by principals, for classes that were originally selected but declined to participate for logistical reasons.³⁰

³⁰ Statistical tests comparing randomly selected versus nonrandomly selected classes showed that only one of 41 drug-related measures examined showed a significant difference (with nonrandomly selected classes showing a higher prevalence). Drug use measures were also evaluated with and without the inclusion of the nonrandomly selected classes, and results did not substantially differ. Thus, nonrandomly selected classes remained in the final dataset.

Students³¹

Finally, of the 17,804 students enrolled in the eligible classes, 10,523 students were considered “completions,”³² resulting in a **student participation rate of 59%**.³³ Eleven percent (11%) of cases were lost due to absenteeism, 29% were lost due to either unreturned consent forms or parental refusal, and 1% were lost due to teacher-assisted completions, comprehension issues, or withdrawals. The sources of nonresponse vary by grade: the major source of nonresponse in the lower grades is unreturned consent or parental refusal (35% in grade 7 versus 26% in grade 12, whereas in the upper grades absenteeism is higher than in the lower grades (14% in grade 12 versus 7% in grade 7).³⁴ The student participation rates according to the four base regions presented in this report were 54% in Toronto, 53% in the North, 60% in the West, and 63% in the East.³⁵

Trends in Student Participation

Student participation in the OSDUHS has trended downward over the long-term. Between 1977 and 2015, the student participation rate fell from 70% to 59%, with a peak in 1981–1983 at 85%. This decline is strongly associated with an

³¹ Although students are neither a stage of selection nor a sampling unit, they are the unit of observation within clusters. Consequently, their participation is a component of the overall participation rate.

³² A “complete case” had to answer at least half of the questionnaire and had to report a valid answer for sex and age.

³³ This shows the *unweighted* student participation rate. The *weighed* rate is based on the sum of the product of the regional weighted distribution and regional participation rate: Toronto (.170×.54) + North (.047×.59) + North Bay (.009×.46) + West (.280×.64) + Peel Region (.123×.61) + Niagara Region (.034×.54) + Brant County (.011 ×.59) + East (.161×.66) + Durham Region (.057×.56) + York Region (.065×.68) + Simcoe County (.044×.63) = 61%.

³⁴ The participation rate among students in grades 9–12 only was 60%.

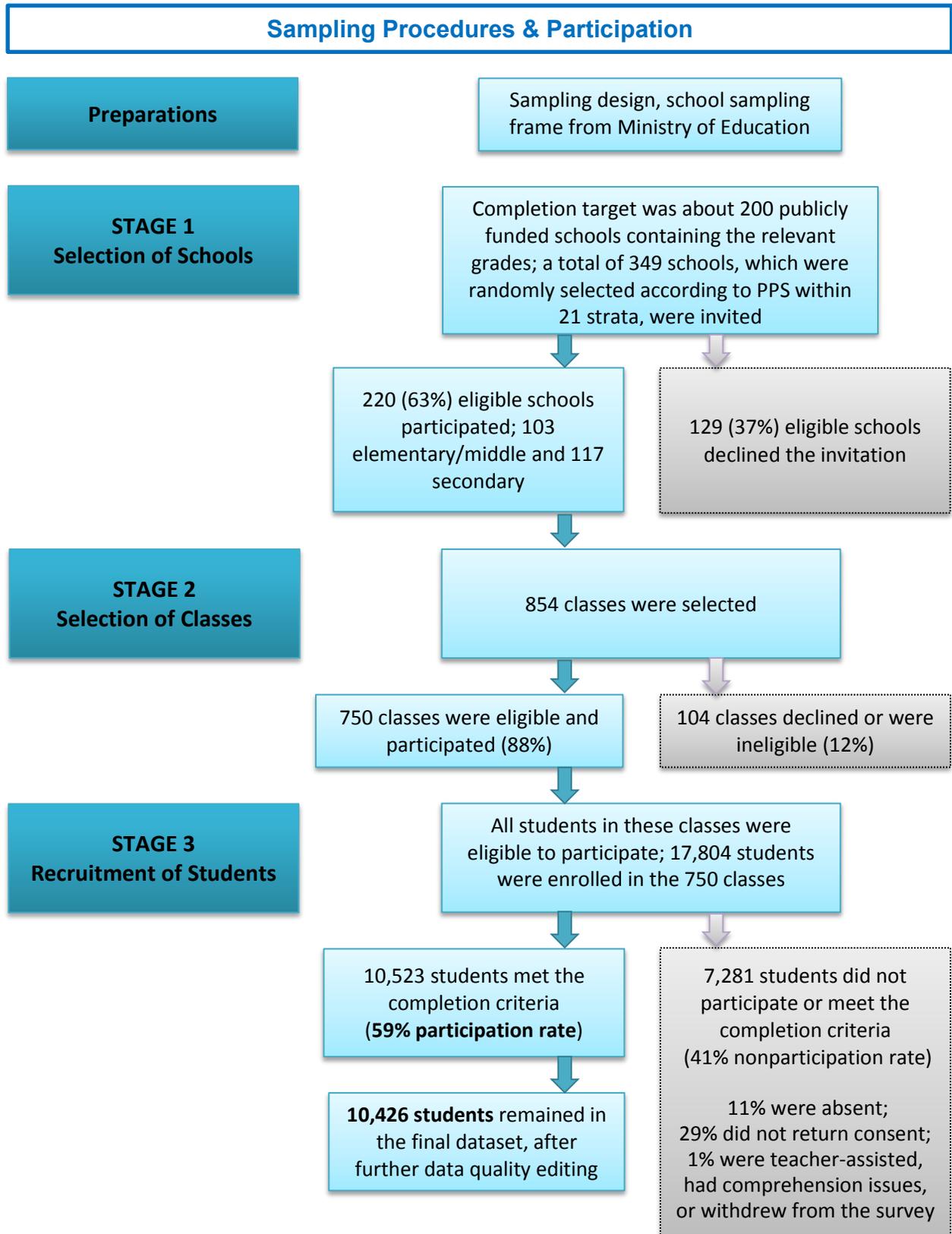
³⁵ For further details about the 2015 sample selection and participation rates for the 11 regions, please see Park (2015).

increase in consent loss, which increased from 4% to 29% during this interval. In contrast, the loss due to absent students remained flat (11%–15%). While the loss due to absenteeism has remained constant across cycles, the proportion not returning their consent form has been increasing across all grades and all regions. The reasons for this increase are unclear. One possible explanation is the increasing number of school board RRCs and institutional REBs that have mandated active parental consent/student assent procedures, which tend to increase loss. This problem of declining response rates is common to the survey research field generally and is not unique to the OSDUHS (de Leeuw & de Heer, 2002; Galea & Tracy, 2007; Groves et al., 2009; Kreuter, 2013).

Still, our student participation rate of 59% is not below average for a student survey employing full active parental consent (Courser, Shamblen, Lavrakas, Collins, & Ditterline, 2009; Shaw, Cross, Thomas, & Zubrick, 2014; Tigges, 2003; White, Hill, & Effendi, 2004). For example, Health Canada’s 2012/2013 *Youth Smoking Survey*, based on a combination of active and passive consent procedures, had a national student response rate of 72% yet the response rate in Ontario – where active consent is required by the vast majority of school boards – was 59% (Burkhalter, Cumming, Rynard, & Manske, 2013). The American *Monitoring the Future* (MTF) survey also employs a blend of active and passive consent procedures, an active parental dissent procedure (i.e., passive consent) for all students unless a school requires active consent procedures. MTF reports student response rates of 80%–84% of 12th graders and 86%–91% of 8th and 10th graders.³⁶

³⁶ There are some important procedural differences between MTF and OSDUHS that may account for an exceptional MTF response rate. First, unlike Canada, research projects conducted in the United States can obtain confidentiality protection guaranteed in law. Second, when a school response rate is less than 70% a second “recoup” administration is conducted. Third, the default consent procedure for all students is passive consent (one that typically provides higher response rates), unless the school requires active consent. Fourth, participating schools in the MTF are given a substantial monetary incentive to commit to the study for two cycles.

Figure 2.1 Sampling Procedures and Participation in the 2015 OSDUHS



Nonresponse and Nonresponse Bias

The association between the magnitude of nonresponse and nonresponse *bias* is complex. A nonresponse rate is only an indicator of the *risk* of nonresponse bias. Although a high response rate is a necessary condition for valid data, a low response rate does not necessarily indicate the presence of significant nonresponse bias, as bias is a function of both the *size* of the nonresponse rate and the *differences* between respondents and nonrespondents on the measures of interest (Groves, 2006; Johnson & Wislar, 2012; Peytcheva & Groves, 2009).³⁷ Moreover, Groves and colleagues (2009) have shown that a survey can have a high response rate, yet discernible nonresponse bias when in the presence of large differences between respondents and nonrespondents.³⁸

Existing research examining the impact of nonconsent (nonparticipation) on estimates of student drug use, mental health, and risk behaviours has not been conclusive. Some studies have found that students not providing parental consent or not participating in research studies are more likely to use drugs, engage in risk behaviours, or have mental health problems than students who do participate (Anderman, Cheadle, Curry, & Diehr, 1995; Courser et al., 2009; Shaw et al., 2014; White et al., 2004), whereas others have found no such differences (de Winter et al., 2005; Eaton, Lowry, Brener, Grunbaum, & Kann, 2004; Jelsma et al., 2012).

³⁷ Specifically, $\text{bias} = \text{nonresponse rate} \times (\text{mean}_{\text{respondents}} - \text{mean}_{\text{nonrespondents}})$

³⁸ An example would be a survey with a 90% response rate in which a large proportion underreported (or unreported) a given behaviour or state.

Evaluation of Nonresponse Bias

While we are unable to compare students who returned a signed parental consent form with those who did not, we did compare demographics, drug use, other risk behaviours, and problem indicators in classes in which the class participation rate was below 70% ($n=466$ classes) with classes in which the rate was 70% or higher ($n=284$ classes). If students without consent are indeed “high-risk” youth, then we would expect classes with low participation to have lower prevalence estimates (less likely) of risk behaviours and problem indicators due to the greater absence of high-risk students compared with high participation classes. We found no significant sex or grade differences between classes with low versus high participation, however low participation classes were most likely to be in Toronto and the North region. Of the 63 measures compared between the two groups, only two showed a significant difference.³⁹ This suggests that students who participated in the survey were not dominantly “low-risk” youth. In sum, we have no compelling evidence that our nonparticipation rate produced appreciable bias.

By design, one group not represented by the OSDUHS sample is dropouts or early school leavers. We must recall, however, that our target population is *enrolled* students. Adolescents who have dropped out of secondary school are no longer enrolled and, therefore, are out of scope – unless they dropped out after the sampling frame was generated.⁴⁰ This should serve as a reminder that readers should not attempt to extrapolate the OSDUHS findings to groups outside the target population (e.g., early school leavers, homeless or institutionalized youth).

³⁹ Low participation classes had lower estimates for past year drinking and any gambling activity compared with high participation classes, but these differences were found only in elementary schools.

⁴⁰ Another source of sampling error would occur if school leavers are not removed from the enrolment list resulting in potential coverage errors of ineligible units, and deflating the class response rate and expansion estimates. We expect such error to be negligible.

School Leavers in Ontario

Although the *Ontario Education Act* (2006) stipulates that school attendance is compulsory to age 18 for those who have not graduated from high school,⁴¹ there are some exceptions (e.g., illness, legal emancipation). One challenge in assessing the impact of school leavers (dropouts) on our sample lies with the differing methods of measurement and their corresponding estimates. The Ministry of Education estimates that the high school graduation rate in 2013/2014 was 84% (Ontario Ministry of Education, April 2015). However, we cannot assume that the dropout rate was 16% because some students remain in school without graduating (i.e., take more years to graduate). Statistics Canada, on the other hand, measures the dropout rate using the *Labour Force Survey* and found that about 5% of 16 to 17 year-olds and 7% of 18 to 19 year-olds in Ontario were not attending high school (and did not already graduate) in 2009/2010 (McMullen & Gilmore, 2010).

Because school leavers are outside our target population of enrolled students, their omission should not bias our target population estimates. School leavers are more likely to be male, Canadian-born, and live outside of large urban centres (Gilmore, 2010). However, our poststratification weight adjustments should reduce this concern. The omission of school leavers would not affect our drug use and other risk behaviours trends if the proportion remains constant from cycle to cycle. However, both the Ontario Ministry of Education and Statistics Canada indicate that the proportion of school leavers has declined over the past two decades, not only in Ontario but also in most of Canada. One would assume that because of this decline (and therefore retaining a greater number of older males in schools over time), our estimates would show increases in drug use and other risk behaviours over time, but this has not been the case. This suggests that the omission of school leavers does not substantially affect our trend estimates.

⁴¹ Prior to 2006, the compulsory age of education in Ontario was 16 years.

Postsurvey Processing

Final Data Set Creation

Consistent with previous process quality procedures, editing rules were established to enhance data quality. As mentioned earlier, students that did not answer at least half of the questionnaire were not entered into the dataset, and students that did not report a valid answer for age or sex ($n=38$) were removed from the dataset and considered “incomplete.”⁴² These two criteria were applied at ISR. After student data delivery to CAMH, three more data quality criteria were applied. Students that reported: (1) the use of a fictitious drug;⁴³ (2) using all of the core illicit drugs 40 or more times during the past year (“faking bad”), or (3) did not respond to half or more of the core drug use questions were also removed from the dataset. Note that criteria 1 and 2 address the potential bias due to overreporting drug use. This data editing process resulted in a final dataset consisting of **10,426 minimally complete cases** used in the data analyses (Form A-ES $n=1,977$ students; Form B-ES $n=1,852$ students; Form A-SS $n=3,426$ students; Form B-SS $n=3,171$ students).⁴⁴

⁴² We contend that if students are unwilling to provide valid responses to questions about their sex or age, the data quality of their remaining responses is untrustworthy. Those cases with invalid sex or age responses were removed by ISR, before sending the data to CAMH.

⁴³ The fictitious drug was called “adrenochromes.” Our data suggest that any overreporting bias should be minimal given rare reports of fictitious drug use ($n=84$ cases).

⁴⁴ 97 cases were removed from the final dataset due to the three data quality criteria applied at CAMH. This proportion is similar to the proportion removed in previous cycles.

Item Missingness

Both the single item missing rate and the cumulated item missing rate were low, suggesting quality responding. Across the 59 core questions (i.e., items in all four questionnaire forms), the item missingness average was about 1%. In addition, there is no evidence that item nonresponse inflates with the transition from the demographic questions to the more sensitive drug use questions.⁴⁵ In this report, missing responses to questions were not statistically imputed, but were excluded on a casewise (i.e., listwise) basis for all multivariable analyses.

Poststratification

We compared the 2015 OSDUHS sample with the most currently available school enrolment numbers from the Ministry of Education, which were based on the 2012/2013 academic year. Table 2.3 shows that there were slight discrepancies between the 2015 OSDUHS sex-by-grade weighted (preadjusted) total sample distribution and the provincial enrolment figures. However, larger discrepancies were found within certain regional strata when compared to the provincial distribution. For example, in certain regions younger males were overrepresented, whereas in other regions older females were overrepresented. To further improve the quality of estimates by reducing potential nonresponse and noncoverage bias, we calculated postsurvey adjustments for the sex-by-grade distributions within *each of the eleven regional strata separately* to restore each region's demographic composition to the population composition.⁴⁶ The poststratified

weighted sample distribution is shown in Table 2.3 (far-right columns). The OSDUHS adjusted-weighted sample corresponds well to the Ontario enrolment.⁴⁷ Table 2.4 and Figure 2.2 show the demographic characteristics of the final weighted sample.

⁴⁵ For example, the demographic and background items immediately preceding the drug use items averaged an item-missing rate of 0.9%. Transition to the subsequent module containing the drug use items did not alter this rate (0.9%).

⁴⁶ The sex-by-grade population distribution was not available according to each of the 11 regions, thus the provincial distribution was used to calculate the poststratification weights for each region. The assumption is that each region's population sex-by-grade distribution

does not substantially differ from the provincial distribution.

⁴⁷ After adjustment, the difference between the weighted sample and enrolment figures did not exceed 0.5 percentage points in any of the 12 poststratification classes.

Table 2.3 The 2015 OSDUHS Sample vs. Ontario 2012/2013 School Enrolment

	OSDUHS Preadjusted		Population Enrolment		OSDUHS Postadjusted	
	% Male	% Female	% Male	% Female	% Male	% Female
Grade 7	6.2	7.0	7.3	6.9	6.8	6.4
Grade 8	6.5	7.2	7.5	7.1	7.0	6.7
Grade 9	7.9	8.2	8.0	7.6	8.2	7.8
Grade 10	7.2	9.4	8.2	7.8	8.4	8.0
Grade 11	8.5	9.0	8.5	8.1	8.8	8.3
Grade 12	11.7	11.2	12.2	10.8	12.5	11.1
Total	47.9	52.1	51.7	48.3	51.7	48.3

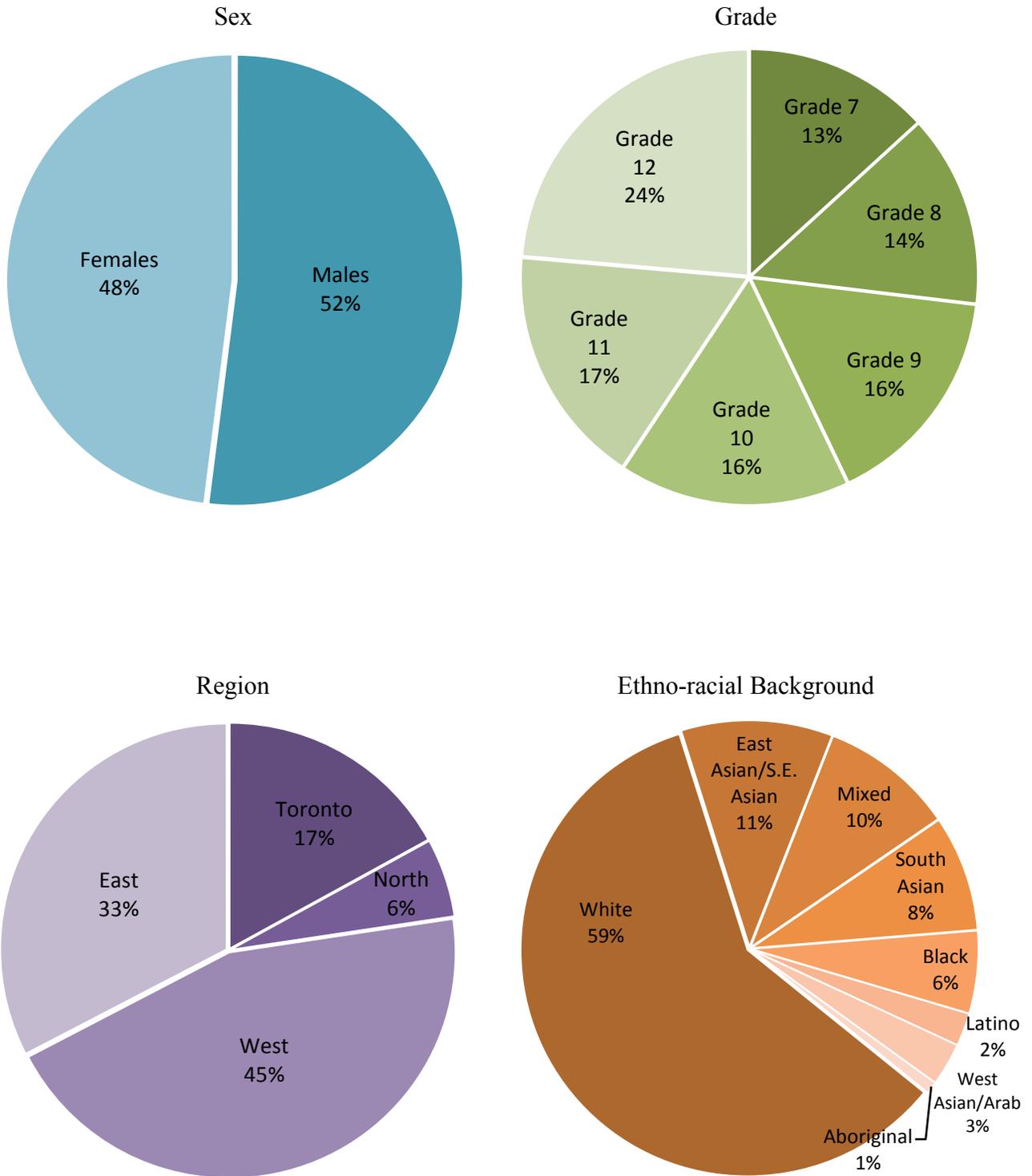
Notes: (1) OSDUHS cell entries are total sample percentages and are based on weighted data; (2) enrolment cell entries are total enrolment percentages and are based on 961,500 students enrolled in Ontario's publicly funded schools during the 2012/2013 academic year.

Table 2.4 Final Sample Characteristics, 2015 OSDUHS

	Final Number (<i>n</i>)	Weighted %
Total	10,426	
Males	4,782	51.7
Females	5,644	48.3
Grade 7	1,874	13.2
Grade 8	1,955	13.7
Grade 9	1,794	16.0
Grade 10	1,702	16.4
Grade 11	1,557	17.1
Grade 12	1,544	23.6
Toronto	1,053	17.0
North	775	4.7
North Bay Parry Sound District (OS)	580	0.9
West	1,297	28.0
Peel Region (OS)	1,155	12.3
Niagara Region (OS)	889	3.4
Brant County (OS)	1,066	1.1
East	461	16.0
Durham Region (OS)	766	5.7
York Region (OS)	1,110	6.5
Simcoe Muskoka District (OS)	1,274	4.4
Public School	6,443	64.4
Catholic School	3,983	35.6

Notes: (1) OS=oversample for the public health unit/department; (2) mean age was 15.1 years (SD=1.9); (3) the 11 regional strata were mutually exclusive; (4) for the four regional estimates presented in this report, the North region includes North Bay Parry Sound District (combined $n=1,355$), the West region includes Peel Region, Niagara Region, and Brant County (combined $n=4,407$), and the East region includes Durham Region, York Region, and Simcoe Muskoka District (combined $n=3,611$).

Figure 2.2 Sample Demographics, 2015 OSDUHS (Weighted Percentages of Total Sample, N=10,426)



Data Analysis, Interpretation, and Presentation

Data Weighting

Our deliberate oversampling of students in certain regions and our equal allocation of students within grade (and the additional public health region oversamples), results in the oversampling and undersampling of students relative to their population share. Given that the objective of our analyses is to provide descriptive population estimates, our design-based analysis requires selection or case weights attached to each student to ensure the proper representation of students to the Ontario student population.⁴⁸

For each student, the final case weight is based on the product of five components: (1) the probability of a school being selected; (2) the probability of a class being selected within a selected school (components 1 and 2 comprise the base weight); (3) a student unit nonresponse adjustment factor; (4) a regional poststratification adjustment to restore regional representation; and (5) a final poststratification adjustment to restore the sex-by-grade distribution, using the most currently available provincial enrolment numbers.

Our weighted estimates are representative of all students in grades 7 through 12 enrolled in publicly funded schools in Ontario. Our population-scaled case weights expand our sample from **10,426 students to represent about 961,500 Ontario students** in grades 7 through 12, while ensuring that the sample composition corresponds to the population.⁴⁹

⁴⁸ The use of selection weights are not straightforward for analytic analyses, where data users must choose between an unbiased weighted estimate with inflated variance versus a biased unweighted estimate with smaller variance (Korn & Graubard, 1999).

⁴⁹ The population-scaled weights range in value from 1.661 to 936.903 (mean=92.229; median=54.776 and inflates to the population count of 961,584. The sample-scaled weight ranges in value from 0.018 to 10.158 (mean=1.00; median=0.594).

Sample Weights

One intuitive way of thinking of the sampling weight is that each student in the sample represents or “stands in” for 92 students in the province who share similar characteristics.

Survey Estimation

Before turning to the survey results, we must first discuss briefly the meaning, interpretation, and limitations of survey estimates as they pertain to our data. The main goal of sample surveys is to estimate the “true” value of a particular characteristic in the population – in our case, the percentage of Ontario students in grades 7–12 who report use of a specified drug or engage in a risk behaviour. Because we do not conduct a census of all students in the province, this “true” population percentage is unknown and must be estimated from a single sample. Consequently, every sample estimate has associated with it some degree of sampling error, a type of “statistical noise.” The accuracy of a percentage – the difference between the obtained sample percentage and the “true” population percentage – is determined by the degree of precision and bias. Consequently, our goal in sampling is to obtain accurate estimates – that is estimates with high precision and low bias while maintaining an acceptable cost.

Precision refers to the variance or sampling error surrounding an estimate; those summarized in the present report include a range, or confidence interval (CI), enclosing a percentage value. The reason for employing confidence intervals stems from the uncertainty, or sampling error, associated with using the results obtained from a single sample to draw conclusions about the entire population. If we had drawn another sample, using identical procedures, the results would probably have differed slightly from those we obtained from our present sample, although the CI would most likely enclose the true percentage in this sample as well. It is important to note that CIs do not include various

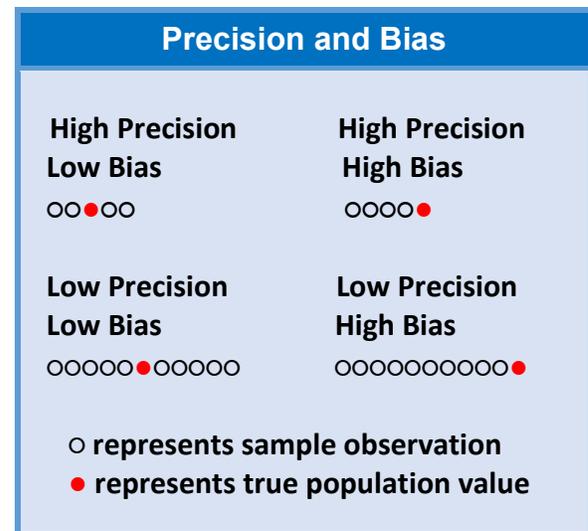
errors of bias such as nonresponse and misreporting (e.g., unintentional errors of memory and recall, or intentional errors of underreporting or overreporting).

The confidence interval enclosing a percentage estimate indicates the likelihood of CIs from repeated samples containing the true population percentage (in our case, 95% of the CIs drawn from repeated samples). In reporting that the percentage of students who carried a weapon in the past year was 5.1% (4.1%-6.4%), we infer that with repeated sampling 95% of the CIs would contain the true population value (ignoring bias). Narrower confidence intervals indicate greater precision, or less sampling error; wider intervals indicate less precision, or greater sampling error.

In our case, the width of the interval depends on three factors: first, the number of students surveyed – other things being equal, the larger the sample size the narrower or more precise is the interval because sampling variance decreases as the sample size increases; second, the size of the percentage – other things being equal, percentages near 50% have the widest interval (i.e., maximum variance) while percentages approaching 0% and 100% have the narrowest interval;⁵⁰ and third, design effects (deff) – in our design, other things being equal, the greater the similarity (or correlation) among students within schools and classrooms the larger is the deff, which, in turn, widens the interval.⁵¹ Changes in any of these three factors combine to affect the width of the confidence interval. All CIs shown in this report are design-adjusted, that is, accommodated for features of the complex sample design, and logit transformed to ensure

that the lower and upper limits neither subceed 0% nor exceed 100%, a matter especially important to the estimation of rare or common behaviours (see Korn & Graubard, 1999, pp. 66-68).

Bias, in contrast to precision, refers to sources of error that may systematically inflate or deflate estimates from the true percentage. Such sources of nonsampling error include underreporting or overreporting of drug use, memory effects, nonresponse, noncoverage, and other sources of systematic error. Thus, a percentage may have a high degree of precision (a narrow confidence interval) and yet may still be biased (not close to the true population value). The margins of error, or confidence intervals, we present in this report include only sampling error. Confidence intervals do not include errors due to nonsampling factors such as the underreporting of drug use and other illegal behaviours or sensitive information, or errors of memory or recall.



⁵⁰ This is because very large and very small percentages have little variability, as most students are either in the “yes” category or in the “no” category.

⁵¹ The design effect (deff), originated by Kish in 1965, represents the net effect of the combined influence of stratification, clustering and weighting, relative to a simple random sample. Deffs of 1.0 indicate a variable whose complex survey data has an equivalent precision to a simple random sample (SRS). Deffs larger than 1.0 indicate precision loss – precision less than an equivalent SRS. Deffs smaller than 1.0 indicate precision gain – precision greater than an equivalent SRS.

Validity of Self-Reports

The OSDUHS data collection features (i.e., in-class, self-completed, anonymous, voluntary) are the optimal conditions under which to survey adolescents about sensitive topics such as drug use, other illegal behaviours, and mental health problems (Brener et al., 2006; Gfroerer, Wright, & Kopstein, 1997; Griesler, Kandel, Schaffran, Hu, & Davies, 2008; Hibell et al., 2003; O'Malley, Johnston, Bachman, & Schulenberg, 2000; Tourangeau & Yan, 2007). We made full effort to elicit truthful responses by repeatedly ensuring students of complete anonymity and confidentiality of their responses. While the OSDUHS design does not include external, objective validation of students' self-reports of drug use (e.g., biomarkers) and mental health measures, we do have some inferential evidence to support their validity:

- The OSDUHS data have shown predictable relationships between self-reported drug use and other items including demographics, aggressive and other problem behaviours, and school problems (for examples see Cook et al., 2015; Fischer et al., 2013; Hamilton, van der Maas, Boak, & Mann, 2014; Vingilis et al., 2011). These various studies, including this descriptive report, provide empirical evidence of construct validity.
- As discussed earlier, the questionnaire includes several published, validated measures of problem-behaviour and mental health problems among adolescents.
- As discussed earlier, missing responses to the drug use questions are not substantially higher than nonsensitive questions (e.g., demographics) that immediately precede the drug use questions.
- The fictitious drug question elicited low levels of reported use indicating that intentional overreporting is likely minimal. Further, any cases reporting use of the fictitious drug or exaggerated drug use were removed from the dataset.

Still, there is research evidence to suggest that self-reported drug use, risk behaviours, and other problems are generally underreported to some extent due to the social stigma and sensitivity surrounding the (mostly) illegal behaviours being studied (Adlaf, 2005; Brener, Billy, & Grady, 2003; Delaney-Black et al., 2010; Hibell et al., 2003; McCambridge & Strang, 2006; Meiklejohn, Connor, & Kypri, 2012; Miech et al., 2015; Tourangeau & Yan, 2007). In addition to intentional misreporting, respondents may unintentionally misreport their responses due to various errors in the response process. Indeed, respondents may err in their reporting of a behaviour or event due to such factors as the event not being stored in memory; not understanding the question; being unable to retrieve the information; and difficulty in formatting a response based on provided categories (Biemer & Lyberg, 2003). Further, students absent from class have a greater propensity to engage in risk behaviours than students who are regularly present in class (Bovet, Viswanathan, Faeh, & Warren, 2006; Centers for Disease Control and Prevention, 1994; Eaton, Brener, & Kann, 2008; Michaud, Delbos-Piot, & Narring, 1998; Weitzman, Guttmacher, Weinberg, & Kapadia, 2003). **Considering all this, our survey results should be viewed as conservative, tending toward underestimation.** Yet, understated estimates still provide important public health information by establishing the lower bounds of a population value. Assuming that underreporting and absenteeism remains rather constant across years (as our data show for absenteeism), then any biases in trend estimates should remain constant across time. Therefore, trend estimates should not be greatly affected by any such biases (Cochran, 1977; Groves et al., 2009). Indeed, the steady nature of our trend curves provides support for this assertion.

2015 Estimation and Analysis

The OSDUHS design featuring stratification, clustering, and selection weights (due to unequal selection probabilities) requires the use of estimation methods that accommodate complex survey data. Unfortunately, many standard

statistical software systems assume that data are derived from simple random samples (i.e., the sampling of independent units with equal probability). Such systems cannot correctly estimate variances and their associated confidence intervals and statistical tests from such complex sample data.⁵²

All 2015 percentage and population count estimates and corresponding confidence intervals presented in this report were design-based and statistical tests were design-adjusted, (i.e., accommodated for characteristics of the complex sampling, namely, stratification, clustering, and weighting) using Taylor series linearization (TSL) available in Stata 13 (Heeringa et al., 2010; StataCorp, 2013).⁵³

The 2015 OSDUHS sampling design was comprised of **21 strata** (region by school level),⁵⁴ **220 primary sampling units** (schools), and **10,426 students**. The design-based degrees

⁵² Statistical systems assuming simple random samples (SRS) underestimate variances of complex sample data due to various violations of some key assumptions of SRS-based estimation, most notably being the independence of observations, which is readily violated by hierarchically clustered data and sampling with unequal probabilities. The consequence of this (and other) violations is underestimated variances and CIs resulting in overstated statistical inference (i.e., deflated probability levels). Another matter related to statistical testing is the calculation of degrees of freedom (*df*). In complex sampling the traditional calculation of the *df* no longer holds; instead, for stratified designs, fixed *df* are calculated based on the *sample design* $df = N_{PSU} - N_{strata}$. This correction typically reduces the *df*, which, in turn, results in lower statistical significance compared with the unadjusted *df*. Statistical systems that produce correct estimates now include general purpose software, including Stata *svy* suite of survey commands, SPSS Complex Samples module, SAS SURVEY procedures, R survey package, and dedicated systems including SUDAAN, WesVar, and Mplus.

⁵³ Estimation of percentages and other point parameters employed pseudo maximum likelihood estimation (PMLE) also known as weighted maximum likelihood estimation; estimation of variances and resulting confidence intervals employed first-order Taylor series linearization (TSL), a robust variance estimator, also known as the Huber White robust sandwich variance estimator.

⁵⁴ Elementary/middle schools were not sampled in one of the 11 regions, resulting in 21 rather than 22 strata.

of freedom (*df*) for our complex sample was 199 ($df=220$ [# school PSUs] – 21 [# strata]). We restrict design specification to stage 1 primary sampling units (schools), given that stage 2 variances (classes) “roll-up” into stage 1 PSUs (Heeringa et al., 2010, p. 67).⁵⁵ In addition, our negligible sampling fraction allows us to ignore the finite population correction (fpc) in our estimation.⁵⁶

The statistical significance of subgroup (i.e., sex, grade, region) differences in 2015 was tested using bivariate second-order design-adjusted Rao-Scott Pearson chi-square tests at the $p<.05$ level of significance (Heeringa et al., 2010).

Another unique feature of complex sample analysis is the estimation of subpopulations (e.g., drinking problems among drinkers or drinking-driving among drivers). If the analysis was to employ a simple selection filter command (e.g., “select if” drinker), the software would ignore the correct survey design elements and, consequently, miscalculate the degrees of freedom, and by doing so would overstate statistical tests leading to false positive findings. In this report, we employ unconditional subclass methods for all subgroup analyses by specifying a command (*subpop* in Stata) that properly retains the correct design structure information (clusters and strata) of the subpopulation and full sample.⁵⁷

⁵⁵ This restriction to stage 1 units has the added advantage of increasing the degrees of freedom by eliminating the stage 2 selection (classes).

⁵⁶ The fpc reflects the expected reduction in the sampling variance due to sampling without replacement and is used when the sampling fraction n/N exceeds 5%–10%. Given the negligible sampling fraction of the 2015 OSDUHS ($n/N=.01$) and the resulting fpc is ~ 1.0 , we have employed the standard practice of ignoring the fpc in variance estimation (Biemer & Lymer, 2003; Korn & Graubard, 1999).

⁵⁷ Essentially, such a procedure assigns a weight of zero to all cases outside of the subclass and retains the original weight for subclass cases (Heeringa et al., 2010; Korn & Graubard, 1999). Consequently, although observations are “removed,” their strata and PSUs are not.

Why do cluster samples “lose data”?

One way to understand the loss of data due to clustering is to consider a simple random sample (SRS) of students, each selected independently throughout the province. In this scenario, each student represents a simple case count of 1 because each provides unique, independent information. Because the sample is widely dispersed over a large area, there is wide variability in student characteristics. Students selected in this way would reside in different neighbourhoods, in families with differing incomes, ethnic backgrounds, parental occupations, and so on.

Now, consider a sample of students drawn from clusters of schools and classrooms. Because students in the same schools and classes share many of the same background characteristics and behaviours, they tend to be similar, resulting in extra-correlation. Because of this high similarity, each student is no longer providing unique, independent information, and so is no longer representing a student count of 1, but represents a count of less than 1.

Consequently, a SRS of 100 students would statistically represent 100 students. In contrast, a cluster sample of 100 students might effectively (statistically) represent only 70 SRS equivalent students, for example.

This reduction in effective sample size depends on the degree of similarity – greater similarity within clusters results in greater data loss due to a higher design effect.⁵⁸

⁵⁸ This is why sample designers attempt to design clusters that are *internally heterogeneous* (i.e., highly dissimilar). This goal, however, is difficult to attain with some organizational populations such as schools where the composition of organizational-based clusters may be highly structured and less manageable to control.

Trend Analysis

In this report, we describe three patterns of change in our data: the first describes changes between 2013 and 2015 (changes since the previous survey); the second describes trends from 1999 to 2015; and the third describes long-term trends from 1991 to 2015. To evaluate the time trends, a merged or “stacked” dataset was used.⁵⁹ All estimates spanning back to 1991 were accommodated for the respective survey design effects.

2015 vs. 2013 and 1999–2015 Trends

We first evaluated changes since the previous survey (i.e., 2015 vs. 2013). Following that, we evaluated changes since 1999 because this was the year the survey first included all grades from 7 through 12. The tests contrasting 2015 and 2013 estimates and estimates since 1999 were based on grades 7 through 12.

For time trends 1999 through 2015, we assessed change with a binary-response logistic regression providing an appraisal of the cycle-to-cycle change (with 2015 contrasted to each prior survey, i.e., reference group contrasts) as well as assessing the presence of linear and nonlinear trends.⁶⁰ A linear trend indicates a constant straight-line increase or decrease over the entire period. A nonlinear trend indicates a levelling-off and/or a change in direction over time (one or more bends in the line). Both linear and nonlinear trends may be simultaneously present in a longitudinal data series.

⁵⁹ Trend analyses were conducted using a stacked dataset cumulating all 20 cycles for the years 1977–2015. The full dataset contains 103,679 students enrolled in 2,473 schools (stage 1 PSU clusters) distributed among 264 region-by-school level-by-year strata. (Cluster and stratum codes were created with unique values across cycles.) The notion of a stacked dataset is descriptively accurate given that data from each cycle is sequentially stacked on top of one another. See Kish (1999) and Korn & Graubard (1999) for discussion on combining multiple surveys.

⁶⁰ Linear and nonlinear trends were evaluated with orthogonal polynomial contrasts that decompose linear from quadratic and higher order nonlinear contrasts.

1991–2015 Trends

The long-term trend analyses from 1991 through 2015 were based on an unconditional subpopulation consisting of only grades 7, 9 and 11, the three grades common to all survey cycles. Again, we assessed change with a binary-response logistic regression, providing an appraisal of the cycle-to-cycle change (with 2015 contrasted to each prior survey, i.e., reference group contrasts) and a joint test of the presence of any change between 1991 and 2015. We also assessed whether changes over time showed significant linear and nonlinear trends. Given the smaller long-term sample, we restricted our trend analyses to the total sample, and did not evaluate the long-term trends by subgroup.

For all statistical tests comparing percentages across time, we used the more conservative $p < .01$ significance level. As discussed earlier, absolute differences between two percentages do not necessarily signal meaningful differences. This more conservative significance level for temporal differences should reduce the problem of inflated false positive findings due to multiple testing – i.e., our large number of computed tests.

Reporting of Results

Readers should also note the following regarding our analyses and reporting:

- Statistical differences must be carefully interpreted. First, although we used methods to reduce the problem, our analysis does not fully resolve the problem of the large number of statistical tests performed. Indeed, for every 20 statistical tests, one “significant difference” could occur solely by chance, thus resulting in false positive findings. Second, outcomes that are statistically significant tell us only that the difference is probably not due to chance. Whether a statistically significant difference is a meaningful one of public health importance is a matter that requires both statistical and extra-statistical judgement.
- Readers should be mindful of the varying estimation sample sizes, even for the same subgroup. Although the modularized split ballot questionnaires (Form A vs. Form B) are efficient means to maximize data collection, sample sizes for the same subgroup of students (e.g., males) may vary widely depending on which questions from which questionnaire form are being assessed. Further, readers should note that only Form A was translated into French, therefore Form B was not completed in French-language schools.
- Visual inspection of overlapping CIs is a useful *approximation* of statistical findings, but each separate CI is a nominal 95% CI. Thus, when visually comparing two or more CIs for overlap, in some instances the visual difference may not perfectly correspond to a statistical test because the probability of two 95% CIs do not equal the probability of a single 95% statistical test.
- The scope of this report is limited to a select few epidemiologically relevant risk factors – sex, grade, and region. It should be obvious that not all potentially relevant risk factors were assessed in this report. Such investigations will be a matter for future work.
- We intentionally emphasize the influence of grade when describing age-based associations because grade-related findings are more readily translated into school system programming. Nonetheless, readers should recognize that our findings concerning grade associations and health indicators would, of course, mirror age associations.
- Our report is descriptive. Associations found in these data do not imply causal relationships. For example, regarding regional differences, we can only determine if a difference exists and describe the pattern of differences. Because other factors may be the root cause of regional differences (e.g.,

socioeconomic status differences or ethno-cultural differences), we cannot causally attribute such differences solely to the regional residence of students. Indeed, many socio-demographic characteristics are naturally “bundled” within region.

- Most estimates presented in this report are prevalence rates in percentages and population counts, the latter of which have been rounded downward.
- All analyses were based on casewise, or listwise, deletion of missing responses resulting in complete case analysis. In casewise deletion, if a student has at least one missing value for a set of items used in the analysis, *all* information from this student was temporarily removed from the specific analysis.
- For multi-item measures and screeners (e.g., the *K6*), we report the alpha reliability coefficient which measures the internal consistency of the scale – the degree to which the items are strongly interrelated and thus measure the same construct.
- Small percentages and estimates based on few students produce wide confidence intervals (i.e., large error) and ones that have a propensity toward being untrustworthy. In this report, estimates were suppressed due to unreliability (unstable) if they met any *one* of the following conditions:
 - (1) an estimate less than 0.5%;
 - (2) a base sample size (i.e., the denominator) of fewer than 50 students; or

- (3) a relative standard error, measured by the coefficient of variation⁶¹ (CV), exceeding a value of 33.3. This suppression threshold for untrustworthy estimates is also used by Statistics Canada and other statistical agencies.

Although the numerical value of a suppressed estimate is nonreportable, we may still draw useful interpretations of suppressed data. First, we can conclude that the estimate is too low to be discernible with our sample size. Second, a suppressed estimate can still establish that a behaviour has not measurably diffused into the student population.

⁶¹ The coefficient of variation is the ratio of the standard error to its estimate (i.e., $CV = SE/estimate$). Stata computes the CV as a percentage: $CV = (SE/estimate) \times 100\%$. This measure is especially useful when comparing the precision of measures with different percentage magnitudes and different sample sizes. Another important application of the CV is to flag potentially untrustworthy estimates requiring suppression.

Table 2.5 2015 OSDUHS Method and Sample Summary

2015 OSDUHS Method and Sample Summary	
Design	<ul style="list-style-type: none"> ▪ Target sample consisted of 7th–12th graders enrolled in provincially funded English and French language schools (public and Catholic school sectors) in Ontario during the 2014/2015 school year. Students excluded as being out-of-scope were those in private schools, those schooled in correctional or health facilities, those schooled on First Nations reserves, military bases, those schooled in the remote areas of Northern Ontario, and those who were home-schooled. ▪ Sample selected by a stratified (region by school level), two-stage cluster design. Stage 1: schools (stratified by region and school level) were selected by probability-proportionate-to-school size (PPS). Stage 2: classes (stratified by grade) were selected with equal probability. Both stages employed sampling without replacement (WOR). ▪ The primary stage stratification, which included both a design component (4 regions × 2 school levels) and an optionally-sponsored public health oversample (7 regions × 2 school levels), resulted in a combined total of 21 (22-1) region-by-school level strata (elementary/middle schools were not sampled in one of the 11 regions). ▪ Within each stratum, schools were selected by systematic random sampling according to PPS using the 2011/2012 Ontario Ministry of Education’s school enrolment database as the sampling frame. Within selected schools, one class per grade was randomly selected with equal probability of selection (EPSEM).
Participation	<ul style="list-style-type: none"> ▪ 10,523 of 7th–12th graders sampled from 220 schools, 750 classes, and who provided active parental consent and student assent, completed questionnaires from Nov. 2014 to June 2015. ▪ 63% of selected schools, 88% of selected classes, and 59% of students in participating classes participated in the survey. ▪ The final (edited) sample of 10,426 students is representative of the 961,500 7th–12th graders enrolled in Ontario’s publicly funded public and Catholic schools.
Questionnaire	<ul style="list-style-type: none"> ▪ Four split ballot versions (Form A-ES, Form B-ES, Form A-SS, Form B-SS) of the anonymous, self-completed, paper-and-pencil instrument (PAPI), which averaged 30 minutes to complete, were administered in classrooms by trained staff from the Institute for Social Research.
Student Characteristics	<ul style="list-style-type: none"> ▪ Males (n=4,782; 52% weighted); Females (n=5,644; 48% weighted) ▪ 7th graders (n=1,874; 13%); 8th graders (n=1,955; 14%); 9th graders (n=1,794; 16%); 10th graders (n=1,702; 16%); 11th graders (n=1,557; 17%); 12th graders (n=1,544; 24%). ▪ Toronto (n=1,053; 17%); North (n=1,355; 6%); West (n=4,407; 45%); East (n=3,611; 33%).
Data Quality	<ul style="list-style-type: none"> ▪ Cases (n=44) not responding to at least half the questionnaire were not entered into the dataset. ▪ Data editing rules were applied, resulting in 135 (n=38 invalid sex or age; n=97 invalid or exaggerated drug use responses) ‘untrustworthy’ questionnaires removed from the final dataset. ▪ Nonresponse analysis comparing classes with participation rates of 70% or higher to classes with lower rates showed no significant differences in most of the key drug-related measures.
Analysis	<ul style="list-style-type: none"> ▪ Selection weights were used to account for differing sampling probabilities and to restore the sample to the corresponding population distribution. Poststratification adjustments were used to correspond to the Ministry of Education’s 2012/2013 enrolment for sex-by-grade groupings. ▪ The complex sample analysis model is based on a design with 220 primary sampling unit clusters (schools), 750 secondary sampling unit clusters (classes) distributed among 21 region-by-school level strata. For analysis, only stage 1 primary sampling units (schools) and strata were necessary to approximate the two-stage sampling design used to draw the sample.

Table 2.6 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 engaging in physical activity (defined as a total of at least 60 minutes of moderate-to-vigorous activity per day) on <i>each</i> of the seven 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 seven days before the survey.
Screen Time Sedentary Behaviour	Reporting watching TV and/or on a computer for recreational purposes for three hours or more per day, on average, during the seven 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 <i>International Obesity Task Force</i> , 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.”
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.
Unmet Need for Mental Health Support	Reporting not knowing where to turn when wanted to talk to someone about a mental health or emotional problem (during the 12 months before the survey).
Fair/Poor Self-Rated Mental Health	Rating one’s mental or emotional health as either “fair” or “poor.”
Psychological Distress	The <i>Kessler 6-Item Psychological Distress Scale</i> (K6) was used to measure unspecified psychological distress (symptoms of anxiety and/or depression). A score of at least 8 of 24 (Likert scoring) was used to indicate a moderate-to-serious level of distress experienced during the past four weeks. A score of 13 or higher was used to indicate serious psychological distress during the past four weeks.
Symptoms of Attention-Deficit/Hyperactivity Disorder (ADHD)	Scoring at least 14 of 24 (Likert scoring) on the <i>ADHD Self-Report Scale</i> (ASRS).
Antisocial Behaviour (Index)	Reporting at least three of the following nine antisocial behaviours in the 12 months before the survey: vandalized property, theft of goods worth \$50 or less, theft of goods worth more than \$50, stole a car/joyriding, breaking and entering, sold cannabis, ran away from home, assaulted someone (not a sibling), and carried a weapon.
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 ways: 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 ways: verbally, physically, or stealing/damaging something of theirs.
Cyberbullying 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 were classified as “not bullied.”
Any Gambling Activity	Reporting gambling money (any amount) at any gambling activity during the 12 months before the survey.
Multi-Gambling Activity	Reporting gambling money at five or more gambling activities during the 12 months before the survey.
Low-to-Moderate Gambling Problem Severity	Scoring 2 to 5 of 27 (Likert scoring) on the <i>Gambling Problem Severity Subscale</i> (GPSS) of the <i>Canadian Adolescent Gambling Inventory</i> (CAGI).
High Gambling Problem Severity	Scoring 6 or higher of 27 (Likert scoring) on the <i>Gambling Problem Severity Subscale</i> (GPSS) of the <i>Canadian Adolescent Gambling Inventory</i> (CAGI).
Video Gaming Problem	Reporting at least five of the nine symptoms on the <i>Problem Video Game Playing (PVP) Scale</i> , which measures preoccupation, tolerance, school and family problems due to video gaming during the 12 months before the survey.

Table 2.7 Outline of Topics Presented in the Report by Survey Year

	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015
3.1 Home & School Life													
Family Living Arrangement	•	•	•	•	•	•	•	•	•	•	•	•	✓
Parental Monitoring	•	•	•	•	•	•	•	•	•	•	•	•	✓
Part-Time Employment [‡]	•	•	•	•	•	•	•	•	•	•	•	•	✓ ^A
Social Media Use	•	•	•	•	•	•	• ^B	•	•	•	•	✓	✓ ^A
School Performance and Attitudes	✓	✓	✓	✓	✓	✓ ^B	✓ ^A						
School Suspension or Expulsion	•	•	•	•	•	•	•	•	•	•	•	•	✓ ^A
School Climate	•	•	•	•	✓	✓	✓	✓	✓	✓	✓	✓	✓
Subjective Social Status at School	•	•	•	•	•	•	•	•	•	•	•	•	✓
3.2 Physical Health													
Self-Rated Physical Health	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Asthma Diagnosis	•	•	•	•	•	•	•	•	•	•	✓ ^B	✓ ^B	✓ ^B
Physical Activity	•	•	•	•	•	•	•	•	•	✓	✓	✓	✓
Physical Activity at School	•	•	•	•	✓ ^A	✓ ^A	✓	✓	✓	✓	✓	✓	✓
Screen Time Sedentary Behaviour	•	•	•	•	•	•	•	•	•	✓	✓	✓	✓
Overweight or Obese	•	•	•	•	•	•	•	•	✓	✓	✓	✓	✓
Body Image and Weight Control	•	•	•	✓ ^A	•	✓ ^B							
Go to Bed or School Hungry	•	•	•	•	•	•	•	•	•	•	•	•	✓ ^B
8+ Hours of Sleep on a School Night	•	•	•	•	•	•	•	•	•	•	•	•	✓ ^B
Use of an Indoor Tanning Device	•	•	•	•	•	•	•	•	•	•	•	✓ ^B	✓ ^B
Medically Treated Injury	•	•	•	•	•	•	✓ ^A	✓ ^A	✓ ^B				
Helmet Use While Bicycling	•	•	•	•	•	•	•	•	•	•	•	✓ ^B	✓ ^B
Seatbelt Use	•	•	•	•	•	•	•	•	•	•	✓ ^B	✓ ^B	✓ ^B
Texting While Driving	•	•	•	•	•	•	•	•	•	•	•	✓ ^B	✓ ^B
Vehicle Collision as a Driver	•	•	•	•	•	•	•	•	•	•	✓ ^B	✓ ^B	✓ ^B
3.3 Health Care Utilization													
Physician Health Care Visit	•	•	•	•	✓	✓	✓	✓	✓	✓	✓ ^B	✓ ^B	✓ ^B
Mental Health Care Visit	•	•	•	•	✓	✓	✓	✓	✓	✓	✓ ^A	✓ ^A	✓ ^A
Medical Tranquillizer/Sedative Use [‡]	✓	✓	✓	✓	✓	✓	✓ ^B	✓ ^A	✓ ^A	✓ ^A	✓ ^A	✓	✓
Medical ADHD Drug Use	•	•	•	•	•	•	•	•	✓	✓	✓	✓	✓ ^A
Medical Opioid Pain Reliever Use	•	•	•	•	•	•	•	•	✓	✓	✓	✓	✓ ^B
Prescription for Depression/Anxiety [‡]	•	•	•	•	•	✓ ^A							
Sought Counselling Over the Phone	•	•	•	•	•	•	•	✓ ^A					
Sought Counselling Over the Internet	•	•	•	•	•	•	•	•	•	•	✓ ^A	✓ ^A	✓ ^A
Unmet Need for Mental Health Support	•	•	•	•	•	•	•	•	•	•	•	✓ ^A	✓ ^A

(cont'd)

	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015
3.4 Internalizing Indicators													
Self-Rated Mental Health	•	•	•	•	•	•	•	•	✓ ^A				
Low Self-Esteem	•	•	•	•	•	•	•	•	•	•	•	•	✓ ^A
Elevated Stress	•	•	•	•	•	•	•	•	•	•	•	•	✓ ^A
Psychological Distress (K6 scale)	•	•	•	•	•	•	•	•	•	•	•	✓ ^A	✓ ^A
Suicidal Ideation	•	•	•	•	•	✓ ^A							
Suicide Attempt	•	•	•	•	•	•	•	•	✓ ^A				
ADHD Symptoms (ASRS scale)	•	•	•	•	•	•	•	•	•	•	•	•	✓ ^A
3.5 Externalizing Indicators													
Nonviolent Antisocial Behaviour	✓	✓	✓	✓ ^B	✓ ^B	✓ ^A							
Violent/Aggressive Behaviour	✓	✓	✓	✓ ^B	✓ ^B	✓ ^A							
Violence on School Property	•	•	•	•	•	✓ ^A							
Bullying Behaviour at School	•	•	•	•	•	•	✓ ^A						
Victim of Cyberbullying	•	•	•	•	•	•	•	•	•	•	✓ ^A	✓ ^A	✓ ^A
3.6 Gambling & Video Gaming													
Gambling Activities	•	•	•	•	•	✓ ^A							
Gambling Problems (GPSS scale) [±]	•	•	•	•	•	•	•	•	•	•	•	•	✓ ^A
Video Gaming Problems (PVP scale)	•	•	•	•	•	•	•	•	✓ ^B	✓ ^B	✓ ^A	✓ ^A	✓ ^A
3.7 Coexisting Problems[±]													
	•	•	•	•	•	•	•	•	•	•	•	•	✓ ^A
3.8 Overview by LHIN Areas[±]													
	•	•	•	•	•	•	•	•	•	•	•	•	✓
3.9 Overview of the GTA													
	•	•	•	•	•	•	•	•	•	•	•	•	✓

• not available; ^A Form A random half sample; ^B Form B random half sample; [±] based on Grades 9–12 only

3. RESULTS

3.1 Home and School

3.1.1 Family Living Arrangement

Family structure is an important influence on child and youth development. Indeed, family structural factors, such as an “intact” family – defined by the presence of two (or more) parents (including a stepparent) – can increase or decrease the economic, emotional and cognitive resources available to children, thereby affecting their well-being (Gore, Aseltine, & Colton, 1992; Mohanty & Ullah, 2012; Paxton, Valois, & Drane, 2007; Simons, Lin, Gordon, Conger, & Lorenz, 1999; Wells & Rankin, 1991).

Between 1993 and 1995, family living arrangement was measured with the question “*Do you currently live with both parents?*” In 1997, this was revised to “*With whom are you currently living?*” Starting in 2007, the question was revised again to “*Which of the following adults live with you in your main home?*” Students were instructed to check all that apply from the following list: *birth mother, stepmother, adoptive mother, birth father, stepfather, adoptive father, brother/stepbrother, sister/stepsister, grandparent(s), other adult relative(s), foster parent(s), others*. We also asked whether students live in a single home, or divide their time between two or more homes.

2015 (Grades 7–12):

- An estimated 19.7% (95% CI: 18.0%-21.4%) of students report that they live with a single parent or with no parent (that is, neither a birth parent, nor an adoptive parent, nor a stepparent).
- About 12.8% (95% CI: 11.5%-14.4%) of students report that they divide their living between two or more homes.

3.1.2 Parental Monitoring

Students were asked whether one of their parents knows their whereabouts when away from home – an indicator of parental monitoring.

2015 (Grades 7–12):

- Most students (91.5%; 95% CI: 90.5%-92.4%) report that at least one parent “always” or “usually” knows where they are when away from home.

3.1.3 Family Subjective Social Status

The OSDUHS included the *MacArthur Scale of Subjective Social Status* to measure perceived family socioeconomic status (Goodman et al., 2001; Karvonen & Rahkonen, 2011). The questionnaire showed a 10-rung ladder to represent the social hierarchy of Canadian society. Students were asked to choose the rung that best represents their family’s place in Canadian society with respect to money, education, and occupation. The higher the rung, the higher the perceived family subjective social status (SSS) – more money, higher education, and highly respected occupations. For our purpose, we look at the percentage reporting low family SSS (rungs 1–3 on the ladder), average SSS (rungs 4–7), and high SSS (rungs 8–10).

2015 (Grades 7–12):

- About 2.4% (95% CI: 2.0%-3.0%) of students rank their family SSS as low. Over half of students (57.6%; 95% CI: 55.3%-59.8%) rank their family SSS as average, and 40.0% (95% CI: 37.6%-42.4%) of students rank their family SSS as high.

3.1.4 Part-Time Employment

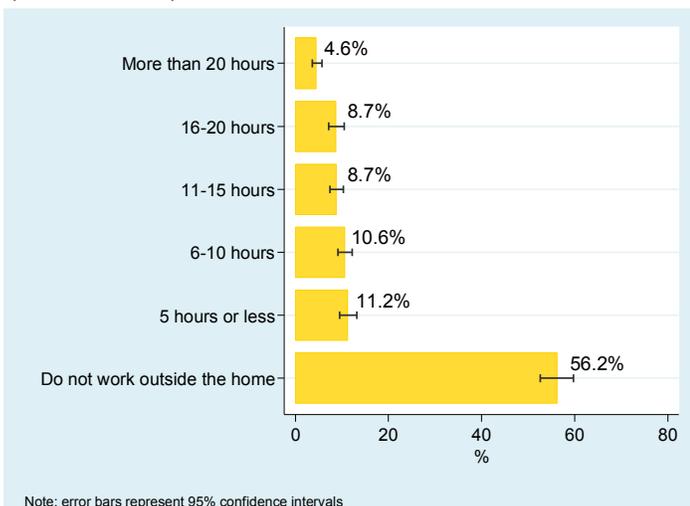
(Figure 3.1.1)

A random half sample of secondary students was asked how many hours per week they work for pay outside the home. The question was “*On average, how many hours a week do you spend working for pay outside the home, during the school year?*”

2015 (Grades 9–12):

- ❑ Over half (56.2%) of students in grades 9–12 do not work outside of the home. About 11.2% work five hours or less outside of the home, while 4.6% work more than 20 hours per week.

Figure 3.1.1
Hours per Week Work Outside the Home, 2015 OSDUHS
(Grades 9–12)



3.1.5 Social Media Use

(Figures 3.1.2, 3.1.3)

A random half sample of students was asked how many hours daily they usually spend on social media websites, with the question: “*About how many hours a day do you usually spend on social media websites such as Facebook, Twitter, Instagram, Snapchat, either posting or browsing?*” Students also had the option to respond that they do not use these sites, or that they do not use the Internet. Here we focus on the percentage who report spending five or more hours daily on social media.

2015 (Grades 7–12):

- ❑ Most students visit social media websites on a daily basis. About 12.4% spend less than one hour daily on these sites, whereas 6.1% spend seven or more hours daily. About 7.0% do not use social media at all.
- ❑ About 16.0% of students in grades 7–12 report usually spending five or more hours on social media per day.
- ❑ Females (22.4%) are significantly more likely than males (10.1%) to report spending five or more hours daily on social media.
- ❑ There is significant grade variation, with students in grades 10 and 11 (about 21%-22%) most likely to spend five or more hours daily on social media.
- ❑ There is significant regional variation, with students in Toronto (22.6%) most likely to spend five or more hours daily on social media, whereas students in the West (13.5%) are least likely.

2013–2015 (Grades 7–12):

- ❑ The percentage of students who report spending five or more hours on social media per day significantly increased between 2013 and 2015, from 10.7% to 16.0%.

Figure 3.1.2
Hours per Day Spent on Social Media, 2015 OSDUHS
(Grades 7–12)

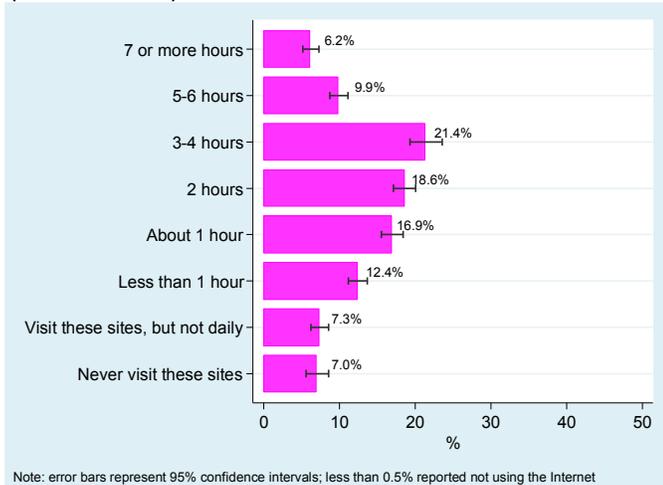
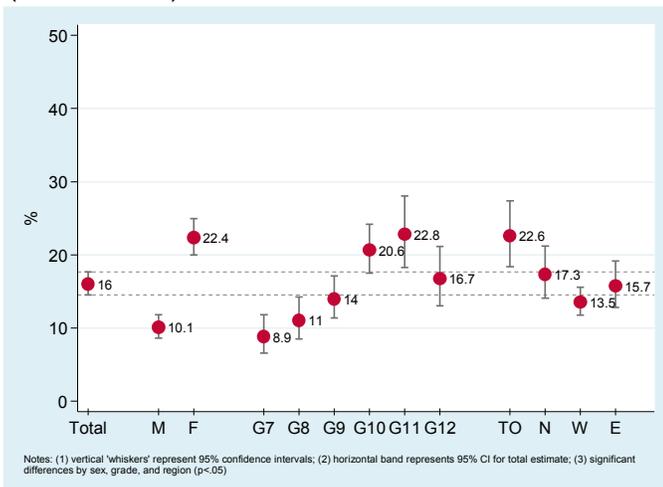


Figure 3.1.3
Percentage Reporting Usually Spending Five or More Hours per Day on Social Media, 2015 OSDUHS
(Grades 7–12)



3.1.6 School Performance

(Table A3.1.1)

School is one of the major socialization agents in adolescent development. In addition to academics, school fosters social skills, a personal sense of competence, all of which influence current and future health-related behaviours.

Starting in the early 1990s, the OSDUHS introduced a set of questions about students' school experiences including school grades usually received and time spent on homework.

2015 (Grades 7–12):

- ❑ Overall, 13% of students report usually receiving school grades of 90% or higher; 43% report grades between 80% and 89%; 36% report grades between 70% and 79%; 6% report grades between 60% and 69%; and about 1% report usually receiving grades below 60%.
- ❑ One-quarter (24.4%) of students spend less than one hour on homework per week outside of school. One-in-seven (13.6%) students report spending seven hours or more on homework weekly outside of school.

1999–2015 (Grades 7–12):

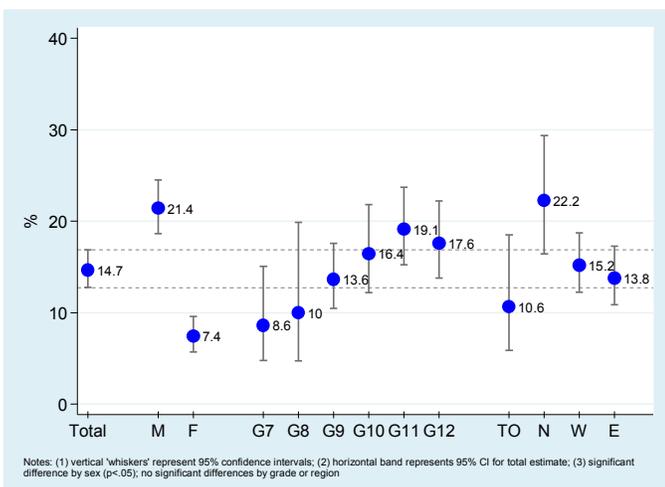
- ❑ The percentage of students who report usually receiving grades of 80% or higher significantly increased between 1999 (37.8%) and 2015 (56.3%).
- ❑ Between 1999 and 2015, the percentage of students reporting that they spend less than an hour on homework outside of school did not significantly change.

3.1.7 School Suspension or Expulsion (Figure 3.1.4)

Starting in 2015, a random half sample of students was asked whether or not they have ever been “suspended, expelled, or excluded from any school in your lifetime?”

- ❑ An estimated 14.7% (95% CI: 12.7%-16.9%) of students report being suspended or expelled from school at least once in their lifetime.
- ❑ Males (21.4%) are much more likely than females (7.4%) to report being suspended or expelled from school.
- ❑ Despite some variation among the grades, these differences are not statistically significant.
- ❑ Despite some variation among the four regions, these differences are not statistically significant.

Figure 3.1.4
Percentage Reporting Ever Being Suspended or Expelled from School by Sex, Grade, and Region, 2015 OSDUHS



3.1.8 School Climate

(Figures 3.1.5–3.1.7; Tables 3.1.1, A3.1.1, A3.1.2)

School climate is a multidimensional construct, usually referring to the physical, organizational, and cultural elements of a school. Examples of school climate characteristics include school size, policies and enforcement, teaching quality, student misconduct, and attachment to school. School climate can influence not only academic performance, but also skill development, social behaviour, and emotional well-being (Bond et al., 2007; Bonny et al., 2000; Saab & Klinger, 2010; Welsh, 2000).

Starting in 1991, students were asked how much they like school with the question: “Some people like school very much while others don’t. How do you feel about going to school?” Starting in 1999, students were asked to indicate their agreement on a five-point scale (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.

2015 (Grades 7–12):

- ❑ One-third (32.3%) of students report liking school very much or quite a lot. Half (49.5%) of students like school to some degree. About 18.2% report not liking school very much or at all.
- ❑ Males (32.5%) and females (32.1%) are equally likely to like school very much or quite a lot.
- ❑ There is significant grade variation, with students in grade 7 (49.3%) most likely, and students in grade 11 (20.8%) least likely, to report liking school very much or quite a lot.

- ❑ There is significant regional variation, with students in Toronto (38.7%) most likely to report liking school compared with students in the other three regions (28%-33%).
- ❑ Most students feel close to people at their school (88.2%), and feel like they are part of their school (86.2%).
- ❑ Although almost all students (95.0%) generally feel safe in their school, 12.1% – an estimated 120,300 Ontario students – are worried about being harmed, threatened, or being a victim of theft at school.
- ❑ Males (11.4%) and females (12.9%) are equally likely to be worried about being harmed or threatened at school.
- ❑ Despite some variation, the differences among the grades regarding worry about being harmed at school are not statistically significant.
- ❑ There are no significant regional differences.

1999–2015 (Grades 7–12):

- ❑ As seen in Table 3.1.1, the percentage of students who report they like school very much or quite a lot significantly declined between 2013 (44.3%) and 2015 (32.3%). However, the 2015 estimate is similar to that seen in 1999 (29.6%).
- ❑ The percentage of students worried about being harmed or threatened at school did not significantly change between 2013 (15.4%) and 2015 (12.1%). The 2015 estimate is also similar to that seen in 1999 (14.2%), the first year of monitoring.

Figure 3.1.5
Attitudes about School, 2015 OSDUHS (Grades 7–12)

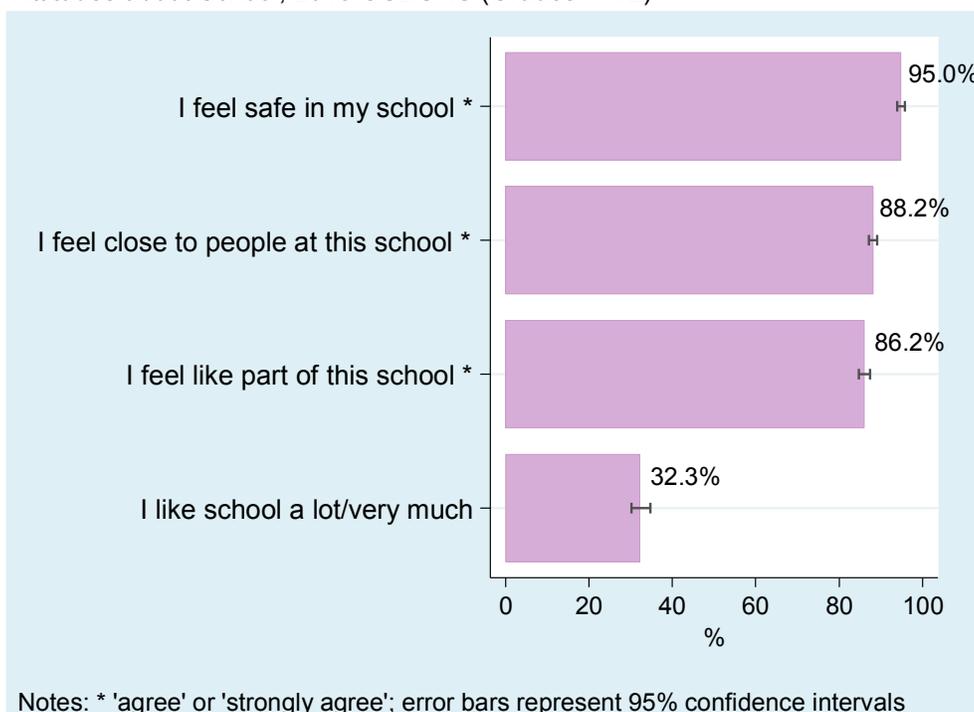


Figure 3.1.6
 Percentage Reporting They Like School “Very Much” or “Quite a lot” by Sex, Grade, and Region, 2015 OSDUHS

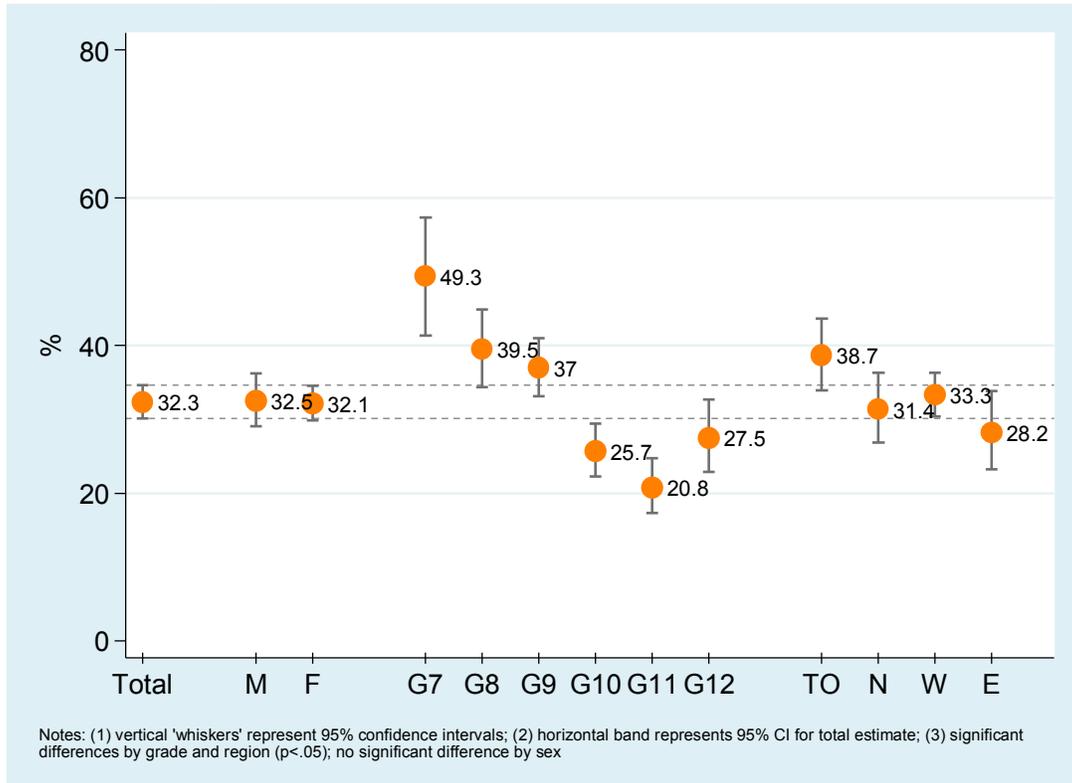


Figure 3.1.7
 Percentage Reporting Being Worried About Being Harmed, Threatened, or a Victim of Theft at School by Sex, Grade, and Region, 2015 OSDUHS

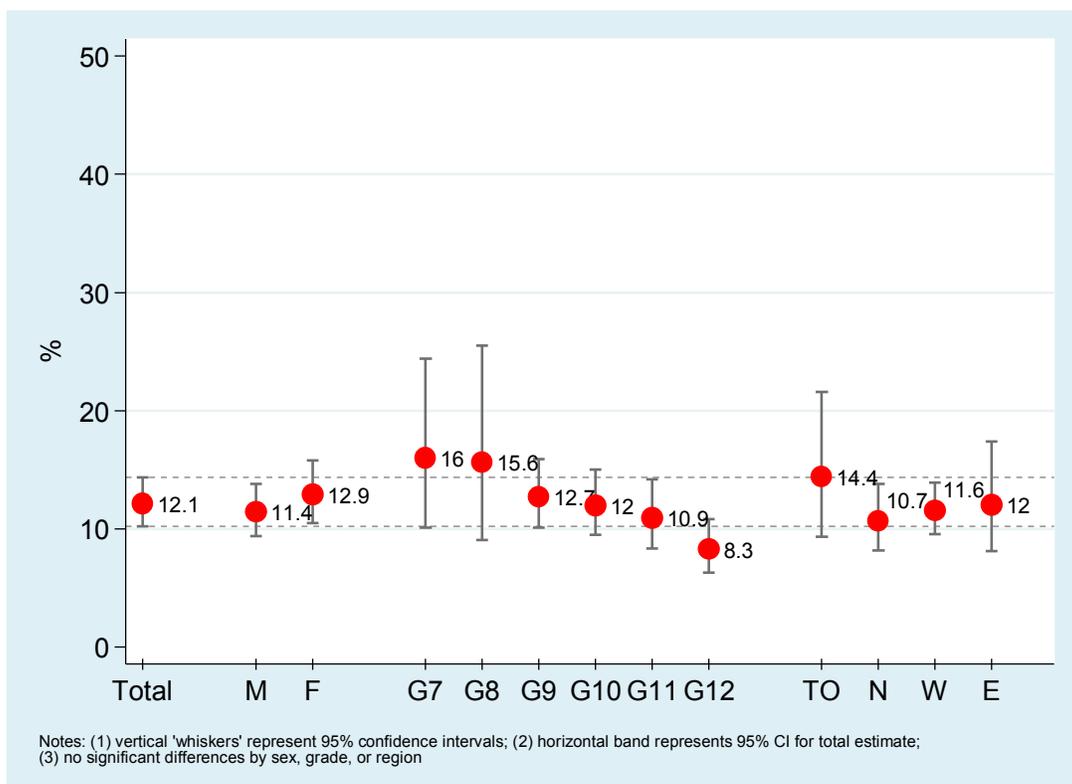


Table 3.1.1 Attitudes About School, 1999–2015 (Grades 7–12)

	1999	2001	2003	2005	2007	2009	2011	2013	2015
TOTAL SAMPLE (n=)	(4447)	(3898)	(6616)	(7726)	(6323)	(9112)	(9288)	(10272)	(10426)
I feel close to people at this school*	85.4	87.8	86.9	88.7	89.7	89.3	91.2	88.4	88.2
I feel like I am part of this school*	83.8	84.9	82.7	85.7	87.1	85.8	88.5	86.8	86.2
I feel safe in my school*	90.4	91.4	90.9	92.6	92.7	93.8	95.6	95.7	95.0
Like school very much or quite a lot	29.6	26.8	28.3	30.6	33.3	35.5	44.1	44.3	32.3 ^a
Worried that will be harmed/threatened at school	14.2	13.1	12.4	12.8	11.7	12.3	18.2	15.4	12.1

Notes: n=number of students surveyed; the last two questions were asked of a random half sample; entries are percentages; * “agree” or “somewhat agree” with the statement; ^a 2015 vs. 2013 significant difference, p<.01; no significant differences 2015 vs. 1999.

Source: OSDUHS, Centre for Addiction and Mental Health

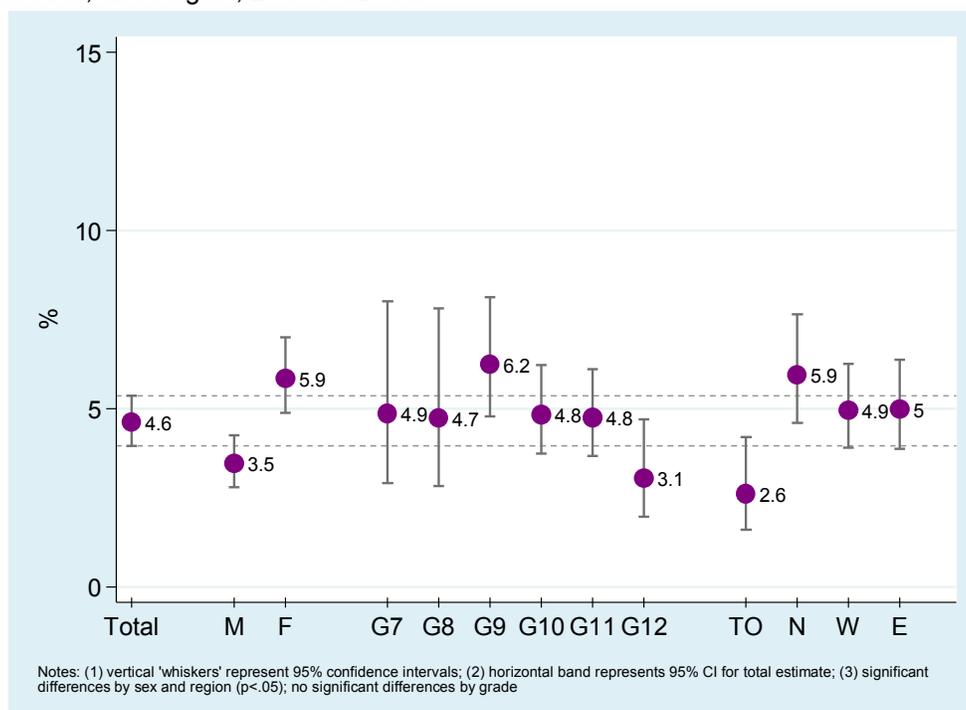
3.1.9 School Subjective Social Status (Figure 3.1.8)

For the first time in 2015, the OSDUHS included the *MacArthur Scale of Subjective Social Status* to measure perceived status at school (Goodman et al., 2001; Sweeting & Hunt, 2014). The questionnaire included a 10-rung ladder to represent the social hierarchy at school. The question was “*Imagine this ladder below is a way of picturing your school. At the top of the ladder are the people in school with the most respect and the ‘highest standing.’ At the bottom of the ladder are the people who no one respects and no one wants to hang out with. Please check off the numbered box that best shows where you would place yourself on this ladder.*” The higher the rung on the ladder, the higher the subjective social status (SSS) at school. For our purpose, we look at the percentage reporting low school SSS (rungs 1–3 on the ladder), average SSS (rungs 4–7), and high SSS (rungs 8–10). We also look at subgroup differences regarding low school SSS.

2015 (Grades 7–12):

- ❑ About 4.6% (95% CI: 4.0%-5.4%) report low SSS at school. Half (50.4%; 95% CI: 48.4%-52.4%) report average SSS at school, and 45.0% (95% CI: 42.9%-47.0%) report high SSS at school.
- ❑ Females are significantly more likely than males to report low SSS at school (5.9% vs. 3.5%, respectively).
- ❑ There are no significant grade differences regarding low SSS at school.
- ❑ There are significant differences among the regions showing that students in Toronto (2.6%) are the least likely to report low SSS at school compared with students in the other three regions (about 5%-6%).

Figure 3.1.8
Percentage Reporting Low Subjective Social Status (SSS) at School by Sex, Grade, and Region, 2015 OSDUHS



3.2 Physical Health

3.2.1 Self-Rated Physical Health

(Figures 3.2.1, 3.2.2; Table A3.2.1)

One of the more frequently used indicators of a person's current health status is perceived or self-rated health. Despite its simplicity, this global assessment of health status has been shown to be a reliable measure and a valid predictor of physical health and emotional well-being among adolescents (Fosse & Haas, 2009), and future morbidity and mortality (Idler & Benyamini, 1997).

Since 1991, global self-rated health has been measured with the question "*How would you rate your physical health?*" The response options were *poor, fair, good, very good, or excellent*. We describe the percentage of students who rate their health as fair or poor.

2015 (Grades 7–12):

- About two-thirds of Ontario students rate their health as either excellent (25.2%) or very good (41.1%). At the risk end, 7.6% report fair or poor health, which represents roughly 72,200 Ontario students.
- Females (8.9%) are significantly more likely than males (6.4%) to report fair or poor health.
- There is significant grade variation, with students in grades 11 and 12 most likely to report fair or poor health (about 9%-10%).
- There are no significant differences among the four regions.

1999–2015 (Grades 7–12):

- Among the total sample of students, fair/poor self-rated health remained stable between 2013 (7.0%) and 2015 (7.6%). No subgroup shows a change between these two years.
- The percentage rating their health as fair/poor significantly increased between 1999 (8.9%) and 2011 (15.6%), subsequently declined in 2013 (7.0%), and remained stable in 2015. The current estimate of 7.6% is similar to that seen in 1999.

1991–2015 (Grades 7, 9, 11 only):

- Among 7th, 9th, and 11th graders only, fair/poor self-rated health increased from a low of 5.8% in 1991 up to 12.0% in 2003 and remained elevated and stable until 2011. There was a significant decline in 2013 and stability again in 2015. The current level resembles the low levels seen when monitoring first began over two decades ago.

Figure 3.2.1
Self-Rated Physical Health, 2015 OSDUHS (Grades 7–12)

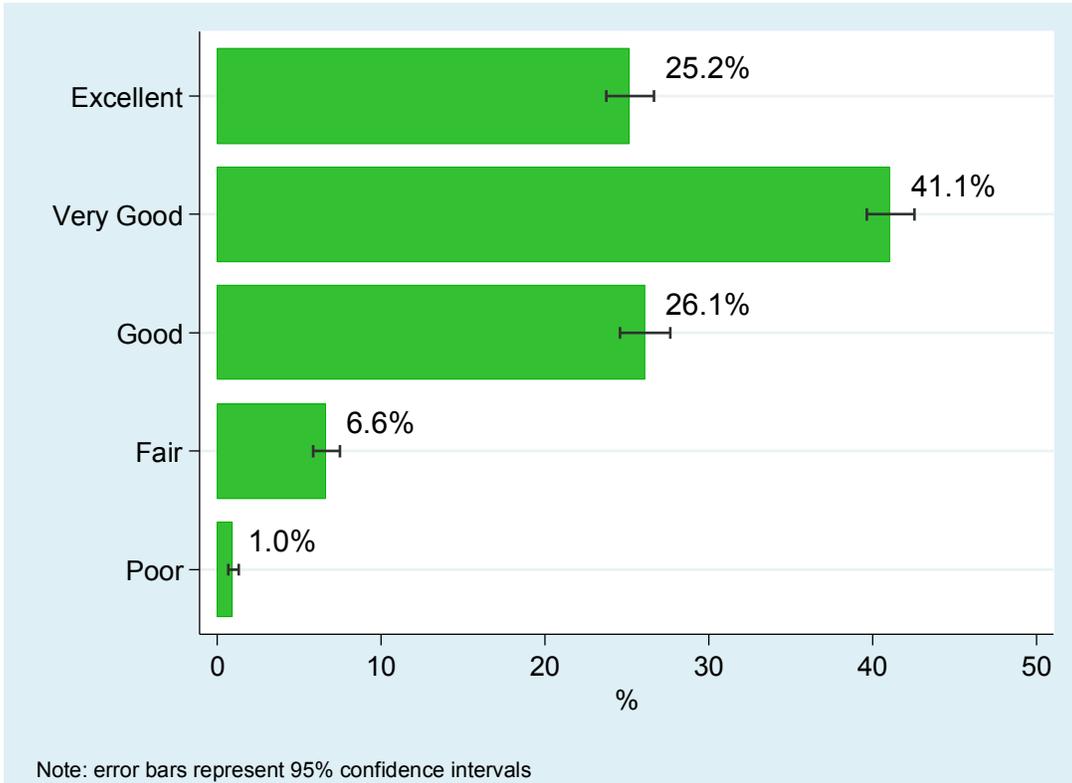
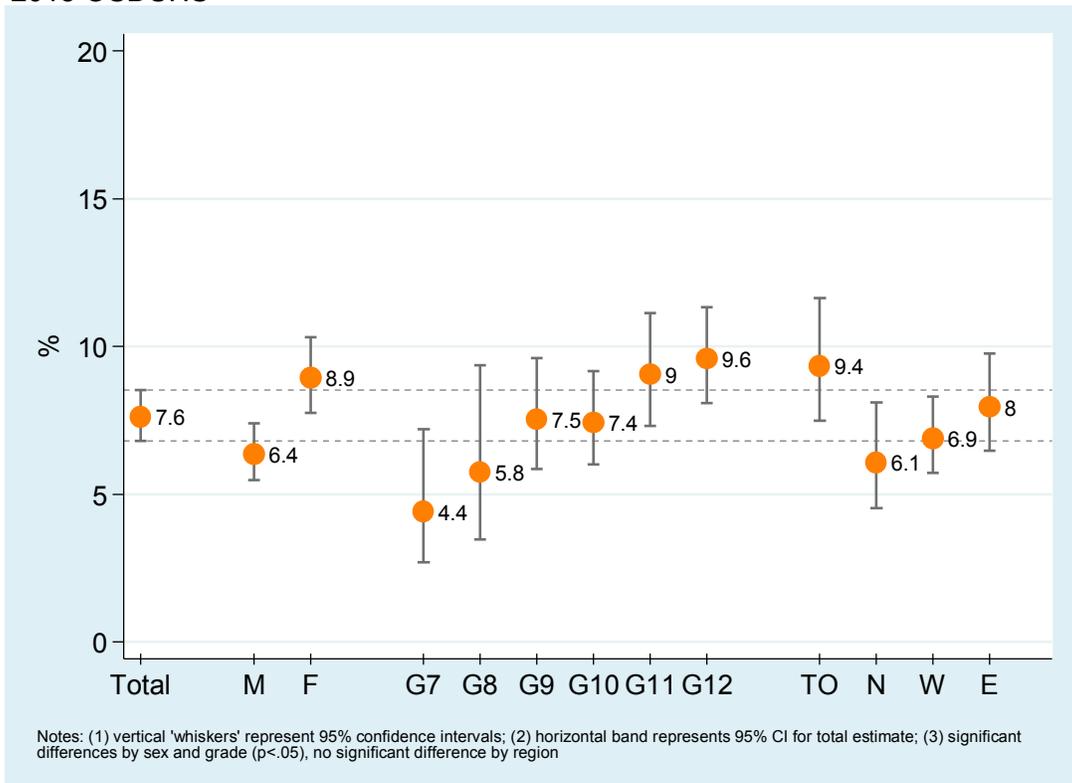


Figure 3.2.2
Percentage Reporting Fair or Poor Physical Health by Sex, Grade, and Region, 2015 OSDUHS



3.2.2 Asthma Diagnosis

(Figure 3.2.3; Table A3.2.2)

The prevalence of asthma among children and adolescents is typically twice that of adults, and there is some evidence to suggest that it has increased over time (Gershon, Guan, Wang, & To, 2010).

Starting in 2011, a random half sample of students was asked whether they have had an asthma diagnosis. The question was “*Has a doctor or nurse ever told you that you have asthma?*” The four response options were *No*, *Yes, I have asthma now*, *Yes, I used to have asthma, but not anymore*, or *Not sure*. Here we present the percentage who report that they currently have asthma.

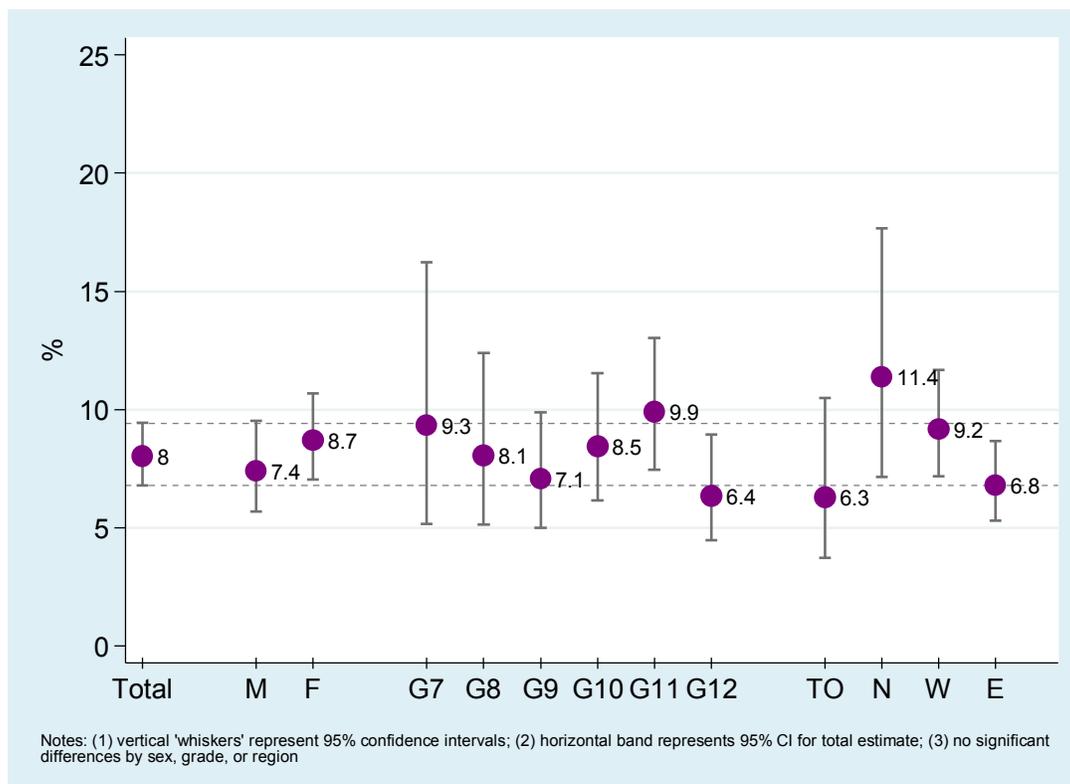
2015 (Grades 7–12):

- ❑ An estimated 8.0% (95% CI: 6.8%-9.4%) of students currently have asthma. This estimate represents about 71,900 Ontario students in grades 7–12.
- ❑ Males (7.4%) and females (8.7%) are equally likely to report currently having asthma.
- ❑ There are no significant grade differences.
- ❑ Despite some variation among the four regions, there are no significant differences.

2011–2015 (Grades 7–12):

- ❑ The percentage of students who report having a current asthma diagnosis in 2015 (8.0%) does not significantly differ from 2013 (7.9%), or 2011 (9.0%), the first year of monitoring.

Figure 3.2.3
Percentage Reporting a Current Asthma Diagnosis by Sex, Grade, and Region,
2015 OSDUHS



3.2.3 Daily Physical Activity

(Figure 3.2.4; Table A3.2.3)

Regular physical activity offers short-term physical and mental health benefits, such as reducing the risk of obesity and stress, and improving self-esteem (Faulkner et al., 2007; Petty, Davis, Tkacz, Young-Hyman, & Waller, 2009). Moreover, an active lifestyle established during adolescence is likely to extend into adulthood (Singh et al., 2008). In Canada, a minimum of 60 minutes of moderate-to-vigorous physical activity per day is recommended for children and youth (Janssen, 2007).

Starting 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 describe the percentage of students who report meeting the 60-minute daily recommendation on each of the past seven days.

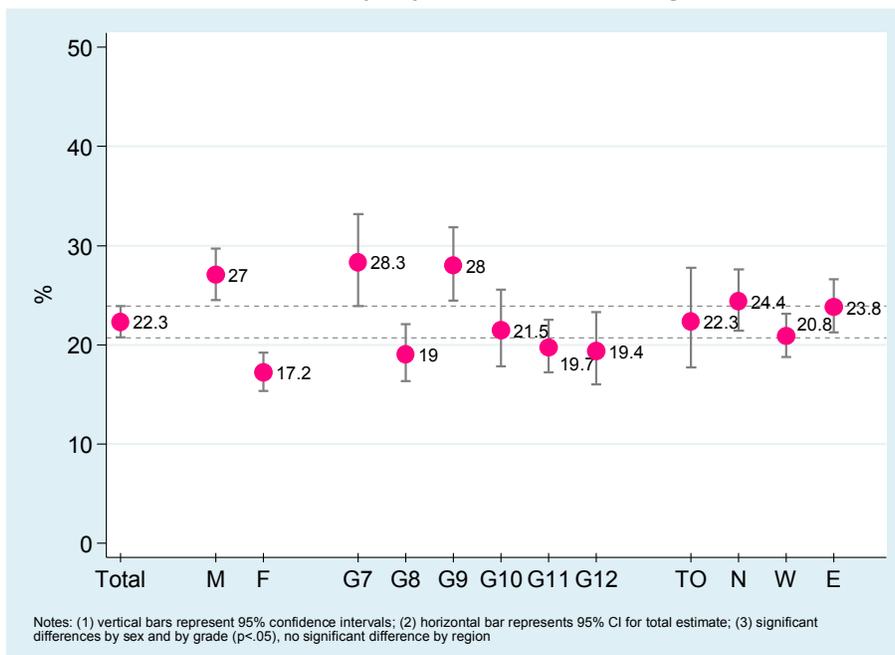
2015 (Grades 7–12):

- ❑ About one-in-five (22.3%) students report meeting the 60-minute daily activity recommendation. This estimate represents about 210,600 Ontario students.
- ❑ Males (27.0%) are significantly more likely than females (17.2%) to be active daily.
- ❑ Sixty-minute daily physical activity significantly decreases with grade, from 28.3% of 7th graders to about 19% of 11th and 12th graders.
- ❑ There are no significant differences among the four regions.

2009–2015 (Grades 7–12):

- ❑ There has been no significant change in the percentage of 7th–12th graders meeting the daily physical activity recommendation between 2009 (20.8%) and 2015 (22.3%).
- ❑ Among the subgroups, 8th graders show a significant decrease between 2009 and 2015 (from 26.7% to 19.0%), whereas 12th graders show an increase (from 14.1% to 19.4%).

Figure 3.2.4
Percentage Meeting the 60-Minute Daily Physical Activity Recommendation on Each of the Past Seven Days by Sex, Grade, and Region, 2015 OSDUHS



3.2.4 Physical Inactivity

(Figure 3.2.5; Table A3.2.4)

This section describes the percentage of students who report *no* days of physical activity (defined as at least 60 minutes in total per day of moderate-to-vigorous activity) during the seven days before the survey.

2015 (Grades 7–12):

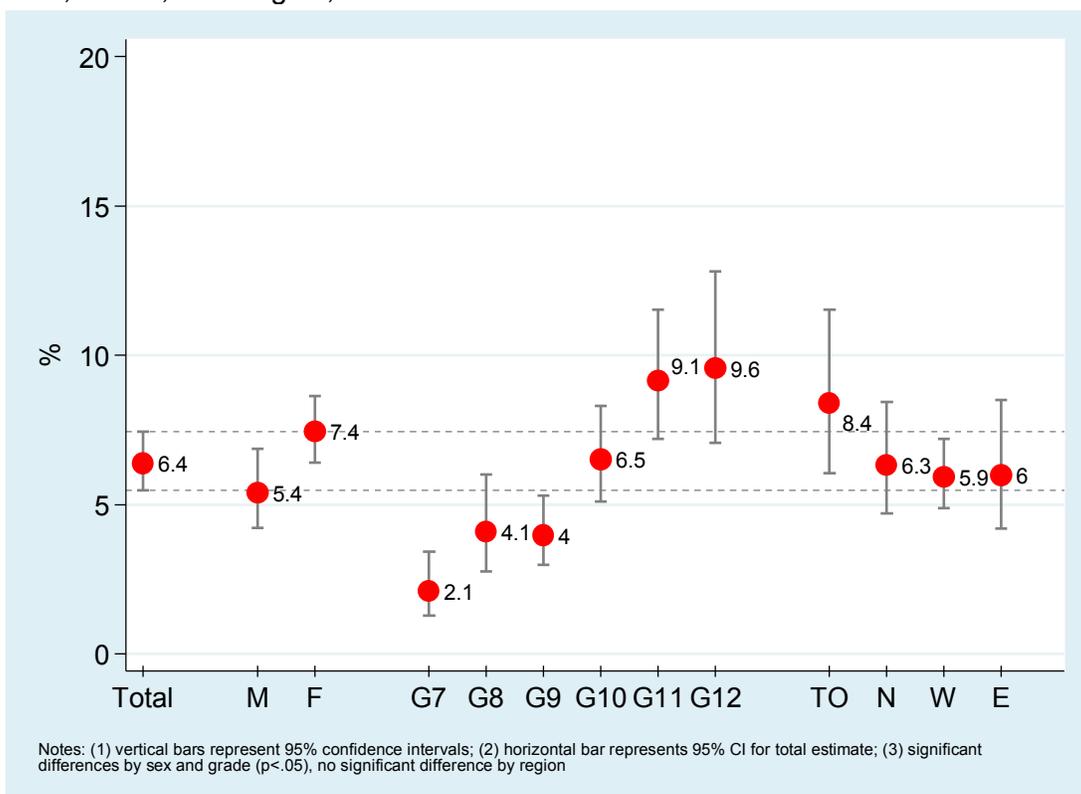
- ❑ An estimated 6.4% of students were physically inactive on each of the seven days before the survey. This estimate represents about 60,400 Ontario students.
- ❑ Females (7.4%) are significantly more likely than males (5.4%) to be inactive.
- ❑ Inactivity significantly increases with grade, peaking in 11th and 12th grades at about 9%-10%.

- ❑ Despite some variation, there are no significant differences among the four regions.

2009–2015 (Grades 7–12):

- ❑ There was a significant decrease in the percentage of all students who report being inactive between 2009 (8.5%) and 2015 (6.4%).
- ❑ Among the subgroups, only 7th graders and 9th graders show significant decreases between 2009 and 2015.

Figure 3.2.5
Percentage Reporting No Physical Activity on Any of the Past Seven Days by Sex, Grade, and Region, 2015 OSDUHS



3.2.5 Physical Inactivity at School

(Figures 3.2.6, 3.2.7; Table A3.2.5)

Starting in 1999, students were asked about physical activity at school, specifically in physical education (PE) 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 describe the percentage of students who reported no days of physical activity in PE class. Note that this estimate includes those students who reported that they were not currently enrolled in a PE class (these students were assigned to the “no days of activity” group). Also note that we retained the previously used 20-minute guideline because the 60-minute recommendation is not feasible given the varying lengths of PE classes across the province.

2015 (Grades 7–12):

- Just under half (41.9%) of all students do not engage in physical activity in a PE class.

- Males (40.4%) and females (43.4%) are equally likely to be inactive at school.
- Inactivity at school significantly increases with grade, from about 10%–13% among 7th and 8th graders to 62.9% among 12th graders.
- There are no significant regional differences.

1999–2015 (Grades 7–12):

- The percentage of students who report being physically inactive at school in a PE class significantly decreased between 2013 (51.0%) and 2015 (41.9%). The 2015 estimate is similar to the percentage found in 1999 (43.8%), when monitoring first began.
- Among the subgroups, inactivity at school significantly decreased between 2013 and 2015 among males, females, 9th graders, 11th graders, Northern, and Western students. Notably, students in grades 7 and 8 show a dramatic decrease in inactivity at school since 1999 (from 30.0% in 1999 to 10.9% in 2015 among 7th graders; from 23.9% in 1999 to 13.0% in 2015 among 8th graders).

Figure 3.2.6
Percentage Reporting No Physical Activity at School in Physical Education Class on Any of the Past Five School Days by Sex, Grade, and Region, 2015 OSDUHS

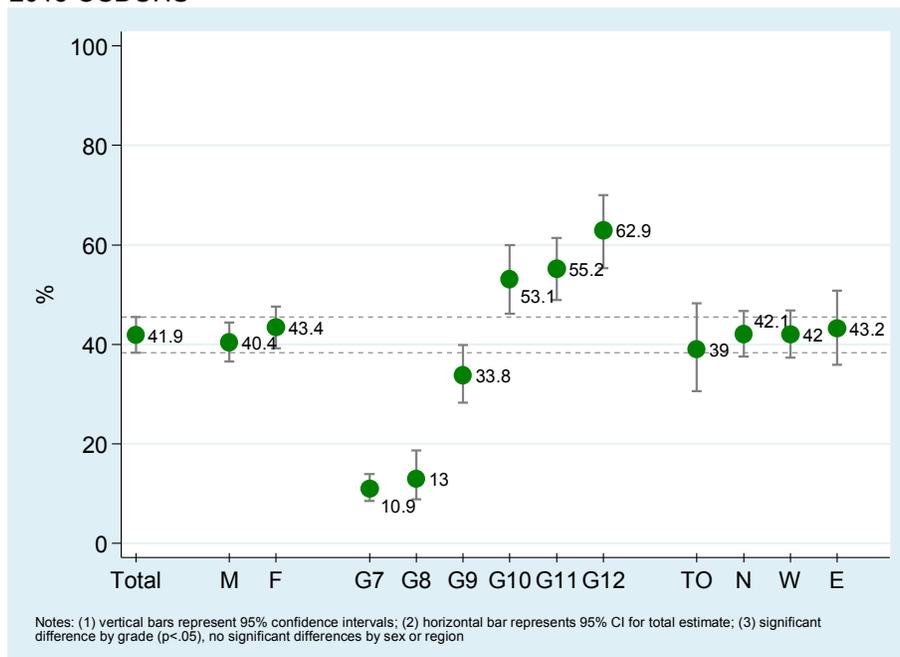
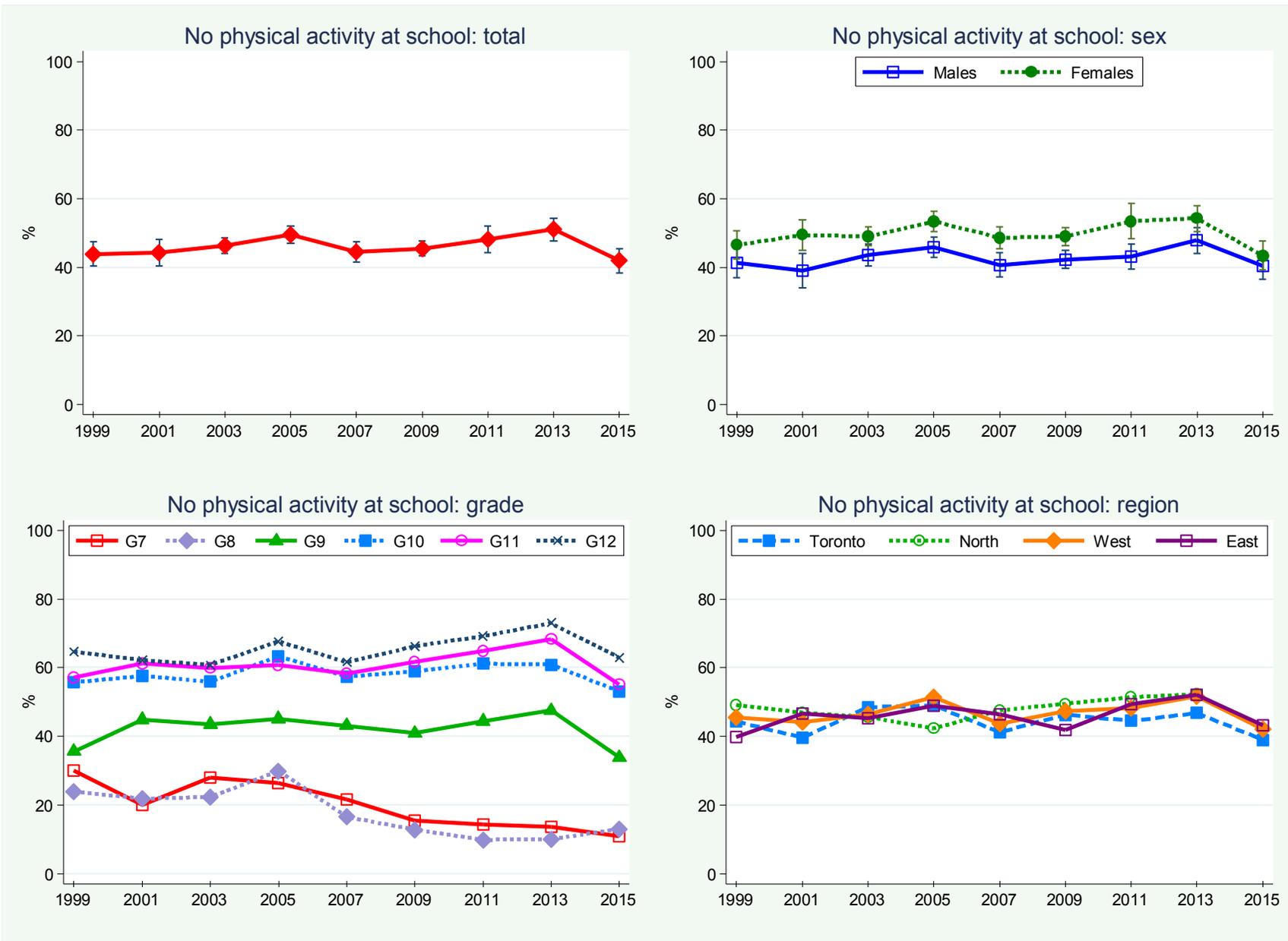


Figure 3.2.7
 Percentage Reporting No Physical Activity at School in Physical Education Class on Any of the Past Five School Days,
 1999–2015 OSDUHS (Grades 7–12)



3.2.6 Screen Time Sedentary Behaviour (Figure 3.2.8; Table A3.2.6)

Starting in 2009, students were asked about the usual amount of time they spend in front of a computer or television (i.e., “recreational 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/tablet chatting, emailing, or surfing the Internet in your free time?*” The Canadian Society for Exercise Physiology’s *Canadian Sedentary Behaviour Guidelines for Children and Youth* recommend that youth aged 12–17 limit recreational screen time to no more than two hours per day (Tremblay et al., 2011). Here we present the percentage considered to be sedentary, based on reporting three or more hours per day of screen time. Responses of “not sure” (5% of the total sample) were coded as missing values and were excluded from the analysis.

2015 (Grades 7–12):

- Almost two-thirds (62.6%) of students spend at least three hours a day on recreational screen time. This estimate

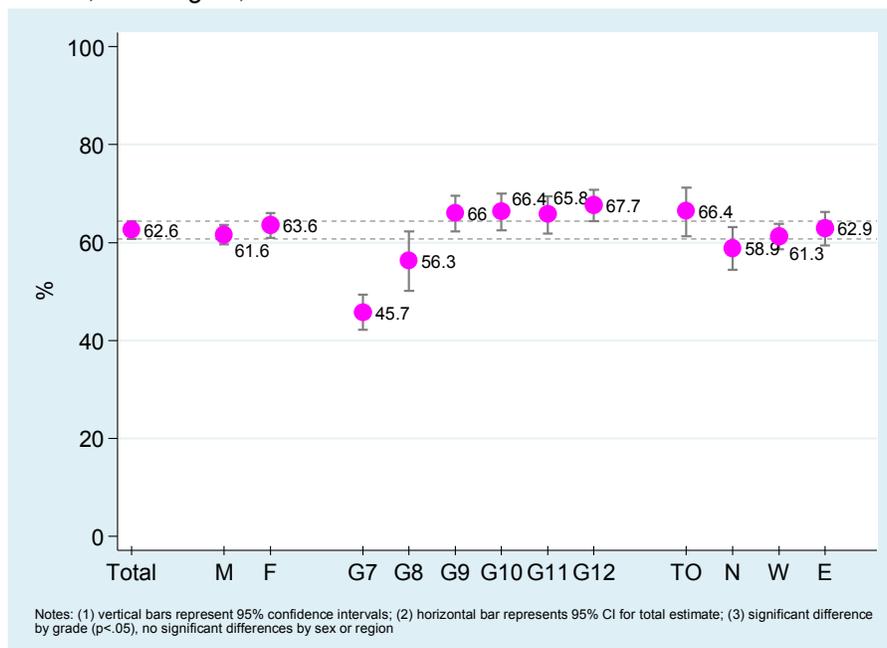
represents about 570,300 Ontario students in grades 7–12. At the extreme end, 13.0% report seven or more hours a day, representing about 118,900 students.

- Males (61.6%) and females (63.6%) are equally likely to spend at least three hours a day in front of a screen.
- There is significant grade variation showing that 7th graders (45.7%) are least likely to be screen time sedentary. The percentage climbs about 10 points up until 9th grade and then remains stable.
- There are no significant regional differences.

2009–2015 (Grades 7–12):

- The percentage of students who are screen time sedentary in 2015 (62.6%) is significantly higher than the estimate from 2013 (58.3%), as well as from 2009 (57.4%), the first year of monitoring.
- Among the subgroups, females, 9th graders, 12th graders, students in the West and East regions show significant increases over time.

Figure 3.2.8
Percentage Reporting Three or More Hours per Day of Recreational Screen Time (Sedentary Behaviour) in the Past Seven Days by Sex, Grade, and Region, 2015 OSDUHS



3.2.7 Overweight or Obese

(Figures 3.2.9, 3.2.10; Table A3.2.7)

Since 2007 the OSDUHS has asked students to report their current height and weight, using precoded response options.⁶² Body mass index (BMI) was calculated as weight in kilograms divided by height in metres squared.⁶³ Students without valid height and weight responses (6% of the total sample, $n=629$) 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-points created by Cole and colleagues (2000), 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 (Brener, McManus, Galuska, Lowry, & Wechsler, 2003; Elgar & Stewart, 2008; Sherry, Jefferds, & Grummer-Strawn, 2007; Tsigilis, 2006).

2015 (Grades 7–12):

- An estimated 8.7% (95% CI: 7.7%-10.0%) of students are classified as underweight, 64.8% (63.2%-66.4%) are a healthy weight, 19.0% (17.8%-20.3%) are overweight, and 7.4% (6.6%-8.2%) are classified as obese.

- An estimated 26.4% of students are either overweight or obese. This percentage represents about 239,600 7th–12th graders in Ontario.⁶⁴
- Males (30.0%) are significantly more likely than females (22.5%) to be overweight or obese.
- Despite some grade variation in the percentage estimated to be overweight or obese, the differences among the grades are not statistically significant.
- There are no significant differences among the four regions.

2007–2015 (Grades 7–12):

- The percentage of Ontario students who are classified as overweight or obese in 2015 (26.4%) is significantly higher than the percentage in 2007 (23.2%), the first year of monitoring. No subgroup shows a significant change.

⁶² Experimental work on the OSDUHS showed that the precoded format reduced missing value responses versus open-ended formats. The height question contained 27 precoded categories ranging from 4'4"/132 cm or less to 6'6"/198 cm or more. The weight question contained 42 precoded categories ranging from 80 lbs/36 kg or less in 5 lb increments to 281 lbs/127 kgs or more (the midpoints of these categories were used for the BMI calculation).

⁶³ Using the “zanthro” module in *Stata* 13.0.

⁶⁴ The estimate for overweight/obese using the *WHO Reference 2007* cut-points (de Onis et al., 2007) is 29.8% (95% CI: 28.2%-31.5%).

Figure 3.2.9
 Percentage Classified as Underweight, Healthy Weight, Overweight, and Obese,
 2015 OSDUHS (Grades 7–12)

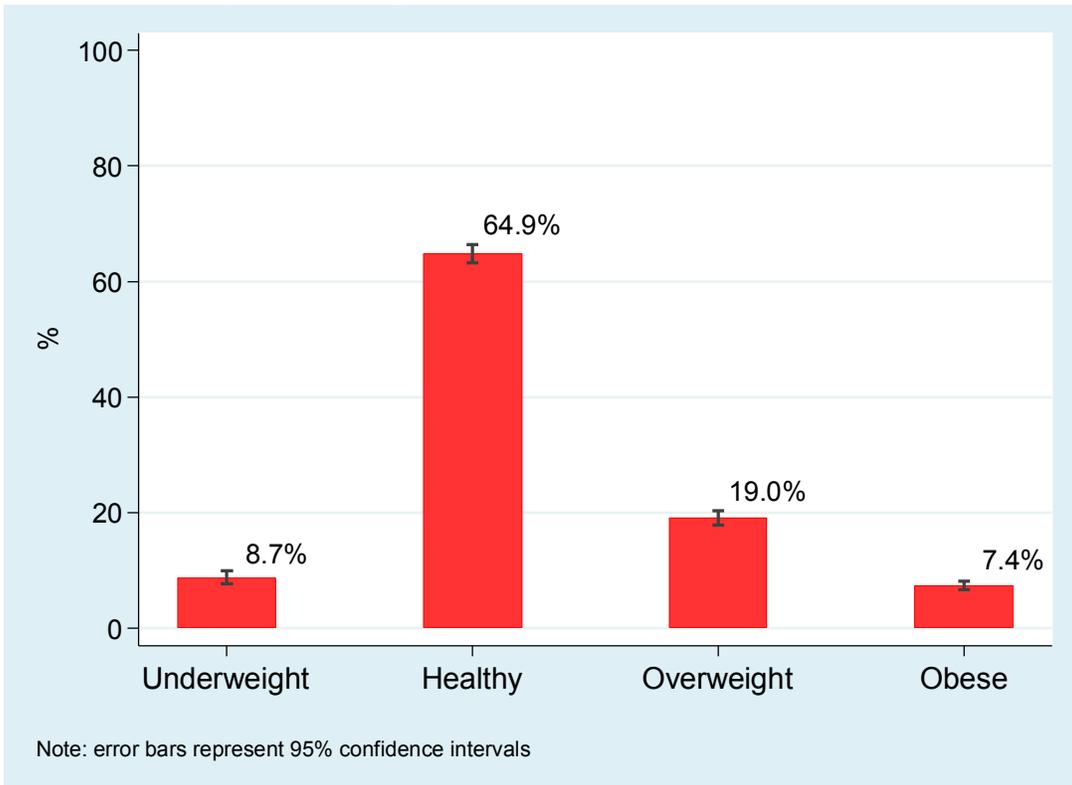
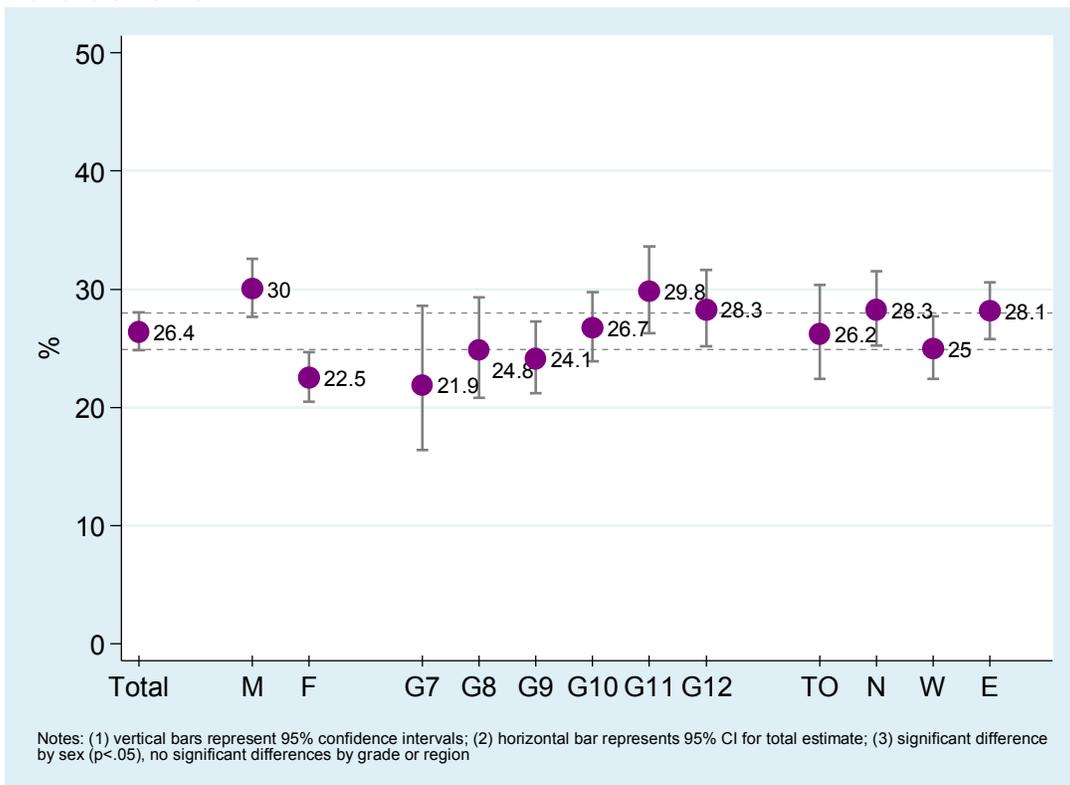


Figure 3.2.10
 Percentage Classified as Overweight or Obese by Sex, Grade, and Region,
 2015 OSDUHS



3.2.8 Body Image and Weight Control

(Figures 3.2.11, 3.2.12; Table A3.2.8)

The issues surrounding body image and weight become increasingly prominent during the adolescent years. Teenagers, especially females, can become preoccupied with achieving an “ideal” body, which can subsequently cause physical and mental health problems. In the extreme, a fixation on body image can lead to eating disorders such as anorexia nervosa or bulimia.

Since 2001, the OSDUHS included questions measuring beliefs about personal weight and desired change in weight. Two questions were asked of a random half sample: (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?”*

2015 (Grades 7–12):

- ❑ Two-thirds (67.4%) of students are satisfied with their weight. About one-in-five (22.3%) believe they are too fat, and one-in-ten (10.3%) believe they are too thin.
- ❑ Females are twice as likely as males to believe that they are too fat, (30.1% vs. 14.8%, respectively), whereas males are three times more likely than females to believe that they are too thin (14.6% vs. 5.8%, respectively).
- ❑ Satisfaction with weight significantly differs by grade, but the direction of change is dependent on sex. Among males, believing one is too thin increases with grade, from 4.8% of 7th graders to 20.5% of 12th graders. Among females, believing one is too fat increases with grade, from 18.2% of 7th graders to 34.2% of 12th graders.
- ❑ There are no significant regional differences.

- ❑ One-third (34.2%) of students are not trying to alter their weight. Another 28.0% are attempting to lose weight, 25.0% want to keep from gaining weight, and 12.8% want to gain weight.
- ❑ Females are significantly more likely than males to report they are trying to lose weight (35.3% vs. 21.1%, respectively), whereas males are much more likely than females to report that they are trying to gain weight (21.4% vs. 3.7%, respectively).
- ❑ The desire to change one’s weight significantly differs by grade, but the direction is dependent on sex. Among males, attempts to gain weight increase with grade, from 7.9% of 7th graders to 29.8% of 12th graders. In contrast, among females, attempts to lose weight significantly increase with grade, from 27.4% of 7th graders to 38.6% of 12th graders.
- ❑ There are no significant regional differences.

2001–2015 (Grades 7–12):

- ❑ The percentage of all students in 2015 who believe they are too fat is similar to the percentage seen in 2001, the first year of monitoring (22.3% vs. 18.7%, respectively). However, among the subgroups, only females show a significant increase in this belief, from 23.6% in 2001 to 30.1% in 2015). Males did not show an increase.
- ❑ There have been no significant changes over time regarding weight control efforts.

Figure 3.2.11
Body Image and Weight Control by Sex, 2015 OSDUHS (Grades 7–12)

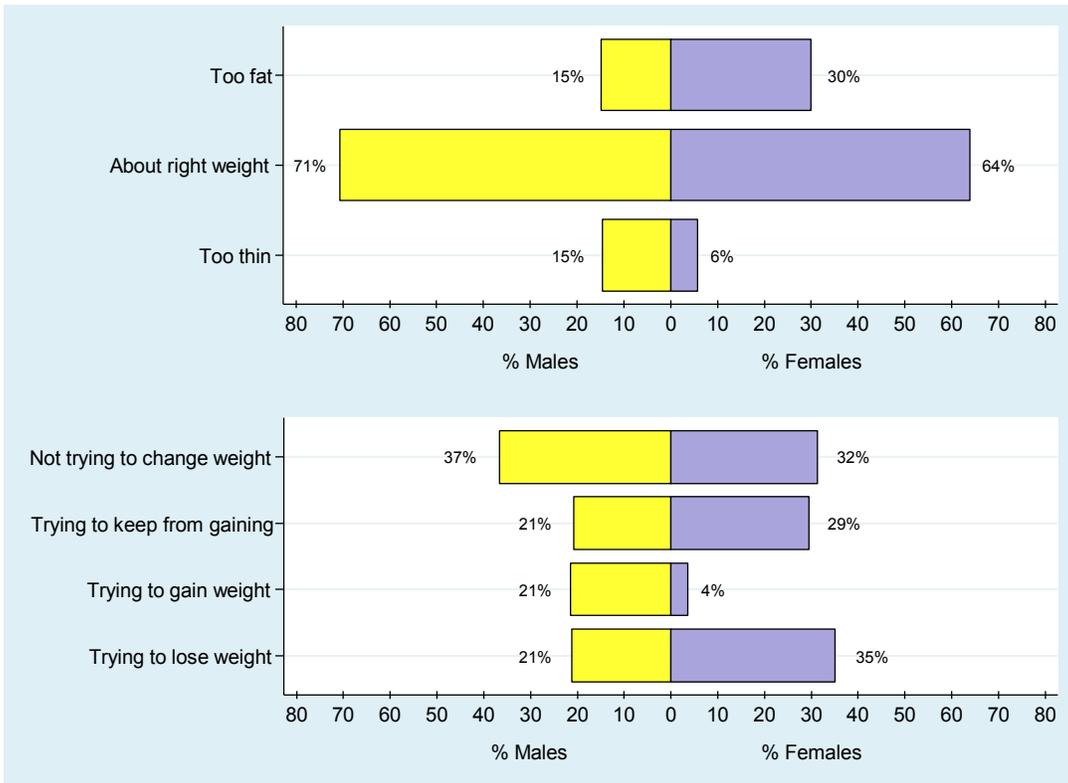
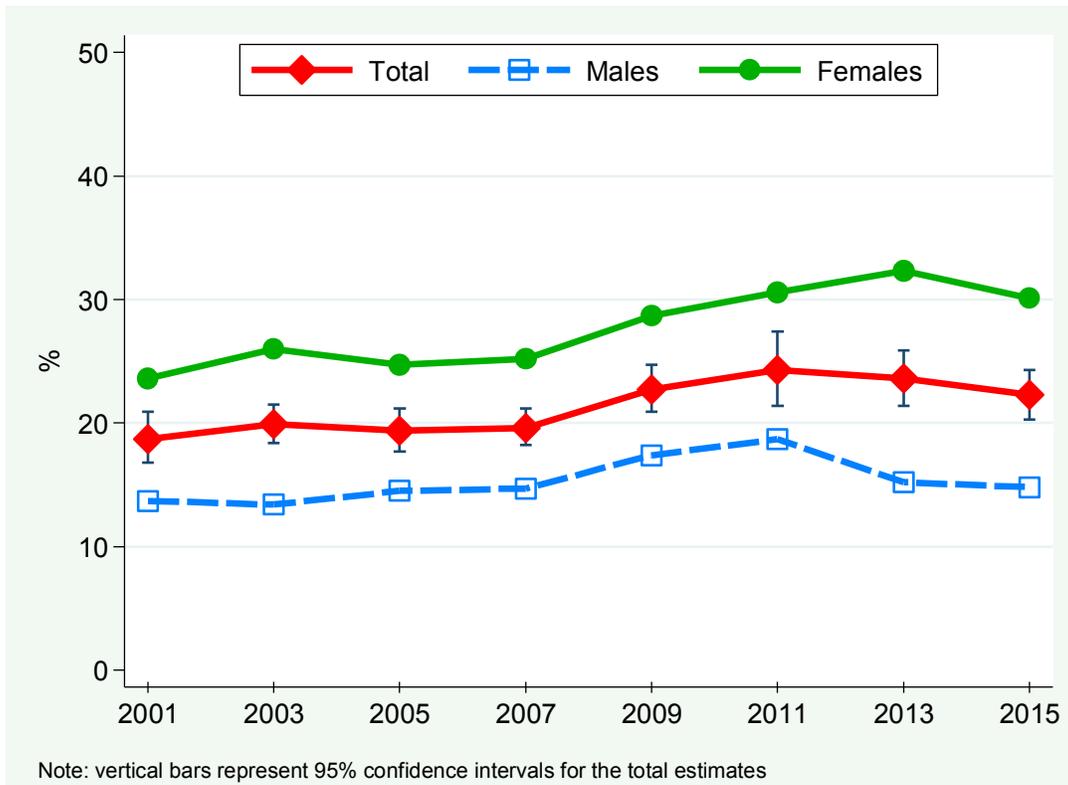


Figure 3.2.12
Percentage Reporting the Belief That They are “Too Fat” by Sex, 2001–2015 OSDUHS (Grades 7–12)



3.2.9 Hours of Sleep on an Average School Night (Figure 3.2.13)

For the first time in 2015, the OSDUHS included a question about hours of sleep on school nights. Students were asked “*On an average school night, how many hours of sleep do you get?*” Response options ranged from 4 hours or less up to 10 or more hours. Here we present the percentage of students reporting getting eight or more hours of sleep.

2015 (Grades 7–12):

- Less than half (41.0%; 95% CI: 38.9%-43.2%) of students report that they usually get eight or more hours of sleep on an average school night. Therefore, most students (59%) are not getting at least eight hours of sleep.

- Males (44.9%) are significantly more likely than females (36.9%) to get at least eight hours of sleep on an average school night.
- There is significant grade variation, with younger students significantly more likely to report at least eight hours of sleep on an average school night. Sufficient sleep decreases as grade increases. Only about one-quarter of 11th and 12th graders report at least eight hours of sleep.
- There are no significant differences among the four regions.

Figure 3.2.13
Percentage Reporting Eight or More Hours of Sleep on School Nights by Sex, Grade, and Region, 2015 OSDUHS



3.2.10 Go to Bed or School Hungry

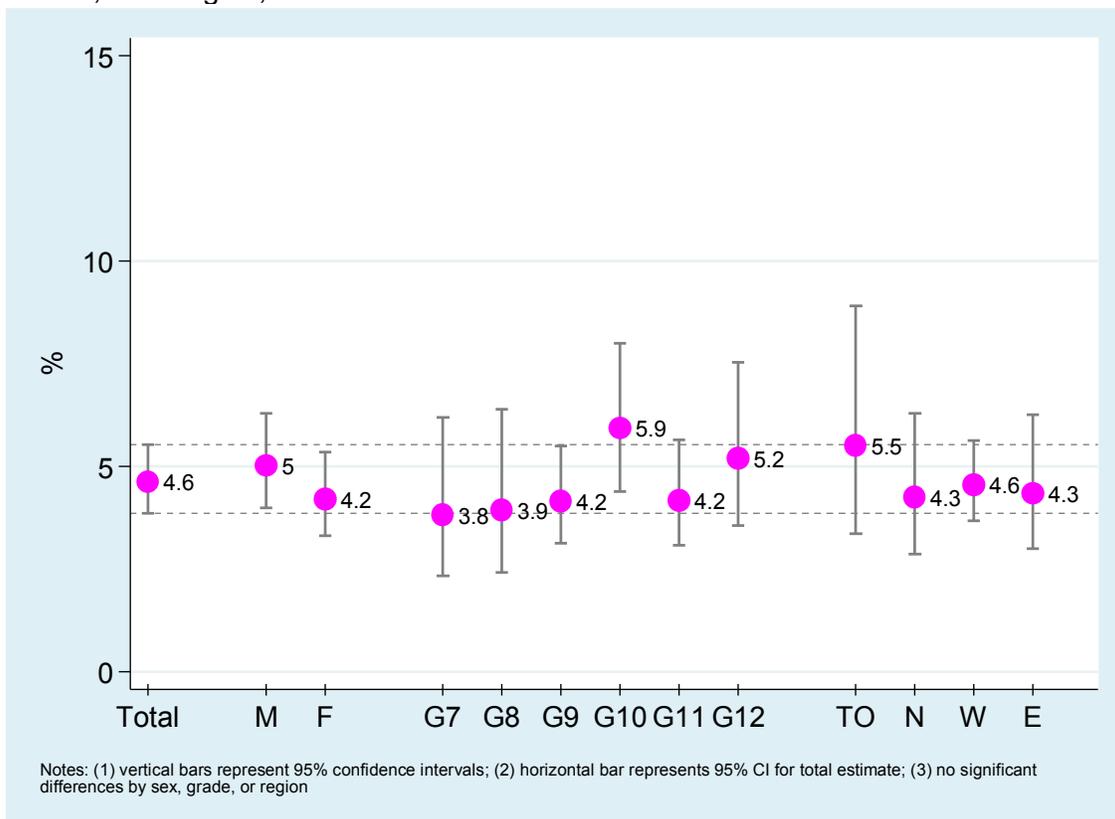
(Figure 3.2.14)

For the first time in 2015, students were asked about going without food (food insecurity). The question was “*Some young people go to school or to bed hungry because there is not enough food at home. How often does this happen to you?*” The response options were *always, often, sometimes, or never*. Here we present the percentage of students who report that they often or always go to bed or school hungry.

2015 (Grades 7–12):

- ❑ An estimated 4.6% (95% CI: 3.9%-5.5%) of students report that they often or always go to bed or school hungry. This percentage represents about 43,800 students in Ontario.
- ❑ Males (5.0%) and females (4.2%) are equally likely to report often or always going to bed or school hungry.
- ❑ There is no significant grade variation.
- ❑ There is no significant regional variation.

Figure 3.2.14
Percentage Reporting “Often” or “Always” Going to Bed or School Hungry by Sex, Grade, and Region, 2015 OSDUHS



3.2.11 Use of an Indoor Tanning Device

(Figure 3.2.15; Table A3.2.9)

Beginning in 2013, a random half sample of students was asked about using an indoor tanning device. The question was “*In the last 12 months, how often did you use an indoor tanning device such as a sunlamp, sunbed, or tanning booth? (Do not include getting a spray-on tan or tanning cream.)*” Response options ranged from one or two times up to 40 or more times. Students also had the options of responding that they did not use in the past 12 months or never used in their lifetime. Here we describe the percentage of students using at least once in the past year.

2015 (Grades 7–12):

- An estimated 3.6% of students report using an indoor tanning device such as a sunlamp, sunbed, or tanning booth at least once in the past year. This estimate represents about 32,300 students in grades 7 through 12.

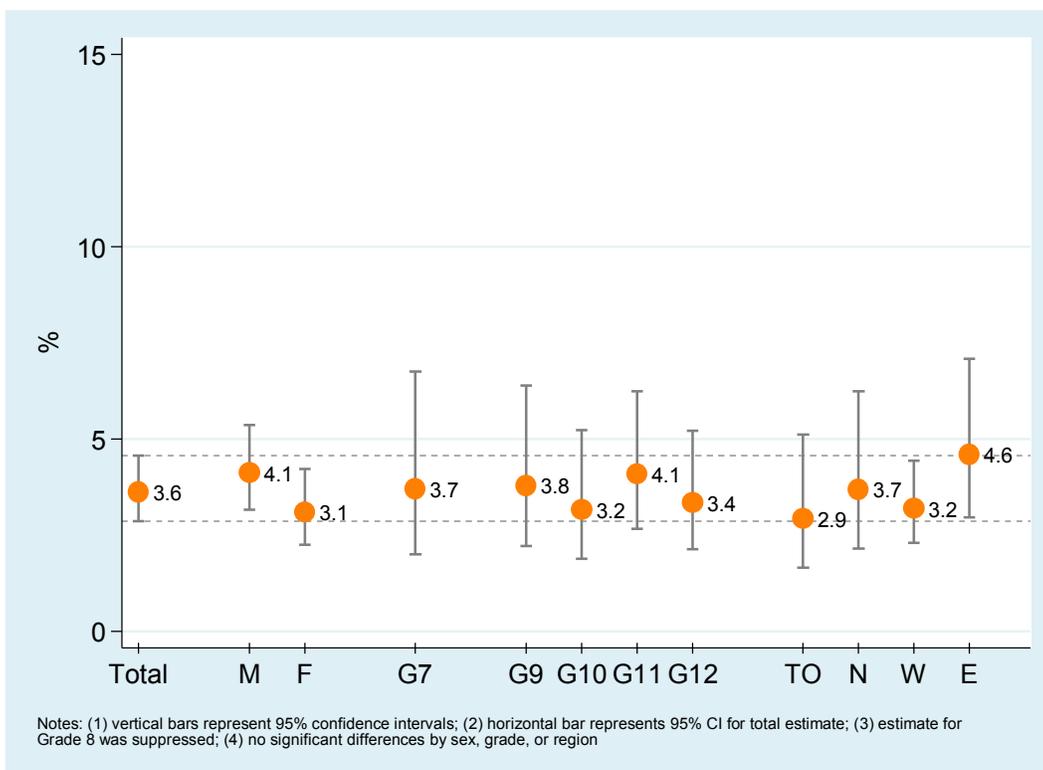
About 7.3% (95% CI: 6.1%-8.8%) of students report using an indoor tanning device in their lifetime.

- Males (4.1%) and females (3.1%) are equally likely to report using a tanning device in the past year.
- There are no significant differences among the grades.
- There are no significant differences among the four regions.

2015 vs. 2013 (Grades 7–12):

- There was no significant change in past year tanning device use between 2013 (4.4%) and 2015 (3.6%) among the total sample of students.
- Among the subgroups, females show a significant decrease since 2013, from 6.3% to 3.1%. Twelfth graders also show a decrease from 8.0% to 3.4%.

Figure 3.2.15
Percentage Reporting Using an Indoor Tanning Device (Sunlamp, Sunbed, Tanning Booth) at Least Once in the Past Year by Sex, Grade, and Region, 2015 OSDUHS



3.2.12 Medically Treated Injury

(Figures 3.2.16, 3.2.17; Table A3.2.10)

Injuries are the leading causes of death of children and adolescents in Canada (Pan et al., 2007; Public Health Agency of Canada, 2009; Statistics Canada, 2015). Starting in 2003, the OSDUHS asked a random half sample of students whether they experienced medically treated injuries during the past year. The question used was “*In the last 12 months, how many times were you hurt or injured, and had to be treated by a doctor or nurse?*” The five response options were *Not treated for an injury in the last 12 months, One time, 2 times, 3 times, or 4 or more times.*

2015 (Grades 7–12):

- An estimated 43.7% of students were treated for an injury at least once in the 12 months before the survey. This percentage represents about 390,500 students across Ontario. More specifically, 22.6% were treated for an injury once in the past year, 11.3% were treated twice, 5.3% were treated three times, and 4.5% four or more times.

- Males (45.4%) and females (41.8%) are equally likely to report a medically treated injury at least once in the past year.
- There are no significant grade differences.
- There are significant regional differences, with Toronto students (33.5%) least likely, and Northern students (50.8%) most likely, to report a medically treated injury in the past year.

2003–2015 (Grades 7–12):

- The percentage of students sustaining a medically treated injury in 2015 (43.7%) is similar to the estimate from 2013 (41.0%). However, there has been a linear increase over the years and the current estimate is significantly higher than the estimate from 2003 (35.4%), the first year of monitoring.
- Among the subgroups, males, females, 8th graders, 10th graders, 12th graders, students in the North and West regions all show significant increases since 2003.

Figure 3.2.16
Percentage Reporting a Medically Treated Injury in the Past Year by Sex, Grade, and Region, 2015 OSDUHS

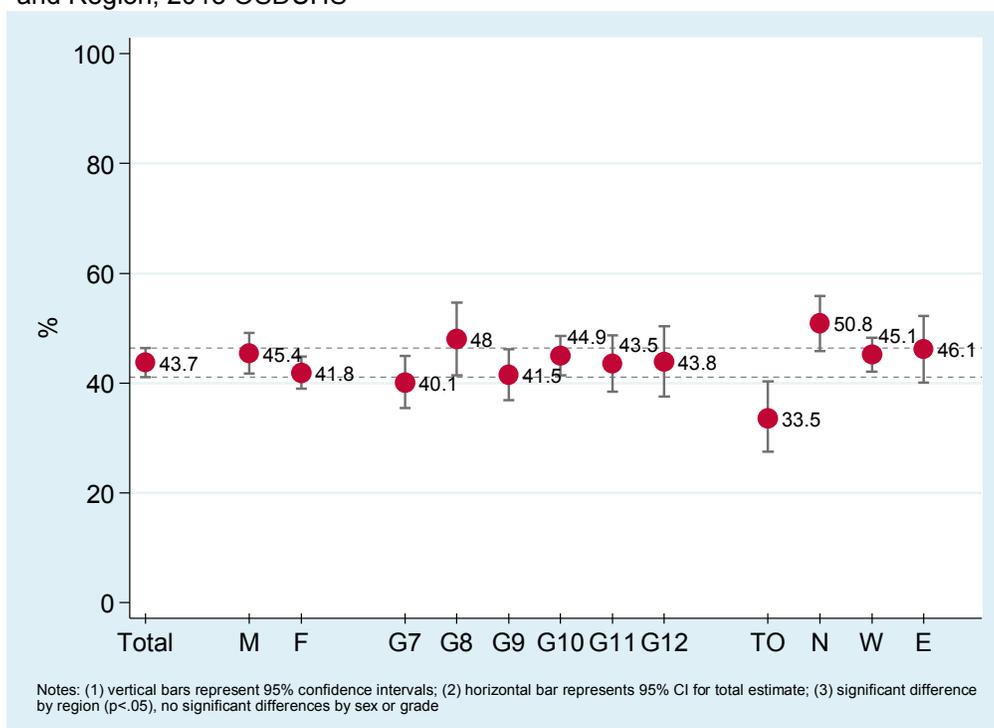
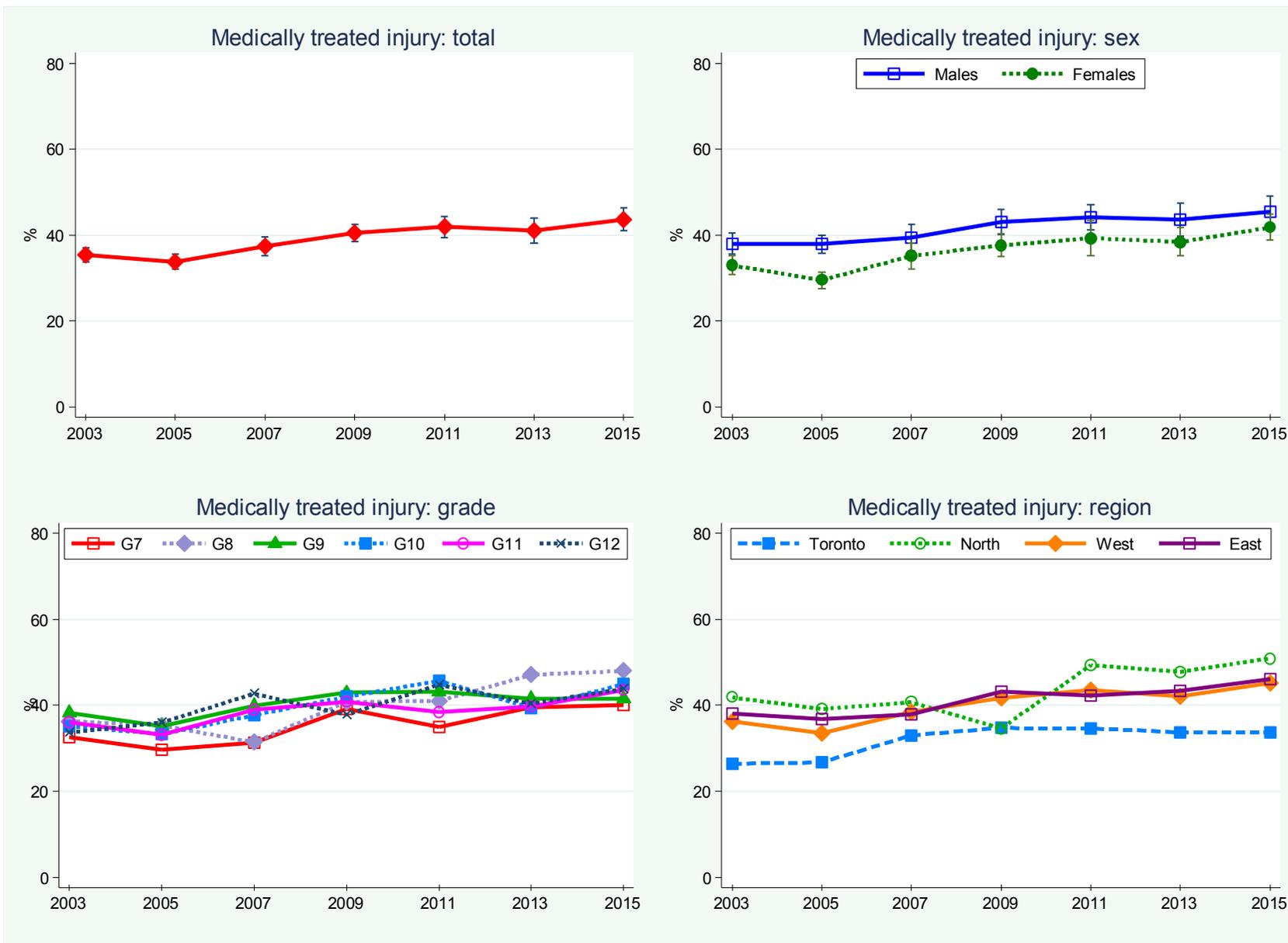


Figure 3.2.17
 Percentage Reporting a Medically Treated Injury in the Past Year, 2003–2015 OSDUHS (Grades 7–12)



3.2.13 Bicycle Helmet Use

(Figure 3.2.18; Table A3.2.11)

For the first time in 2013, the OSDUHS asked a random half sample of students how often they wear a helmet while bicycling. The question was “*In the last 12 months, how often did you wear a helmet while riding a bicycle?*” The response options were *Did not ride a bicycle in the last 12 months, All of the time, Most of the time, Some of the time, Rarely, or Never*. Here we describe the percentage who reported that they do not always wear a helmet while they bicycle among students who reported that they rode a bicycle in the past year (79% of all students, $n=3,894$).

2015 (Grades 7–12):

- Over three-quarters (76.9%) of bicyclists in grades 7–12 report that they do not always wear a helmet. This estimate represents about 541,800 students in Ontario. Looking at the extreme end, 49.8% of bicyclists

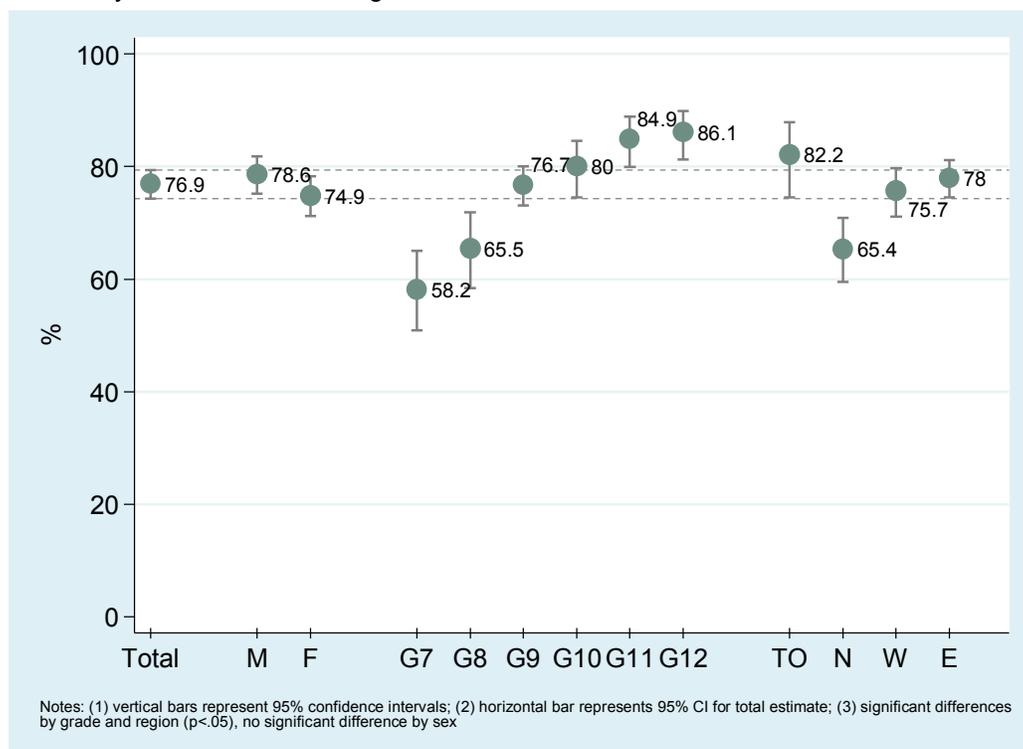
report that they rarely or never wear a helmet (representing 351,000 students).

- Male (78.6%) and female (74.9%) cyclists are equally likely to report that they do not always wear a helmet.
- There is significant grade variation showing that older students do not always wear a helmet while bicycling.
- There are significant regional differences showing that Toronto students (82.2%) are most likely to not always wearing a helmet, while Northern students (65.4%) are least likely.

2015 vs. 2013 (Grades 7–12):

- The percentage of bicyclists who report not always wearing a helmet remained stable between 2013 (78.7%) and 2015 (76.9%).

Figure 3.2.18
Percentage Who Rode a Bicycle in the Past Year Reporting Not Always Wearing a Helmet by Sex, Grade, and Region, 2015 OSDUHS



3.2.14 Seatbelt Use

(Figure 3.2.19; Table A3.2.12)

Starting in 2011, the OSDUHS asked a random half sample of students how often they wear a seatbelt when they ride in a vehicle. The question was “How often do you wear a seat belt when you are in a vehicle?” The response options were *Never travel by vehicle, All of the time, Most of the time, Some of the time, Rarely, or Never*. Here we present the percentage of students who do not always wear a seatbelt when they are in a vehicle.

2015 (Grades 7–12):

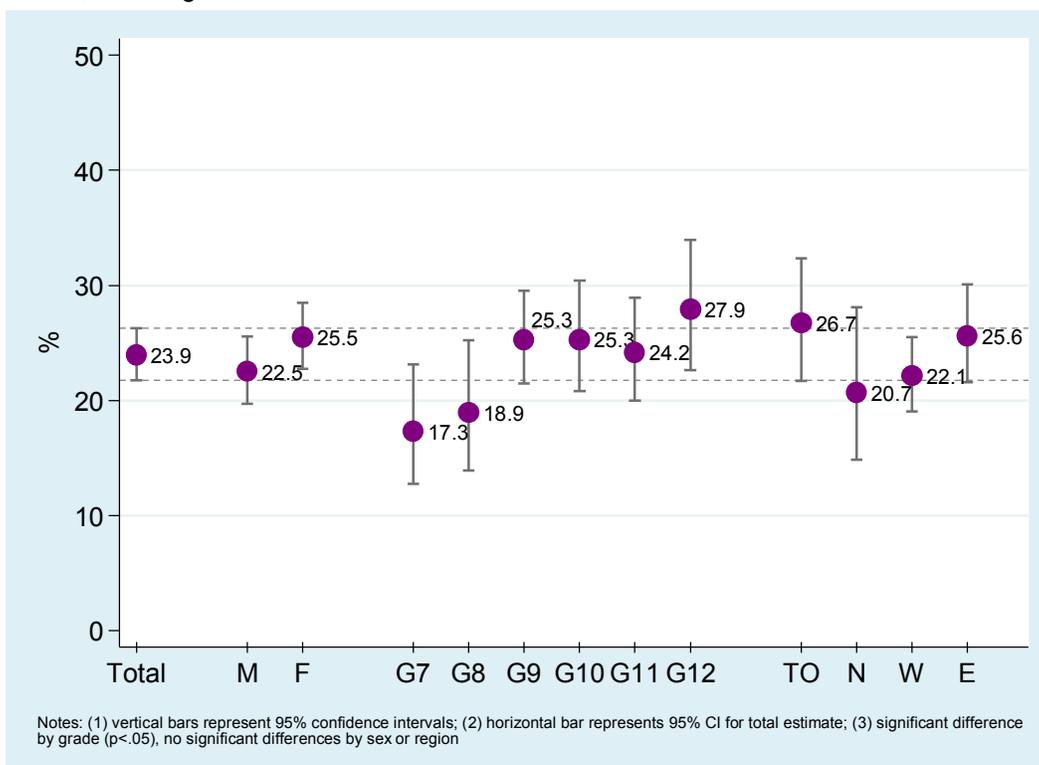
- One-quarter (23.9%) of students report they do not always wear a seatbelt. This estimate represents about 219,100 students in Ontario. Looking at the extreme end, 1.9% of students report that they rarely or never wear a seatbelt (representing 17,500 students).

- Males (22.5%) and females (25.5%) are equally likely to not always wear a seatbelt.
- There are significant grade differences showing that older students are more likely to not always wear a seatbelt.
- There are no significant regional differences.

2011–2015 (Grades 7–12):

- The percentage of students who report not always wearing a seatbelt in 2015 (23.9%) is similar to the percentage in 2013 (23.7%), but is significantly lower than the percentage in 2011 (28.4%), the first year of monitoring.
- Among the subgroups, males and students in the West region show significantly lower estimates in 2015 compared with their respective estimates from 2011.

Figure 3.2.19
Percentage Reporting Not Always Wearing a Seatbelt When in a Vehicle by Sex, Grade, and Region, 2015 OSDUHS



3.2.15 Texting While Driving

(Figure 3.2.20; Table A3.2.13)

Starting in 2013, the OSDUHS asked a random half sample of secondary students about texting and driving. The question was “*In the last 12 months, how often did you send or read a text message or an email while you were driving a vehicle?*” Here we present the percentage of drivers in grades 10, 11, and 12 who report texting while driving a vehicle at least once in the past year.

2015 (Drivers in Grades 10–12):

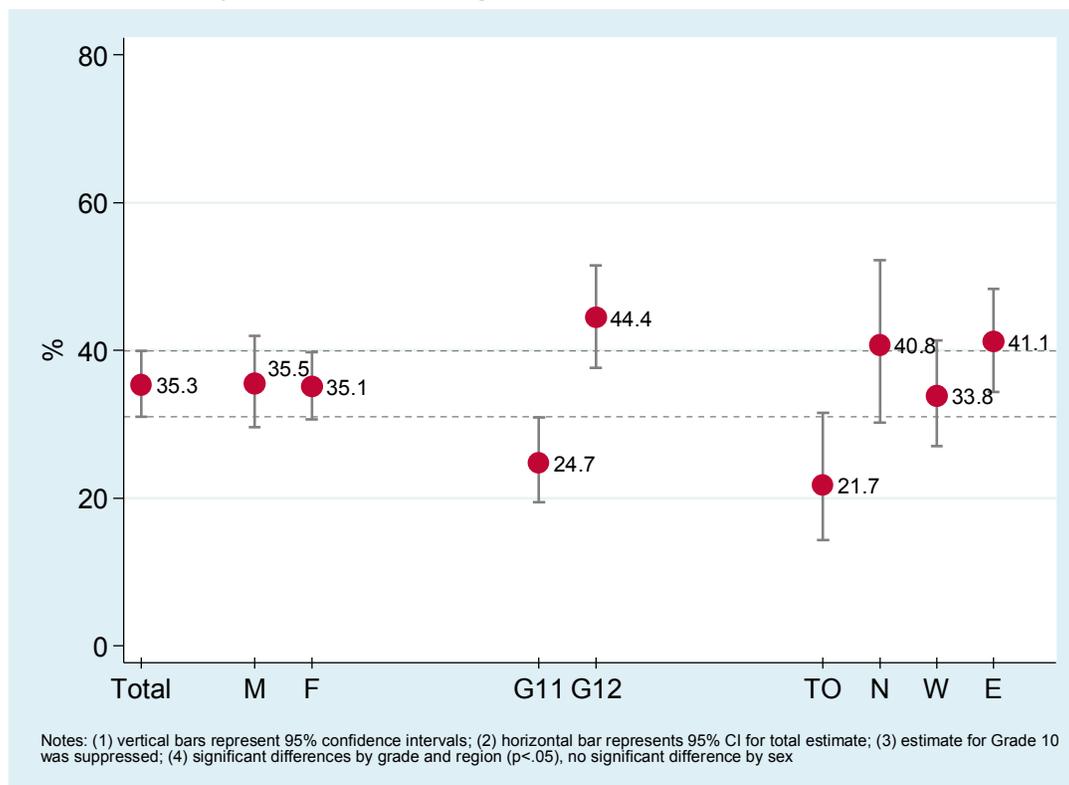
- Among drivers in grades 10–12, just over one-third (35.3%) report texting while driving at least once in the past year. This estimate represents about 103,400 adolescent drivers in Ontario.

- Male drivers (35.5%) and female drivers (35.1%) are equally likely to report texting while driving at least once in the past year.
- There are significant grade differences showing that drivers in 12th grade (44.4%) are most likely to report texting while driving.
- There are significant regional differences showing that drivers in Toronto (21.7%) are the least likely to report texting and driving compared with students in the other three regions.

2015 vs. 2013 (Drivers in Grades 10–12):

- The percentage of adolescent drivers reporting texting and driving in the past year did not significantly change between 2013 (35.9%) and 2015 (35.3%).
- No subgroup shows a significant change between 2013 and 2015.

Figure 3.2.20
Percentage of Drivers in Grades 10–12 Reporting Texting While Driving at Least Once in the Past Year by Sex, Grade, and Region, 2015 OSDUHS



3.2.16 Vehicle Collision as a Driver

(Figure 3.2.21)

Starting in 2011, the OSDUHS asked students about being involved in a collision as a driver. The question 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?*” The response options were *No driver’s licence of any type, Never, Once, 2 times, 3 times, or 4 or more times*. We describe 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.

2015 (Drivers in Grades 10–12):

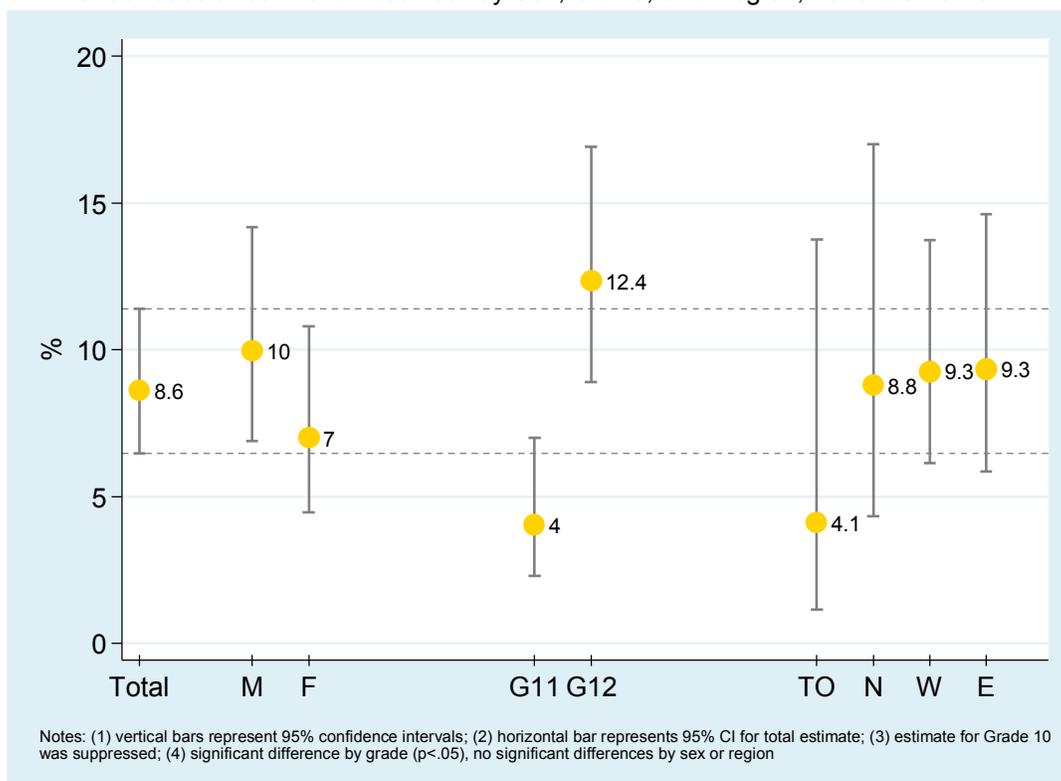
- Among drivers in grades 10–12, about 8.6% (95% CI: 6.5%-11.4%) report being involved in a collision as a driver at least once in the past year. This percentage represents an estimated 25,200 adolescent drivers.

- Male drivers (10.0%) and female drivers (7.0%) are equally likely to report involvement in a collision at least once in the past year.
- There is a significant difference by grade showing that drivers in 12th grade (12.4%) are most likely to report involvement in a collision.
- There are no significant regional differences.

2011–2015 (Drivers in Grades 10–12):

- The percentage of drivers who report being in a collision in 2015 (8.6%) is not significantly different from the percentage seen in 2013 (7.6%) or in 2011 (9.8%), the first year of monitoring.

Figure 3.2.21
Percentage of Drivers in Grades 10–12 Reporting Being Involved in a Vehicle Collision as a Driver at Least Once in the Past Year by Sex, Grade, and Region, 2015 OSDUHS



3.3 Health Care Utilization

In this section, we examine visits to health care professionals, past year use of prescription medication, whether students were prescribed medication for depression or anxiety, whether students sought telephone or website counselling, and whether students experienced an unmet need for mental health support.

3.3.1 Physician Health Care Visit

(Figure 3.3.1; Table A3.3.1)

Starting in 1999, the OSDUHS asked a random half sample of students how often they visited a doctor about their physical health, including just for a check-up, during the past 12 months. The question was “*In the last 12 months, how many times have you seen a doctor about your physical health or for a check-up?*” Here we describe the percentage of students who reported *not* visiting a doctor during the past 12 months.

2015 (Grades 7–12):

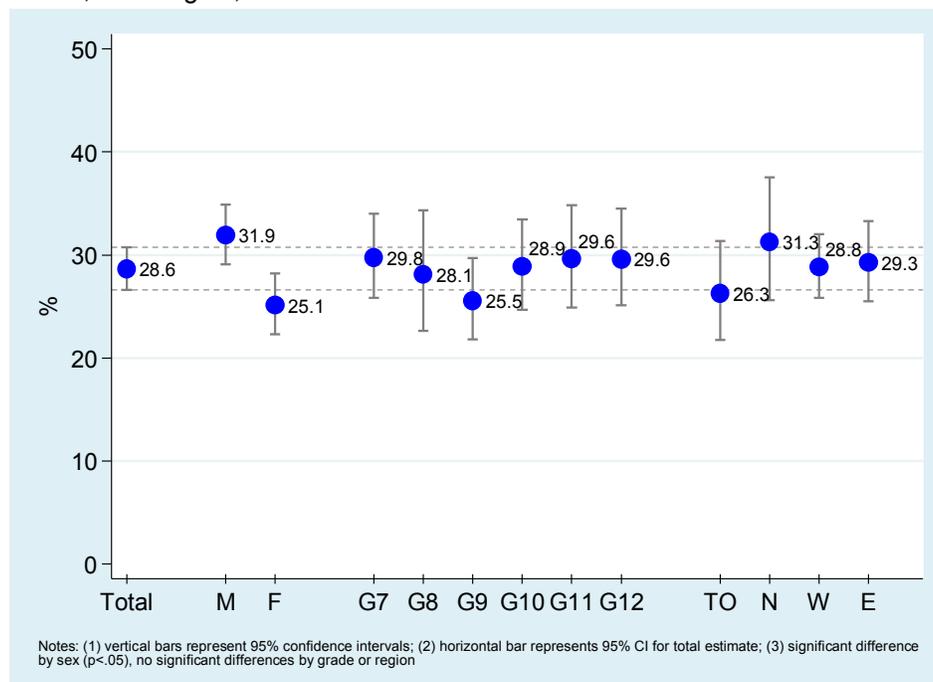
- Over one-quarter (28.6%) of students did not visit a physician, not even for a check-up, in the past year. This estimate represents about 256,600 students in Ontario.

- Males (31.9%) are significantly more likely than females (25.1%) to report no doctor visits in the past year.
- There are no significant grade differences.
- Despite some variation, there are no significant differences among the regions.

1999–2015 (Grades 7–12):

- The percentage of students reporting not visiting a physician in 2015 (28.6%) is similar to that seen in 2013 (27.4%), as well as the percentage seen in 1999 (30.0%), the first year of monitoring.
- No subgroup shows a significant change since 2013, or 1999.

Figure 3.3.1
Percentage Reporting No Physician Health Care Visit in the Past Year by Sex, Grade, and Region, 2015 OSDUHS



3.3.2 Mental Health Care Visit

(Figure 3.3.2; Table A3.3.2)

Starting in 1999, the OSDUHS asked a random half sample of students whether they consulted a professional about a mental health matter. The question was “*In the last 12 months, how often have you seen a doctor, nurse, or counsellor about your emotional or mental health?*” In this section we describe the percentage who reported at least one mental health care visit during the past year.

2015 (Grades 7–12):

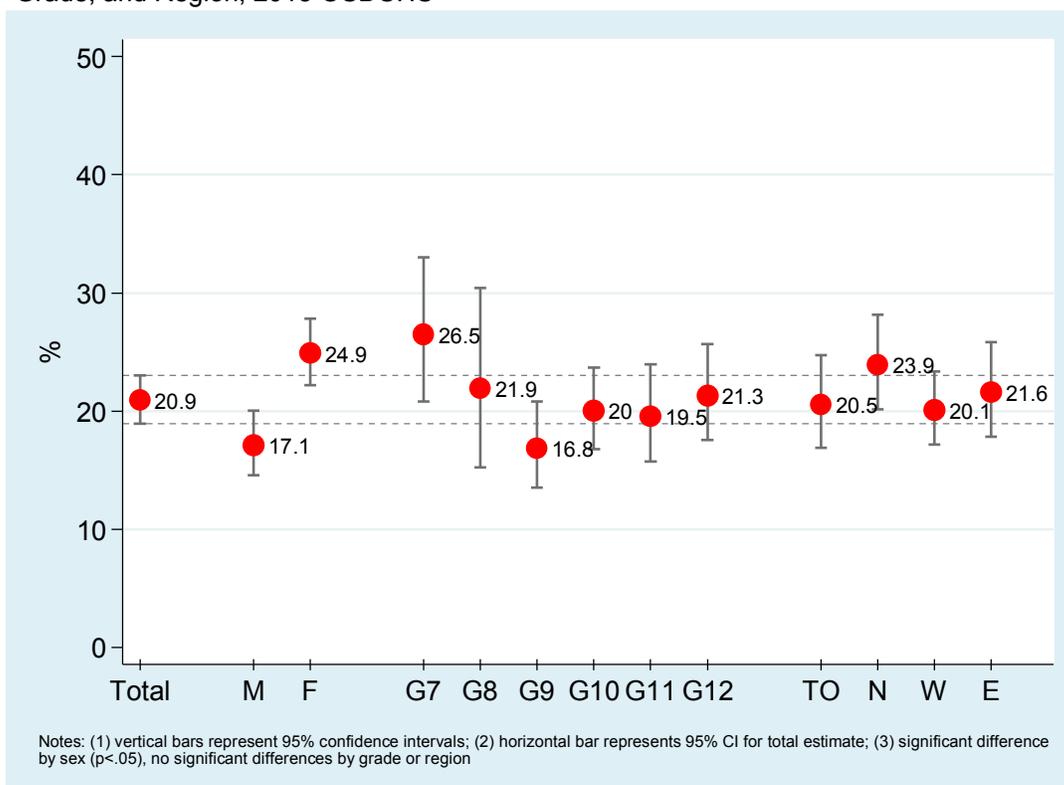
- About one-fifth (20.9%) of students report visiting a professional about a mental health issue at least once in the past year. This estimate represents about 205,300 students in Ontario.

- Females (24.9%) are significantly more likely than males (17.1%) to report a mental health care visit.
- Despite some variation among the grades, these differences are not statistically significant.
- There are no significant differences among the four regions.

1999–2015 (Grades 7–12):

- The percentage of students who report a mental health care visit did not significantly change between 2013 (21.9%) and 2015 (20.9%). However, the 2015 estimate is significantly higher than the estimate from 1999 (12.4%), the first year of monitoring.
- Most subgroups show increases compared with their respective 1999 estimates.

Figure 3.3.2
Percentage Reporting at Least One Mental Health Care Visit in the Past Year by Sex, Grade, and Region, 2015 OSDUHS



3.3.3 Use of Drugs for Medical Reasons (Figures 3.3.3–3.3.5; Tables A3.3.3–A3.3.5)

This section presents past year prevalence estimates for three types of prescription drug classes used for medical reasons: tranquilizers/sedatives (asked of students in grades 9–12 only), drugs to treat ADHD, and opioid pain relievers. The medical tranquilizer question dates back to 1977, whereas the latter two drug classes were first introduced in the 2007 cycle. The following questions were asked:

- *Sedatives or tranquilizers are sometimes prescribed by doctors to help people sleep, calm them down, or to relax their muscles. In the last 12 months, how often did you use sedatives or tranquilizers (such as Valium, Ativan, Xanax) with a prescription or because a doctor told you to take them?*⁶⁵
- *Sometimes doctors give medicine to students who are hyperactive or have problems concentrating in school. This is called Attention-Deficit Hyperactivity Disorder (ADHD). In the last 12 months, how often did you use medicine to treat ADHD (such as Ritalin, Concerta, Adderall, Dexedrine) with a prescription or because a doctor told you to take it?*
- *In the last 12 months, how often did you use pain relief pills (such as Percocet, Percodan, Tylenol #3, Demerol, OxyNeo, OxyContin, codeine) with a prescription or because a doctor told you to take them? (We do not mean regular Tylenol, Advil, or Aspirin that anyone can buy in a drugstore.)*

2015:

- Among all secondary students, 3.3% used tranquilizers/sedatives medically, that is by prescription, at least once in the past year (an estimated 22,800 students in grades 9–12 in Ontario).
- Among all students, 2.6% used an ADHD drug medically (an estimated 26,000 students in grades 7–12).

- Among all students, 21.1% used opioid pain relievers medically (an estimated 193,000 students in grades 7–12).
- Females are significantly more likely than males to report the medical use of tranquilizers (4.9% vs. 1.8%, respectively), as well as opioid pain relievers (23.1% vs. 19.3%). Males and females are equally likely to report the medical use of a drug to treat ADHD.
- Older students are significantly more likely than younger students to use opioid pain relievers medically. Despite some variation, medical tranquilizer use and ADHD drug use do not significantly differ by grade.
- Students in the North region are most likely to report medical ADHD drug use. Students in Toronto are least likely to report medical opioid use. There are no significant regional differences for medical tranquilizer/sedative use.

1999–2015:

- The medical use of tranquilizers/sedatives has not significantly changed since 1999, nor has the medical use of ADHD drugs.
- Although the medical use of opioid pain relievers did not change between 2013 (20.9%) and 2015 (21.1%), the current estimate is significantly lower than the estimate from 2007 (40.6%), the first year of monitoring.

1977–2015 (Grades 9 and 11 only):

- Over the past three decades, the medical use of tranquilizers/sedatives peaked in the late 1970s, declined during the 1980s, and remained stable in the 1990s and 2000s, at around 3% or 4%.

⁶⁵ This question was asked of students in grades 9–12 only, and was not asked of 7th and 8th graders.

Figure 3.3.3
 Percentage Reporting Medical Use of a Tranquillizer/Sedative Drug in the Past Year by Sex, Grade, and Region, 2015 OSDUHS (Grades 9–12)

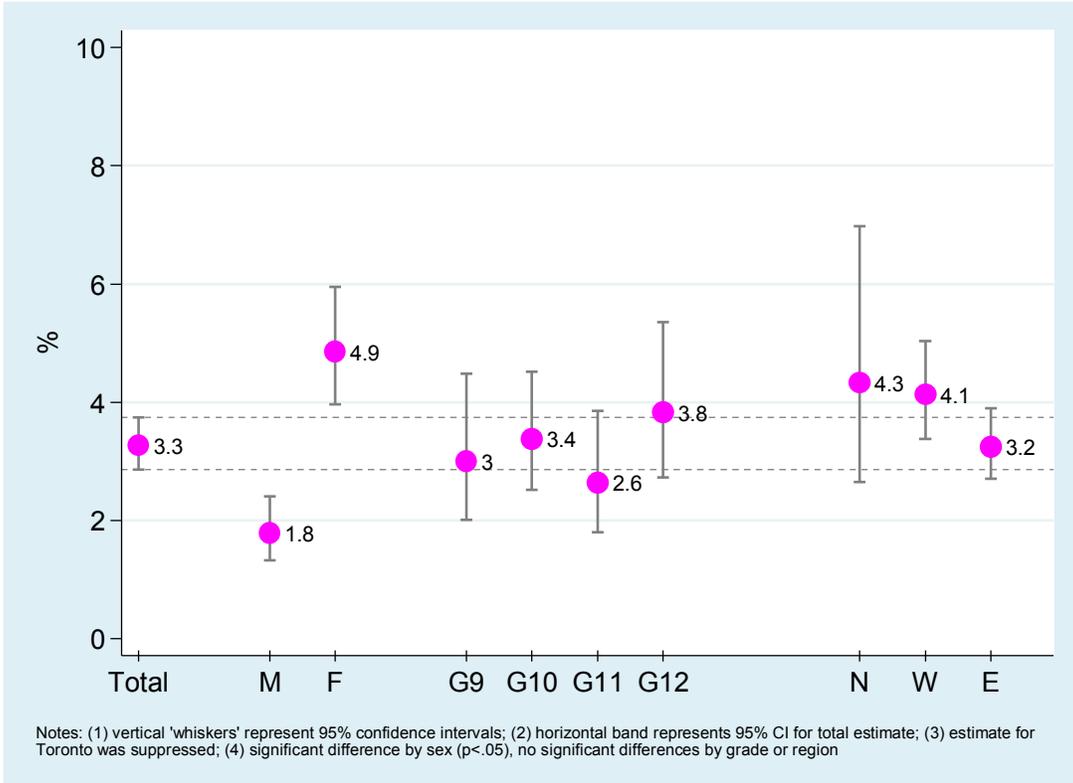


Figure 3.3.4
 Percentage Reporting Medical Use of an ADHD Drug in the Past Year by Sex, Grade, and Region, 2015 OSDUHS

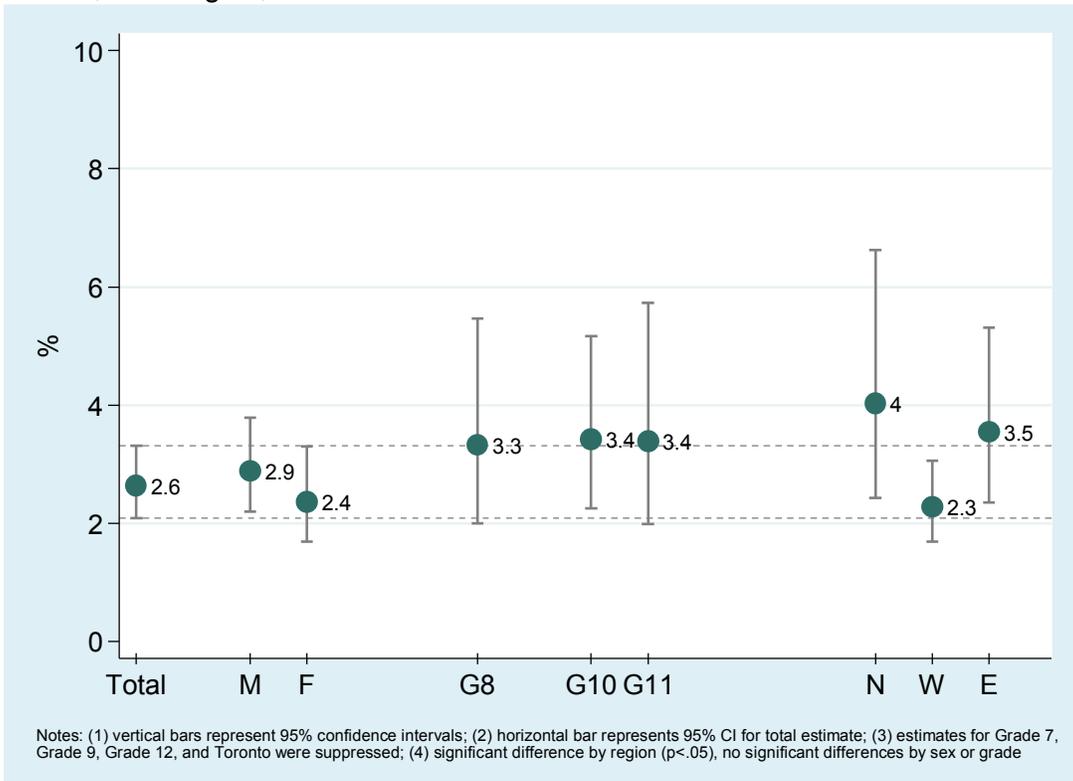
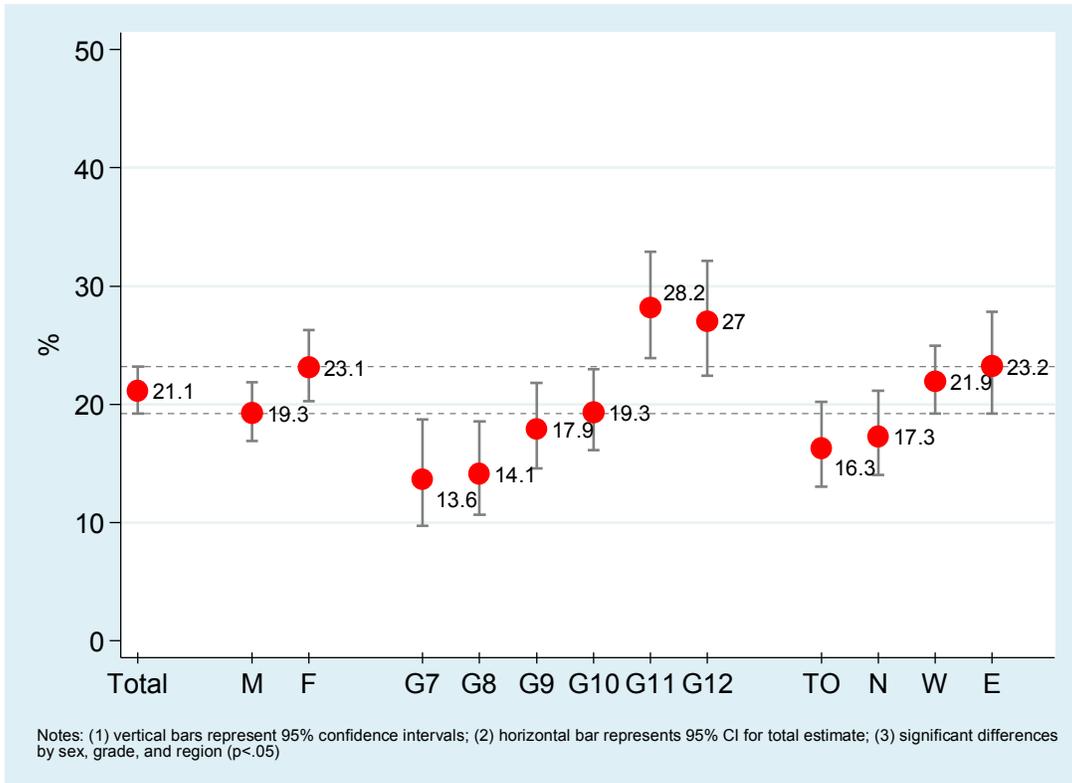


Figure 3.3.5
 Percentage Reporting Medical Use of Opioid Pain Reliever in the Past Year by
 Sex, Grade, and Region, 2015 OSDUHS



3.3.4 Prescription Medication to Treat Anxiety or Depression

(Figure 3.3.6; Table A3.3.6)

Starting in 2001, the OSDUHS has asked a random half sample of students in grades 9–12 about 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?*” The four response options were *Yes, for anxiety only*; *Yes, for depression only*; *Yes, for both*; or *No*.

2015 (Grades 9–12):

- ❑ An estimated 1.7% of secondary students report they were prescribed medication to treat anxiety in the past year, 1.2% were prescribed medication to treat depression, and 2.7% were prescribed medication for *both* anxiety and depression.
- ❑ Combining the response options, an estimated 5.6% report being prescribed medication to treat anxiety, depression, or

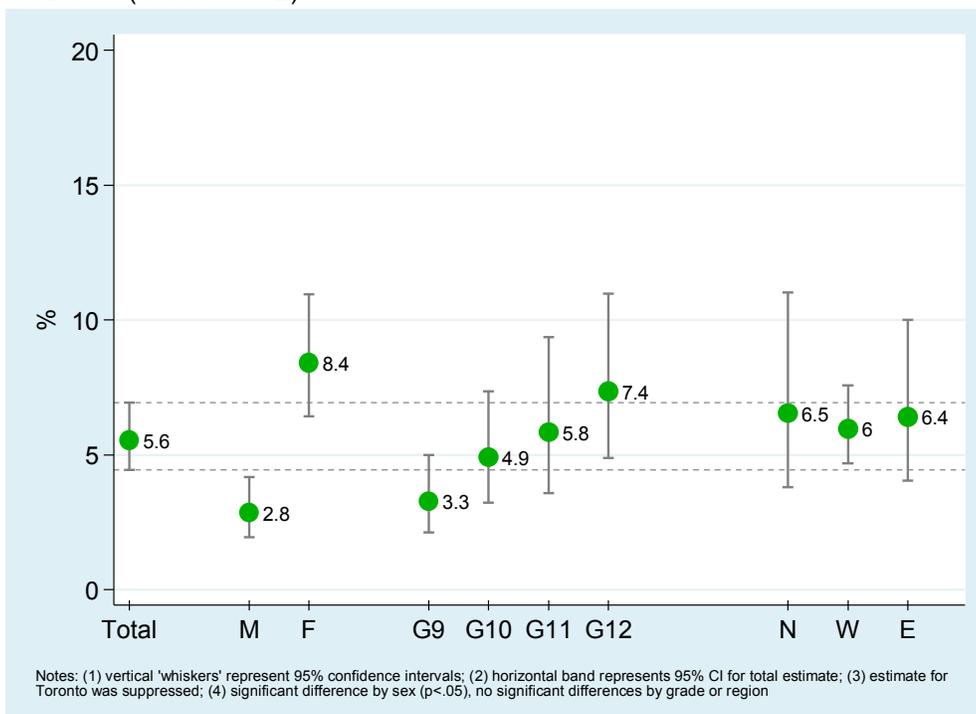
both conditions. This represents about 39,300 secondary students in Ontario.

- ❑ Females (8.4%) are significantly more likely than males (2.8%) to report being prescribed medication to treat anxiety, depression, or both conditions.
- ❑ Despite some variation, there are no significant differences among the grades.
- ❑ There are no significant regional differences.

2001–2015 (Grades 9–12):

- ❑ The percentage of secondary students who report being prescribed medication to treat anxiety, depression, or both did not significantly change between 2013 (5.5%) and 2015 (5.6%). However, the current estimate is significantly higher than that seen in 2001 (3.0%), the first year of monitoring.
- ❑ Among the subgroups, only females show a significant increase between 2001 (4.2%) and 2015 (8.4%).

Figure 3.3.6
Percentage Reporting Having Been Prescribed Medication to Treat Anxiety, Depression or Both in the Past Year by Sex, Grade, and Region, 2015
OSDUHS (Grades 9–12)



3.3.5 Sought Counselling Over the Telephone or the Internet

(Figure 3.3.7; Table A3.3.7)

Between 2005 and 2009, the OSDUHS asked a random half sample of students whether they used a telephone counselling helpline in the past year. In 2011, the question was expanded to include websites. The question was “*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?*” The response options were *Yes, I’ve phoned a helpline only; Yes, I’ve posted a question on a website only; Yes, I’ve phoned a helpline and posted a question on a website; or No.*

2015 (Grades 7–12):

- An estimated 2.1% report using a telephone counselling helpline in the past year. An estimated 1.1% report seeking help from a

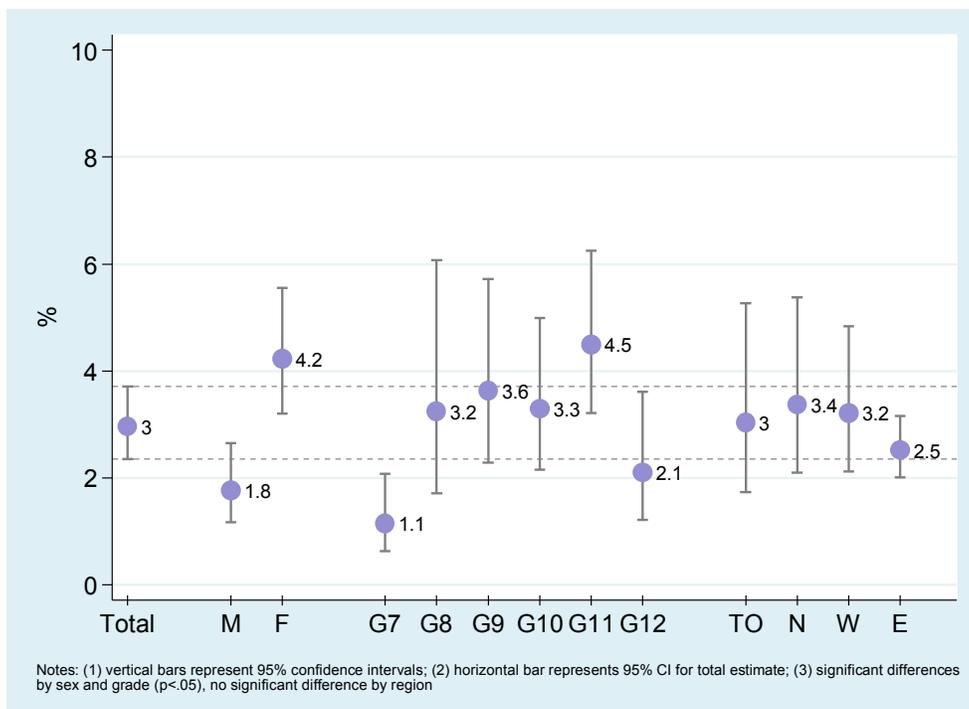
website. In combination, 3.0% report using a helpline or a website or both to seek counselling (roughly 29,200 students).

- Females (4.2%) are more likely than males (1.8%) to seek counselling either over the phone, the Internet, or both.
- There are significant grade differences showing that students in 7th grade and 12th grade are least likely to seek counselling over the phone, the Internet, or both.
- There are no significant regional differences.

2011–2015 (Grades 7–12):

- The percentage of students who report using a helpline, a website, or both in 2015 (3.0%) does not differ from 2013 (3.0%) or from 2011 (2.1%), the first year of monitoring.

Figure 3.3.7
Percentage Reporting Seeking Counselling Over the Phone, Over the Internet, or Both in the Past Year by Sex, Grade, and Region, 2015 OSDUHS



3.3.6 Unmet Need for Mental Health Support (Figure 3.3.8; Table A3.3.8)

Starting in 2013, the OSDUHS asked students if, during the last 12 months, they wanted to talk to someone about a mental health problem, but did not know where to turn. The question was: “*In the last 12 months, was there a time when you wanted to talk to someone about a mental health or emotional problem you had, but did not know where to turn?*” The response options were yes or no.

2015 (Grades 7–12):

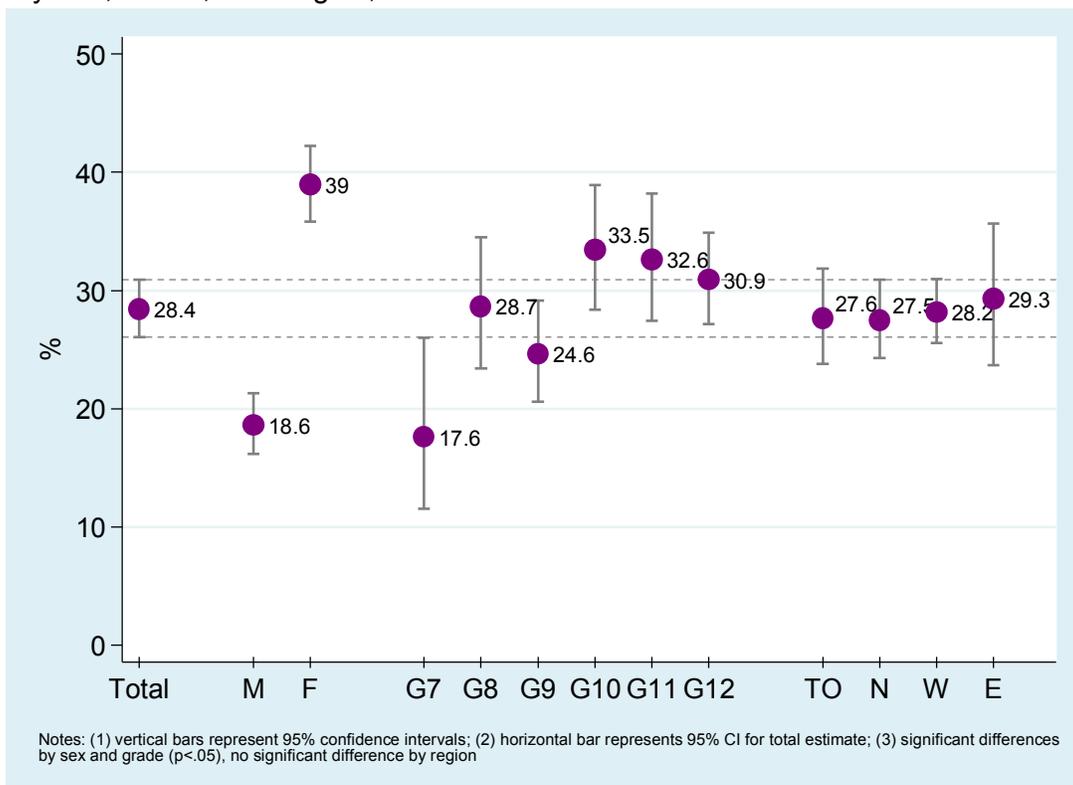
- Over one-quarter (28.4%) of students report that they wanted to talk to someone about a mental health problem, but did not know where to turn. This estimate represents about 280,400 students.

- Females (39.0%) are twice as likely as males (18.6%) to report an unmet need for mental health support.
- There are significant grade differences showing that students in grades 10 to 12 are most likely to report an unmet need for mental health support.
- There are no significant regional differences.

2015 vs. 2013 (Grades 7–12):

- The percentage of students reporting an unmet need for mental health support did not significantly change between 2013 (27.9%) and 2015 (28.4%).
- No subgroup shows a significant change since the previous survey in 2013.

Figure 3.3.8
Percentage Reporting an Unmet Need for Mental Health Support in the Past Year by Sex, Grade, and Region, 2015 OSDUHS



3.4 Internalizing Indicators

Internalizing indicators are emotional states or psychological traits that can adversely affect all life areas, including one's ability to function. Some examples include low self-esteem, depression, and anxiety.

3.4.1 Self-Rated Mental Health

(Figures 3.4.1–3.4.3; Table A3.4.1)

Self-rated mental health is a simple, yet valid, way of measuring mental health status in a population survey (Mawani & Gilmour, 2010). Starting in 2007, we asked a random half sample of students “*How would you rate your emotional or mental health?*” The response options were *poor, fair, good, very good, or excellent*. Here we describe the percentage of students who rate their mental health as fair or poor.

2015 (Grades 7–12):

- ❑ Most students rate their mental health as excellent (22.9%) or very good (36.7%). At the risk end, 16.5% report fair or poor mental health. This estimate represents about 163,800 students in Ontario.
- ❑ Females (23.2%) are significantly more likely than males (10.3%) to rate their mental health as fair or poor.
- ❑ Ratings of fair or poor mental health significantly increase with grade, ranging from 7.7% among 7th graders to 23.2% among 11th graders, and drops slightly to 18.9% in 12th grade.
- ❑ Despite some variation, there are no significant regional differences.

2007–2015 (Grades 7–12):

- ❑ The percentage of students rating their mental health as fair or poor in 2015 (16.5%) does not significantly differ from 2013 (15.3%). However, the 2015 percentage is significantly higher than that seen in 2007 (11.4%), the first year of monitoring.
- ❑ Ratings of fair or poor mental health significantly increased since 2007 among males, females, 10th graders, 11th graders, and students in the West. A significant increase between 2013 and 2015 was evident among Northern students, from 12.2% to 20.0%.

Figure 3.4.1
Self-Rated Mental Health, 2015 OSDUHS (Grades 7–12)

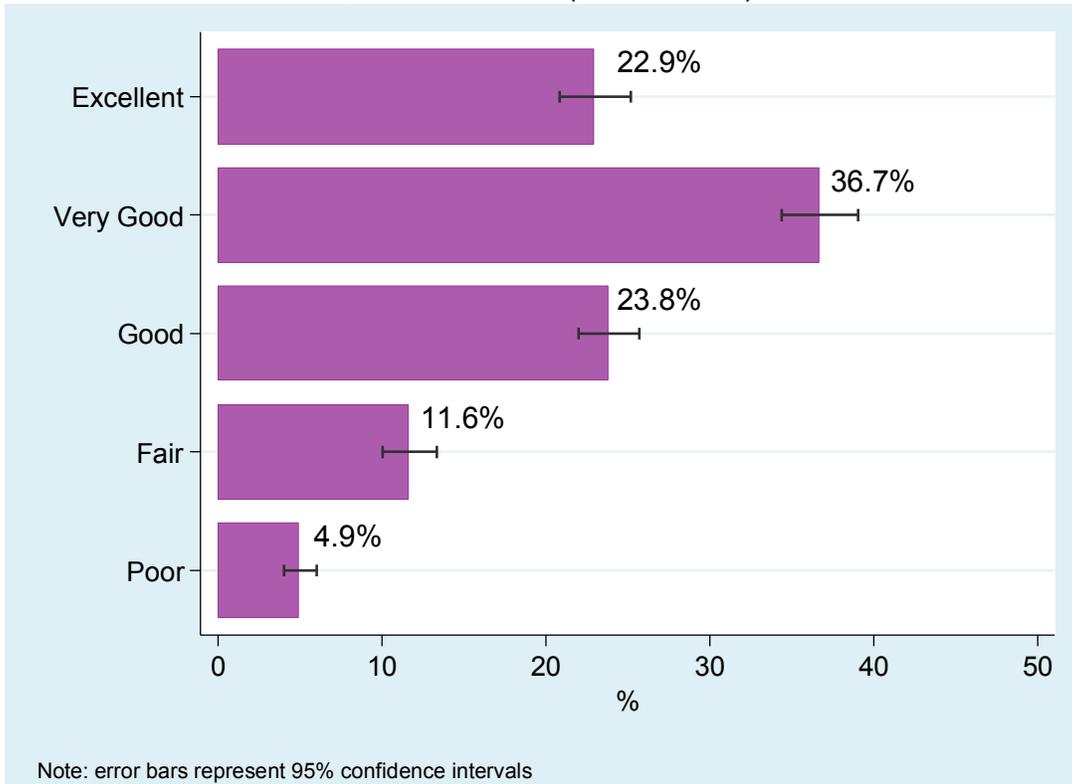


Figure 3.4.2
Percentage Reporting Fair or Poor Mental Health by Sex, Grade, and Region, 2015 OSDUHS

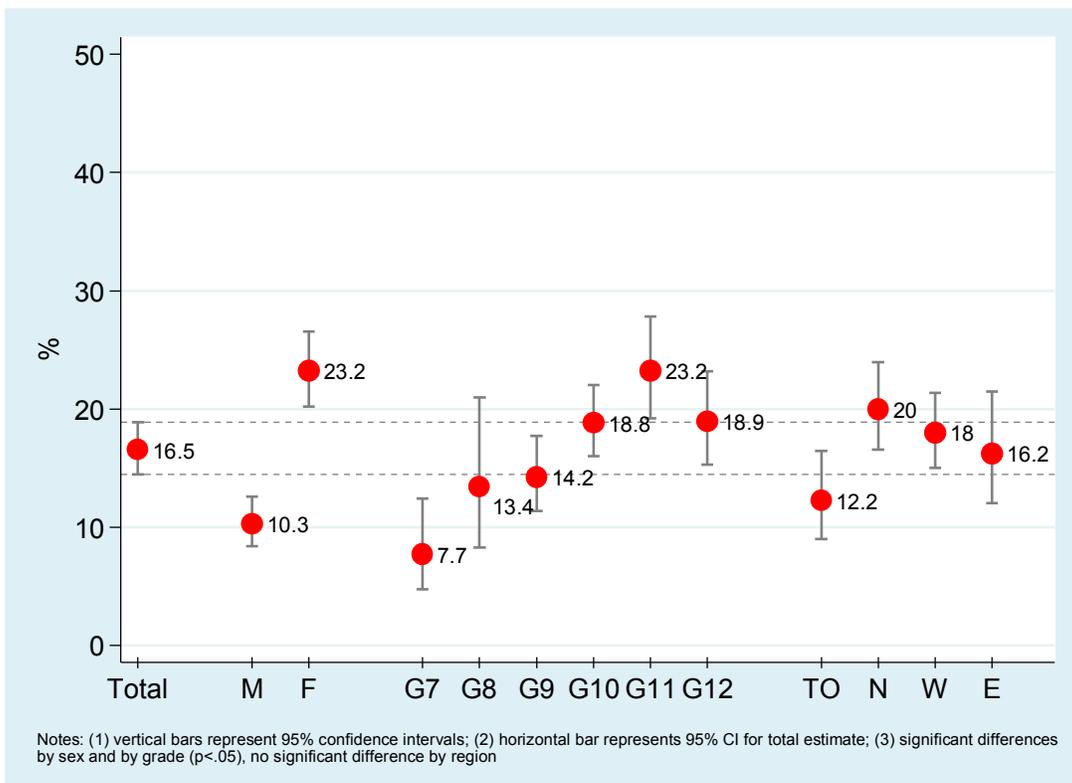
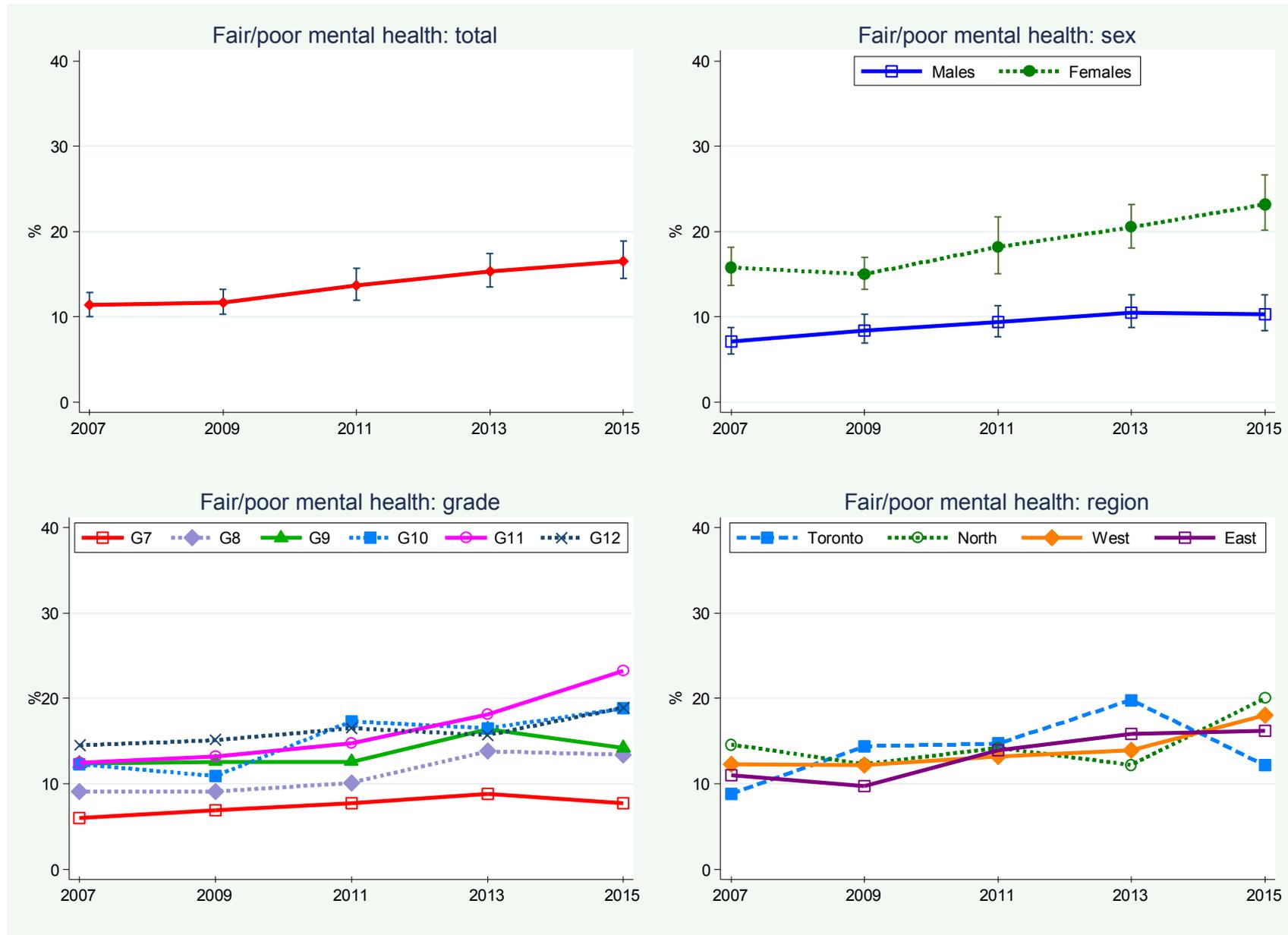


Figure 3.4.3
 Percentage Reporting Fair or Poor Mental Health, 2007–2015 OSDUHS (Grades 7–12)



3.4.2 Low Self-Esteem

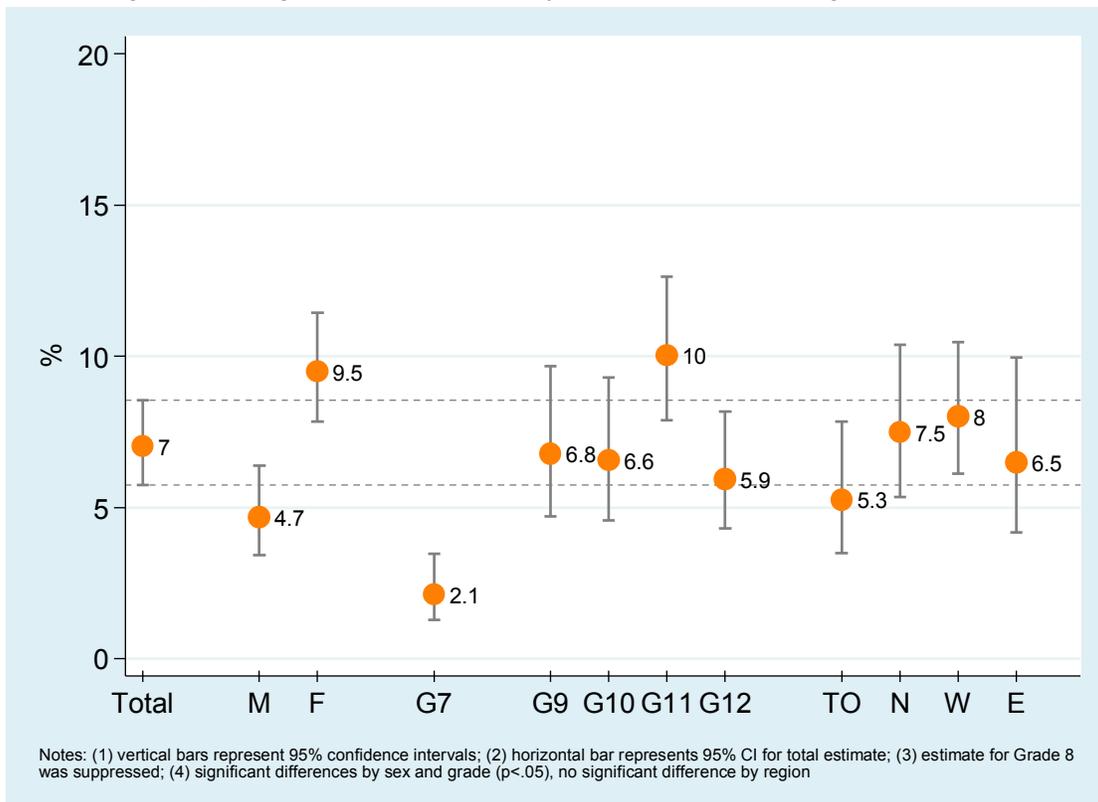
(Figure 3.4.4)

Starting in 2015, a global measure of self-esteem or self-liking from the *Rosenberg Self-Esteem Scale* (Rosenberg, Schooler, & Schoenbach, 1989) was included in the survey. A random half sample of students was asked “How much do you agree or disagree with the following statement? On the whole, I am satisfied with myself.” Those who responded “strongly disagree” were considered to have low self-esteem.

2015 (Grades 7–12):

- ❑ About 7.0% (95% CI: 5.7%-8.5%) of students indicate low self-esteem. This estimate represents about 68,700 students.
- ❑ Females are twice as likely as males to indicate low self-esteem (9.5% vs. 4.7%, respectively).
- ❑ There are significant grade differences showing that 7th graders (2.1%) are least likely to indicate low self-esteem and 11th graders (10.0%) are most likely.
- ❑ Despite some variation, there are no significant regional differences.

Figure 3.4.4
Percentage Reporting Low Self-Esteem by Sex, Grade, and Region, 2015 OSDUHS



3.4.3 Elevated Stress

(Figures 3.4.5, 3.4.6)

Starting in 2015, the OSDUHS included a question about the level of stress students experience. A random half sample of students was asked “*In the last 4 weeks, did you feel that you were under any stress, strain, or pressure?*” The response options were *Yes, almost more than I could take; Yes, a lot; Yes, some; Yes, a little; or Not at all.* Those who responded “*Yes, almost more than I could take*” or “*Yes, a lot*” were considered to be experiencing an elevated level of stress.

2015 (Grades 7–12):

- ❑ Only 17.8% of students report experiencing no stress in the past month. Conversely, 28.7% report an elevated level of stress. This percentage represents about 283,500 students.
- ❑ Females (38.2%) are twice as likely as males (19.8%) to report elevated stress.

- ❑ There are significant grade differences showing that stress increases with grade, from a low of 10.9% among 7th graders to 42.2% among 12th graders.
- ❑ There are no significant regional differences.

Figure 3.4.5
Percentage Reporting the Level of Stress Experienced in the Past Month, 2015 OSDUHS (Grades 7–12)

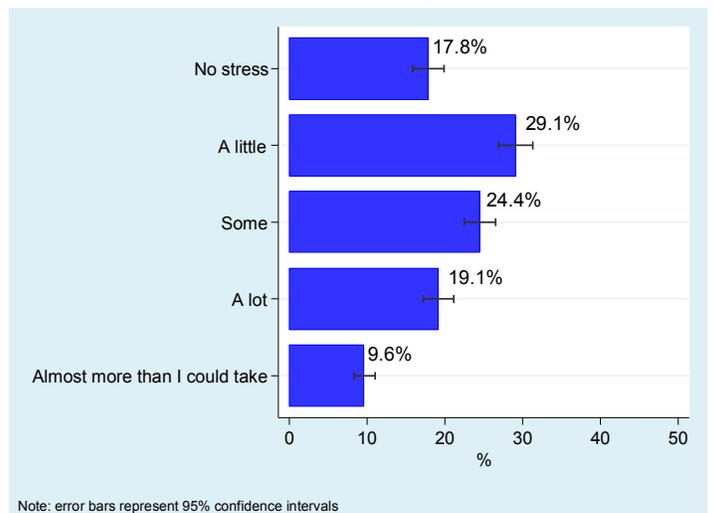
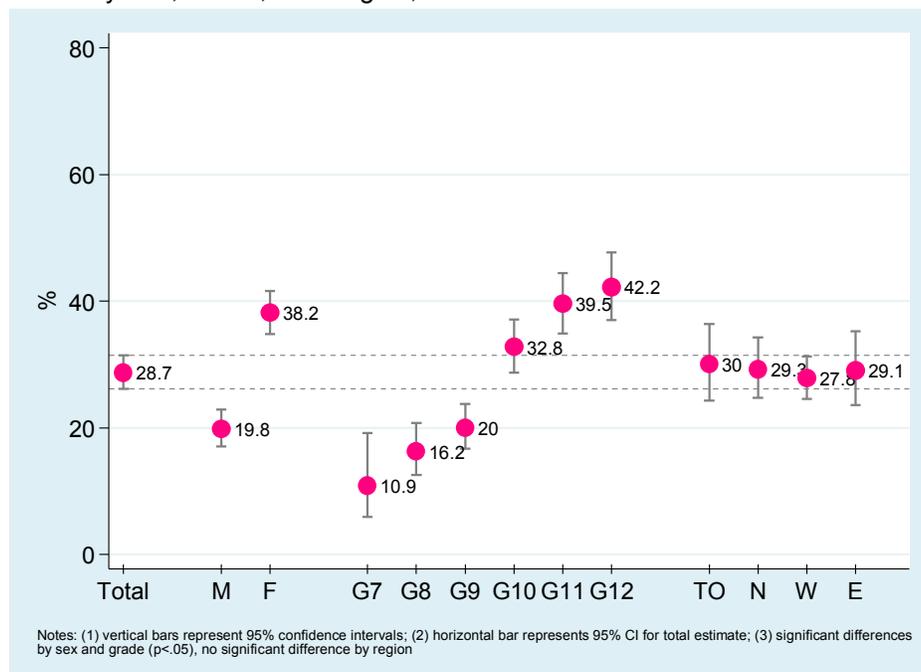


Figure 3.4.6
Percentage Reporting an Elevated Level of Stress Experienced in the Past Month by Sex, Grade, and Region, 2015 OSDUHS



3.4.4 Psychological Distress

(Figures 3.4.7–3.4.10; Tables A3.4.2, A3.4.3)

Starting in 2013,⁶⁶ the OSDUHS included the *Kessler 6-Item Psychological Distress Scale* (K6), which is a 6-item screening instrument designed to detect nonspecific psychological distress (symptoms of anxiety and depression) (Kessler et al., 2003). Although the K6 was first developed and calibrated for population health surveys of adults, the screener has been used in research with adolescents as well (Chan & Fung, 2014; Green, Gruber, Sampson, Zaslavsky, & Kessler, 2010; Li, Green, Kessler, & Zaslavsky, 2010; Peiper, Clayton, Wilson, & Illback, 2015). Note that this instrument is a screener and is not used for clinical diagnoses.

Each of the six items in the K6 begins with the wording “*In the last 4 weeks, about how often did you...*” The following symptoms comprise the K6:

- *feel nervous*
- *feel hopeless*
- *feel restless or fidgety*
- *feel so depressed (sad) that nothing could cheer you up*
- *feel that everything was an effort*
- *feel worthless*

Response categories are on a 5-point frequency scale ranging from (1) *None of the time* to (5) *All of the time*. Responses to each of the six items were rescaled ranging from 0 to 4. A summated score ranging from 0 to 24 was computed for students who answered all six items. Higher scores indicate higher levels of psychological distress. For our purposes, we used a cut-off score of eight or higher (of 24) to estimate the percentage experiencing a moderate-to-serious level of psychological distress (henceforth, called moderate psychological distress). Another

cut-off score of 13 or higher was used to estimate the percentage experiencing serious psychological distress. Assessment of the six scale items indicates an excellent internal consistency ($\alpha=0.88$).

2015 (Grades 7–12):

- ❑ The three most common symptoms experienced by students “most of the time” or “all of the time” during the past month were: feeling that everything was an effort (17.2%), feeling restless or fidgety (16.6%), and feeling nervous (15.0%). The least prevalent symptom was feeling hopeless (8.3%).
- ❑ One-third (34.0%) of students meet the criteria for moderate psychological distress during the past month (representing about 328,600 Ontario students). About 14.2% meet the criteria for serious psychological distress (representing about 137,000 Ontario students).
- ❑ Females are significantly more likely than males to indicate moderate psychological distress (45.9% vs. 22.7%, respectively), and serious psychological distress (21.7% vs. 7.0%, respectively).
- ❑ Psychological distress significantly increases with grade, peaking in grades 11 and 12.
- ❑ There is no significant regional variation in psychological distress.

2015 vs. 2013 (Grades 7–12):

- ❑ The percentage of students indicating moderate psychological distress in 2015 (34.0%) is significantly higher than in 2013 (23.5%). This increase is evident for both males and females, most grades, and most regions.
- ❑ The percentage indicating serious psychological distress significantly increased between 2013 (10.7%) and 2015 (14.2%). This increase is evident for most subgroups.

⁶⁶ During the years 1999 to 2011, the 12-item version of the General Health Questionnaire (GHQ12) was used to measure psychological distress. For various reasons (including a simpler response scale and one measuring absolute level rather than relative change), the OSDUHS transitioned to the Kessler 10-item scale (K10) to measure psychological distress in 2013. In 2015, the shorter Kessler 6-item scale (K6) was used because of its brevity. Note that the K6 is an abbreviated version of the K10.

Figure 3.4.7
Kessler-6 (K6) Scale Symptoms of Psychological Distress Experienced “Most of the Time” or “All of the Time” in the Past Month, 2015 OSDUHS (Grades 7–12)

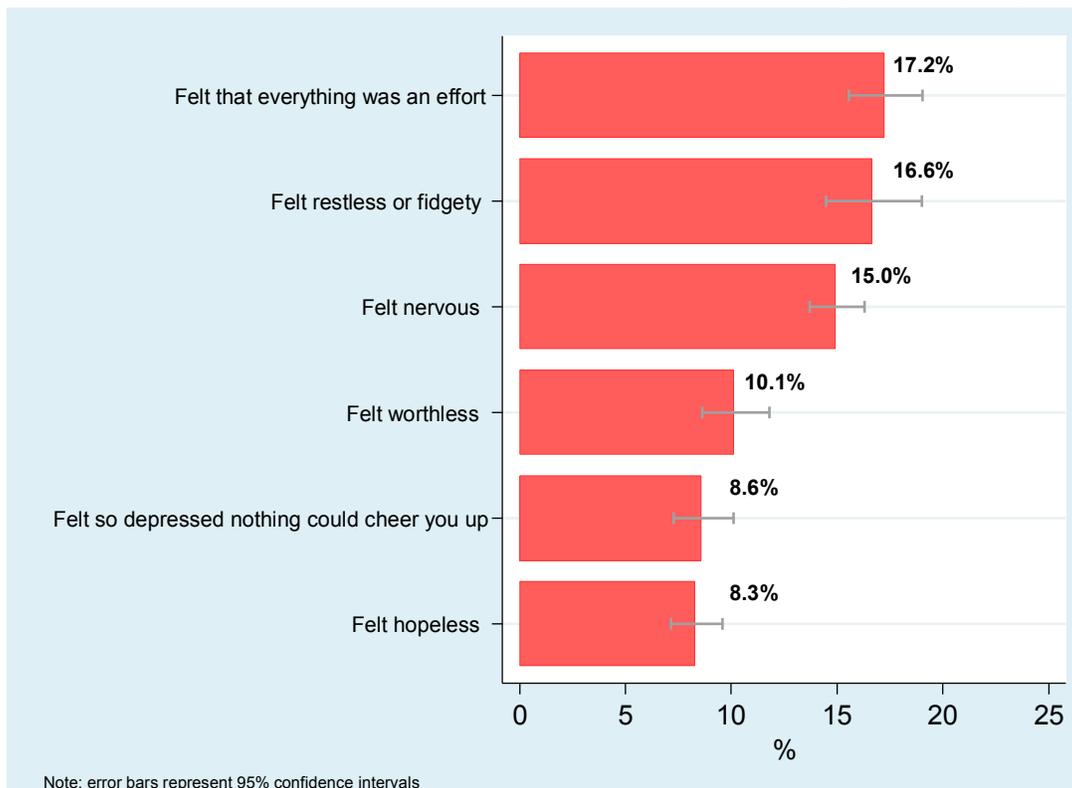


Figure 3.4.8
Kessler-6 (K6) Scale Symptoms of Psychological Distress Experienced “Most of the Time” or “All of the Time” in the Past Month by Sex, 2015 OSDUHS (Grades 7–12)



Figure 3.4.9
 Percentage Indicating Moderate-to-Serious Psychological Distress (K6 Scale 8+) in the Past Month by Sex, Grade, and Region, 2015 OSDUHS

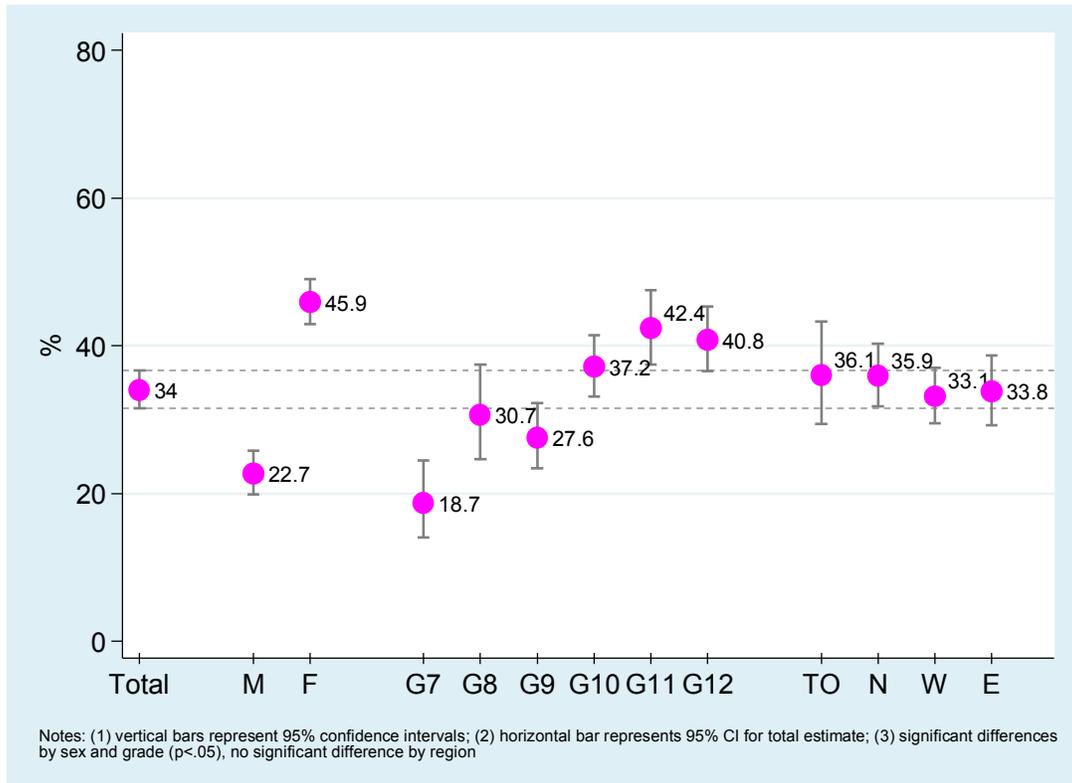
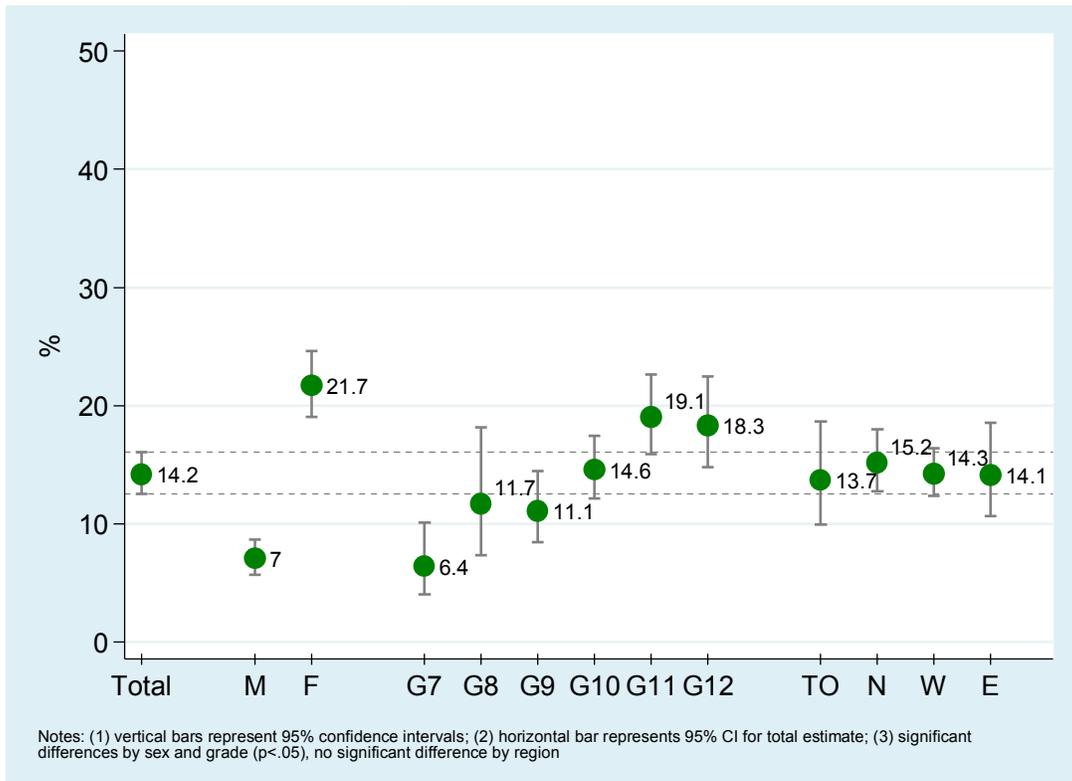


Figure 3.4.10
 Percentage Indicating Serious Psychological Distress (K6 Scale 13+) in the Past Month by Sex, Grade, and Region, 2015 OSDUHS



3.4.4 Suicidal Ideation and Suicide Attempt

(Figures 3.4.11–3.4.13; Tables A3.4.4, A3.4.5)

Starting in 2001, the OSDUHS included a question about suicidal ideation. Specifically, a random half sample of students were asked: “*In the last 12 months, did you ever seriously consider attempting suicide?*” Starting in 2007, 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*.

2015 (Grades 7–12):

- ❑ About one-in-eight (12.4%) students report that they had seriously contemplated suicide in the past year. This percentage represents an estimated 113,500 Ontario students. An estimated 3.0% of students report attempting suicide in the past year. This represents about 27,000 Ontario students.
- ❑ Females are twice as likely as males to report suicidal ideation (16.9% vs. 8.2%, respectively), as well as a suicide attempt (4.5% vs. 1.5%, respectively).
- ❑ Suicidal ideation significantly varies by grade showing an increased prevalence among students in grades 10–12 (about 15%-16%). Despite some variation, suicide attempt does not significantly vary by grade.
- ❑ Neither of the two indicators significantly differs by region.

2001–2015 (Grades 7–12):

- ❑ Among the total sample, the percentage reporting contemplating suicide did not significantly change between 2013 (13.4%) and 2015 (12.4%). The 2015 estimate is also similar to that seen in 2001 (11.4%), the first year of monitoring.
- ❑ The percentage of students reporting a suicide attempt has remained stable since 2007, the first year of monitoring, at around 3%.
- ❑ No subgroup shows a significant change between 2013 and 2015 in suicidal ideation or suicide attempt. Further, current estimates are similar to those seen when monitoring first began.

Figure 3.4.11
 Percentage Reporting Suicidal Ideation in the Past Year by Sex, Grade, and Region, 2015 OSDUHS

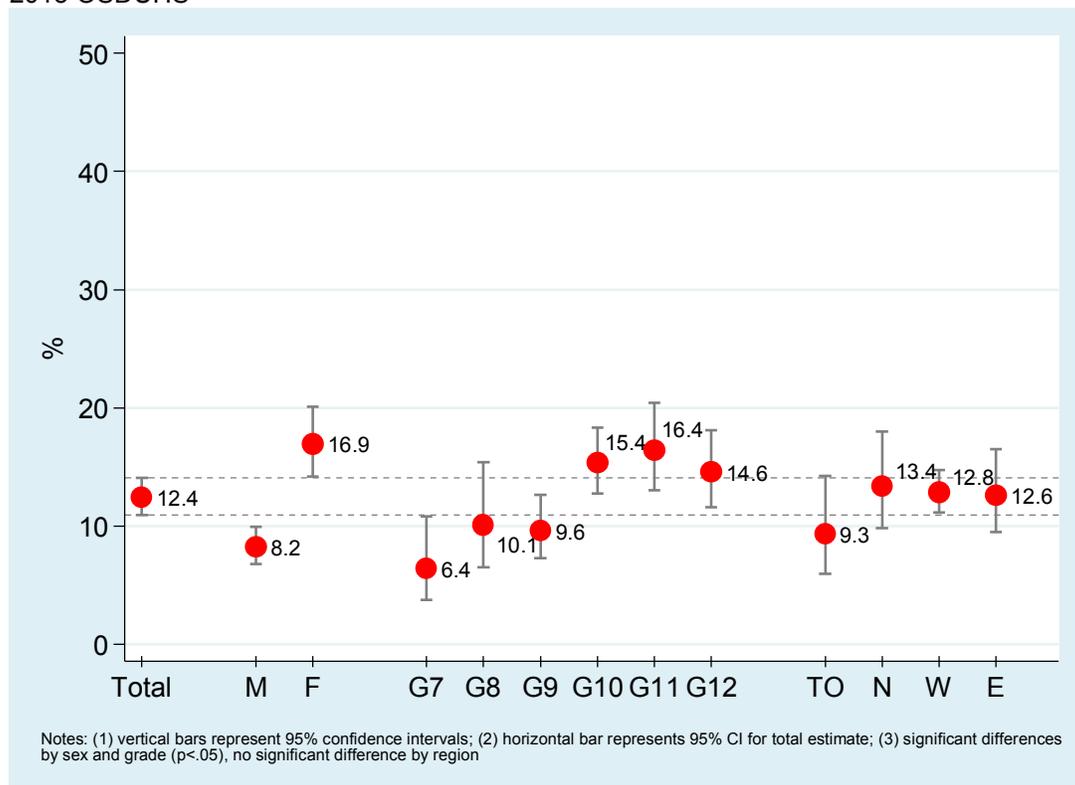


Figure 3.4.12
 Percentage Reporting a Suicide Attempt in the Past Year by Sex, Grade, and Region, 2015 OSDUHS

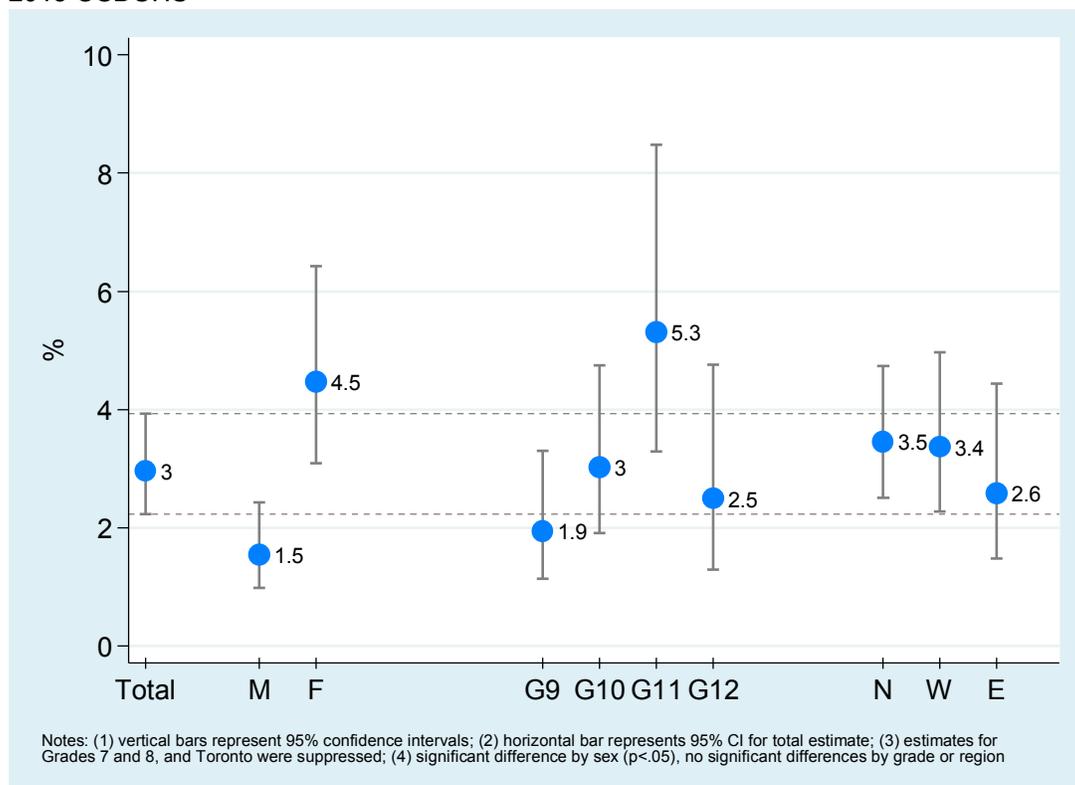


Figure 3.4.13
 Percentage Reporting Suicidal Ideation in the Past Year, 2001–2015 OSDUHS (Grades 7–12)



3.4.5 Symptoms of Attention-Deficit/Hyperactivity Disorder (ADHD)

(Figures 3.4.14-3.4.16)

For the first time in 2015, the OSDUHS included an instrument to screen for symptoms of attention-deficit/hyperactivity disorder (ADHD) as per the DSM-IV criteria. A random half sample answered the 6-item *ADHD Self-Report Scale-V1.1* (ASRS; Kessler et al., 2005a, 2007). Although the ASRS was first developed for population health surveys of adults, the screener has been used in research with adolescents as well (Jelenchick et al., 2015; Madruga et al., 2012; Sonnby, Aslund, Leppert, & Nilsson, 2011). Note that this instrument is a screener and is not used for a clinical diagnosis.

The following six questions were asked:

- *How often did you have trouble wrapping up the final details of a project, once the challenging parts had been done?*
- *How often did you have difficulty getting things in order when you had to do a task that required organization?*
- *How often did you have problems remembering appointments or obligations (things you had to do)?*
- *When you had a task that required a lot of thought, how often did you avoid or delay getting started?*
- *How often did you fidget or squirm with your hands or feet when you had to sit down for a long time?*
- *How often did you feel overly active and compelled to do things, like you were driven by a motor?*

All questions refer to the past six months.

Response categories are on a 5-point frequency scale ranging from (1) *Never* to (5) *Very often*. Responses to each of the six items were rescaled ranging from 0 to 4. A summated score ranging from 0 to 24 was computed for students who answered all six items. A cut-off score of 14 or higher was considered a positive indication of ADHD symptoms. Assessment of the six scale items indicates an excellent internal consistency ($\alpha=0.79$).

2015 (Grades 7–12):

- ❑ Among the six ASRS items, the most commonly experienced “often” or “very often” during the past six months was fidgeting with hands/feet when sitting for a long time (38.3%). The least commonly experienced symptom was difficulty getting things in order when a task required organization (11.8%). Females are significantly more likely than males to report experiencing five of the six scale items.
- ❑ About 15.8% (95% CI: 14.0%-17.6%) of students report symptoms of ADHD. This percentage represents roughly 152,700 students in grades 7–12.
- ❑ Females (18.1%) are significantly more like than males (13.6%) to report ADHD symptoms.
- ❑ The likelihood of experiencing symptoms of ADHD significantly increases with grade, peaking in grades 11 and 12 (about 19%-22%).
- ❑ There are no significant regional differences.

Figure 3.4.14
 Percentage Reporting Experiencing *ADHD Self-Report Scale (ASRS)* Items “Often” or “Very Often” in the Past Six Months, 2015 OSDUHS (Grades 7–12)

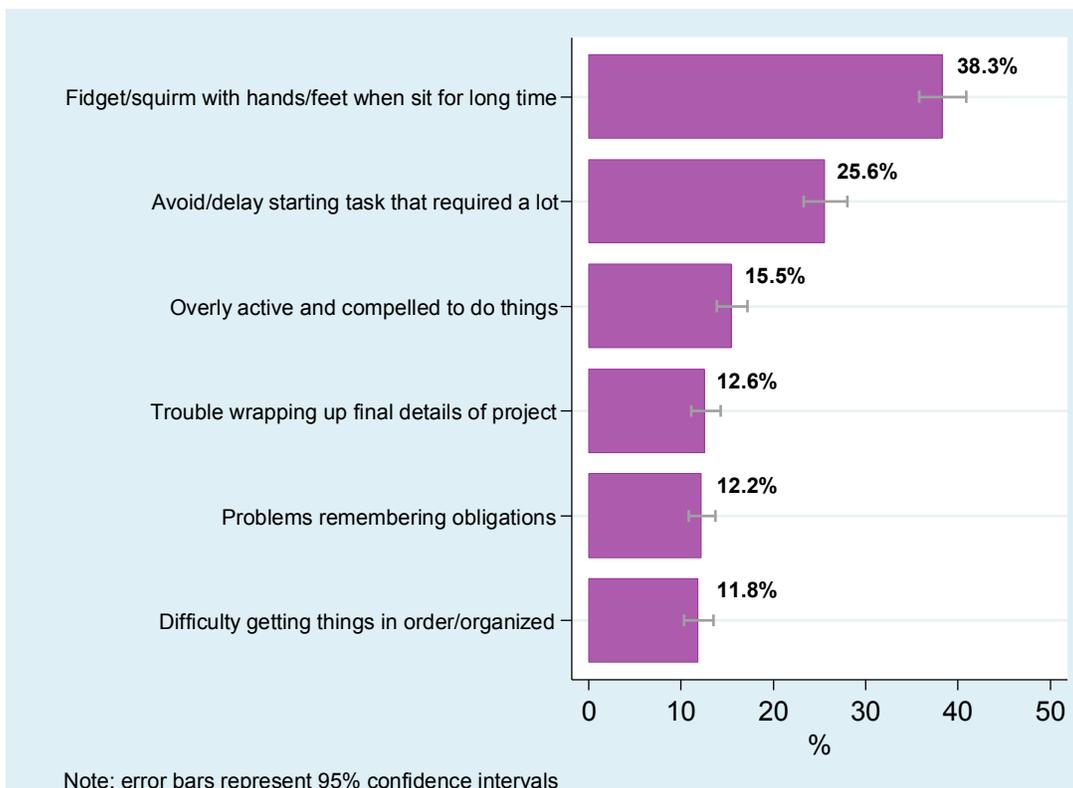


Figure 3.4.15
 Percentage Reporting Experiencing *ADHD Self-Report Scale (ASRS)* Items “Often” or “Very Often” in the Past Six Months by Sex, 2015 OSDUHS (Grades 7–12)

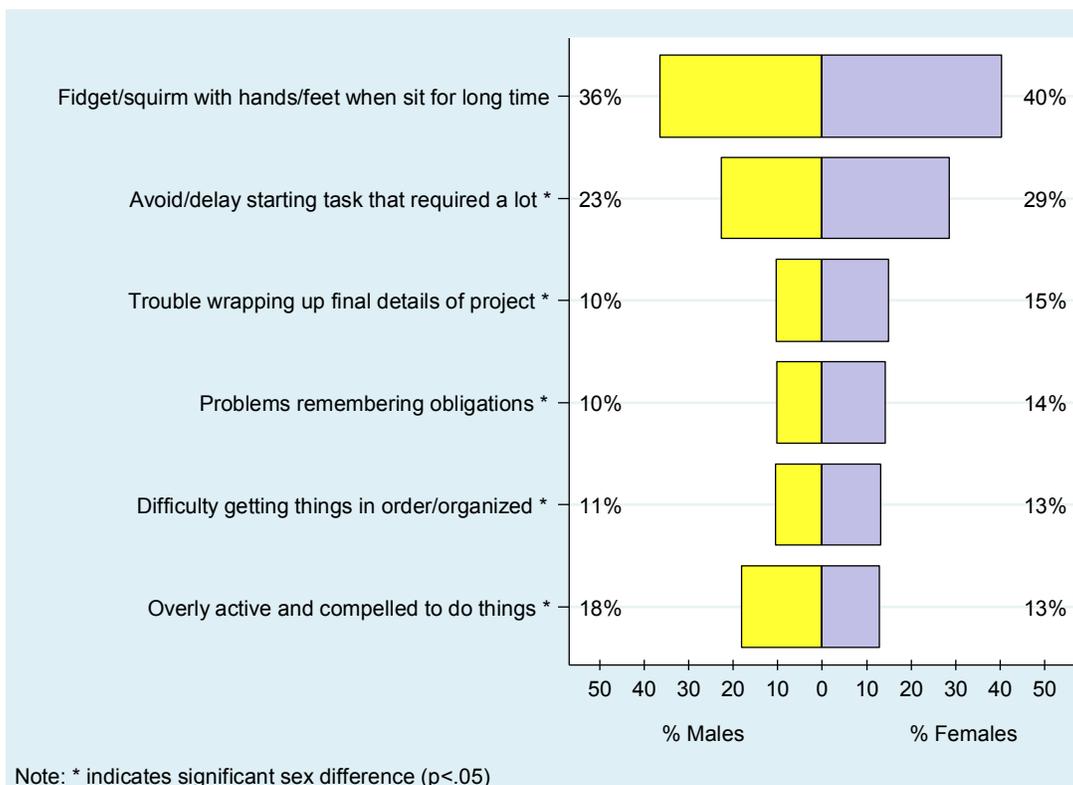
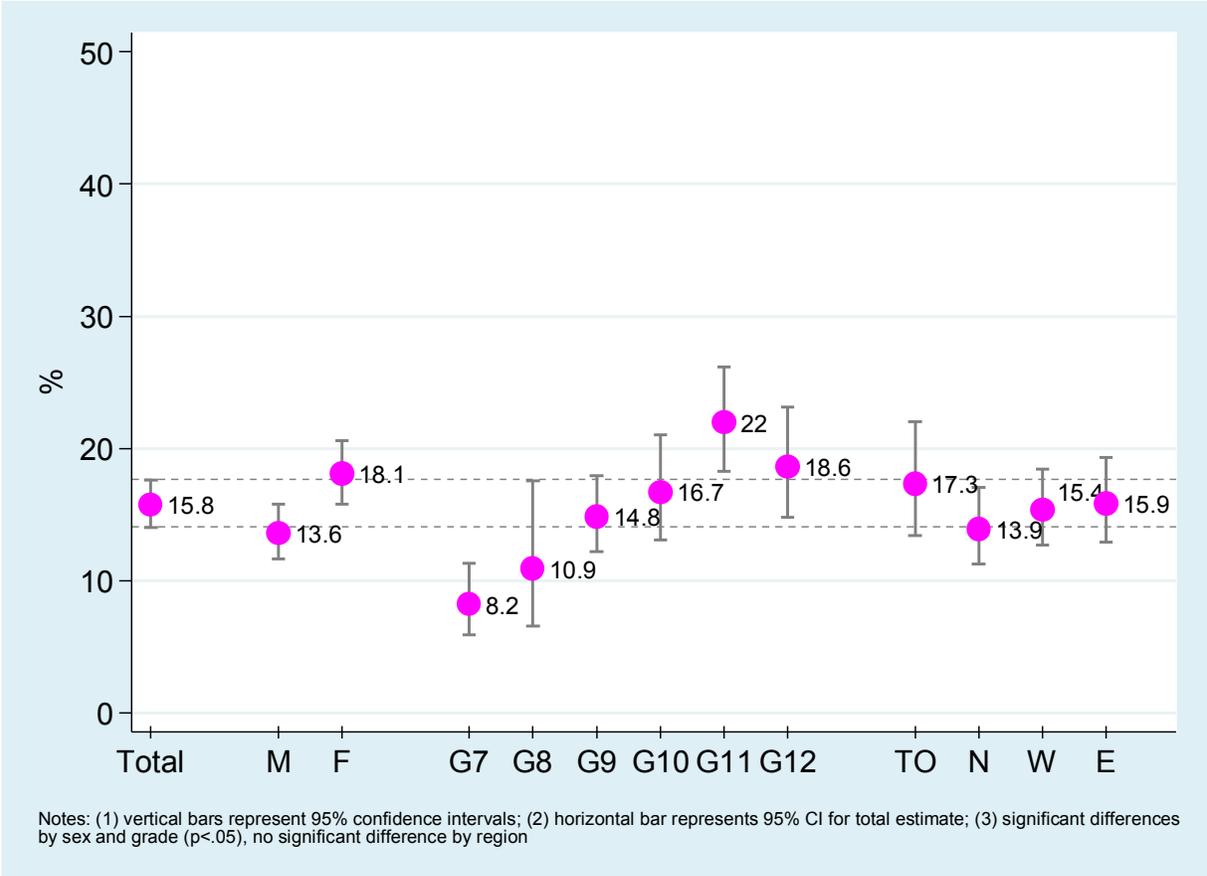


Figure 3.4.16
 Percentage Reporting ADHD Symptoms (ASRS 14+) in the Past Six Months by Sex,
 Grade, and Region, 2015 OSDUHS (Grades 7–12)



3.5 Externalizing Indicators

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

3.5.1 Antisocial Behaviour

Since 1991, the OSDUHS has surveyed students about engaging in violent and nonviolent antisocial behaviours. This section looks at the percentage of students engaging in antisocial behaviours at least once during the past year.

The 10 activities listed below were prefaced with the following: “*How often (if ever) in the last 12 months have you done each of the following...?*”

Nonviolent Behaviours:

- *taken a car without permission*
- *banged up or damaged something on purpose (vandalism)*
- *sold marijuana or hashish*
- *taken things worth \$50 or less*
- *taken things worth more than \$50*
- *broken into a locked building (excluding home)*
- *ran away from home*
- *set something on fire that you weren't supposed to (added in 2007)*

Violent Behaviours:

- *beat up or hurt anyone (excluding sibling fights)*
- *carried a weapon (e.g., gun or knife)*

A random half sample of students responded to each activity question using an open-ended format to indicate the number of occasions during the past 12-month period.

An overall measure of antisocial behaviour was created based on the nine items consistently used since 1991 (this index excludes setting something on fire). Overall antisocial behaviour is defined here as participating in three or more of the nine behaviours at least once during the past year.

Overall Antisocial Behaviour

(Figures 3.5.1–3.5.4; Tables A3.5.1a, A3.5.1b)

2015:

- ❑ Among the total sample of students, the most prevalent of the 10 behaviours is fire setting (8.9%) and the least prevalent is theft of goods worth more than \$50 (2.3%).
- ❑ An estimated 5.2% of students engage in antisocial behaviour (defined as three or more of nine behaviours surveyed over time). This percentage represents about 50,700 students in Ontario.
- ❑ Males are significantly more likely than females to engage in antisocial behaviour (6.4% vs. 4.1%, respectively).
- ❑ Students in grades 10, 11, and 12 are the most likely to engage in antisocial behaviour (about 7%).
- ❑ There are no significant differences among the regions.

Figure 3.5.1
 Percentage Reporting Engaging in Antisocial Behaviours at Least Once in the Past Year, 2015 OSDUHS (Grades 7–12)

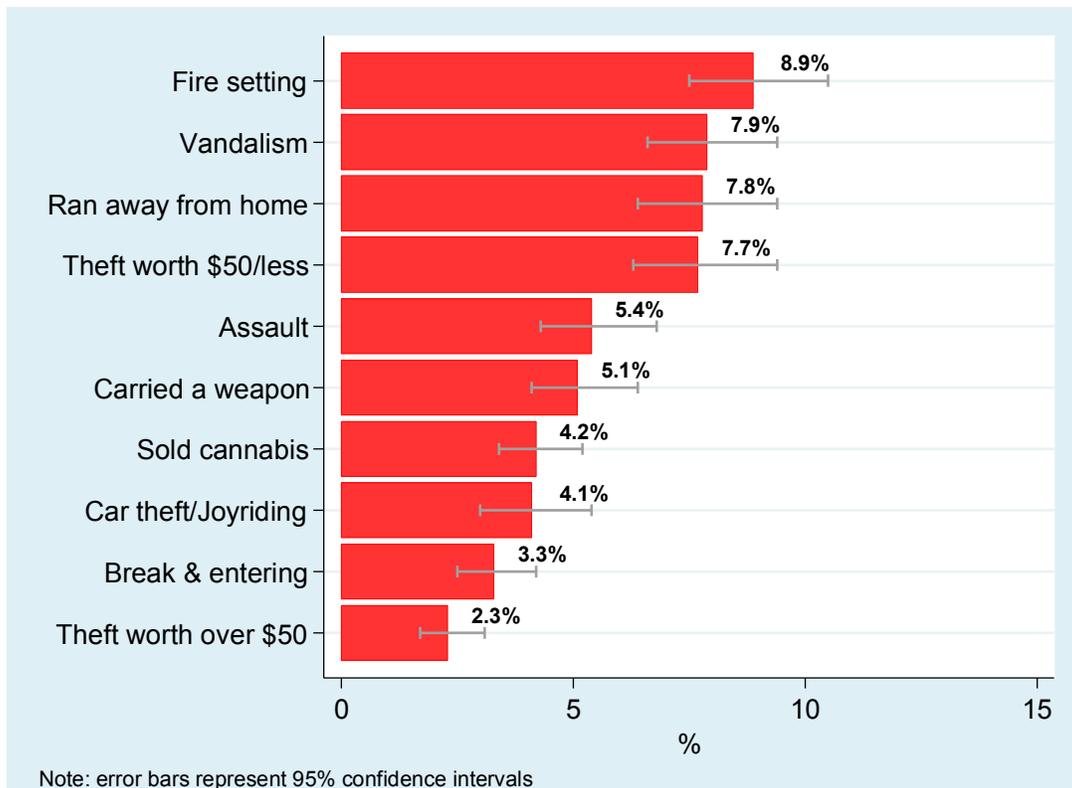


Figure 3.5.2
 Percentage Reporting Engaging in Antisocial Behaviours at Least Once in the Past Year by Sex, 2015 OSDUHS (Grades 7–12)

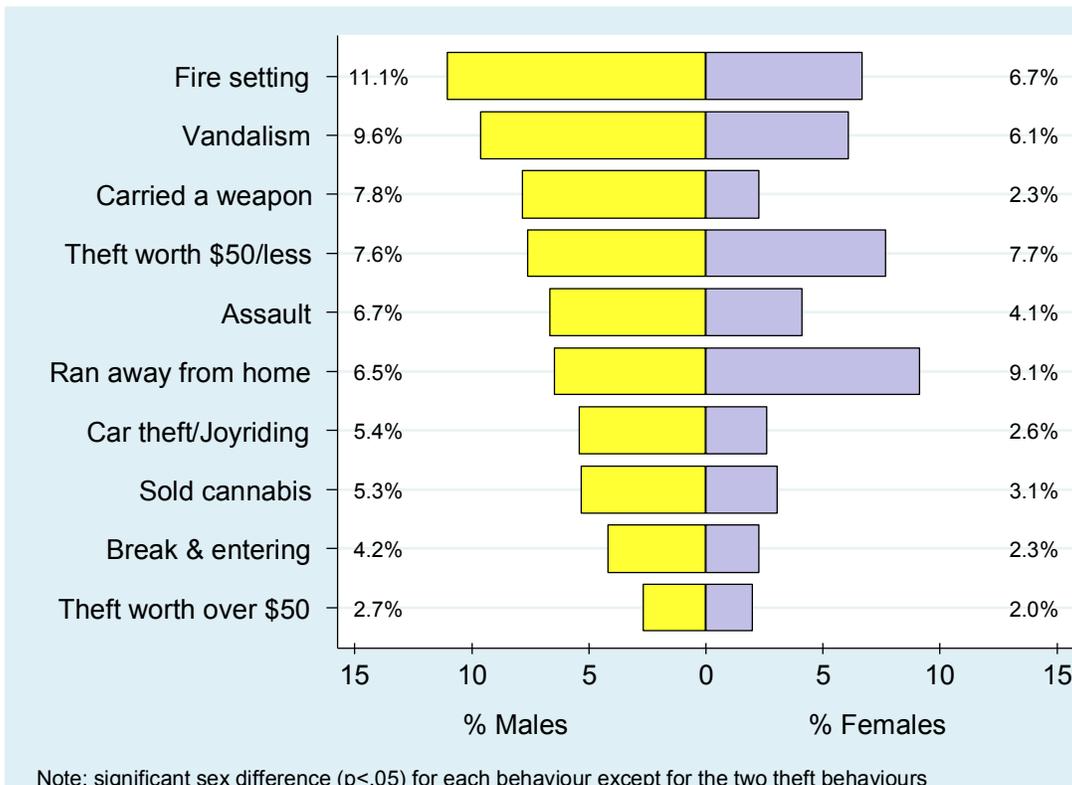
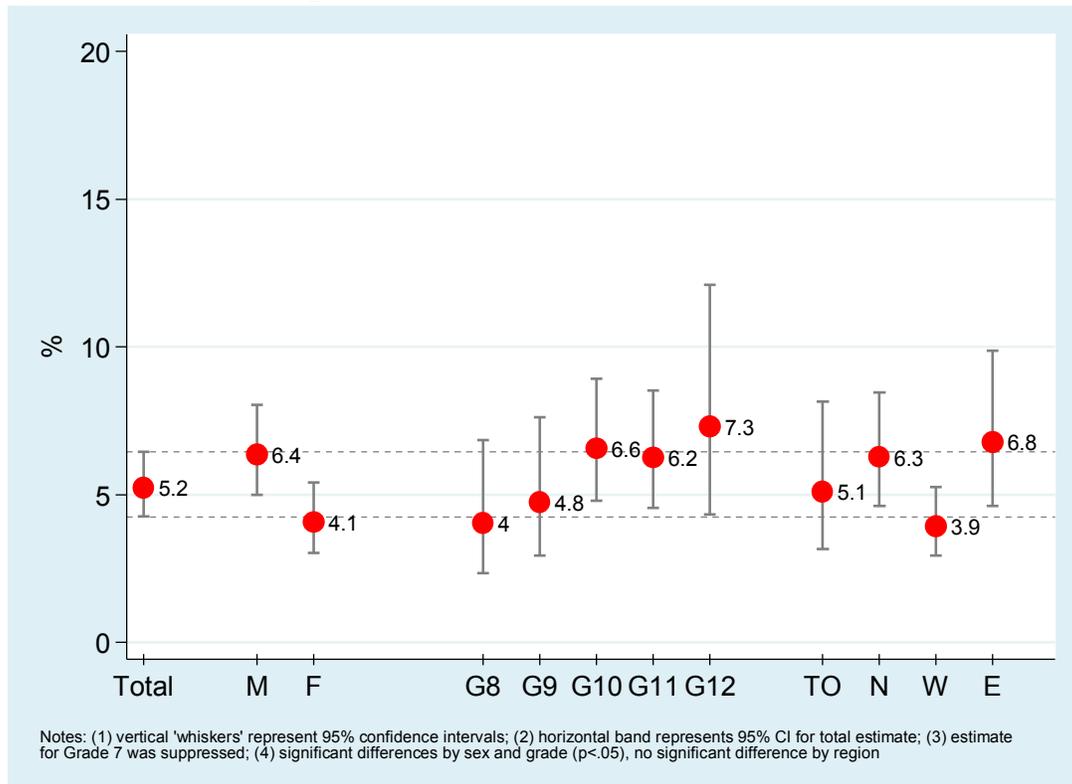


Figure 3.5.3
 Percentage Reporting Antisocial Behaviour (3+ of 9 Behaviours) in the Past Year
 by Sex, Grade, and Region, 2015 OSDUHS



1999–2015 (Grades 7–12):

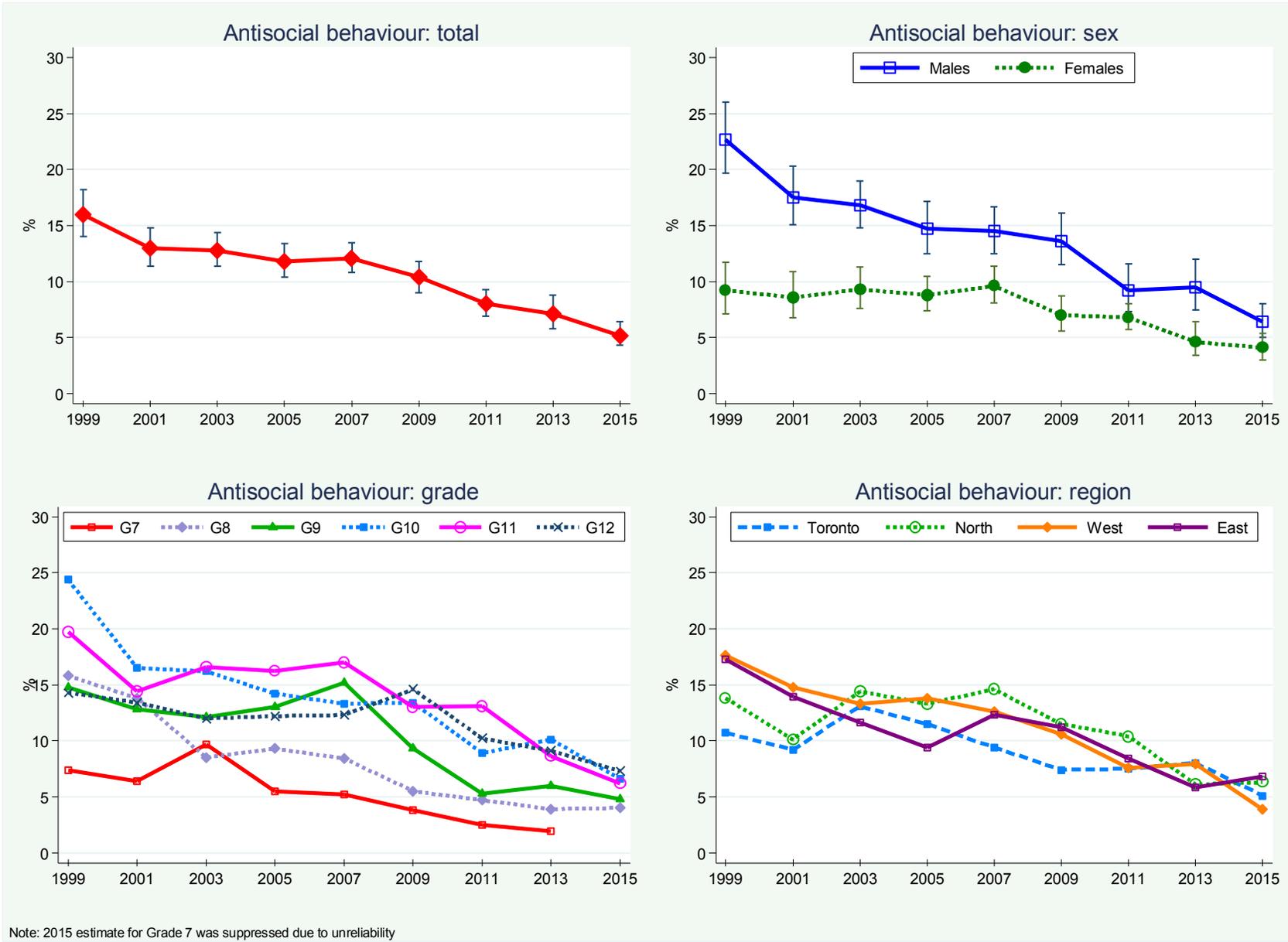
- ❑ Overall antisocial behaviour shows a significant linear decline between 1999 and 2015, from 16.0% to 5.2%.
- ❑ There has been a dramatic decline among males (from 22.7% in 1999 to 6.4% in 2015) and, although weaker, among females (from 9.2% to 4.1%).
- ❑ Students in all grades except for 12th grade show a significant decline in antisocial behaviour since 1999.
- ❑ All regions except for Toronto show a significant decline in antisocial behaviour since 1999.

1993–2015 (Grades 7, 9, 11 only):

Note: 1991 is excluded due to the absence of the weapon carrying question.

- ❑ Over the long-term, there has been a significant decline in antisocial behaviour (among grades 7, 9, and 11 only), from 15.9% in 1993 to 4.1% in 2015. The long-term decline in antisocial behaviour is evident for both sexes, and especially prominent among males who show a decline from 21.0% in 1993 down to 3.9% in 2015.

Figure 3.5.4
 Percentage Reporting Antisocial Behaviour (3+ of 9 Behaviours) in the Past Year, 1999–2015 OSDUHS (Grades 7–12)



3.5.2 Violent Behaviours

(Figures 3.5.5–3.5.7; Tables A3.5.1a, A3.5.1b)

In this section we describe the past year prevalence of assault and carrying a weapon.

2015 (Grades 7–12):

Assault

- ❑ Among all students, 5.4% (95% CI: 4.3%–6.8%) report assaulting someone at least once during the 12 months before the survey. This percentage represents about 52,400 students in Ontario.
- ❑ Males are significantly more likely than females to report assaulting someone (6.7% vs. 4.1%, respectively).
- ❑ Assault does not significantly vary by grade or by region.

Weapon Carrying

- ❑ An estimated 5.1% (95% CI: 4.1%–6.4%) of students carried a weapon, such as a knife or gun, at least once during the 12 months before the survey. This percentage represents about 49,600 students.

- ❑ Males (7.8%) are four times more likely than females (2.3%) to report carrying a weapon.
- ❑ Despite some variation, there are no significant differences by grade or by region.

1999–2015 (Grades 7–12):

- ❑ The percentage of students reporting assaulting someone shows a significant linear decline since 1999, from 19.9% down to 5.4% in 2015.
- ❑ The percentage of students reporting carrying a weapon shows a significant linear decline since 1999, from 13.5% down to 5.1% in 2015.

1991–2015 (Grades 7, 9, 11 only):

- ❑ Assault peaked in the late 1990s, declined sharply thereafter, followed by a steady decline. The 2015 estimate is significantly lower than estimates seen in the early 1990s.
- ❑ Carrying a weapon peaked in 1993, steadily declined until about 2009, and has since levelled off. The 2015 estimate is significantly lower than estimates seen in the early 1990s.

Figure 3.5.5
Percentage Reporting Assaulting Someone at Least Once in the Past Year by Sex, Grade, and Region, 2015 OSDUHS

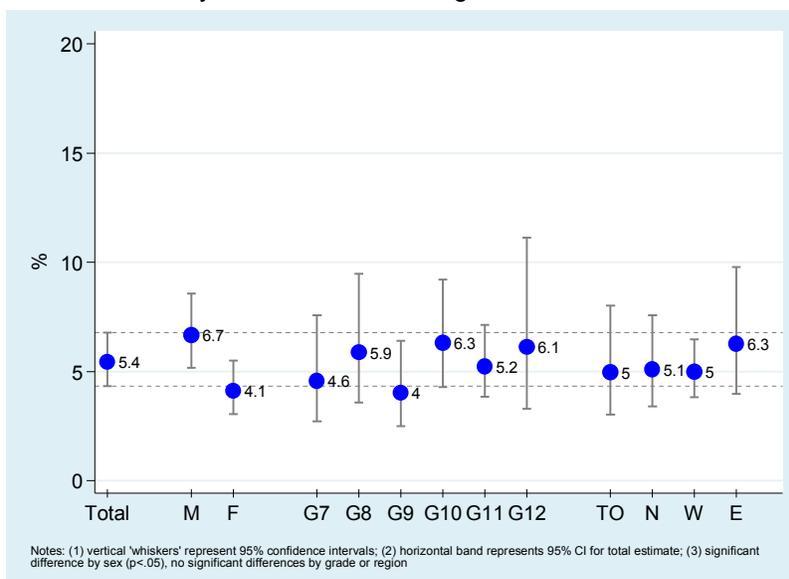


Figure 3.5.6
 Percentage Reporting Carrying a Weapon (i.e., Knife or Gun) at Least Once in
 the Past Year by Sex, Grade, and Region, 2015 OSDUHS

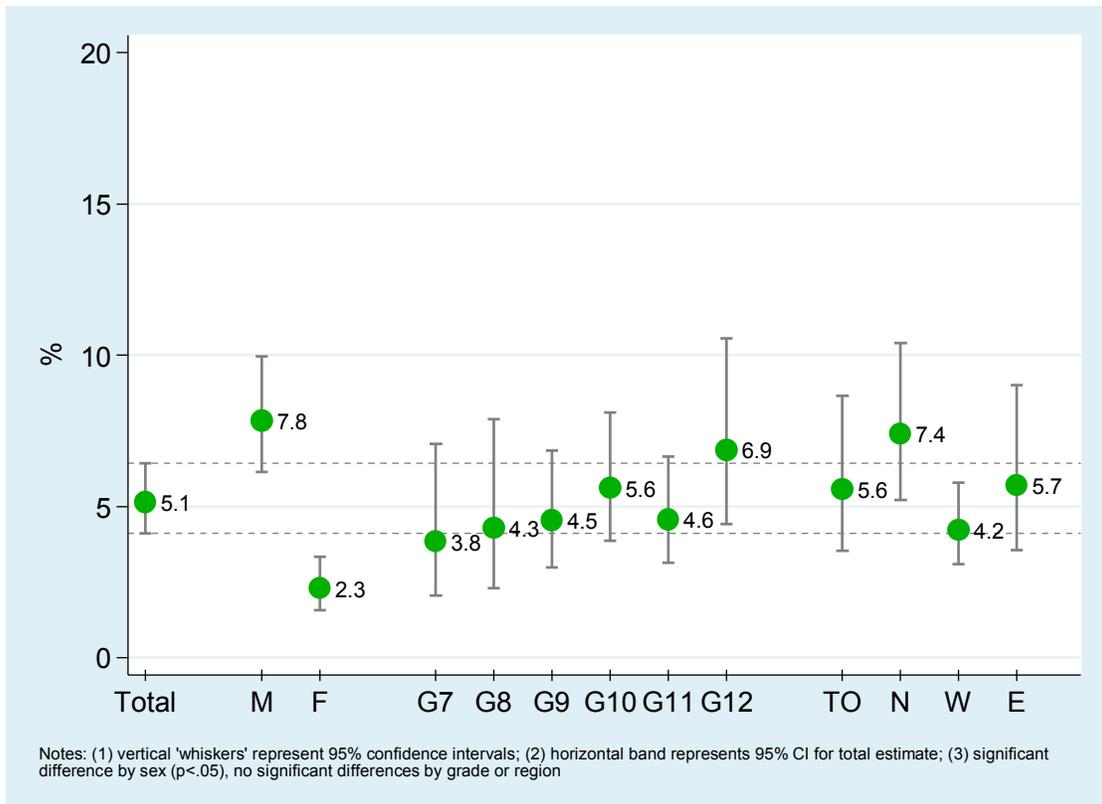
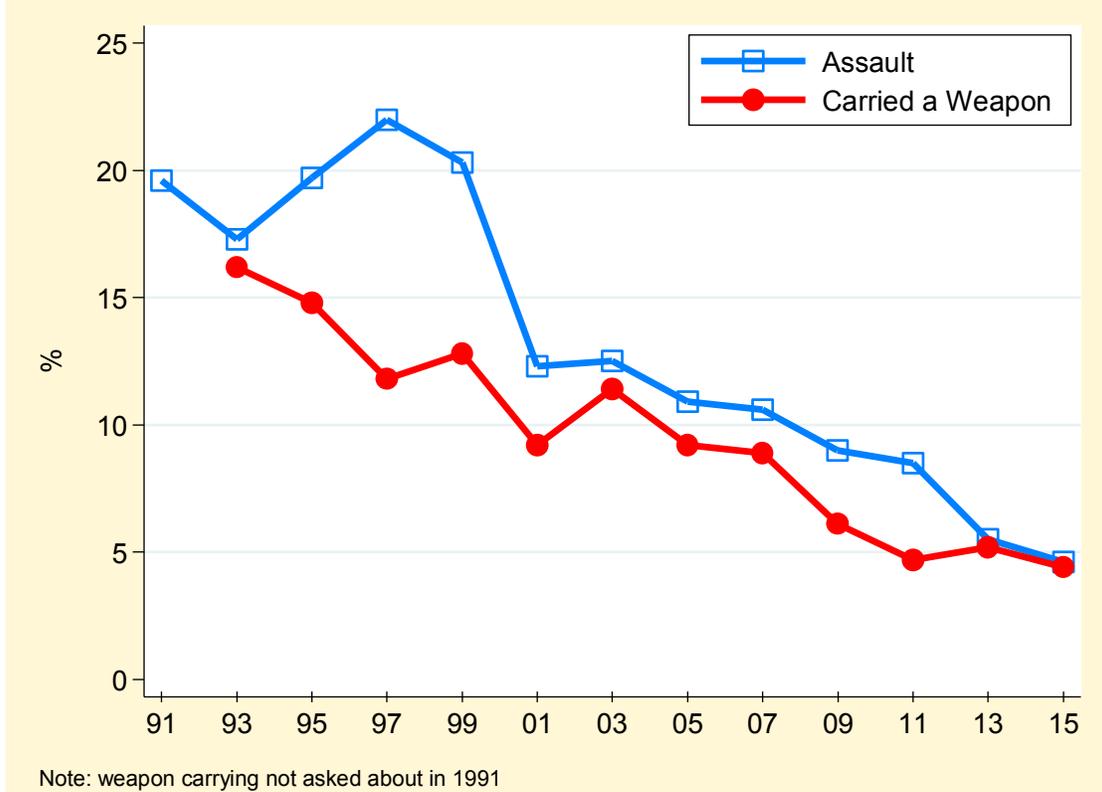


Figure 3.5.7
 Percentage Reporting Violent Behaviours, 1991–2015 OSDUHS (Grades 7, 9, 11 only)



3.5.3 Violence on School Property

(Figures 3.5.8–3.5.10; Tables A3.5.2, A3.5.3)

Starting in 2001, the OSDUHS introduced a question about fighting on school property. A random half sample was asked: *“During the last 12 months, how many times were you in a physical fight on school property?”* In this section we describe the percentage reporting at least one occasion during the past year.

Starting in 2003, the OSDUHS asked students about being threatened with a weapon on school property. A random half sample was asked: *“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?”* In this section we describe the percentage reporting at least one occasion during the past year.

2015 (Grades 7–12):

Physical Fighting

- ❑ One-in-ten (10.4%) – an estimated 102,200 students – report fighting on school property at least once in the past 12 months (6.4% report a single time, while 4.0% report two or more times).
- ❑ There is a significant sex difference, with males significantly more likely than females to report fighting at school (15.9% vs. 4.5%, respectively).
- ❑ Fighting at school significantly decreases with grade. Students in grades 7 and 8 (about 18%) are most likely to fight at school, whereas 12th graders (5.5%) are least likely.
- ❑ There are no significant differences among the regions.

Threatened or Injured with a Weapon

- ❑ An estimated 5.8% – roughly 56,900 students in grades 7 through 12 – report being threatened or injured with a weapon on school property at least once in the past year (3.6% report a single event, while 2.2% report two or more times).
- ❑ Males are twice as likely as females to report being threatened or injured with a weapon at school (7.9% vs. 3.6 %, respectively).
- ❑ There are no significant differences among the grades.
- ❑ There are no significant differences among the regions.

2001–2015 (Grades 7–12):

- ❑ The percentage of students reporting physical fighting at school in 2015 (10.4%) is similar to the estimate from 2013 (10.9%), but significantly lower than the estimate from 2001 (16.9%), the first year of monitoring. The 2015 estimates for males, females, 9th graders, students in the West, and East are significantly lower than their respective 2001 estimates.
- ❑ The percentage of students reporting being threatened or injured with a weapon at school in 2015 (5.8%) does not differ from 2013 (5.8%), or 2003 (7.7%), the first year of monitoring. No significant changes among the subgroups are evident.

Figure 3.5.8
 Percentage Reporting Fighting at School at Least Once in the Past Year by Sex, Grade, and Region, 2015 OSDUHS

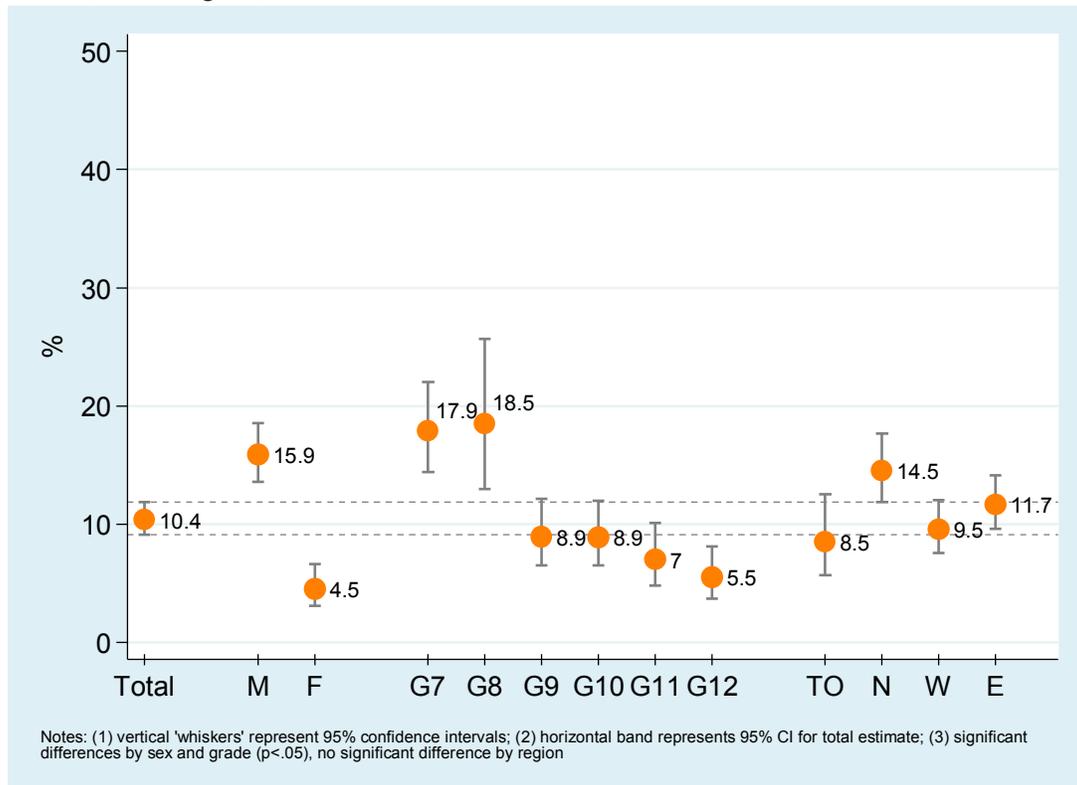


Figure 3.5.9
 Percentage Reporting Having Been Threatened or Injured with a Weapon at School at Least Once in the Past Year by Sex, Grade, and Region, 2015 OSDUHS

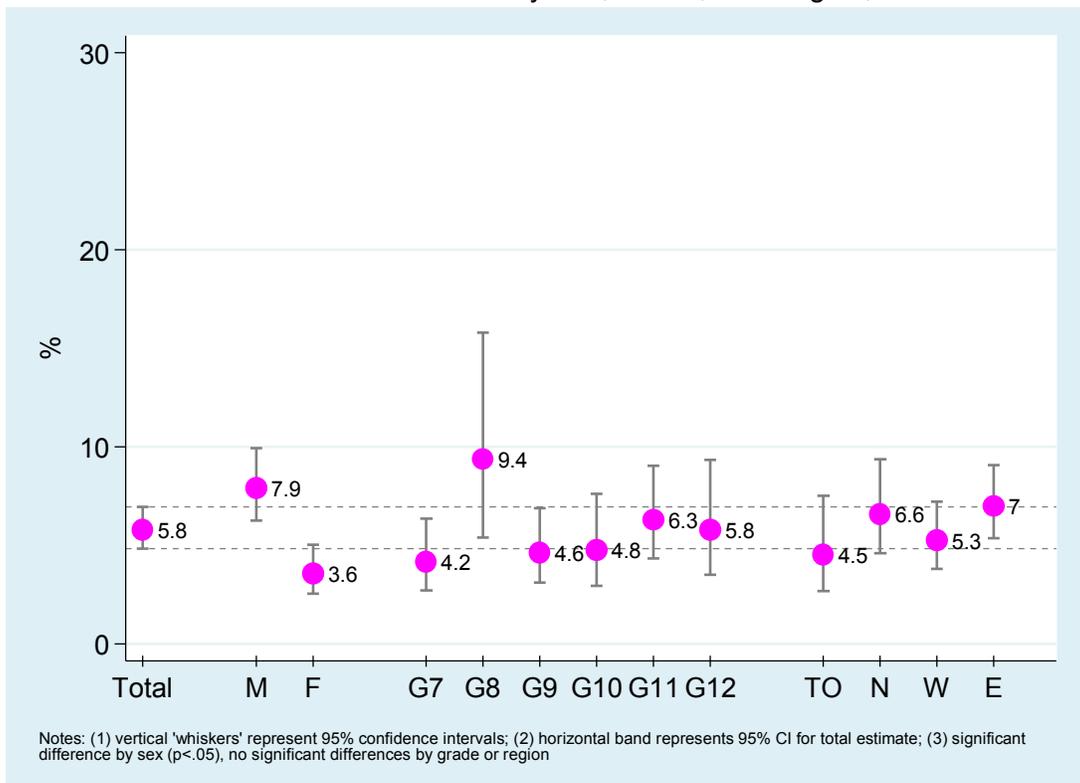
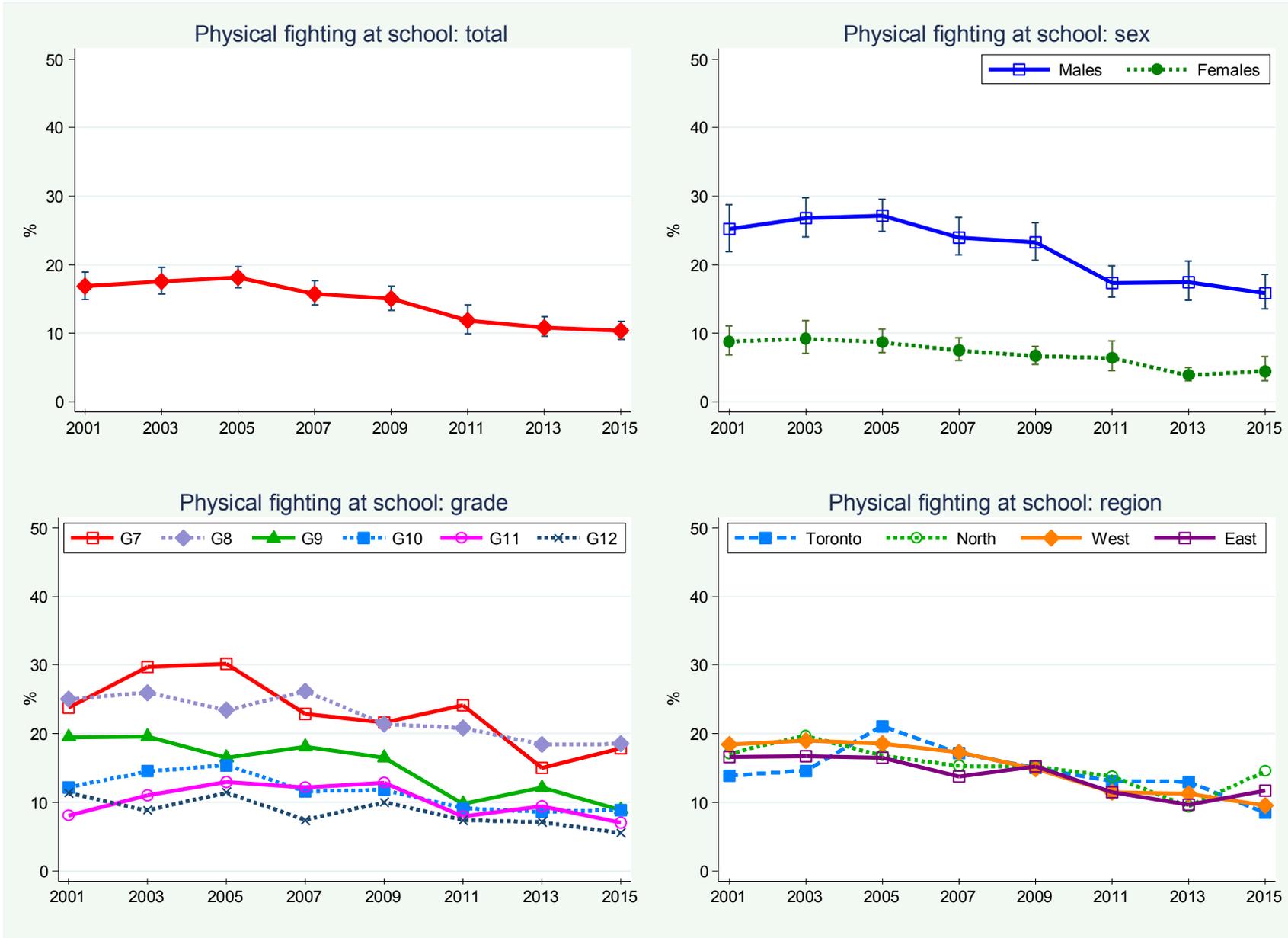


Figure 3.5.10
 Percentage Reporting Fighting at School in the Past Year, 2001–2015 OSDUHS (Grades 7–12)



3.5.4 Bullying at School

(Figures 3.5.11–3.5.14; Tables A3.5.4, A3.5.5)

Starting in 2003, the OSDUHS introduced 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.” Note that the last sentence was added in 2005.

A random half sample of students was 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: (1) not involved in bullying at school; (2) physical attacks (for example, beat up, pushed or kicked); (3) verbal attacks (for example, teased, threatened, spread rumours); or (4) 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 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 (1) *Was not bullied at school*; (2) *Daily or almost daily*; (3) *About once a week*; (4) *About once a month*; or (5) *Less than once a month*.

2015 (Grades 7–12):

Bullying Victims at School

- ❑ One-quarter (23.6%) of 7th to 12th graders report being bullied at school since September. This represents about 231,200 students in Ontario.

- ❑ The most prevalent mode of victimization is verbal (21.0%), while only 1.1% are typically bullied physically, and 1.5% are typically victims of theft or vandalism.
- ❑ An estimated 6.6% of students report being bullied on a daily or weekly basis, and 15.8% are bullied monthly or less often.
- ❑ Females are significantly more likely than males to report being bullied in any way at school (27.8% vs. 19.6%, respectively). This sex difference, however, varies by mode. Females are more likely than males to be bullied verbally, whereas males are more likely to be bullied physically.
- ❑ Despite some variation, there are no significant grade differences in reports of being bullied at school.
- ❑ Despite some variation, there are no significant regional differences in reports of being bullied at school.

2003–2015 (Grades 7–12):

- ❑ The percentage of 7th to 12th graders reporting being bullied at school did not significantly change between 2013 (25.0%) and 2015 (23.6%). However, there has been a significant linear decline since 2003 (32.7%), the first year of monitoring.
- ❑ The decline in bullying victimization at school since 2003 is significant among males, but not among females. All grades except grades 10 and 12 show a significant decline since 2003. All regions except Toronto show a significant decline since 2003.
- ❑ There has been no significant change over time regarding the typical way students are bullied at school, or in the frequency of being bullied.

Figure 3.5.11
 Percentage Reporting the Typical Way They Were Bullied at School Since September by Sex, 2015 OSDUHS (Grades 7–12)

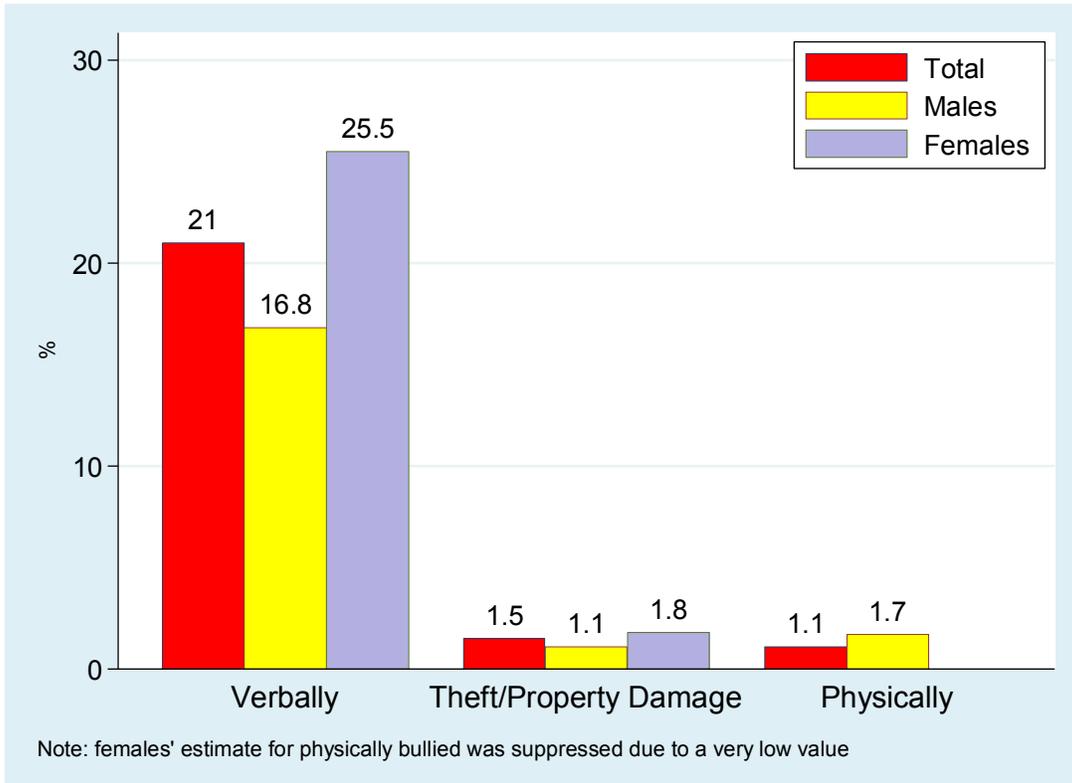


Figure 3.5.12
 Percentage Reporting Being Bullied (in Any Way) at School Since September by Sex, Grade, and Region, 2015 OSDUHS

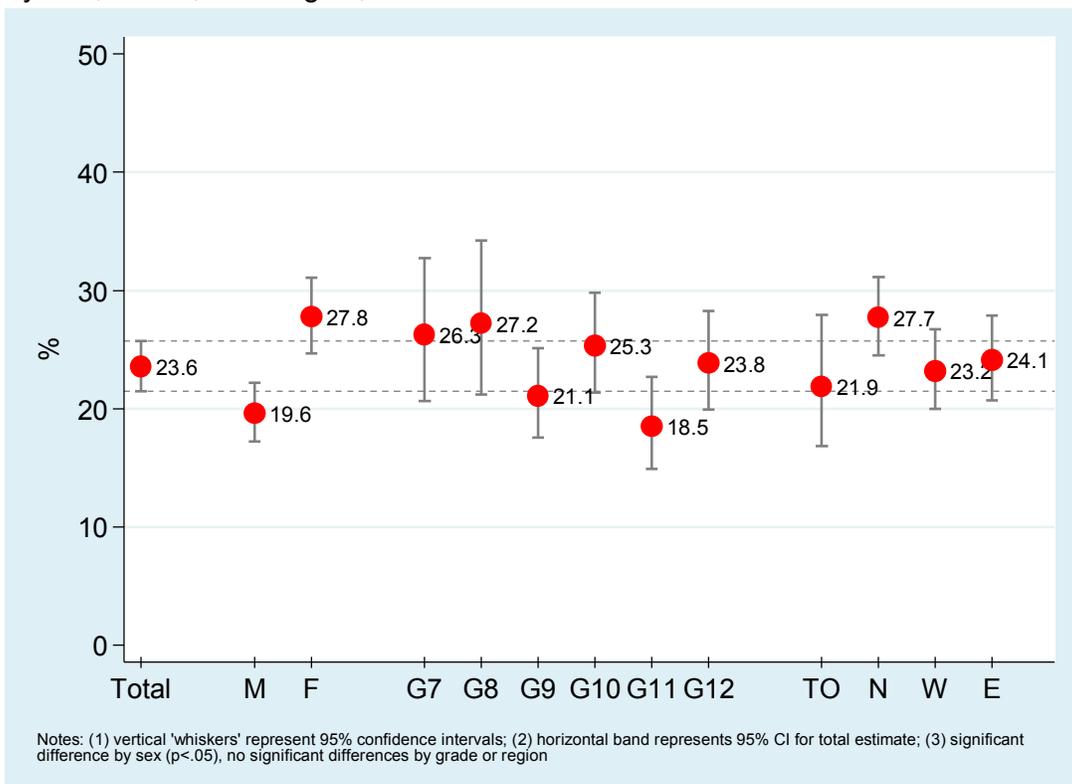
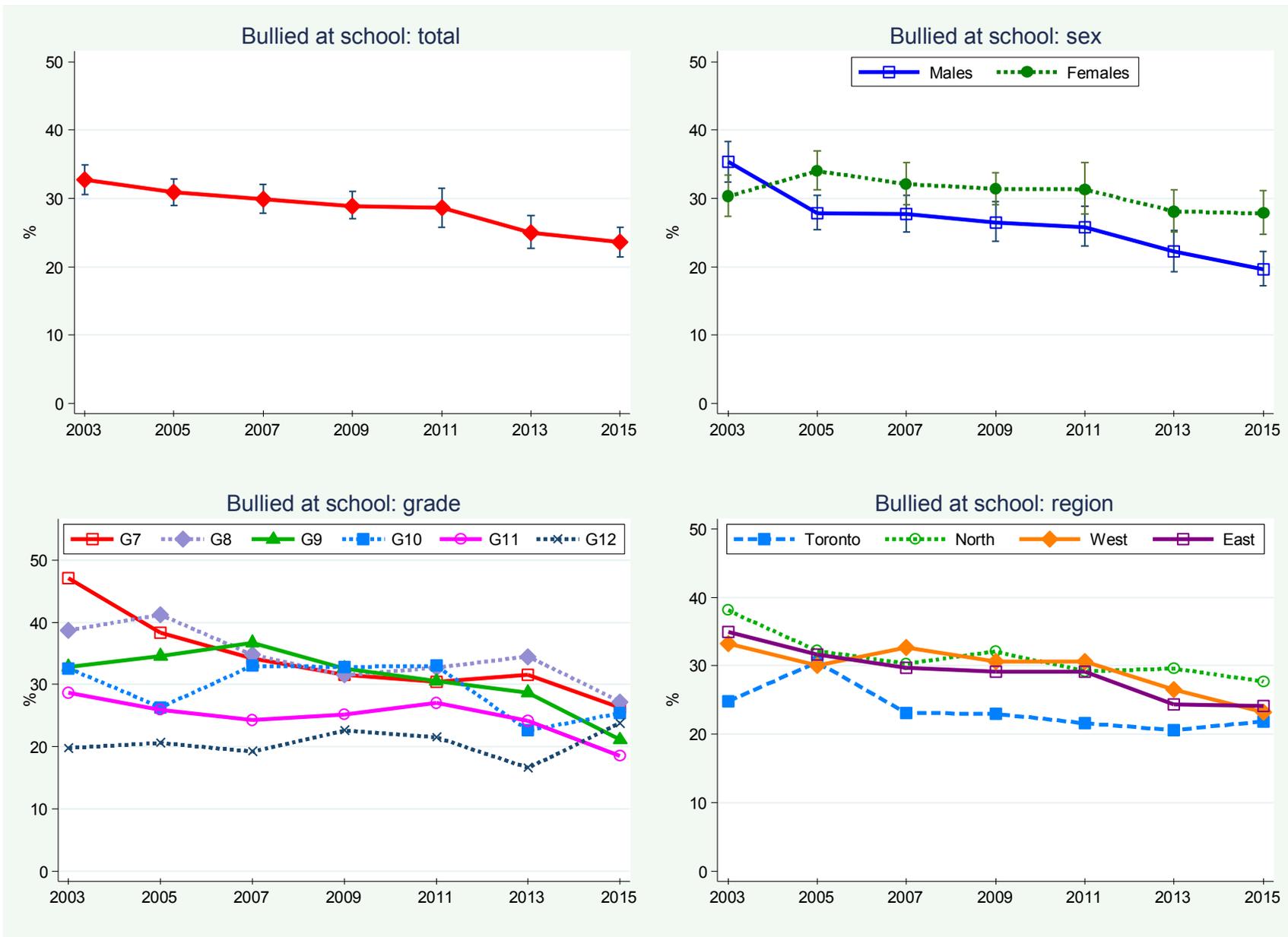


Figure 3.5.13
 Percentage Reporting Being Bullied (in Any Way) at School Since September, 2003–2015 OSDUHS (Grades 7–12)



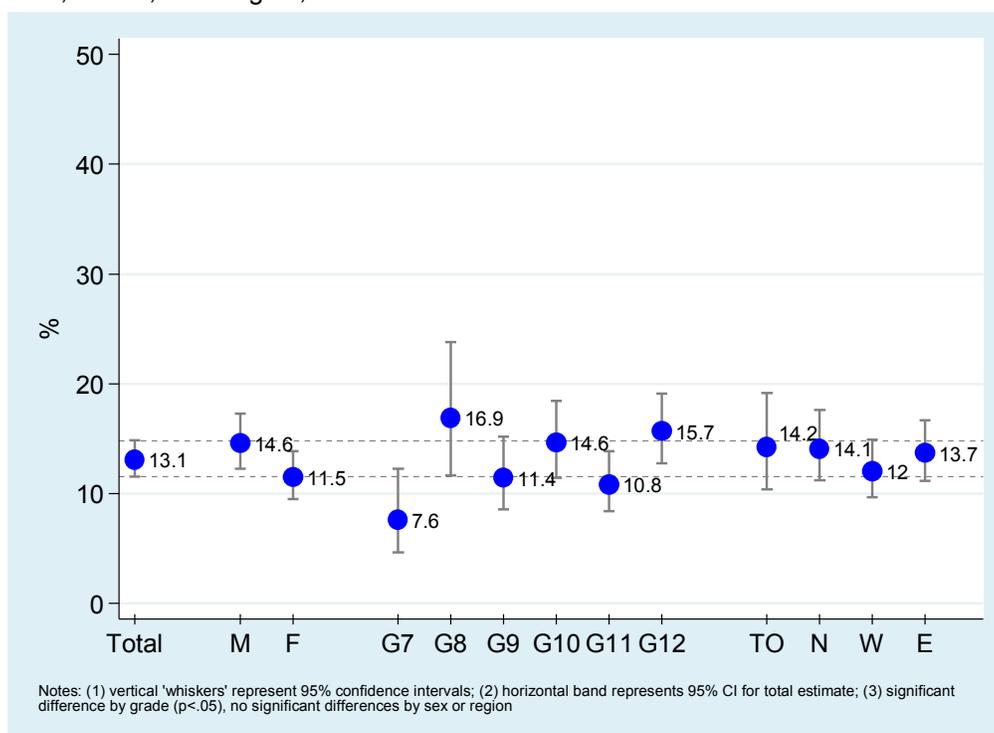
Bullying Perpetrators at School

- ❑ An estimated 13.1% of 7th to 12th graders report bullying other students at school. This represents about 127,700 students in Ontario.
- ❑ The most prevalent mode of bullying others is through verbal attacks (11.5%), followed distantly by physical attacks (1.3%). Theft or damage to others' property is reported by less than 0.5% of students.
- ❑ An estimated 2.4% of students report bullying others on a daily or weekly basis, and 10.0% report bullying others monthly or less often.
- ❑ Males (14.6%) and females (11.5%) are equally likely to report bullying others at school.
- ❑ There is significant grade variation showing that 7th graders are least likely to report bullying others.
- ❑ There are no significant regional differences.

2003–2015 (Grades 7–12):

- ❑ Among the total sample of students, the percentage reporting bullying others at school significantly decreased between 2013 and 2015, from 16.0% to 13.1%. In fact, there has been a linear decrease over the past decade or so, dropping from 29.7% in 2003 – the first year of monitoring – down to 13.1% in 2015.
- ❑ Both males and females show a significant decrease since 2003. All grades except grade 12 show a significant decrease since 2003. All regions except Toronto show a decrease since 2003.
- ❑ There has been no significant change over time regarding the typical way students bully others at school, or in the frequency of bullying others.

Figure 3.5.14
Percentage Reporting Bullying Others (in Any Way) at School Since September by Sex, Grade, and Region, 2015 OSDUHS



3.5.5 Victim of Cyberbullying

(Figures 3.5.15, 3.5.16; Table A3.5.6)

Starting in 2011, the OSDUHS introduced a question about being victimized over the Internet. A random half sample was asked: *“In the last 12 months, how many times did other people bully or pick on you electronically or through the Internet?”* The response options were (1) *Don’t use the Internet or cellphone*, (2) *Never*, (3) *Once*, (4) *2 or 3 times*, or (5) *4 or more times*. Note that those who responded they did not use the Internet or a cellphone (9% of the total sample, $n=454$) were assigned to the “not bullied” group. Here we describe the percentage of students who report they were bullied over the Internet at least once in the past 12 months.

2011–2015 (Grades 7–12):

- ❑ Among all students, the percentage reporting being cyberbullied in 2015 (19.8%) is not significantly different from the estimates seen in 2011 (21.6%) and 2013 (19.0%). No subgroup shows a significant change since 2011.

2015 (Grades 7–12):

- ❑ One-in-five (19.8%) students in grades 7 through 12 report being bullied over the Internet at least once in the past year. This represents about 194,200 students in Ontario.
- ❑ Females are significantly more likely than males to report being cyberbullied (25.8% vs. 14.0%, respectively).
- ❑ There are no significant differences among the grades.
- ❑ There are significant differences among the four regions showing that students in Toronto (14.3%) are least likely to report being cyberbullied, whereas students in the North are most likely (27.3%).

Figure 3.5.15
 Percentage Reporting Being Cyberbullied at Least Once in the Past Year by Sex, Grade, and Region, 2015 OSDUHS

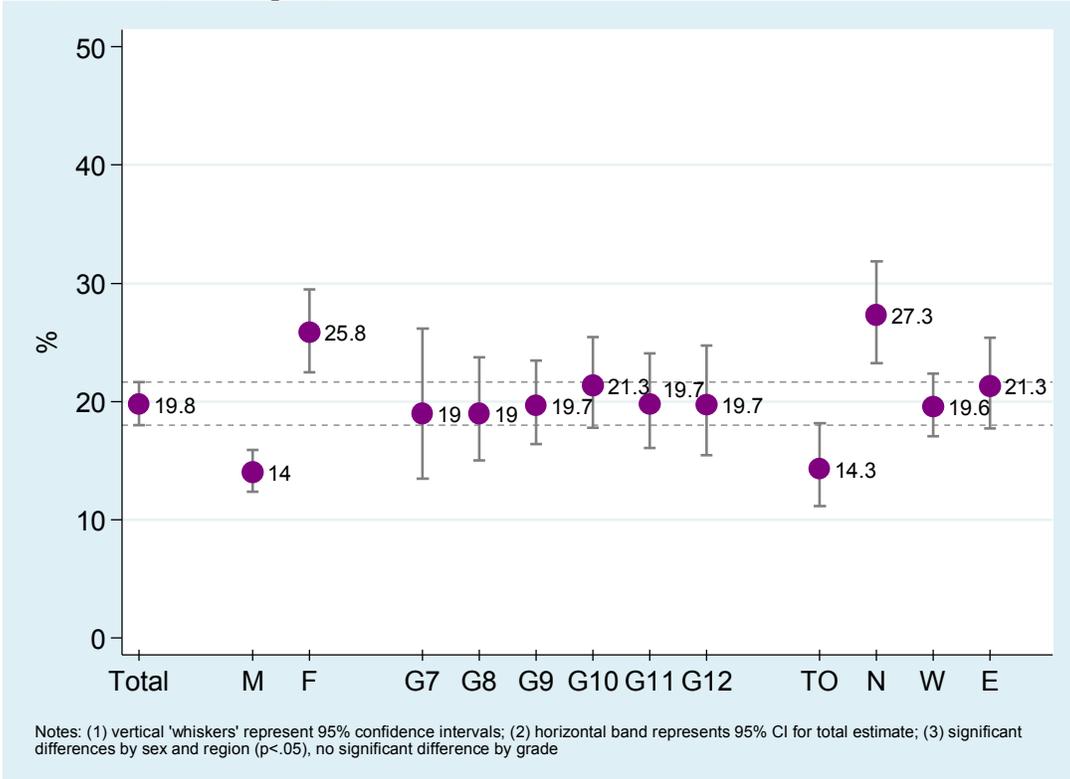
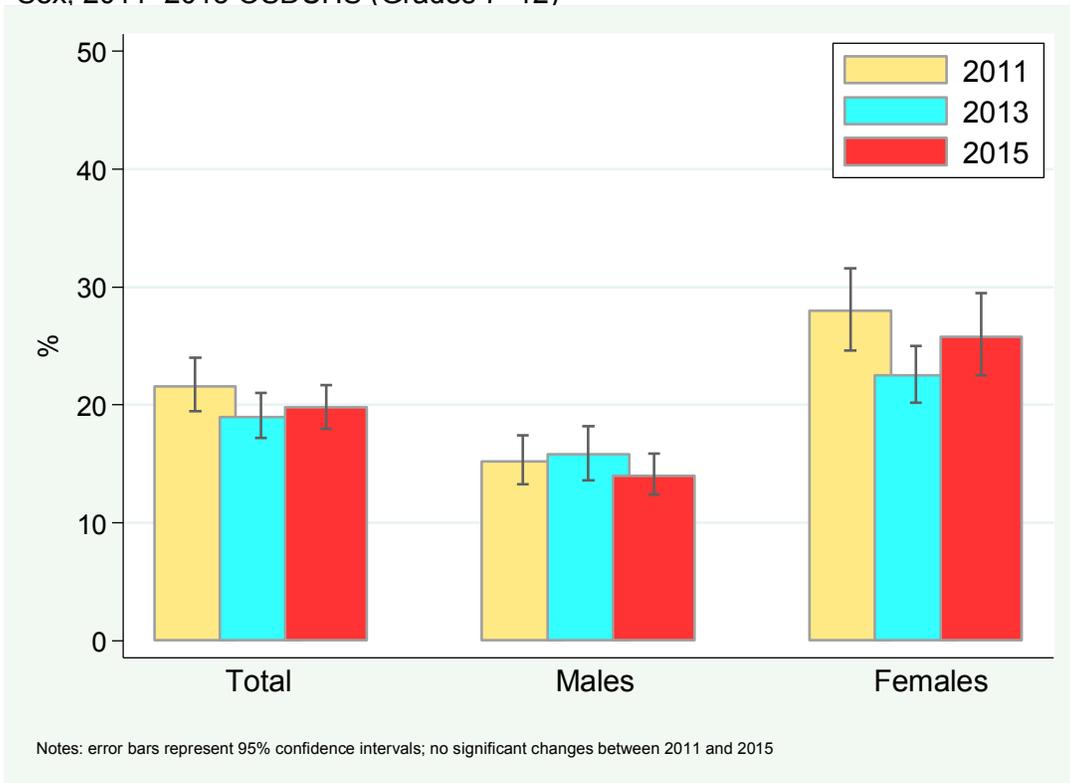


Figure 3.5.16
 Percentage Reporting Being Cyberbullied at Least Once in the Past Year by Sex, 2011–2015 OSDUHS (Grades 7–12)



3.6 Gambling and Video Gaming

3.6.1 Gambling Activity

(Figures 3.6.1–3.6.8; Table A3.6.1)

Starting in 2001, the OSDUHS introduced questions about gambling activity during the past year. A random half sample of students was asked “*How often (if ever) in the last 12 months have you done each of the following?*” The 11 activities listed below were surveyed in 2015:

- *bet money on card games*
- *bet money on dice games* (added in 2003)
- *bet money on other games of skill (such as pool, darts, chess, bowling)* (added in 2013)
- *played bingo for money*
- *bet money in sports pools*
- *bought sports lottery tickets (such as Sports Select or Proline)*
- *bought any other lottery tickets, including instant lottery (such as 6/49, scratch cards, pull-tabs)*
- *bet money on video gambling machines, slot machines, or other gambling machines*
- *bet money at a casino in Ontario*
- *bet money over the Internet, on any game* (added in 2003)
- *bet money in other ways not listed above* (added in 2003).

Students responded to each activity question using an open-ended format to indicate the number of occasions during the past 12-month period. In this section, we describe the percentage of students who report gambling money on each activity at least once in the past 12 months, and the percentage who report at least one of the activities. In addition, the percentage reporting gambling at five or more activities is presented as an indicator of multi-gambling activity.

Students were also asked about the largest amount of money they gambled in the past 12

months. Response options ranged from *\$1 or less* to *\$200 or more*.

Individual Gambling Activities in 2015 (Grades 7–12):

- ❑ Of the specific gambling activities surveyed, betting money in sports pools (9.9%) is the most prevalent among 7th–12th graders, followed closely by card games (9.5%). Casino gambling (prohibited to those under age 19) is the least prevalent activity (0.5%). About one-in-ten (10.5%) students are gambling money on activities not included in our list of activities.
- ❑ All gambling activities, except for three, significantly vary by sex. The activities that do not differ by sex are playing bingo for money, gambling on lottery tickets (excluding sports lottery tickets), and casino gambling.
- ❑ There are significant grade differences for six of the gambling activities: card games, dice games, other games of skill, sports pools, sports lottery tickets, and other lottery tickets. Generally, these activities increase with grade and peak in grade 12.
- ❑ Among the regions, betting money on dice games is significantly more likely in Toronto (8.3%) than in the other three regions (about 2%–4%). Betting money on other games of skill is significantly more likely in Toronto and the North (about 10%) compared with the other two regions (about 5%). Playing bingo for money is significantly more likely in the North (12.7%) compared with the other three regions (about 4%). No other activity differs by region.

Figure 3.6.1
 Percentage Reporting Gambling Activities in the Past Year, 2015 OSDUHS
 (Grades 7–12)

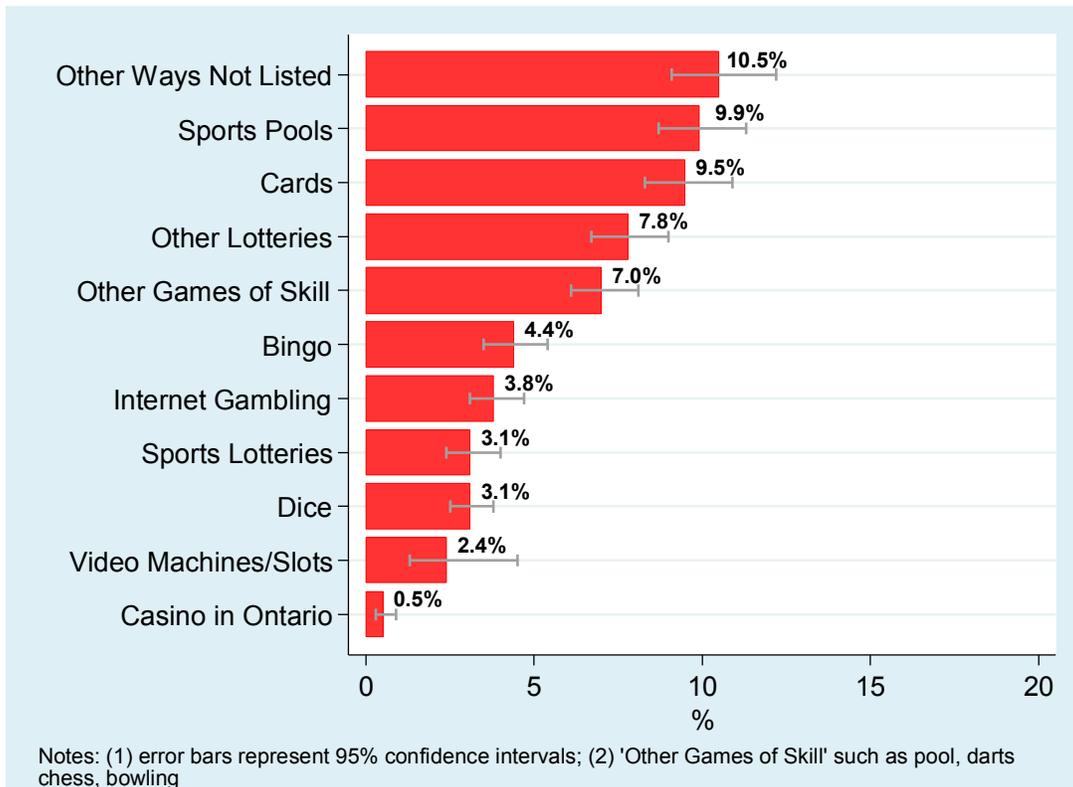


Figure 3.6.2
 Number of Gambling Activities in the Past Year, 2015 OSDUHS (Grades 7–12)

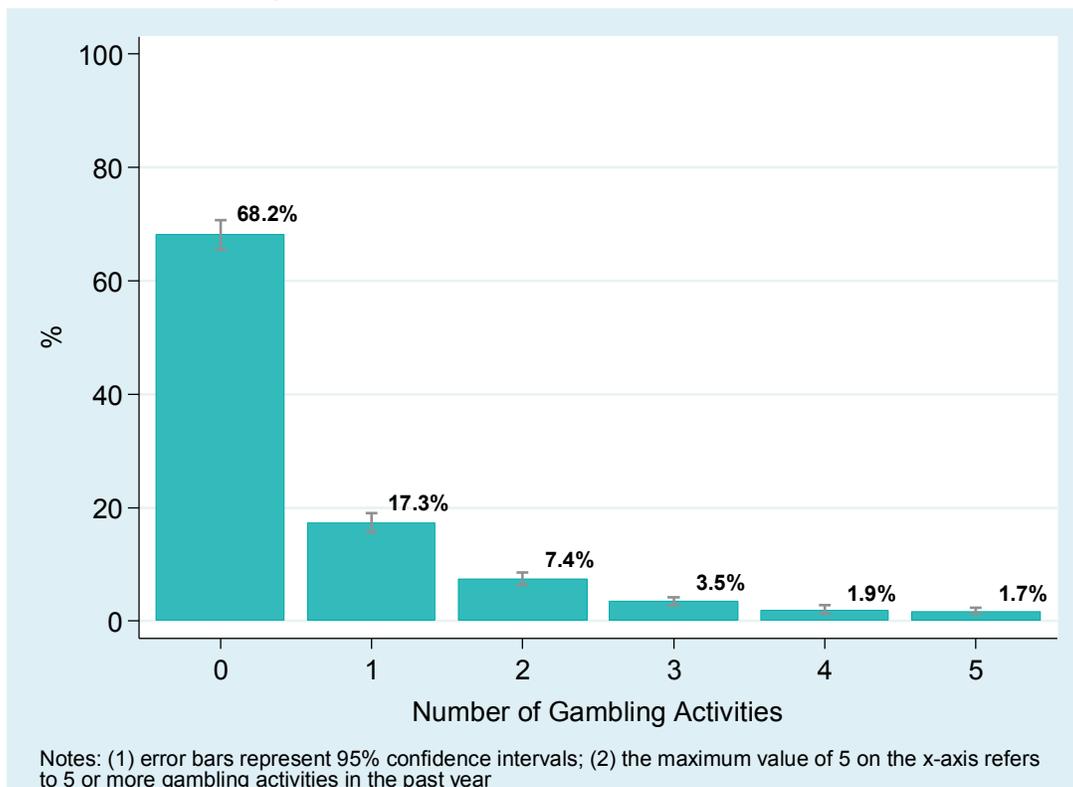


Figure 3.6.3
 Percentage Reporting Gambling Activities in the Past Year by Sex, 2015 OSDUHS
 (Grades 7–12)

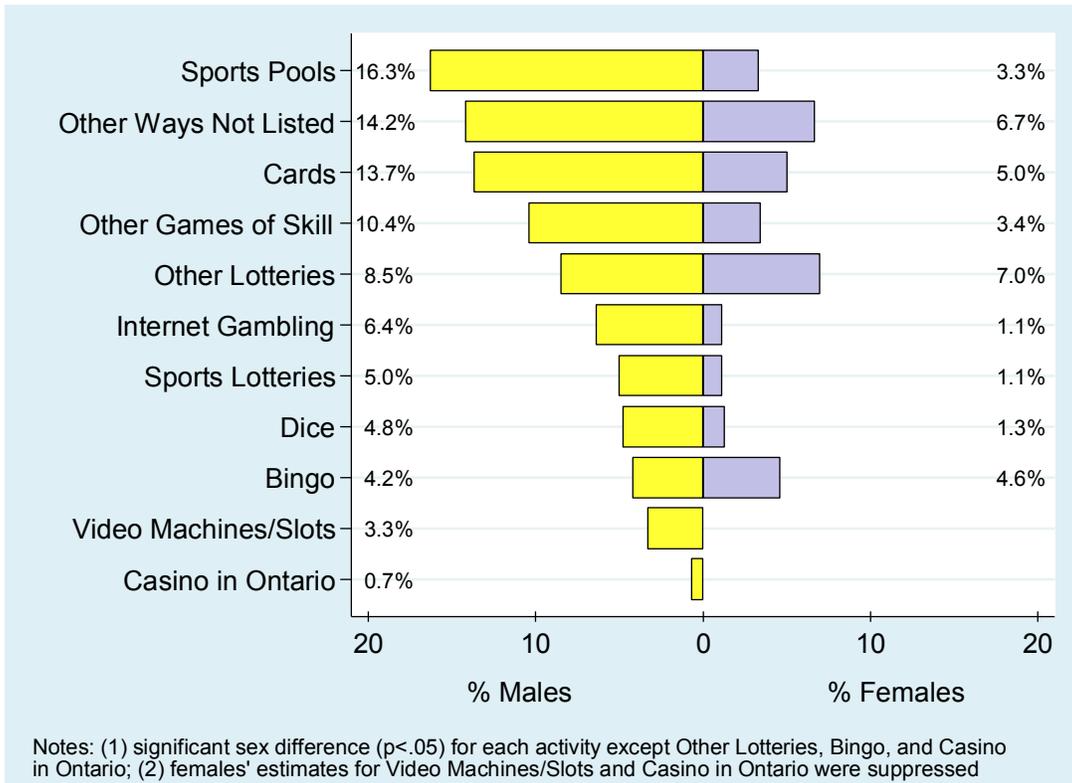
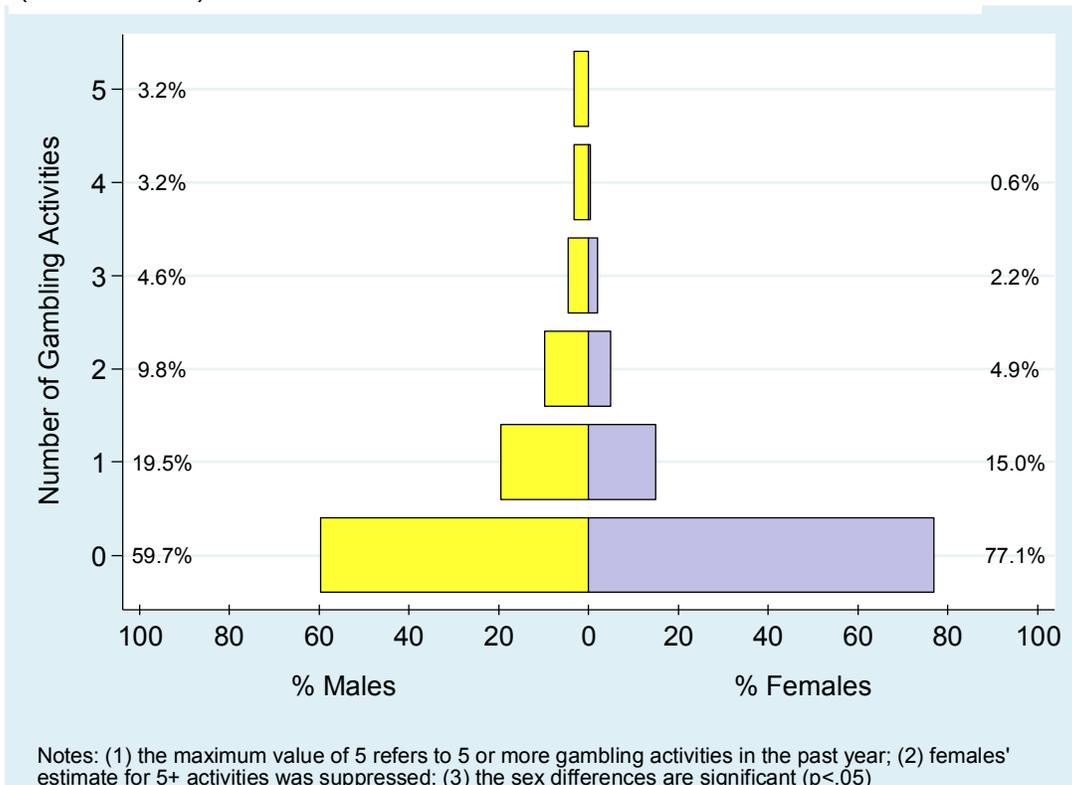


Figure 3.6.4
 Number of Gambling Activities in the Past Year by Sex, 2015 OSDUHS
 (Grades 7–12)



Any Gambling Activity in 2015 (Grades 7–12)

- About one-in-three students (31.8%) in grades 7–12 report at least one gambling activity during the past 12 months. This percentage represents about 308,200 students across Ontario.
- Males are significantly more likely than females to report any gambling (40.3% vs. 22.9%, respectively).
- Gambling significantly increases with grade, from 23.7% of 7th graders to 40.5% of 12th graders.
- There are no significant differences among the four regions.

Multi-Gambling Activity in 2015 (Grades 7–12):

- About 1.7% of students in grades 7–12 gambled at five or more activities during the past 12 months. This percentage represents about 16,700 students across Ontario.
- Males (3.2%) are significantly more likely than females (suppressed estimate due to a low value) to report multi-gambling activity.
- Multi-gambling activity is more likely among the older grades (the younger grade estimates are suppressed due to low values).
- There are no significant differences among the regions.

2001–2015 (Grades 7–12):

- No individual gambling activity increased between 2013 and 2015. In fact, most activities show significant downward trends. The past year prevalence estimates for the following activities are currently lower than in the early 2000s: cards, dice, bingo, sports pools, sports lottery tickets, other lottery tickets, video gambling machines/slots, casino gambling, and other gambling activities (not in our list). The percentage of students gambling money over the Internet on any game has remained stable over time.
- There has been a significant decline in the percentage of students who report any gambling activity between 2003 (57.3%) and 2015 (31.8%).
- There has been a significant decline in the percentage of students who report multi-gambling activity between 2003 (6.1%) and 2015 (1.7%).

Money Spent on Gambling in 2015 (Grades 7–12):

- Among only those students who report gambling in the past year, the vast majority (90%) report that the largest amount of money gambled was less than \$50. Another 5% report gambling between \$50 and \$99; 2% report between \$100 and \$199; and 3% report spending \$200 or more.

Figure 3.6.5
 Percentage Reporting Any Gambling Activity in the Past Year by Sex, Grade, and Region, 2015 OSDUHS

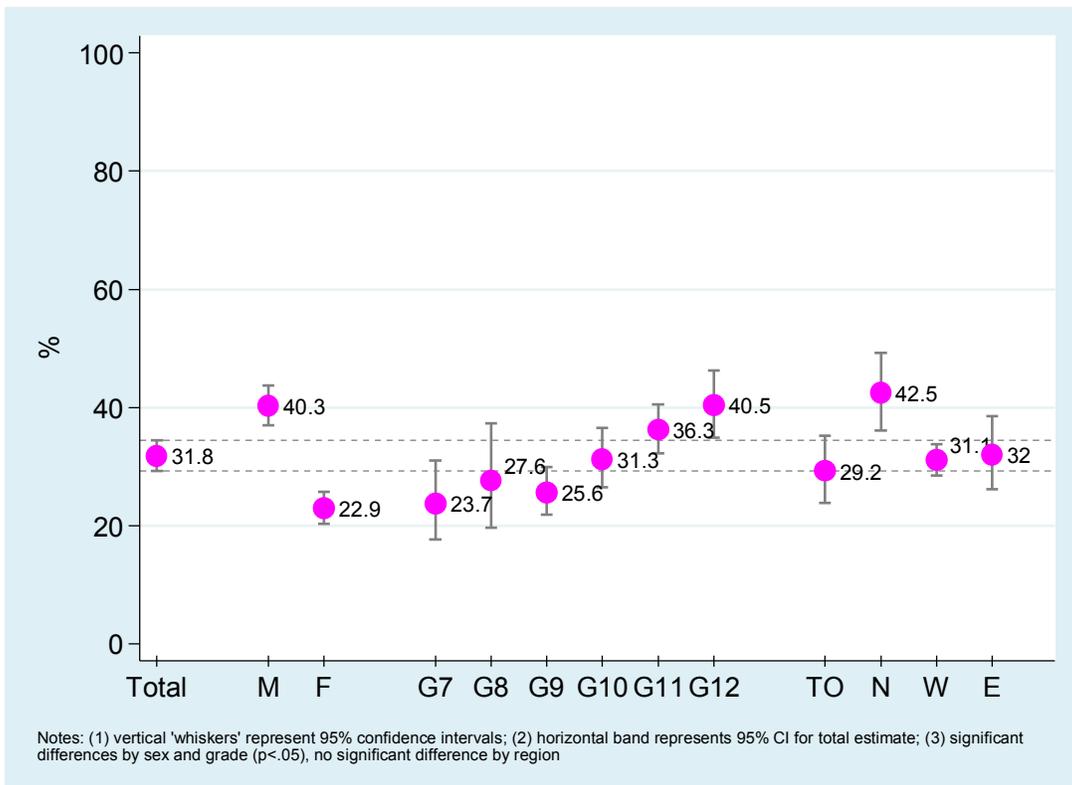


Figure 3.6.6
 Percentage Reporting Multi-Gambling Activity (5+ Activities) in the Past Year by Sex, Grade, and Region, 2015 OSDUHS

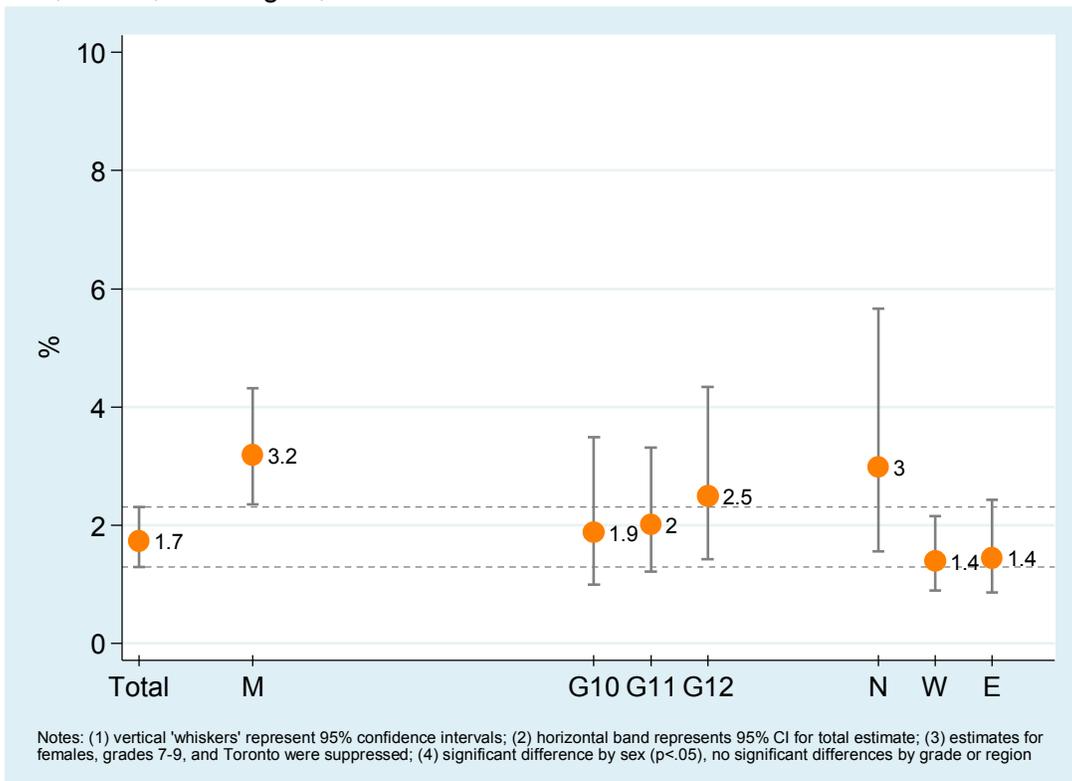
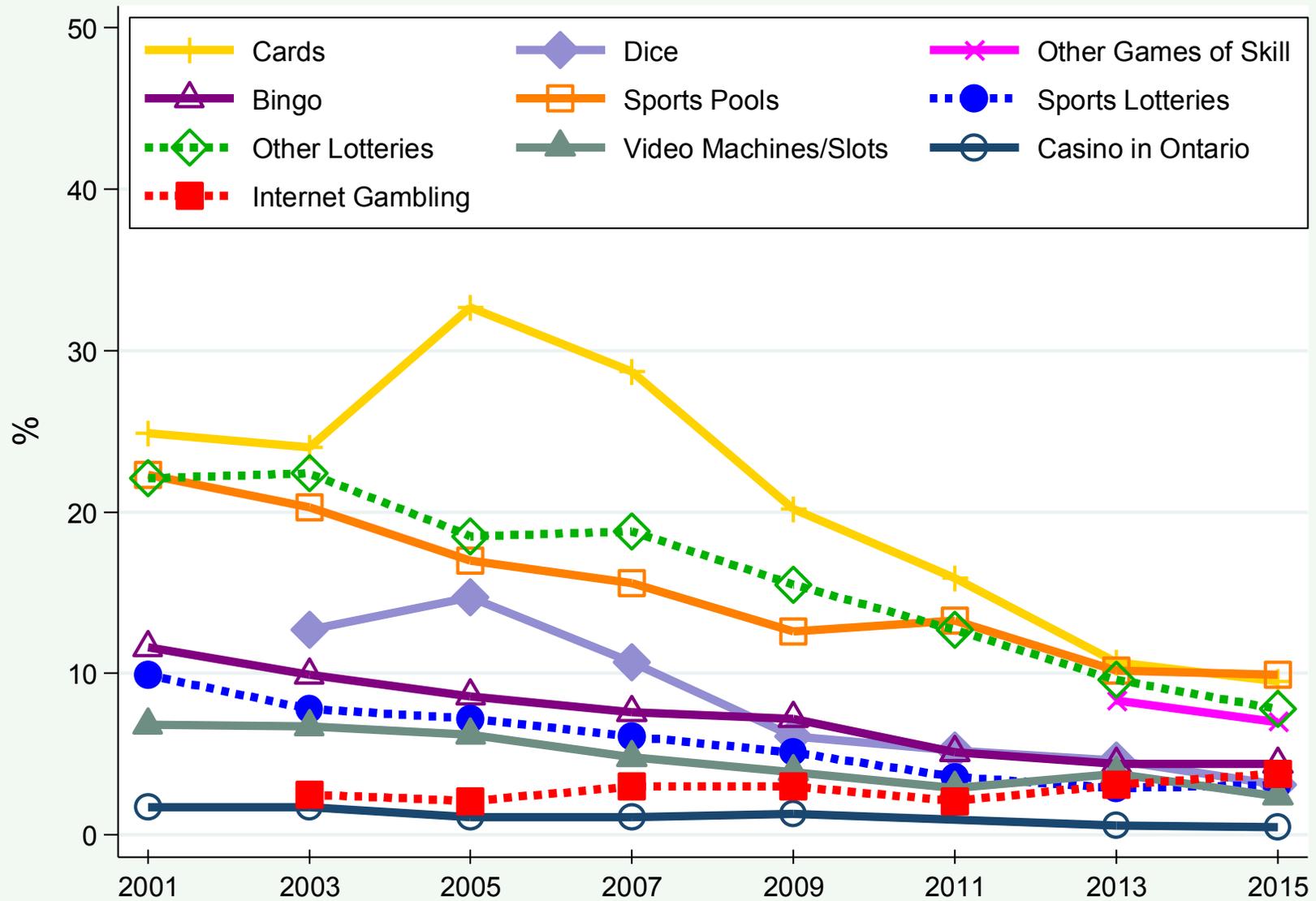
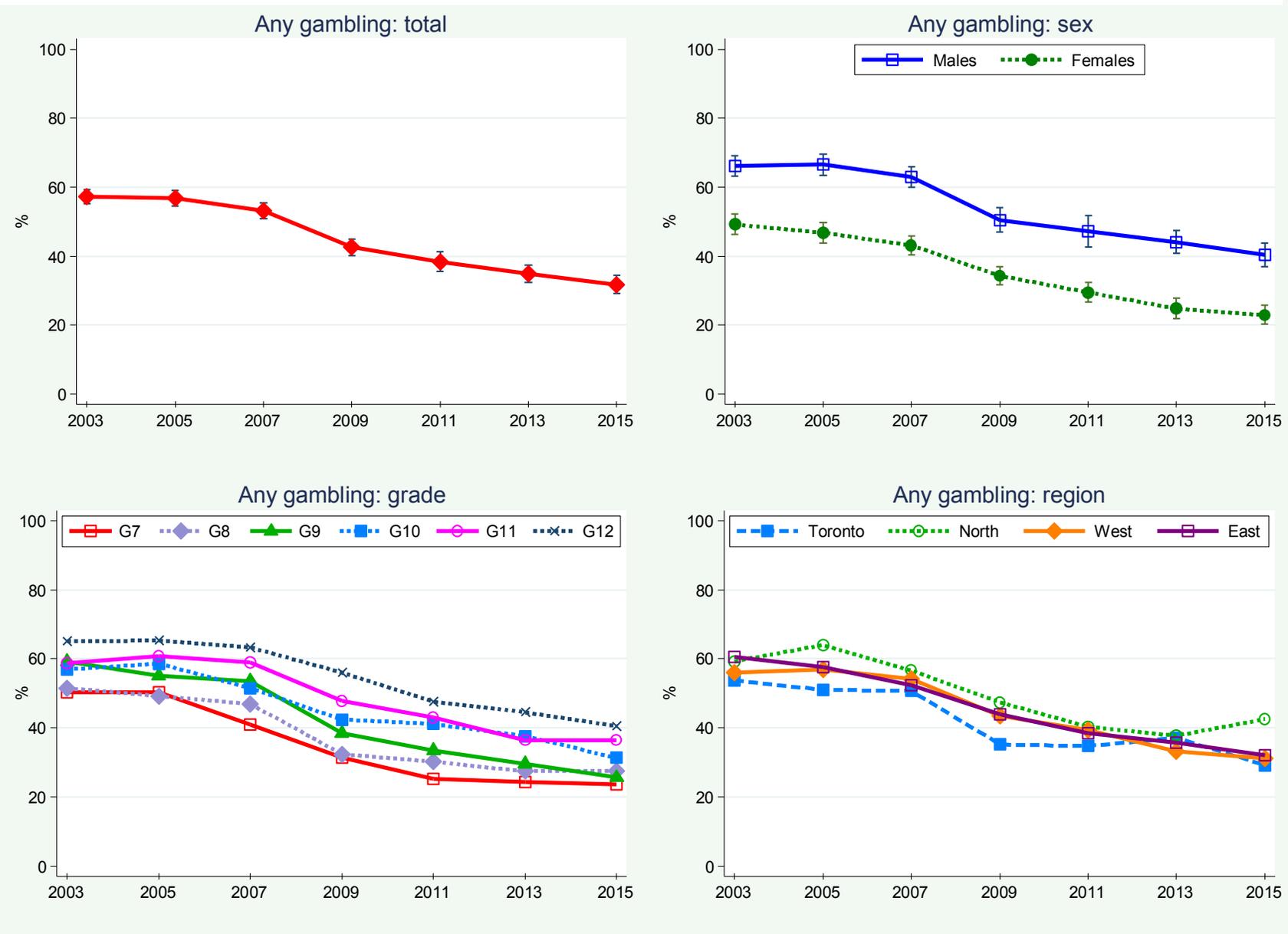


Figure 3.6.7
 Percentage Reporting Gambling Activities in the Past Year, 2001–2015 OSDUHS (Grades 7–12)



Note: Dice and Internet Gambling first asked about in 2003, Other Games of Skill first asked about in 2013

Figure 3.6.8
 Percentage Reporting Any Gambling Activity in the Past Year, 2003–2015 OSDUHS (Grades 7–12)



3.6.2 Problem Gambling

(Figure 3.6.9, Table 3.6.1)

For the first time in 2015, students were asked about gambling problems using the 9-item *Gambling Problem Severity Subscale* (GPSS) of the *Canadian Adolescent Gambling Inventory* (CAGI), developed specifically for adolescents (Stinchfield, 2010; Tremblay, Stinchfield, Wiebe, & Wynne, 2010).⁶⁷ The following nine questions were asked of a random half of students in grades 9–12, each question referring to the past three months:

- *How often have you skipped practice or dropped out of activities (such as team sports or band) due to your gambling?*
- *How often have you skipped hanging out with friends who do not gamble to hang out with friends who do?*
- *How often have you planned your gambling activities?*
- *How often have you felt bad about the way you gamble?*
- *How often have you gone back another day to try to win back the money you lost while gambling?*
- *How often have you hidden your gambling from your parents, other family members, or teachers?*
- *How often have you felt that you might have a problem with gambling?*
- *How often have you taken money that you were supposed to spend on lunch, clothing, movies, etc., and used it for gambling or for paying off gambling debts?*
- *How often have you stolen money or other things of value in order to gamble or to pay off your gambling debts?*

Response options for the first seven items ranged from (1) *Never* to (4) *Almost always*, and were rescaled ranging from 0 to 3. Response options for the last two items ranged from (1) *Never* to (4) *7 or more times* and were rescaled

ranging from 0 to 3. Students also had the option of responding that they never gambled in their lifetime or during the past 3 months and these responses were recoded to 0. A summated score ranging from 0 to 27 was computed for the total sample of secondary students who answered all nine items. Three categories were derived from this summated score: (1) No Problem (scores from 0–1), (2) Low-to-Moderate Problem Severity (scores from 2–5), and (3) High Problem Severity (scores of 6 or higher). Assessment of the nine scale items indicates an excellent internal consistency ($\alpha=0.82$).

2015 (Grades 9–12):

- Of the nine GPSS items displayed in Table 3.6.1, the most prevalent is planning one's gambling activities (4.4%), followed by trying to win back money lost (2.9%). The least prevalent is stealing to gamble or pay off debts (0.5%).
- The vast majority (95.3%) of secondary students do not have a gambling problem. About 3.6% of students met the criteria for low-to-moderate severity of a gambling problem. About 1.1% met the criteria for a high-severity gambling problem (representing about 7,500 Ontario students in grades 9–12).⁶⁸
- Males are significantly more likely than females to indicate a low-to-moderate gambling problem (5.4% vs. 1.6%, respectively), as well as a high-severity gambling problem (1.9% vs. suppressed estimate, respectively).
- There are no significant grade differences.
- There are no significant regional differences.

⁶⁷ The *South Oaks Gambling Screen Revised for Adolescents* (SOGS-RA; Winters, Stinchfield, & Fulkerson, 1993), which was used in the survey since 1999 to measure a probable gambling problem, was retained in the 2015 questionnaire for psychometric comparisons.

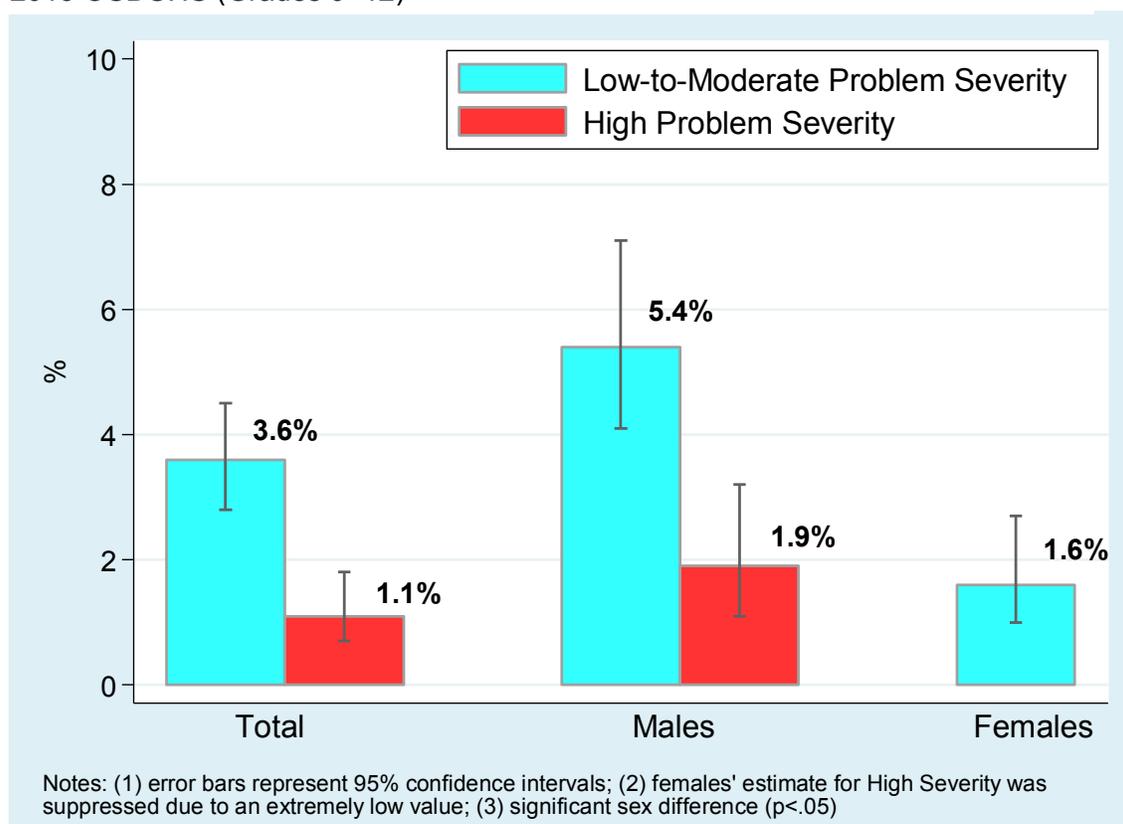
⁶⁸ The 2015 result for a probable gambling problem as measured by the SOGS-RA was 1.0%, which is significantly lower than the prevalence in 1999 (7.7%).

Table 3.6.1: Percentage of Secondary Students Reporting Symptoms of a Gambling Problem in the Past Three Months as Measured by the *Gambling Problem Severity Subscale* (GPSS), 2015 OSDUHS (Grades 9–12)

GPSS Item	Total Sample (n=3,426)
1. Skipped practice or dropped out of activities (such as team sports or band) due to your gambling	0.9%
2. Skipped hanging out with friends who do not gamble to hang out with friends who do	1.1%
3. Planned your gambling activities	4.4%
4. Felt bad about the way you gamble	1.5%
5. Gone back another day to try to win back the money you lost while gambling	2.9%
6. Hidden your gambling from your parents, other family members, or teachers	2.4%
7. Felt that you might have a problem with gambling	0.8%
8. Taken money that you were supposed to spend on lunch, clothing, movies, etc., and used it for gambling or for paying off gambling debts	1.7%
9. Stolen money or other things of value in order to gamble or to pay off your gambling debts	0.5%

Notes: (1) for items 1–7 entries are the percentage who responded at least “sometimes” in the past three months; (2) for items 8 and 9 entries are the percentage who responded at least one time in the past three months; (3) n=number of students surveyed; (4) based on a random half sample of students in grades 9–12.

Figure 3.6.9
Percentage Classified According to Severity of Gambling Problem in the Past Three Months as Measured by the *Gambling Problem Severity Subscale* (GPSS), 2015 OSDUHS (Grades 9–12)



3.6.3 Video Gaming

(Figures 3.6.10–3.6.13; Tables 3.6.2, A3.6.2)

Starting in 2007, the OSDUHS asked a random half sample of students about video gaming (either on a computer, TV, a cell phone, or in an arcade) and related problems using the 9-item *Problem Video Game Playing* (PVP) scale (Tejeiro Salguero & Bersabe Moran, 2002). The scale measures the dimensions of preoccupation, tolerance, loss of control, withdrawal, escape, disregard for consequences, and disruption to family/school. The following nine questions were asked:

- *When you were not playing video games, did you keep thinking about them (such as planning your next game, remembering past games)?*
- *Did you spend an increasing amount of time playing video games?*
- *Did you try to control, cut back, or stop playing video games, or play for longer than you planned to?*
- *Did you get restless or irritated when you could not play video games?*
- *Did you play video games more often when you felt bad (sad, angry or nervous) or had problems?*
- *When you lost in a game or did not get the results you wanted, did you play again to achieve your target?*
- *Did you skip school or work, or lie or steal, or argue with someone so that you could play video games?*
- *Did you ignore homework or go to bed late, or spend less time with family and friends because of your video game playing?*
- *Did you ever hide your video game playing from your family or friends?*

Each question referred to the past 12 months and each had the response options of *Yes*, *No*, or *Don't play video games*. Reporting five or more of the nine problem indicators was used to identify those with a probable video gaming problem. The reliability coefficient (α) for these items is 0.77. Also included was a question about frequency of playing video games during the past 12 months, and a question about hours daily spent playing video games on days when one played.

Frequency of Playing Video Games in 2015 (Grades 7–12):

- ❑ Among the total sample, about 13.9% report that they do not play video games; 24.0% report playing three times a month or less often; 7.6% play once a week; 15.6% play two to three times a week; 13.3% play four to five times a week; and 25.6% play daily or almost daily.
- ❑ Males are about four times more likely than females to play video games daily (39.7% vs. 10.6%, respectively).
- ❑ There are no significant grade differences regarding the percentage that play daily (data not shown).
- ❑ There are no significant regional differences regarding the percentage that play daily (data not shown).

Usual Number of Hours per Day Spent Playing Video Games in 2015 (Grades 7–12):

- ❑ One-quarter (24.9%) of students usually play video games for less than one hour a day; 17.4% play for about one hour; 19.0% play for two hours; 14.7% play for three to four hours; 7.0% play for five to six hours; and 3.4% play for seven or more hours a day.
- ❑ Males are significantly more likely than females to play video games for more hours per day. For example, 17.3% of males report playing video games for five hours or more daily, compared with 3.1% of females.

Video Gaming Problems in 2015 (Grades 7–12):

- ❑ Table 3.6.2 presents the percentage of students reporting each of the nine video gaming problem symptoms. Males are significantly more likely than females to report each symptom.
- ❑ An estimated 12.5% of students meet the criteria for a video gaming problem. This represents about 122,600 students in grades 7–12 in Ontario. When we look only among students who played video games daily in the past year, over one-quarter (29.5%; 95% CI: 25.7%-33.7%) have a problem.
- ❑ Males are about five times more likely than females to indicate a video gaming problem (20.2% vs. 4.5%, respectively).
- ❑ Despite some variation, there are no significant differences among the grades.
- ❑ There are significant regional differences showing that students in Toronto (18.5%) are most likely to indicate a video gaming problem compared with students in the other three regions (about 10%-12%).

2007–2015 (Grades 7–12):

- ❑ The percentage of students reporting playing video games for five or more hours per day significantly increased from 6.4% in 2013 (the first year of monitoring hours per day) to 10.4% in 2015. This increase occurred among males, increasing from 10.2% to 17.3%, but not females.
- ❑ The percentage of students classified as having a video gaming problem remained stable between 2013 (10.3%) and 2015 (12.5%). However, there has been a significant linear increase between 2007 and 2015, from 9.4% to 12.5%. This increase was evident among males (from 15.1% in 2007 to 20.2% in 2015), but not females (stable at around 3%-5%).

Figure 3.6.10
Frequency of Playing Video Games in the Past Year, 2015 OSDUHS (Grades 7–12)

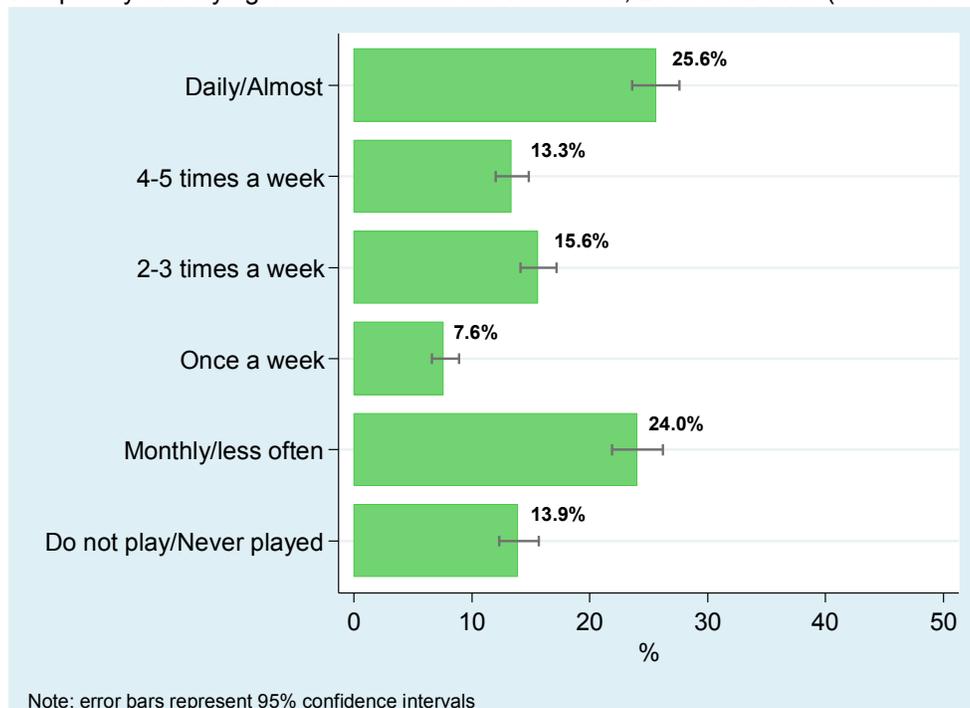


Figure 3.6.11
Usual Number of Hours per Day Spent Playing Video Games in the Past Year,
2015 OSDUHS (Grades 7–12)

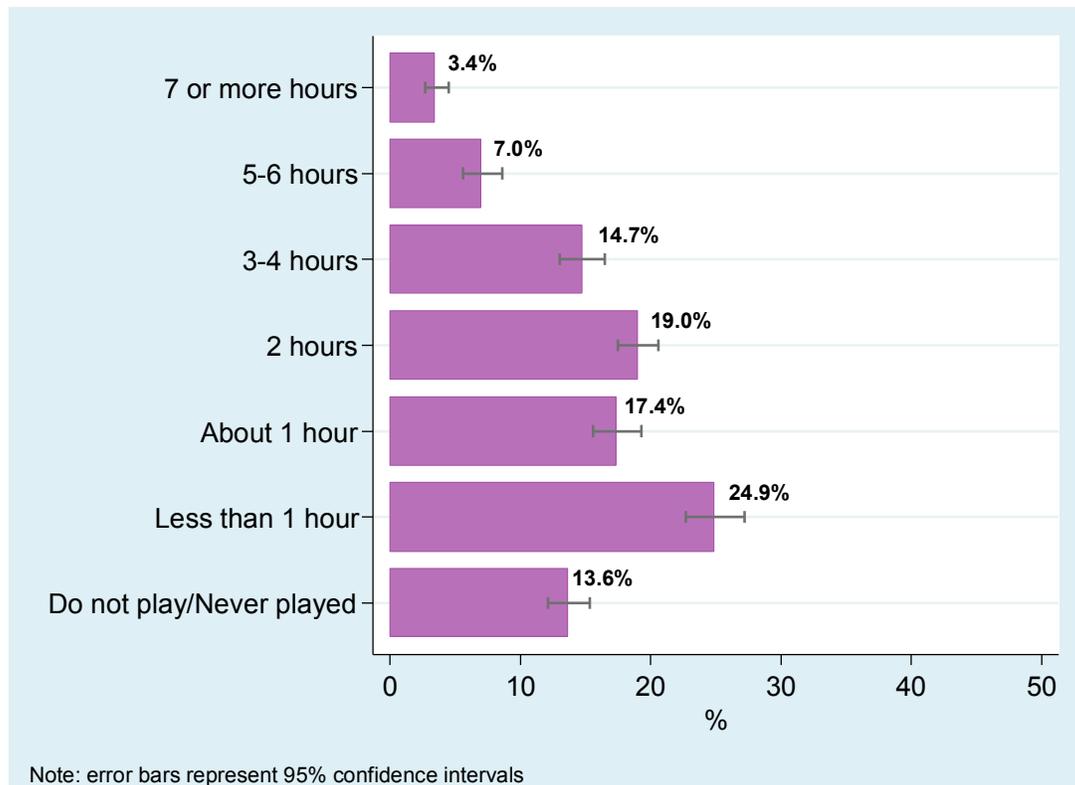


Table 3.6.2: Percentage of Students Reporting Symptoms of a Video Game Playing Problem in the Past Year as Measured by the *Problem Video Game Playing (PVP) Scale*, 2015 OSDUHS (Grades 7–12)

PVP Scale Item	Total Sample (n=5,403)	Males (n=2,496)	Females (n=2,907)
1. Kept thinking about playing video games, when not playing	25.7	40.4	10.2
2. Spent an increasing amount of time playing video games	18.8	28.9	8.2
3. Tried to control, cut back, stop playing video games, or played for longer than intended	23.9	34.0	13.2
4. Became restless or irritated when could not play video games	10.2	15.6	4.5
5. Played more often when felt bad (sad, angry or nervous) or had problems	17.9	24.7	10.6
6. When lost in a game or did not get the desired results, played again to achieve the target	48.3	62.4	33.4
7. Skipped school or work, or lied/stole/argued with someone in order to play	4.1	7.0	1.1
8. Ignored homework, went to bed late, or spent less time with family and friends because of video game playing	25.6	37.9	12.7
9. Hid video game playing from family or friends	5.8	9.2	2.2

Notes: (1) entries are the percentages responding “Yes”; (2) n=number of students surveyed; (3) based on a random half sample; (4) significant sex difference for each item, p<.05.

Figure 3.6.12
 Percentage Classified as Having a Video Gaming Problem (PVP Scale) by Sex, Grade, and Region, 2015 OSDUHS

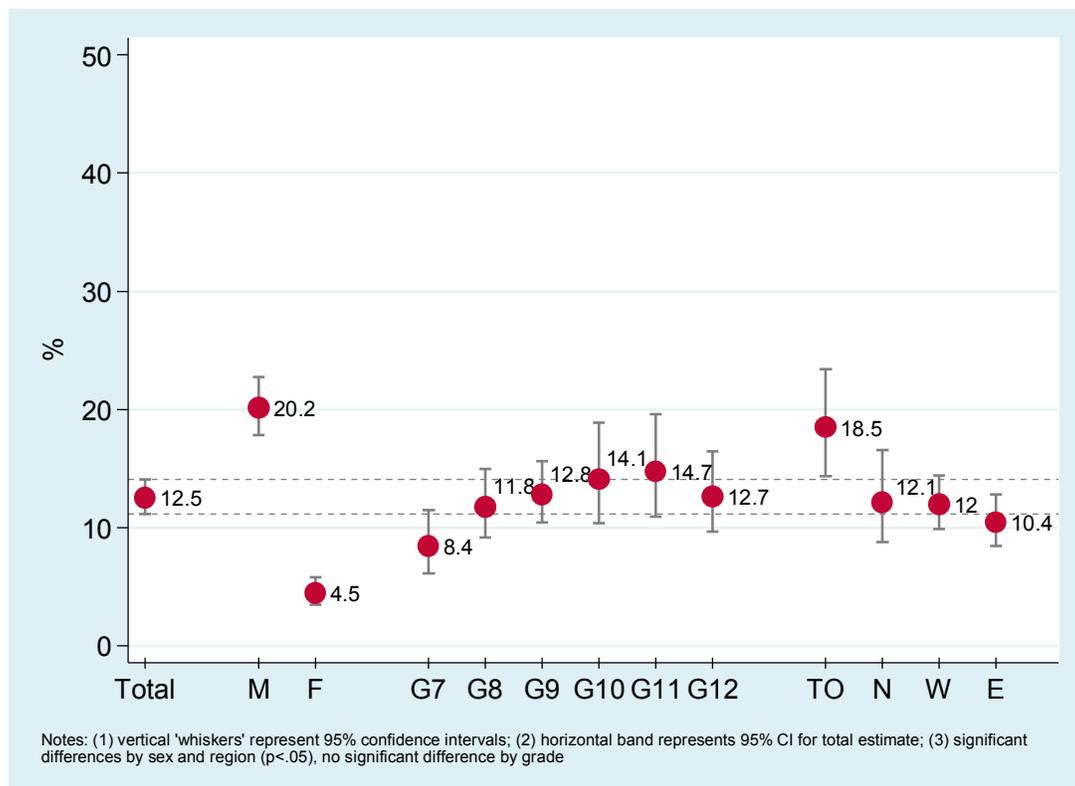
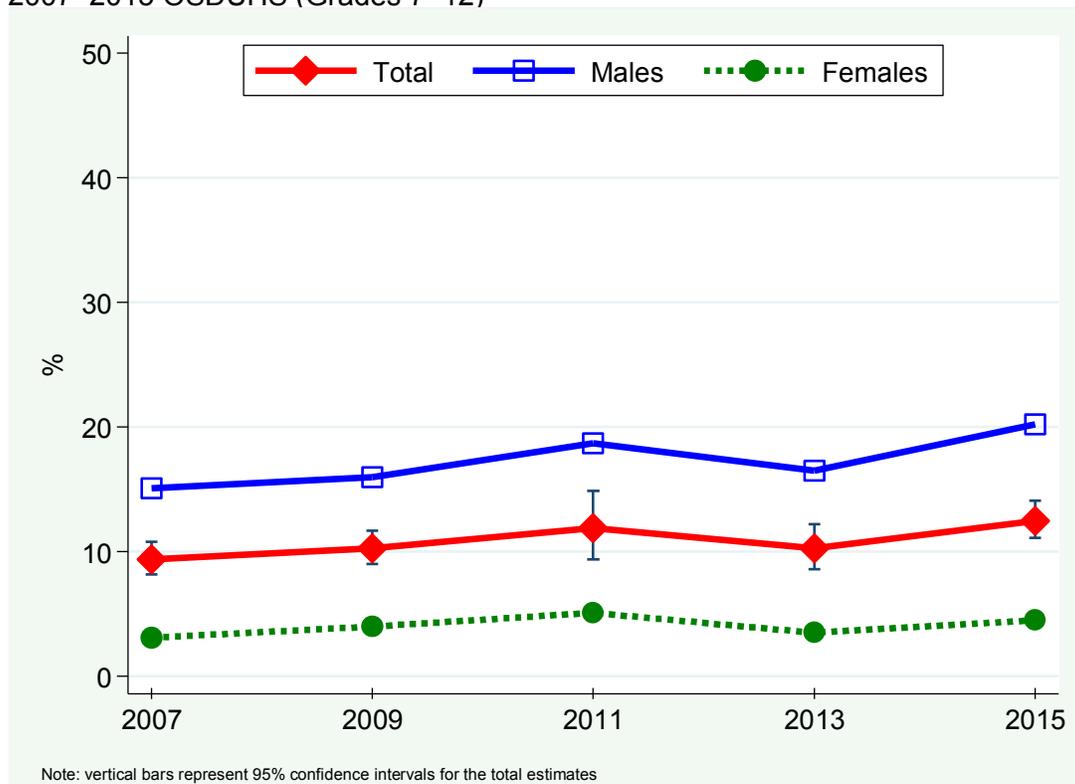


Figure 3.6.13
 Percentage Classified as Having a Video Gaming Problem (PVP Scale) by Sex, 2007–2015 OSDUHS (Grades 7–12)



3.7 Coexisting Problems

This chapter presents the co-occurrence or overlap between substance use problems, mental health problems, and antisocial behaviour. Given the potential array of mental health and substance use problems, it is important to describe the co-occurrence of problems experienced by students.

Research among clinical (treatment) samples shows high rates of coexisting disorders (O’Neil, Conner, & Kendall, 2011). Epidemiological estimates, however, are less conclusive mainly due to the lack of general population surveys on adolescents in Canada and the U.S. that measure disorders. Much is yet to be understood about the prevalence of coexisting problems, patterns of onset, and the specific combinations of substance use and mental health problems.

The *National Comorbidity Survey Replication Adolescent Supplement (NCS-A)* in the U.S. showed that about one-in-five (19%) adolescents in the general population had at least two DSM-IV mental disorders in the past year (Kessler et al., 2012), while another study showed that just under half (42%) of adolescents who had at least one disorder in their lifetime also met the criteria for another disorder (Merikangas et al., 2010). Some research shows that adolescents with severe emotional or behavioural problems (e.g., conduct disorder) are much more likely to have a substance use disorder than those without problems (Armstrong & Costello, 2002; Boyle & Offord, 1991; Costello et al., 1999; Kandel et al., 1999; Roberts et al., 2007; U.S. Department of Health and Human Services, 1999). Especially relevant to our study is the research showing that younger groups have a higher likelihood of coexisting disorders than older groups (Kessler et al., 1994; Wang & El-Guebaly, 2004).

In general, externalizing and internalizing mental health problems (e.g., conduct problems, anxiety, depression) are thought to precede the onset of substance use problems in adolescence

(Copeland et al., 2013; Goodman, 2010; Kessler et al., 1996; Kessler et al., 2005b; Kumpulainen, 2000; O’Neil, Conner, & Kendall, 2011; Wolitzky-Taylor, Bobova, Zinbarg, Mineka, & Craske, 2012). Some researchers have explained this by referencing the “self-medicating hypothesis,” which argues that substance abuse is a coping strategy. Alternatively, the “common cause hypothesis” suggests that pre-existing factors common to both mental health and substance abuse, such as exposure to a traumatic event, adverse childhood experiences, or individual traits (e.g., genetics), play a role in the onset of both conditions (O’Neil, Conner, & Kendall, 2011; U.S. Department of Health and Human Services, 1999).

3.7.1 Coexisting Problems

(Figures 3.7.1–3.7.3)

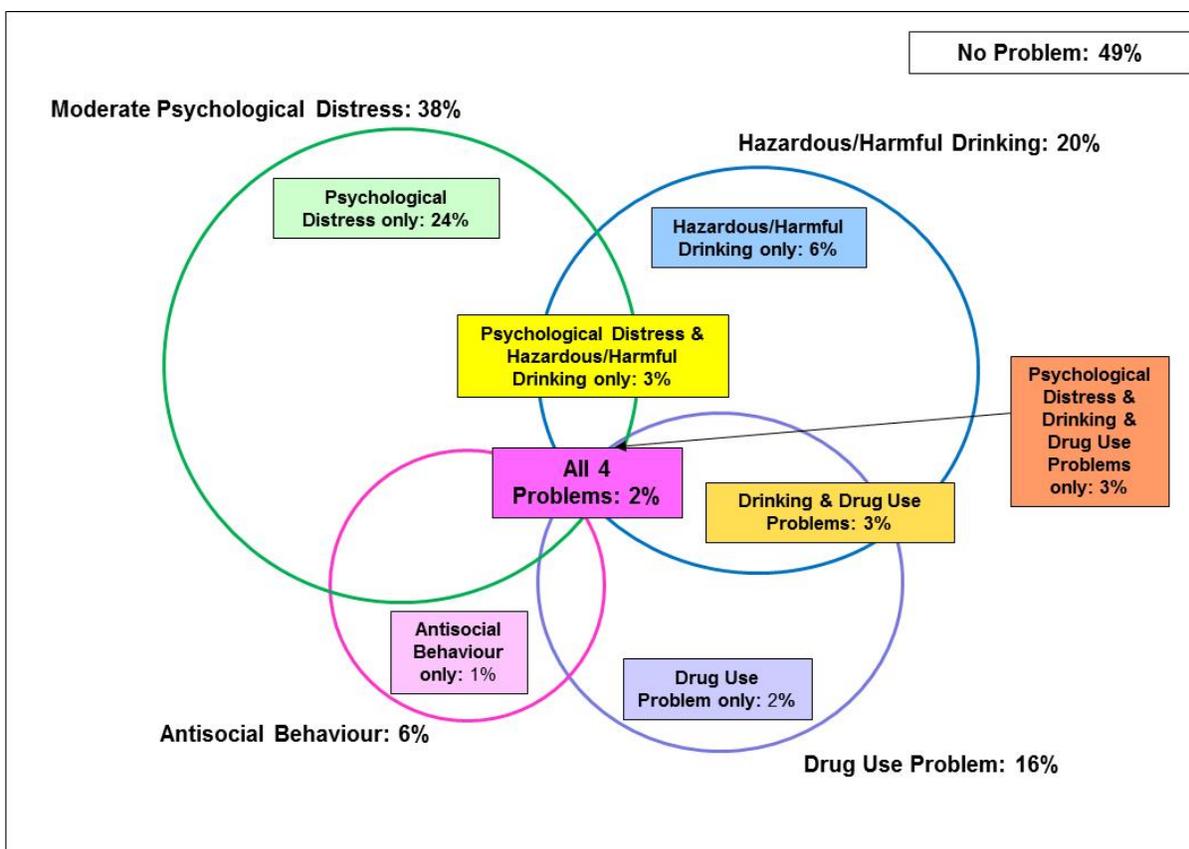
This section describes the overlap or co-occurrence among the following four problems: (1) moderate-to-serious **psychological distress** (as indicated by a score of eight or higher on the K6 screener – see Chapter 3.4); (2) **antisocial behaviour** (indicated by engaging in three or more of nine antisocial acts – see Chapter 3.5); (3) **hazardous/harmful drinking** (indicated by a score of eight or higher on the AUDIT screener); and (4) a **drug use problem** (indicated by a score of two or higher on the CRAFFT screener).⁶⁹ We describe the distribution of the co-occurring problem indicators and the percentage of secondary school students who report three or all four indicators. These findings are based on a random half sample of students.

⁶⁹ Details about the AUDIT and CRAFFT screeners can be found in the companion OSDUHS drug use report “*Drug Use Among Ontario Students, 1977–2015: Detailed OSDUHS Findings*” available on our webpage at <http://www.camh.ca/research/osduhs>.

2015 (Grades 9–12):

- ❑ Almost half (49.4%) of secondary students report none of the four problems. One-in-three (32.7%) report one problem, one-in-ten (10.1%) report two problems, 5.7% report three problems, and 2.1% report all four problems.
- ❑ By far, the most prevalent configuration is psychological distress only, reported by 24% of secondary students. The remaining configurations, such as hazardous/harmful drinking only or drug problem only, are reported by 6% or less.
- ❑ An estimated 7.8% (95% CI: 6.5%-9.5%) of 9th to 12th graders, representing about 56,100 students, report three or all four problems.
- ❑ Females (9.8%) are significantly more likely than males (6.0%) to experience three or all four of these problems.
- ❑ The likelihood of experiencing three or all four problems significantly increases with grade, rising from 2.2% of 9th graders to 11.6% of 12th graders.
- ❑ Despite some variation, the differences among the regions are not statistically significant.

Figure 3.7.1
Coexisting Problems: Psychological Distress, Antisocial Behaviour, Hazardous/Harmful Drinking, and Drug Use Problem, 2015 OSDUHS (Grades 9–12)



Notes: (1) based on a random half sample of secondary school students (n=3,426); (2) not all combinations are shown, therefore percentages do not total to 100%.

Figure 3.7.2
 Count of Coexisting Problems (Psychological Distress, Antisocial Behaviour, Hazardous/Harmful Drinking, and Drug Use Problem), 2015 OSDUHS (Grades 9–12)

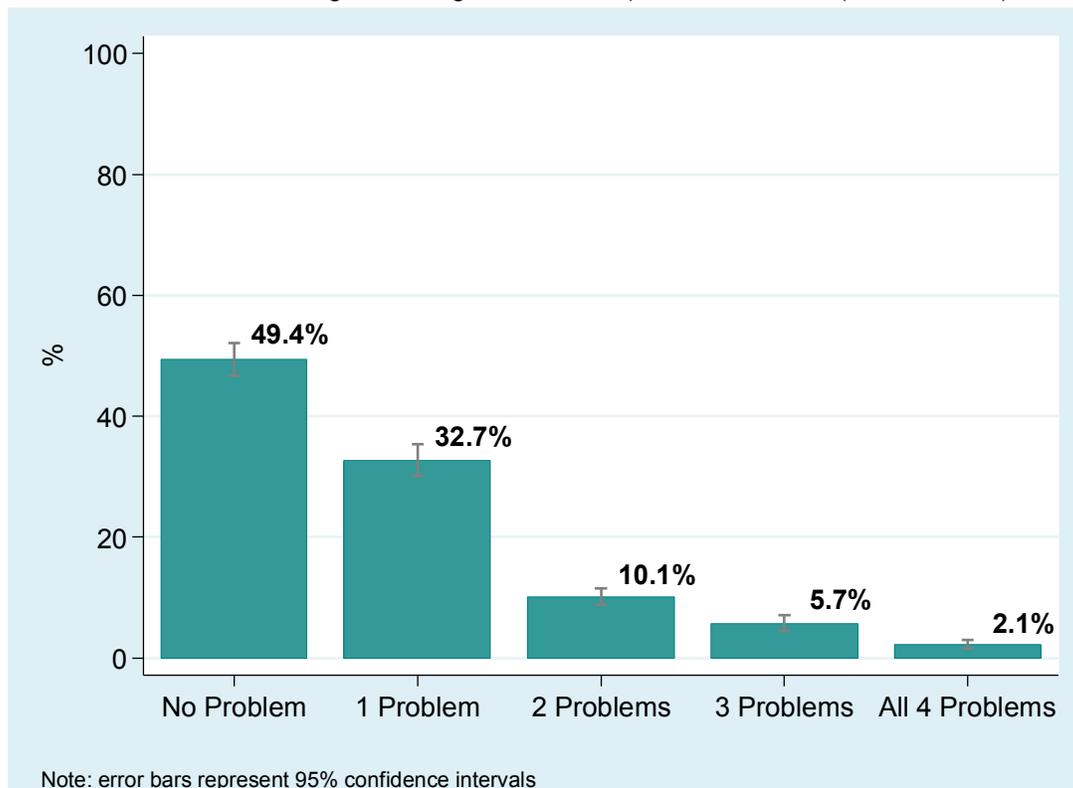
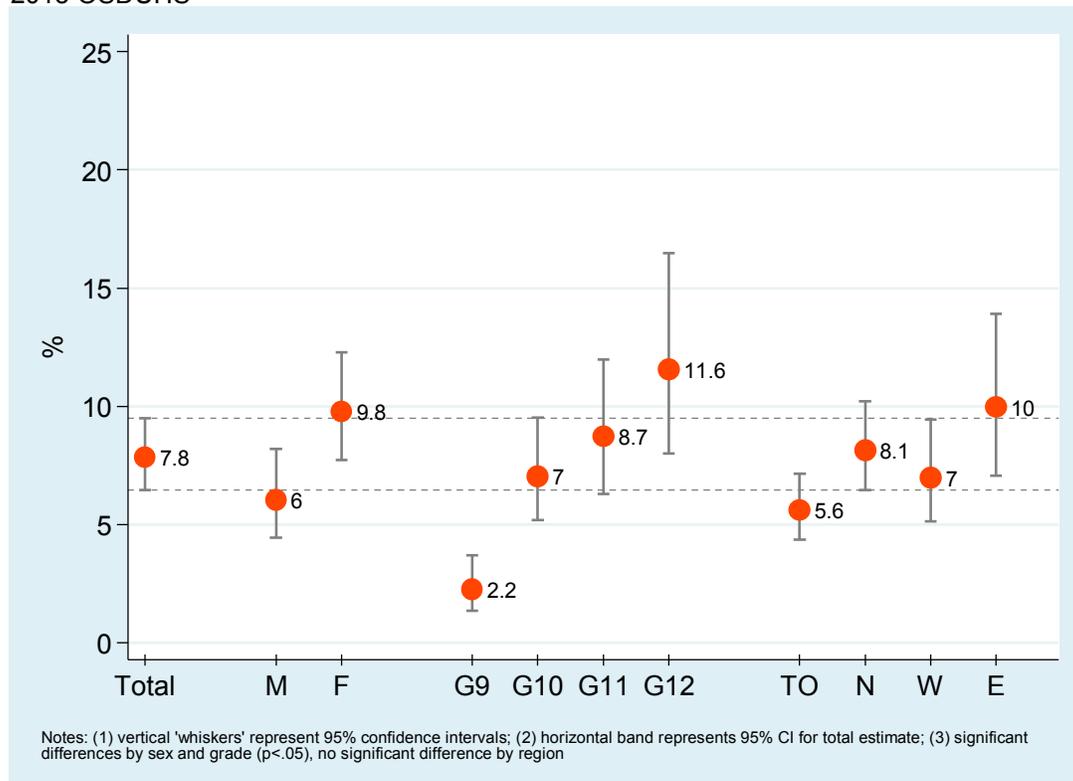


Figure 3.7.3
 Percentage Classified as Having Three or All Four Problems by Sex, Grade, and Region, 2015 OSDUHS



3.8 Overview by Ontario 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 www.lhins.on.ca). This section provides the 2015 estimates for most mental health and well-being indicators **among secondary 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 12 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
- South East & Champlain (merged)
- North Simcoe Muskoka
- North East
- North West

Figure 3.8.1
Local Health Integration Networks of Ontario

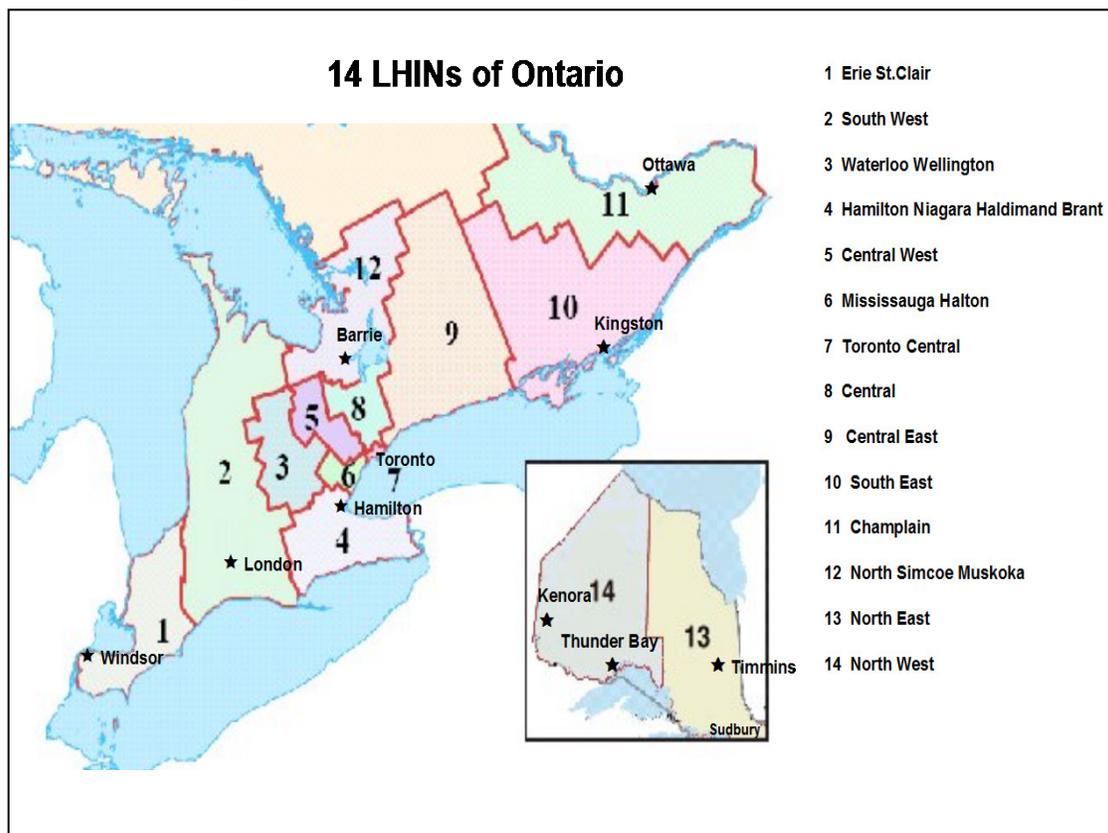


Table 3.8.1: Percentage of Secondary School Students (**Grades 9–12**) Reporting Mental Health and Well-Being Indicators, by Ontario Local Health Integration Network (LHIN) Areas, 2015 OSDUHS

	Erie St. Clair + South West	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
<i>(Student n=)</i>	<i>(559)</i>	<i>(255)</i>	<i>(1,022)</i>	<i>(548)</i>	<i>(323)</i>	<i>(279)</i>	<i>(1,293)</i>	<i>(689)</i>	<i>(302)</i>	<i>(559)</i>	<i>(498)</i>	<i>(270)</i>	<i>(6,597)</i>
<i>(School n=)</i>	<i>(8)</i>	<i>(4)</i>	<i>(19)</i>	<i>(10)</i>	<i>(6)</i>	<i>(5)</i>	<i>(21)</i>	<i>(12)</i>	<i>(5)</i>	<i>(9)</i>	<i>(13)</i>	<i>(5)</i>	<i>(117)</i>
Fair or poor health (95% CI)	8.7 (6.3-12.0)	7.5 (5.7-9.8)	9.7 (7.8-12.0)	7.6 (5.5-10.3)	7.2 (3.8-13.1)	9.2 (7.5-11.3)	9.2 (7.5-11.2)	7.8 (4.9-12.0)	9.7 (7.5-12.5)	8.5 (6.5-10.9)	6.2 (3.7-9.9)	8.8 (6.2-12.5)	8.5 (7.7-9.5)
Asthma diagnosis (current)	13.2* (8.3-20.2)	10.5 (5.8-18.4)	7.3 (4.4-11.8)	6.4 (3.8-10.5)	5.0 (3.0-8.1)	†	5.7 (3.3-9.7)	6.9 (4.2-11.0)	5.5* (4.2-7.3)	6.1 (4.0-9.2)	15.0* (7.8-26.6)	†	7.8 (6.5-9.3)
Daily physical activity (past week)	26.0 (20.6-32.2)	22.0 (18.5-25.9)	18.7** (16.6-21.1)	21.6 (16.9-27.2)	17.8 (11.7-26.1)	17.2 (8.8-30.8)	16.8** (14.1-19.8)	22.3 (17.5-28.0)	28.0* (21.3-35.8)	20.9 (18.7-23.3)	22.6 (17.9-27.9)	25.8 (19.6-33.1)	21.8 (20.0-23.8)
Physically inactive (past week)	7.6 (5.3-10.9)	†	6.1 (4.2-8.6)	6.9 (4.1-11.4)	9.4 (6.9-12.6)	†	8.5 (6.0-11.9)	8.9 (6.4-12.3)	†	8.5 (6.9-10.3)	7.3 (4.8-11.1)	8.9 (5.1-15.1)	7.6 (6.4-8.9)
Screen time sedentary behaviour (3+ hrs/day)	61.0 (55.6-66.2)	63.7 (57.9-69.1)	68.5 (61.0-75.1)	69.1 (62.8-74.7)	68.4 (63.2-73.1)	69.9 (61.6-77.1)	68.7 (64.3-72.8)	69.1 (62.9-74.7)	65.8 (59.0-72.1)	60.0* (54.5-65.3)	64.9 (57.1-72.0)	61.1 (53.3-68.4)	66.6 (64.5-68.5)
Overweight/obese	29.0 (22.3-36.9)	32.0 (25.6-39.2)	26.0 (22.0-30.6)	23.0 (19.4-27.0)	22.6 (16.7-29.4)	22.0 (17.3-27.5)	28.1 (24.2-32.3)	29.1 (24.3-34.5)	32.0* (27.7-36.6)	23.7 (20.4-27.4)	26.4 (21.8-31.7)	22.4 (18.4-26.9)	27.4 (25.7-29.2)
8+ hours of sleep on average school night	35.3 (29.3-41.8)	35.1 (30.3-40.2)	27.3 (22.6-32.5)	26.0 (20.4-32.6)	23.7* (17.5-31.2)	29.5 (21.0-39.8)	31.7 (29.6-33.9)	33.9 (28.2-40.0)	26.4** (23.2-29.8)	36.1 (27.3-45.9)	39.8** (35.3-44.4)	37.3* (31.9-43.0)	30.9 (28.9-32.9)
Go to bed or school hungry	4.7 (2.8-7.6)	7.3** (5.6-9.6)	3.9 (2.2-6.6)	5.2 (3.2-8.2)	4.0 (2.2-7.1)	†	4.0 (3.0-5.4)	7.1 (4.1-12.0)	†	2.2** (1.5-3.4)	4.9 (2.8-8.4)	†	4.9 (4.0-6.0)
Medically treated injury	51.2* (44.5-57.7)	47.4 (37.2-57.8)	39.2 (35.0-43.4)	44.3 (37.5-51.3)	38.1 (28.4-48.9)	36.7 (19.9-57.4)	35.2** (29.3-41.4)	42.2 (35.6-49.1)	48.3 (33.8-63.2)	44.2 (34.3-54.6)	48.5 (39.9-57.2)	54.5* (45.3-63.3)	43.5 (40.3-46.7)
Not always wear bicycle helmet	78.5 (70.7-84.7)	82.4 (62.6-92.9)	79.9 (76.6-82.9)	91.3** (84.7-95.2)	79.1 (52.1-92.6)	76.2 (64.5-85.0)	85.7 (80.0-90.2)	84.8 (76.5-90.6)	84.0 (76.6-89.3)	73.3** (67.3-78.6)	75.7 (67.6-82.3)	76.7 (63.0-86.4)	82.3 (79.4-84.8)
Not always wear seatbelt in vehicle	23.8 (17.7-31.2)	23.6 (16.3-33.0)	29.3 (20.2-40.5)	24.6 (18.7-31.7)	22.5 (16.5-29.8)	26.4 (18.9-35.5)	26.8 (20.4-34.4)	28.0 (23.1-33.4)	28.2 (19.3-39.2)	18.1 (12.6-25.4)	25.3 (14.7-39.8)	23.6 (16.4-32.8)	25.9 (23.4-28.6)
Texting while driving (Drivers in G10–G12)	29.0 (20.8-39.0)	48.3 (33.5-63.3)	43.6 (24.8-64.5)	23.6** (16.5-32.5)	26.1 (14.2-43.1)	28.6 (20.1-38.8)	39.1 (27.4-52.3)	29.5 (21.8-38.5)	38.6 (24.9-54.4)	51.4** (41.1-61.7)	35.9 (23.7-50.3)	49.6 (31.2-68.0)	35.3 (31.0-39.9)
Medical use of prescr. opioid pain reliever	27.6 (20.0-36.9)	27.4 (18.4-38.7)	27.3 (22.7-32.4)	23.3 (16.8-31.4)	16.7* (12.6-21.7)	11.6** (7.1-18.4)	19.8 (15.6-24.7)	22.4 (17.9-27.6)	29.2 (19.9-40.6)	23.6 (14.7-35.8)	23.4 (19.8-27.5)	15.6 (10.2-23.3)	23.6 (21.2-26.2)
Medical use of prescr. ADHD drug	2.8 (1.5-5.2)	†	†	†	†	†	†	2.3 (1.3-4.0)	†	†	†	†	2.7 (2.0-3.6)
Medical use of prescr. tranquilizer/sedative	4.2 (2.7-6.5)	6.9** (5.5-8.6)	3.8 (2.6-5.7)	2.8 (2.0-4.1)	3.3 (2.8-3.9)	†	2.2 (1.3-3.5)	1.8 (1.0-3.1)	3.9 (2.9-5.3)	2.7 (1.6-4.5)	4.8 (2.6-8.7)	†	3.3 (1.6-6.9)
Did not visit a doctor for physical health	29.6 (25.9-33.6)	33.7 (25.2-43.3)	40.7** (34.9-46.8)	25.6 (22.3-29.3)	17.5* (12.5-23.9)	20.0* (14.1-27.7)	24.7 (18.5-32.1)	28.7 (22.7-35.5)	30.2 (22.9-38.7)	31.3 (24.1-39.4)	33.2 (25.2-42.3)	24.9 (18.3-33.0)	28.6 (26.2-31.0)
Mental health care visit	18.0 (12.2-25.6)	18.1 (11.0-28.4)	17.0 (12.9-22.1)	21.9 (17.7-26.8)	21.9 (16.9-27.9)	18.3 (12.7-25.6)	18.0 (15.2-21.2)	17.2 (13.0-22.5)	24.6* (19.7-30.2)	16.4 (12.3-21.4)	27.3* (20.7-35.0)	17.8 (12.4-24.8)	19.6 (17.9-21.5)
Been prescribed medic. for anxiety/depression	6.4 (3.6-11.0)	7.2 (4.7-11.1)	4.9 (2.5-9.4)	6.0 (4.4-8.1)	5.2 (3.0-8.9)	†	3.1* (2.0-5.0)	4.0 (2.3-6.9)	†	6.9 (5.1-9.2)	8.0 (4.2-14.5)	3.7 (2.1-6.6)	5.6 (4.4-6.9)

(continued)

	Erie St. Clair + South West	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
<i>(Student n=)</i>	<i>(559)</i>	<i>(255)</i>	<i>(1,022)</i>	<i>(548)</i>	<i>(323)</i>	<i>(279)</i>	<i>(1,293)</i>	<i>(689)</i>	<i>(302)</i>	<i>(559)</i>	<i>(498)</i>	<i>(270)</i>	<i>(6,597)</i>
<i>(School n=)</i>	<i>(8)</i>	<i>(4)</i>	<i>(19)</i>	<i>(10)</i>	<i>(6)</i>	<i>(5)</i>	<i>(21)</i>	<i>(12)</i>	<i>(5)</i>	<i>(9)</i>	<i>(13)</i>	<i>(5)</i>	<i>(117)</i>
Unmet need for mental health support	29.9 (25.1-35.2)	24.3 (15.3-36.2)	32.9 (26.4-40.2)	36.3* (30.8-42.2)	29.5 (21.9-38.4)	29.4 (21.8-38.4)	29.4 (23.3-36.2)	29.3 (24.9-34.1)	30.4 (22.6-39.6)	36.2* (30.4-42.4)	30.0 (25.6-34.9)	28.1 (22.3-34.7)	30.5 (28.4-32.7)
Fair or poor self-rated mental health	16.0 (11.5-21.8)	15.0 (8.2-25.8)	23.3 (16.5-31.8)	22.5 (16.0-30.7)	24.2 (19.1-30.2)	16.7 (11.3-23.8)	17.5 (13.1-23.0)	12.7* (8.8-18.1)	19.7 (11.8-31.1)	28.0** (21.8-35.3)	22.7 (16.9-29.8)	21.0 (14.4-29.5)	18.9 (16.7-21.2)
Elevated stress (past month)	30.7 (21.2-42.2)	30.8 (21.2-42.3)	32.9 (26.9-39.6)	36.1 (31.1-41.3)	43.5* (37.1-50.1)	37.6 (25.3-51.6)	35.7 (29.8-42.1)	35.9 (28.3-44.4)	29.5 (21.7-38.8)	41.2* (35.7-47.0)	35.0 (26.4-44.7)	35.3 (29.3-41.8)	34.6 (31.9-37.4)
Moderate-to-serious psychological distress	32.2 (26.2-38.9)	36.5 (27.9-46.1)	35.7 (31.4-40.3)	43.4 (35.9-51.3)	41.8 (33.9-50.0)	36.0 (23.3-51.0)	37.8 (31.0-45.2)	36.4 (27.5-46.3)	38.0 (30.6-46.1)	40.9 (31.0-51.5)	38.0 (31.4-45.0)	37.5 (29.3-46.4)	37.5 (34.9-40.2)
Serious psychological distress (past month)	13.3 (8.8-19.7)	16.1 (14.5-17.8)	15.4 (11.5-20.2)	20.2 (15.2-26.4)	17.1 (14.1-20.6)	15.9 (10.3-23.7)	15.6 (11.9-20.3)	13.9 (8.9-21.0)	16.4 (10.5-24.6)	22.9* (17.3-29.7)	17.3 (13.8-21.4)	14.9 (11.0-19.8)	16.1 (14.4-17.9)
Suicidal ideation	12.8 (9.1-17.7)	15.2 (11.6-19.5)	14.7 (11.5-18.5)	16.4 (12.2-21.8)	13.4 (9.9-17.9)	7.7* (4.6-12.6)	11.2 (9.2-13.5)	13.3 (9.5-18.4)	17.3 (12.6-23.4)	16.9 (13.2-21.4)	15.8 (10.1-23.9)	†	14.1 (12.7-15.6)
Suicide attempt	†	†	4.3 (2.4-7.6)	†	3.1 (2.1-4.6)	†	1.5* (0.9-2.7)	4.7 (2.6-8.3)	†	4.6 (2.7-7.8)	4.8* (3.2-6.9)	3.3 (1.8-6.1)	3.1 (2.4-4.0)
ADHD symptoms (past 6 months)	12.0 (8.1-17.5)	16.5 (11.2-23.5)	17.9 (15.7-20.4)	18.6 (14.6-23.5)	20.0 (11.6-32.2)	24.8 (15.1-38.0)	20.2 (15.9-25.3)	18.3 (13.7-24.1)	18.6 (12.7-26.4)	19.7 (15.8-24.3)	16.1 (12.1-21.1)	17.0 (12.0-23.5)	18.1 (16.3-20.1)
Antisocial behaviour	†	7.4 (3.8-13.8)	5.8 (3.9-8.7)	6.6 (4.0-10.7)	†	†	7.0 (5.2-9.4)	5.4 (3.6-8.0)	†	6.0 (3.2-11.0)	9.3* (6.9-12.4)	†	6.3 (5.1-7.9)
Carried a weapon	†	†	6.7 (5.4-8.3)	5.4 (3.5-8.3)	†	7.5 (3.9-13.9)	4.4 (2.5-7.5)	4.0 (2.2-7.0)	†	†	8.4 (5.1-13.5)	9.9* (6.0-15.9)	5.6 (4.4-7.0)
School fight (physical)	8.6 (6.4-11.4)	†	6.6 (4.8-9.0)	10.3* (7.5-14.0)	7.2 (5.5-9.2)	†	6.6 (4.7-9.1)	7.6 (4.1-13.4)	†	†	12.4* (9.0-17.0)	7.9 (5.0-12.2)	7.4 (6.2-8.7)
Worried be harmed/threatened at school	8.3 (5.4-12.4)	12.3** (11.6-13.1)	15.1** (12.5-18.2)	10.8 (7.5-15.4)	9.4 (7.4-11.8)	†	10.7 (7.2-15.8)	13.8 (8.4-21.8)	8.4 (6.1-11.5)	9.4 (6.4-13.7)	9.2 (6.6-12.7)	7.7 (4.1-14.1)	10.7 (9.2-12.3)
Threatened/injured with weapon at school	4.8 (2.6-8.7)	†	6.2 (3.6-10.5)	5.0 (2.7-8.8)	5.7 (4.4-7.5)	†	†	5.6 (3.1-9.7)	7.1 (3.8-12.8)	4.4 (2.4-7.9)	5.8 (3.6-9.2)	6.4 (3.5-11.2)	5.4 (4.4-6.7)
Been victim of bullying at school	26.7 (19.6-35.2)	25.9 (19.1-34.2)	23.4 (18.6-29.1)	18.9 (14.4-24.4)	17.5 (11.1-26.6)	19.9 (15.4-25.2)	17.3 (11.1-26.0)	20.6 (16.3-25.7)	26.0 (20.6-32.2)	23.9 (20.4-27.7)	28.3* (24.0-33.0)	25.6 (19.1-33.4)	22.3 (20.3-24.5)
Been victim of cyberbullying	24.0 (16.4-33.7)	15.9 (8.5-27.6)	23.8* (20.5-27.6)	15.6 (12.0-20.1)	20.7 (17.9-23.8)	†	18.6 (13.6-24.7)	18.1 (15.2-21.4)	24.2 (18.3-31.4)	21.3 (17.7-25.4)	29.4* (24.3-34.9)	19.9 (12.4-30.2)	20.1 (18.2-22.1)
Any gambling activity	34.0 (27.1-41.8)	38.0 (27.4-49.8)	35.1 (29.4-41.1)	33.0 (27.5-39.0)	35.1 (29.2-41.6)	31.5 (24.3-39.6)	35.9 (29.6-42.7)	30.2 (23.4-38.0)	32.3 (20.8-46.4)	28.5* (24.7-32.6)	48.1* (37.4-58.9)	40.4 (31.6-50.0)	34.2 (31.6-37.0)
Video game playing problem	14.5 (10.0-20.4)	†	16.8* (13.1-21.3)	15.5 (9.9-23.5)	9.6 (6.7-13.6)	†	16.1 (11.2-22.6)	16.6 (11.8-22.8)	9.0 (4.7-16.6)	12.8 (10.0-16.2)	14.3 (8.8-22.4)	7.5 (3.8-14.2)	13.5 (11.7-15.5)
Coexisting problems	†	6.6 (4.7-9.2)	4.7* (3.4-6.3)	7.0 (4.2-11.4)	†	5.5* (4.4-6.9)	7.5 (5.5-10.3)	5.3* (3.8-7.4)	14.7** (8.6-24.0)	8.0 (5.3-11.9)	8.3 (6.0-11.3)	7.9 (5.9-10.4)	7.8 (6.5-9.5)

Notes: (1) due to small sample sizes, the Erie St. Clair and the South West LHINs were merged, and the South East and the Champlain LHINs were merged; (2) for indicator definitions, please see Table 2.6 or the individual chapters; (3) entries in brackets are 95% confidence intervals; (4) most of the indicators refer to the past 12 months (past year); (5) some of the indicators are based on a random half sample; (6) † estimate suppressed due to unreliability; (7) *p<.05, **p<.01 significant difference, LHIN area vs. Ontario.

Source: OSDUHS, Centre for Addiction & Mental Health

3.9 Overview of the Greater Toronto Area

In this section, we present estimates of mental health and well-being among students from schools in the Greater Toronto Area (GTA) and comparisons with the province as a whole. The GTA encompasses the City of Toronto, Durham Region, York Region, Peel Region, and Halton Region.

Table 3.9.1: Percentage of Students in the Greater Toronto Area (GTA) Reporting Mental Health and Well-Being Indicators, 2011–2015 OSDUHS (Grades 7–12)

Indicator	2011 GTA % (95% CI) (n=3,726)	2013 GTA % (95% CI) (n=4,806)	2015 GTA % (95% CI) (n=4,288)	2015 Ontario % (95% CI) (n=10,426)
Fair or poor self-rated physical health	16.3 (14.3-18.4)	7.2 (6.2-8.4)	7.6 (6.5-8.8)	7.6 (6.8-8.5)
Asthma diagnosis (current)	7.2 (6.2-8.5)	7.2 (5.8-9.0)	6.8 (5.4-8.5)	8.0 (6.8-9.4)
Daily physical activity (past week)	20.8 (18.9-22.9)	21.2 (19.2-23.3)	20.7 (18.4-23.1)	22.3 (20.7-23.9)
Physically inactive (past week)	9.8 (8.2-11.7)	9.0 (7.8-10.3)	7.3 (6.1-8.7)	6.4 (5.5-7.5)
Screen time sedentary behaviour	65.1 (61.2-68.9)	62.4 (60.1-64.6)	64.0 (61.0-6.9)	62.6 (60.7-64.4)
Overweight or obese	23.4 (20.6-26.3)	22.6 (20.3-25.2)	24.9 (22.8-27.0)	26.4 (24.9-28.0)
8 or more hours of sleep on a school night	n/a	n/a	39.6 (36.1-43.2)	41.0 (38.9-43.2)
Often or always go to bed or school hungry	n/a	n/a	4.5 (3.5-5.8)	4.6 (3.9-5.5)
Use of an indoor tanning device	n/a	3.8 (2.7-5.3)	3.1 (2.2-4.2)	3.6 (2.9-4.6)
Medically treated injury	38.4 (35.7-41.1)	37.2 (33.0-41.5)	39.2 (36.0-42.6)	* 43.7 (41.0-46.3)
Medical use of an opioid pain reliever	19.0 (17.0-21.1)	22.4 (20.2-24.8)	18.1 (16.1-20.4)	* 21.1 (19.2-23.2)
Not always wear a bike helmet	n/a	80.7 (77.8-83.3)	79.0 (74.1-83.2)	76.9 (74.3-79.4)
Not always wear a seatbelt	30.1 (25.7-34.8)	24.9 (22.0-28.0)	23.7 (21.2-26.4)	23.9 (21.8-26.3)
Texting while driving	n/a	29.5 (25.0-34.5)	30.7 (26.0-35.8)	35.3 (31.0-39.9)
Vehicle collision as a driver	7.3 (5.2-10.2)	7.9 (6.0-10.2)	7.0 (4.3-11.4)	8.6 (6.5-11.4)
Mental health care visit	14.3 (12.4-16.3)	21.0 (17.2-25.4)	20.1 (17.9-22.6)	20.9 (18.9-23.0)
Sought counselling over phone or Internet	2.3 (1.6-3.4)	3.8 (2.8-5.1)	3.7 (2.7-5.0)	3.0 (2.3-3.7)
Unmet need for mental health support	n/a	29.3 (26.2-32.5)	28.4 (25.8-31.1)	28.4 (26.1-30.9)
Medical use of a tranquilizer/sedative [‡]	3.8 (2.8-5.1)	2.2 (1.5-3.1)	2.0 (1.6-2.5)	* 3.3 (2.9-3.7)
Medical use of an ADHD drug	1.7 (1.2-2.5)	2.2 (1.6-3.1)	2.1 (1.6-2.8)	2.6 (2.1-3.3)
Been prescribed medication for anxiety, depression or both [‡]	2.5 (1.6-3.8)	5.4 (3.6-7.9)	4.3 (3.3-5.4)	* 5.6 (4.4-6.9)
Fair or poor self-rated mental health	13.4 (11.8-15.3)	16.7 (14.0-19.7)	15.2 (13.0-17.8)	16.5 (14.5-18.9)
Elevated stress	n/a	n/a	30.2 (26.8-33.9)	28.7 (26.1-31.4)
Moderate-to-serious psychological distress	n/a	26.0 (22.9-29.4)	34.7 (30.8-38.8)	34.0 (31.5-36.7)
Serious psychological distress	n/a	12.5 (10.3-15.0)	14.0 (12.0-16.3)	14.2 (12.5-16.0)
Suicidal ideation	9.2 (7.6-11.1)	13.8 (11.1-17.0)	11.6 (9.9-13.4)	12.4 (10.9-14.1)
Suicide attempt	1.9 (1.2-3.0)	3.1 (2.3-4.1)	2.4 (1.6-3.5)	3.0 (2.2-3.9)
ADHD symptoms	n/a	n/a	16.5 (14.1-19.1)	15.8 (14.0-17.6)
Antisocial behaviour	7.2 (5.9-8.9)	6.6 (5.1-8.5)	5.0 (3.9-6.3)	5.2 (4.2-6.4)
Carried a weapon	4.0 (3.1-5.3)	4.2 (3.2-5.4)	4.5 (3.4-6.0)	5.1 (4.1-6.4)
Physical fight at school	12.5 (11.0-14.1)	12.2 (10.4-14.2)	9.4 (7.7-11.4)	10.4 (9.1-11.9)
Worried be harmed/threatened at school	21.1 (18.0-24.5)	17.1 (14.7-19.9)	12.2 (9.9-15.1)	12.1 (10.2-14.4)
Threatened/injured with weapon at school	7.4 (5.8-9.4)	6.4 (5.0-8.3)	4.5 (3.5-5.8)	* 5.8 (4.8-6.9)
Bullied others at school	16.5 (14.0-19.2)	15.5 (13.1-18.1)	12.6 (10.6-15.0)	13.1 (11.5-14.8)
Victim of bullying at school	23.7 (21.1-26.5)	22.7 (20.5-25.0)	20.8 (18.4-23.5)	* 23.6 (21.5-25.8)
Victim of cyberbullying	19.8 (17.3-22.7)	17.9 (15.7-20.4)	16.5 (14.5-18.7)	* 19.8 (18.0-21.7)
Any gambling activity	39.0 (35.9-42.3)	34.8 (30.9-38.8)	30.6 (27.7-33.6)	31.8 (29.3-34.5)
Multi-gambling activity	2.7 (1.6-4.6)	2.7 (1.8-4.1)	2.1 (1.4-3.1)	1.7 (1.3-2.3)
Video gaming problem	13.8 (11.1-17.2)	11.8 (9.9-13.9)	14.0 (11.8-16.6)	12.5 (11.1-14.1)
Coexisting problems [‡]	n/a	n/a	6.8 (5.4-8.4)	7.8 (6.5-9.5)

Notes: (1) for indicator definitions, please see Table 2.6 or the individual chapters; (2) most of the indicators refer to the past 12 months (past year); (3) some of the indicators are based on a random half sample; (4) entries in brackets are 95% confidence intervals; (5) [‡] results among Grades 9–12 only; (6) * 2015 GTA estimate differs from the 2015 Ontario estimate, p<.05 (not controlling for other factors).

Source: OSDUHS, Centre for Addiction & Mental Health

4. SUMMARY AND DISCUSSION

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 diverse disciplines to work collaboratively on prevention. Preventing problems from occurring, or reducing their risk, is far more preferable than treating problems, both on an individual and a societal level. The OSDUHS performs several public health functions including: identifying the extent of impaired well-being in the mainstream student population, identifying priority areas for further research, tracking changes over time, and identifying risk and protective factors. Since 1977, the OSDUHS has been providing a knowledge base for designing and targeting prevention and health promotion programs, informing public health policy, evaluating the efficacy of policies and programs at a population level, and disseminating trustworthy information to health and education professionals and the general public.

Study Limitations

Before discussing our findings, we must first remind readers of some of the limitations of this study. Although school sample surveys are the most feasible means to monitor health behaviours and any negative consequences in the student population, those interpreting the OSDUHS results should consider the following limitations. First, these data are based on self-reports, which cannot be readily verified, nor are they based on clinical assessment. Respondents may unintentionally misreport their responses due to various errors in the response process. Respondents may err in their reporting of a behaviour or event due to such factors as the event not being stored in memory; not understanding the question; being unable to retrieve the information; and difficulty in

formatting a response based on provided categories (Biemer & Lyberg, 2003).

Second, self-reports of height and weight (used to calculate body mass index, which in turn classifies overweight and obesity status), illegal behaviours (e.g., theft, drug use), and sensitive experiences (e.g., suicide attempt) likely underestimate the true rate by some unknown magnitude (Adlaf, 2005; Brener et al., 2003; Brener, Billy & Grady, 2003; Elgar & Stewart, 2008), but the extent of underreporting is not likely to greatly vary over time. Thus, estimates of change should remain valid and unaffected by such constant bias.

Third, the bias caused by nonrespondents can affect our estimates. We do not know whether, or by how much, nonrespondents differ from respondents. It is possible that absent students, suspended students, and those who were not allowed or refused to participate are more likely to have physical and mental health difficulties than those who did participate. However, because the rate of student absenteeism in the OSDUHS has remained fairly stable across time, the trends reported here should remain valid. More compelling, our analysis comparing high-responding classes to low-responding classes found few differences in reports of mental health and well-being indicators (see the Methods section).

Fourth, our findings cannot be generalized to adolescents who are not attending school (e.g., dropouts, street youth, those in the military or in institutionalized health or correctional settings). Mental health and well-being problems in such groups can differ appreciably from what is found in the mainstream student population. However, the bias caused by such noncoverage depends not only on the difference in health indicators between those surveyed and those not, but also on the size of the group missed. Thus, although problems may be more likely among these adolescents excluded because they are out-of-

scope, if the size of the excluded group is small relative to the total population, the bias will not likely be substantial (Heeringa et al., 2010). In our case, the non-school group excluded from our target constitutes only about 8% of the total adolescent population between the ages of 12 and 18 in Ontario.

Fifth, the data reflect a snapshot in time and because we do not re-survey the same students across time, we cannot identify causes of individual change or the temporal order of risk factors (i.e., whether X causes Y, or Y causes X). In addition, we cannot determine from these data whether our findings are adolescent-limited, for example, to what extent antisocial behaviours naturally decline or cease with the transition into emerging adulthood.

Sixth and finally, the findings in such a large study are numerous and complex, and some findings are more reliable than others. For example, random variation causes us to be cautious in interpreting change between two points in time. Therefore, we place greater emphasis on change occurring over multiple survey time points.

Despite these limitations, population surveillance studies such as the OSDUHS excel at identifying the extent of various health behaviours that have important current and future implications for adolescent well-being. Population health surveys help to identify which population groups are at the greatest risk for poor health outcomes, help to identify areas requiring more research, and help to identify potential future trends that have implications for future service and programming needs.

Encouraging Findings

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

- like school and report a positive school climate;
- rate their physical health and mental health as excellent or very good;
- are neither overweight nor obese;
- are satisfied with their weight;
- do not report emotional problems (e.g., psychological distress, low self-esteem, elevated stress);
- are not being bullied;
- do not engage in antisocial behaviours or bullying;
- do not gamble;
- do not experience coexisting problems (psychological distress, antisocial behaviour, hazardous drinking, and drug use problems).

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

- Antisocial behaviour has been trending downward during the past two decades. Fewer students today report behaviours such as vandalism, theft, breaking and entering, assaulting others, and weapon carrying than they did in the early 1990s.
- Gambling has declined since monitoring first began in the early 2000s.
- Bullying victimization, bullying perpetration, and fighting at school have declined during the past decade or so.

- The youngest students in our study, that is students in grades 7 and 8, show a decrease in physical inactivity at school. That is, more young students today are engaging in moderate-to-vigorous physical activity at school in physical education class compared with their counterparts from about a decade ago. If this finding holds stable, it could point to an important shift in the physical health of adolescents.
- More students today report always wearing a seatbelt when in a vehicle compared with students from a few years ago.

Public Health Concerns

Although the majority of students do not report a problem, an important minority report some form of impaired well-being or functioning. See Figure 4.1 for an overview.

About **one-in-two** students or more report...

- sustaining an injury that required treatment in the past year
- sedentary behaviour
- not always wearing a bicycle helmet while bicycling (among cyclists).

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

- gambling in the past year
- moderate-to-serious psychological distress
- texting while driving (among drivers).

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

- do not always wear a seatbelt in a vehicle
- are bullied at school
- are classified as overweight or obese
- report an unmet need for mental health support
- report an elevated level of stress.

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

- hazardous/harmful drinking
- being cyberbullied.

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

- fair/poor mental health

- a drug use problem
- symptoms of ADHD
- serious psychological distress
- a video gaming problem
- suicidal ideation
- worry about being harmed or threatened at school.

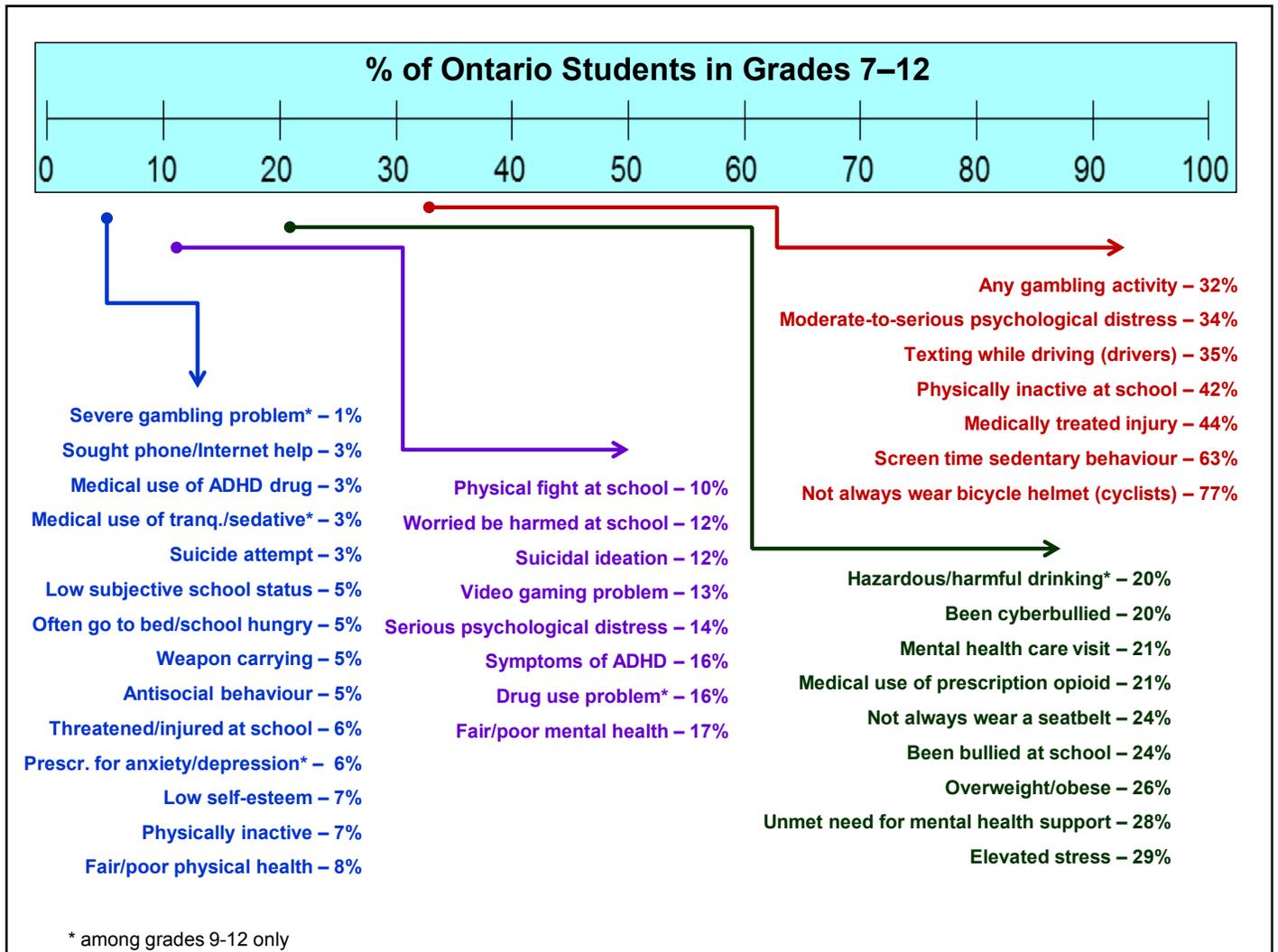
About **one-in-ten** students report...

- fighting at school
- poor physical health.

Some findings point to **concerning trends**:

- Reports of injuries that require medical attention have increased during the past decade.
- Screen time sedentary behaviour has increased during the past few years.
- The percentage of students classified as overweight or obese has increased slightly during the past decade (since 2007).
- Texting and driving has not declined since the previous survey in 2013, despite tougher provincial legislation introduced in 2015.
- More students today rate their mental health as fair or poor than did students a few years ago.
- Psychological distress has increased since the previous survey in 2013.
- Reports of being prescribed medication to treat anxiety or depression, and visits to a mental health professional have increased during the past decade. This may be a positive trend reflecting increased access to services. However, this finding may reflect increases in the population in need of these mental health services.
- Hours video gaming daily and indications of a video gaming problem have increased over the past few years, especially among males.
- Females show an increase in poor body image during the past decade.

Figure 4.1
 Overview of Mental Health and Well-Being Indicators, 2015 OSDUHS



Demographic Correlates

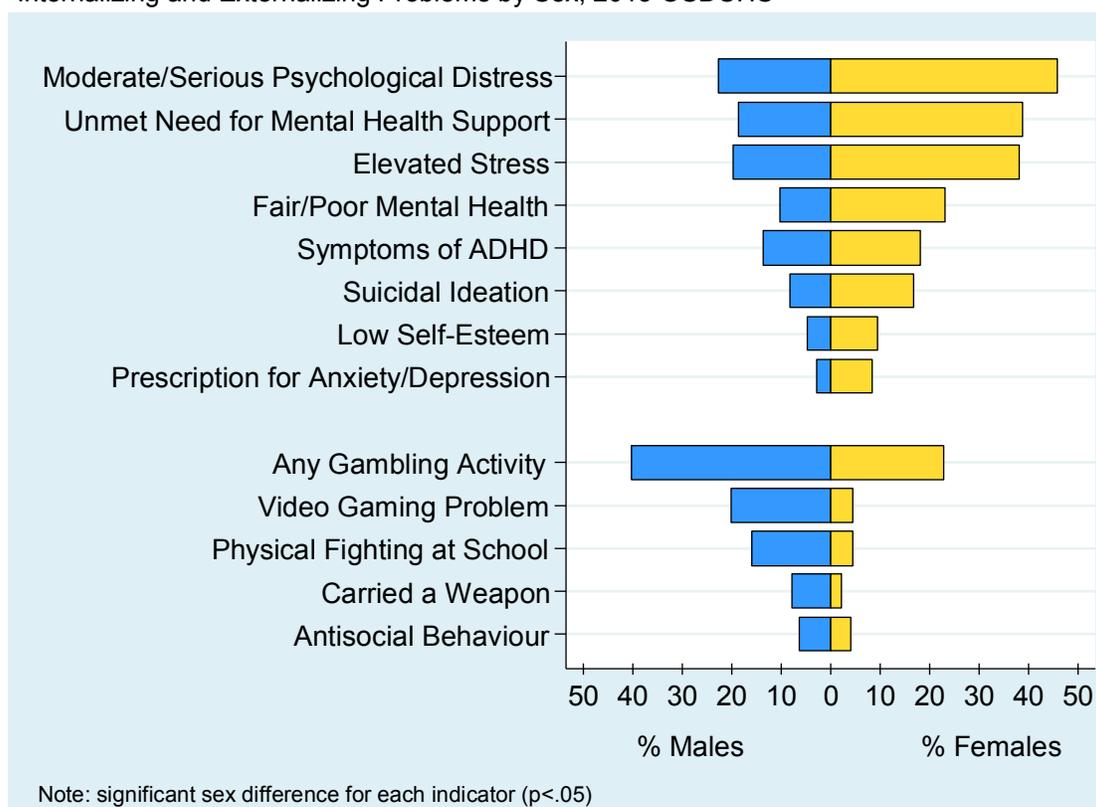
Our report found that mental health and well-being varies by sex, even after controlling for grade and region. As seen in Figure 4.2 and Table 4.2, the general pattern shows that females are more likely to experience internalizing problems (psychological distress, suicidal ideation), whereas males are more likely to exhibit externalizing problem behaviours (such as antisocial behaviour, gambling and problem gambling, video gaming problem).

Age/grade is also significantly related to mental health and well-being. Generally, poor physical health indicators (e.g., inactivity, sedentary behaviour), health risk behaviours (e.g., not wearing a helmet or seatbelt, texting while driving), internalizing problems (e.g., fair/poor self-rated mental health, distress), antisocial behaviour, gambling, and coexisting problems increase with grade. Physical fighting at school is more prevalent in the younger grades and declines in later adolescence.

A few regional differences were found in this report:

- Compared with the provincial average, **Toronto** students are significantly *more* likely to report not always wearing a helmet while bicycling, and to indicate a video gaming problem. Compared with the average, they are significantly *less* likely to report sustaining a serious injury, texting and driving, medical use of prescription opioids, and being cyberbullied.
- Compared with the provincial average, **Northern Ontario** students are *more* likely to report sustaining a serious injury, medical use of an ADHD drug, and being cyberbullied.
- Students in **Western Ontario** and **Eastern Ontario** do not significantly differ from the provincial average on any indicator.

Figure 4.2
Internalizing and Externalizing Problems by Sex, 2015 OSDUHS



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 findings 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 mainstream population. Consequently, our findings should be highly generalizable.

Our findings are consistent with many expectations of the adolescent stage of development. While most Ontario students are in good physical and mental health, a sizeable minority experience an array of functional impairments. Some mental health problem indicators, such as suicidal ideation and psychological distress remain high. One-in-eight Ontario students (an estimated 113,500) report past year suicidal ideation and one-in-twenty-five (an estimated 27,000) report a suicide attempt in the past year. These large population numbers should remind us of the vulnerability of this age group. Also concerning is that some mental health problem indicators, especially among females, show increases over time.

While our results show that the level of bullying victimization at school has decreased during the past decade – perhaps due to initiatives such as the safe school policies implemented in Ontario – the level of cyberbullying victimization shows no change. Cyberbullying is a growing concern as electronic media become predominant in the lives of adolescents. This report showed that one-in-five students are cyberbullied. Bullying victimization is not only associated with immediate adverse consequences such as school problems, stress, and alcohol and drug use (Kowalski, Giumetti, Schroeder, & Lattanner, 2014), it can also have serious, enduring effects on mental health (Arseneault, Bowes, & Shakoor, 2010; Meltzer, Vostanis, Ford, Bebbington, & Dennis, 2011).

Our findings also showed some encouraging improvements in well-being during the past

decade or so, in particular declines in antisocial behaviour, bullying and fighting at school, and gambling. Ongoing monitoring will determine whether these trends reflect more enduring changes or temporary fluctuations.

The past decade has seen a growing interest in the state of adolescent mental health. For example, the *Mental Health Strategy for Canada* (Mental Health Commission of Canada, 2012) and Ontario's comprehensive strategy *Open Minds, Healthy Minds* (Government of Ontario, 2011) sought to bring mental health issues "out of the shadows" and into the public health domain. Mental health promotion, prevention efforts, and early intervention are priorities in both strategies. School is a significant influence on young people's cognitive, social, and emotional development. Further, given the substantial amount of time spent in the school setting, school-based prevention programs and interventions are an ideal way to reach youth. School-based mental health literacy, coping skills development, anti-stigma, and anti-bullying initiatives are a few examples of how schools can support mental health. The sex differences in physical and mental health indicators found in this report and elsewhere suggest the value in targeting programming to the specific needs of males and females. Systematic reviews of school programs promoting mental health and reducing behavioural problems conclude that programs can be effective if implemented with fidelity to the program, intensity, and a long-term commitment (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011; Ttofi & Farrington, 2011; Weare & Nind, 2011; Wolfe, Crooks, Hughes, Chiodo, & Jaffe, 2008).

This report also presented some concerning findings about the physical health of Ontario students. We found continuing increases in 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 morbidity and mortality among Canadian children and adolescents (Pan et al., 2007; Public Health Agency of Canada, 2009; Statistics Canada, 2015). Related to this, one-in-four students do

not always wear a seatbelt when riding in a vehicle, one-in-three drivers text while driving, and over three-quarters of cyclists do not always wear a bicycle helmet. Our report also showed a slight, but significant increase over the past decade in the proportion of Ontario students who are overweight or obese, with the current level remaining elevated at one-in-four. Continued and enhanced surveillance of these health indicators is clearly needed.

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 policies that enable youth to experience optimal well-being. We hope the findings provided in this report – whether showing new concerns or enduring trends – help to raise awareness and to identify priority issues facing adolescents today.

Table 4.1: Period Changes Over Time for Selected Indicators (Grades 7–12)

	No Physical Activity at School in Phys-Ed	Screen Time Sedentary Behaviour	Medically Treated Injury	Mental Health Care Visit	Prescribed Medication for Anxiety/Depression	Fair/Poor Self-Rated Mental Health	Moderate-to-Serious Psycholog. Distress	Antisocial Behaviour Index	Carried a Weapon	Physical Fighting at School	Victim of Bullying at School	Any Gambling Activity	Video Gaming Problem
Total	↓	↑△	△	△	△	△	↑	▽	▽	▽	▽	▽	△
Males	↓		△	△		△	↑	▽	▽	▽	▽	▽	△
Females	↓	↑△	△	△	△	△	↑	▽	▽	▽		▽	
Grade 7	▽			△	--			▽			▽	▽	
Grade 8	▽		△	△	--			▽	▽		▽	▽	
Grade 9	↓	↑△						▽	▽	▽	▽	▽	
Grade 10			△			△	↑	▽	▽			▽	
Grade 11	↓					△	↑	▽	▽		▽	▽	
Grade 12		↑	△	△			↑					▽	
Toronto				△								▽	
North	↓		△	△		↑	↑	▽		↑	▽	▽	
West	↓	△	△	△		△	↑	↓▽	↓▽	▽	▽	▽	
East		△		△			↑	▽	▽	▽	▽	▽	

Notes: (1) for indicator definitions, please see Table 2.6 or individual chapters; (2) ↑↓ significant increase or decrease in 2015 vs. 2013, $p < .01$; (3) △▽ significant increase or decrease in 2015 vs. 1999, $p < .01$ (vs. 2001 for Prescribed Medication; vs. 2003 for Medically Treated Injury, Victim of Bullying at School, and Any Gambling Activity; vs. 2007 for Fair/Poor Mental Health, Video Gaming Problem; vs. 2009 for Screen Time); (4) the following major indicators show no change and, therefore, are not presented: daily physical activity; texting and driving; no physical health doctor visit; medical tranquillizer use; medical ADHD drug use; sought mental health counselling over phone or Internet; suicidal ideation and attempt; threatened/injured with a weapon at school; and victim of cyberbullying.

Source: OSDUHS, Centre for Addiction & Mental Health

Table 4.2: Subgroup Differences for Selected Indicators, 2015 OSDUHS (Grades 7–12)

	Fair/Poor Self-Rated Physical Health	Physically Inactive	Texting While Driving (among Drivers)	Medically Treated Injury	Medical Use Prescript. Opioids	Mental Health Care Visit	Fair/Poor Self-Rated Mental Health	Elevated Stress	Moderate-to-Serious Psych. Distress	Suicidal Ideation	ADHD Symptoms	Antisocial Behaviour	Victim of Bullying at School	Victim of Cyber-bullying	Any Gambling Activity	Video Gaming Problem	Coexisting Problems (Grades 9-12)
Sex Difference	***	**	ns	ns	*	***	***	***	***	***	**	**	***	***	***	***	**
	F ↑	F ↑			F ↑	F ↑	F ↑	F ↑	F ↑	F ↑	F ↑	M ↑	F ↑	F ↑	M ↑	M ↑	F ↑
Grade Difference	**	***	***	ns	***	ns	***	***	***	**	***	**	ns	ns	**	ns	***
(compared with previous grade)		8 ↑ 7	--				8 ↑ 7		8 ↑ 7	8 ↑ 7		8 ↑ 7					--
			--														--
		10 ↑ 9						10 ↑ 9	10 ↑ 9	10 ↑ 9							10 ↑ 9
		11 ↑ 10	11 ↑ 10		11 ↑ 10		11 ↑ 10	11 ↑ 10	11 ↑ 10		11 ↑ 10						
			12 ↑ 11														
Region Difference	ns	ns	*	**	*	ns	ns	ns	ns	ns	ns	ns	ns	**	ns	**	ns
(region compared with Ontario)			TO ↓	TO ↓	TO ↓									TO ↓		TO ↑	
				N ↑										N ↑			

Notes: (1) for indicator definitions, please see Table 2.6 or individual chapters; (2) overall tests of effect are based on a univariate chi-square statistic, *p<.05, **p<.01, ***p<.001, ns=non-significant; (3) subgroup comparisons are based on contrasts in adjusted logistic regression models; (4) TO=Toronto, N=North, W=West, E=East.

Source: OSDUHS, Centre for Addiction & Mental Health

5. REFERENCES

- Adlaf, E. M. (2005). Collecting drug use data from different populations. In Z. Sloboda (Ed.), *Epidemiology of drug abuse* (pp. 99-111). New York: Springer.
- Adlaf, E. M., Mann, R. E., & Paglia, A. (2003). Drinking, cannabis use and driving among Ontario students. *Canadian Medical Association Journal, 168*(5), 565-566.
- Anderman, C., Cheadle, A., Curry, S., Diehr, P., Shultz, L., & Wagner, E. (1995). Selection bias related to parental consent in school-based survey research. *Evaluation Review, 19*(6), 663-674. doi:10.1177/0193841x9501900604
- Anderson, C. A., Shibuya, A., Ihori, N., Swing, E. L., Bushman, B. J., Sakamoto, A., Rothstein, H. A., & Saleem, M. (2010). Violent video game effects on aggression, empathy, and prosocial behavior in Eastern and Western countries: A meta-analytic review. *Psychological Bulletin, 136*(2), 151-173. doi:10.1037/a0018251
- Anderson, V., Brown, S., Newitt, H., & Hoile, H. (2011). Long-term outcome from childhood traumatic brain injury: Intellectual ability, personality, and quality of life. *Neuropsychology, 25*(2), 176-184. doi:10.1037/a0021217
- Armstrong, T. D., & Costello, E. J. (2002). Community studies on adolescent substance use, abuse, or dependence and psychiatric comorbidity. *Journal of Consulting and Clinical Psychology, 70*(6), 1224-1239. doi:10.1037/0022-006X.70.6.1224
- Arseneault, L., Bowes, L., & Shakoor, S. (2010). Bullying victimization in youths and mental health problems: 'Much ado about nothing'? *Psychological Medicine, 40*(5), 717-729. doi:10.1017/S0033291709991383
- Biemer, P. P., & Lyberg, L. E. (2003). *Introduction to survey quality*. Hoboken, NJ: John Wiley & Sons.
- Boak, A., Hamilton, H. A., Adlaf, E. M., & Mann, R. E. (2015). *Drug use among Ontario students, 1977-2015: Detailed OSDUHS findings (CAMH Research Document Series No. 41)*. Toronto: Centre for Addiction and Mental Health.
- Bond, L., Butler, H., Thomas, L., Carlin, J., Glover, S., Bowes, G., & Patton, G. (2007). Social and school connectedness in early secondary school as predictors of late teenage substance use, mental health, and academic outcomes. *Journal of Adolescent Health, 40*(4), 357.e359-357.e318. doi:10.1016/j.chb.2014.04.005
- Bonny, A. E., Britto, M. T., Klostermann, B. K., Hornung, R. W., & Slap, G. B. (2000). School disconnectedness: Identifying adolescents at risk. *Pediatrics, 106*(5), 1017-1021.
- Bovet, P., Viswanathan, B., Faeh, D., & Warren, W. (2006). Comparison of smoking, drinking, and marijuana use between students present or absent on the day of a school-based survey. *Journal of School Health, 76*(4), 133-137. doi:10.1111/j.1746-1561.2006.00081.x
- Boyle, M. H., & Offord, D. R. (1991). Psychiatric disorder and substance use in adolescence. *Canadian Journal of Psychiatry, 36*(10), 699-705.
- Brener, N. D., Billy, J. O. G., & Grady, W. R. (2003). Assessment of factors affecting the validity of self-reported health-risk behavior among adolescents: Evidence from the scientific literature. *Journal of Adolescent Health, 33*(6), 436-457. doi:10.1016/S1054-139X(03)00052-1
- Brener, N. D., Eaton, D. K., Kann, L., Grunbaum, J. A., Gross, L. A., Kyle, T. M., & Ross, J. G. (2006). The association of survey setting and mode with self-reported health risk behaviors among high school students. *Public Opinion Quarterly, 70*(3), 354-374. doi:10.1093/poq/nfl003
- Brener, N. D., Kann, L., McManus, T., Kinchen, S. A., Sundberg, E. C., & Ross, J. G. (2002). Reliability of the 1999 Youth Risk Behavior Survey Questionnaire. *Journal of Adolescent Health, 31*(4), 336-342. doi:10.1016/S1054-139X(02)00339-7
- Brener, N. D., McManus, T., Galuska, D. A., Lowry, R., & Wechsler, H. (2003). Reliability and validity of self-reported height and weight among high school students. *Journal of Adolescent Health, 32*(4), 281-287. doi:10.1016/S1054-139X(02)00708-5
- Brunborg, G. S., Mentzon, R. A., & Frøyland, L. R. (2014). Is video gaming, or video game addiction, associated with depression, academic achievement, heavy episodic drinking, or conduct problems? *Journal of Behavioral Addictions, 3*(1), 27-32. doi:10.1556/JBA.3.2014.002
- Burkhalter, R., Cumming, T., Rynard, V., & Manske, S. (2013). *2012/2013 Youth Smoking Survey Microdata User Guide*. Retrieved from Waterloo, Ontario:
- Busch, V., Loyen, A., Lodder, M., Schrijvers, A. J. P., van Yperen, T. A., & de Leeuw, J. R. J. (2014). The effects of adolescent health-related behavior on academic performance: A systematic review of the longitudinal evidence. *Review of Educational Research, 84*(2), 245-274. doi:10.3102/0034654313518441
- Cali, A. M. G., & Caprio, S. (2008). Obesity in children and adolescents. *Journal of Clinical Endocrinology and Metabolism, 93*(11 Supplement 1), s31-s36. doi:10.1210/jc.2008-1363
- Centers for Disease Control and Prevention (CDC). (1994). Health risk behaviors among adolescents who do and do not attend school -- United States, 1992. *Morbidity and Mortality Weekly Report (MMWR), 43*(8), 129-132.
- Centers for Disease Control and Prevention (CDC). (2013). Mental health surveillance among children—United States, 2005–2011. *Morbidity and Mortality Weekly Report (MMWR), 62*(Suppl 2), 1-35.
- Chan, S. M., & Fung, T. C. T. (2014). Reliability and validity of K10 and K6 in screening depressive symptoms in Hong Kong adolescents. *Vulnerable Children and Youth Studies, 9*(1), 75-85. doi:10.1080/17450128.2013.861620
- Cochran, W. G. (1977). *Sampling techniques* (3rd ed.). New York: Wiley.
- Cole, T. J., Bellizzi, M. C., Flegal, K. M., & Dietz, W. H. (2000). Establishing a standard definition for child overweight and obesity worldwide: International survey. *BMJ, 320*(7244), 1240. doi:10.1136/bmj.320.7244.1240
- Collishaw, S. (2015). Annual research review: Secular trends in child and adolescent mental health. *Journal of Child Psychology and Psychiatry, 56*(3), 370-393. doi:10.1111/jcpp.12372

- Collishaw, S., Maughan, B., Goodman, R., & Pickles, A. (2004). Time trends in adolescent mental health. *Journal of Child Psychology and Psychiatry*, 45(8), 1350-1362. doi:10.1111/j.1469-7610.2004.00335.x
- Collishaw, S., Maughan, B., Natarajan, L., & Pickles, A. (2010). Trends in adolescent emotional problems in England: A comparison of two national cohorts twenty years apart. *Journal of Child Psychology and Psychiatry*, 51(8), 885-894. doi:10.1111/j.1469-7610.2010.02252.x
- Cook, S., Turner, N. E., Ballon, B., Paglia-Boak, A., Murray, R., Adlaf, E. M., Ilie, G., Dunnen, w., & Mann, R. E. (2015). Problem gambling among Ontario students: Associations with substance abuse, mental health problems, suicide attempts, and delinquent behaviours. *Journal of Gambling Studies*, 31(4), 1121-1134. doi:10.1007/s10899-014-9483-0
- Copeland, W. E., Adair, C. E., Smetanin, P., Stiff, D., Briante, C., Colman, I., . . . Angold, A. (2013). Diagnostic transitions from childhood to adolescence to early adulthood. *Journal of Child Psychology and Psychiatry*, 54(7), 791-799. doi:10.1111/jcpp.12062
- Copeland, W. E., Wolke, D., Angold, A., & Costello, E. (2013). Adult psychiatric outcomes of bullying and being bullied by peers in childhood and adolescence. *JAMA Psychiatry*, 70(4), 419-426. doi:10.1001/jamapsychiatry.2013.504
- Copeland, W. E., Wolke, D., Shanahan, L., & Costello, E. (2015). Adult functional outcomes of common childhood psychiatric problems: A prospective, longitudinal study. *JAMA Psychiatry*, 72(9), 892-899. doi:10.1001/jamapsychiatry.2015.0730
- Costello, E. J., Erkanli, A., Federman, E., & Angold, A. (1999). Development of psychiatric comorbidity with substance abuse in adolescents: Effects of timing and sex. *Journal of Clinical Child Psychology*, 28(3), 298-311. doi:10.1207/S15374424jcpp280302
- Courser, M. W., Shamblen, S. R., Lavrakas, P. J., Collins, D., & Ditterline, P. (2009). The impact of active consent procedures on nonresponse and nonresponse error in youth survey data: Evidence from a new experiment. *Evaluation Review*, 33(4), 370-395. doi:10.1177/0193841x09337228
- Curtin, S. C., Warner, M., & Hedegaard, H. (2016). Increase in suicide in the United States, 1999-2014. *NCHS Data Brief*, 241, 1-8.
- de Leeuw, E., & de Heer, W. (2002). Trends in household survey nonresponse: A longitudinal and international comparison. In R. M. Groves, D. A. Dillman, J. L. Eltinge, & R. J. A. Little (Eds.), *Survey nonresponse* (pp. 41-54). New York: Wiley.
- de Onis, M., Onyango, A., Borghi, E., Siyam, A., Nishida, C., & Siekmann, J. (2007). Growth reference 5-19 years. *Bulletin of the World Health Organization*, 85(9), 660-667. doi:10.2471/BLT.07.043497
- de Vries, D. A., Peter, J., de Graaf, H., & Nikken, P. (2016). Adolescents' social network site use, peer appearance-related feedback, and body dissatisfaction: Testing a mediation model. *Journal of Youth and Adolescence*, 45(1), 211-224. doi:10.1007/s10964-015-0266-4
- Delaney-Black, V., Chiodo, L. M., Hannigan, J. H., Greenwald, M. K., Janisse, J., Patterson, G., . . . Sokol, R. J. (2010). Just say "I Don't": Lack of concordance between teen report and biological measures of drug use. *Pediatrics*, 126(5), 887-893. doi:10.1542/peds.2009-3059
- Denniston, M. M., Brener, N. D., Kann, L., Eaton, D. K., McManus, T., Kyle, T. M., . . . Ross, J. G. (2010). Comparison of paper-and-pencil versus Web administration of the Youth Risk Behavior Survey (YRBS): Participation, data quality, and perceived privacy and anonymity. *Computers in Human Behavior*, 26(5), 1054-1060. doi:10.1016/j.chb.2010.03.006
- Derevensky, J. L., Gupta, R., & Winters, K. (2003). Prevalence rates of youth gambling problems: Are the current rates inflated? *Journal of Gambling Studies*, 19(4), 405-425. doi:10.1023/A:1026379910094
- Dickson, L., & Derevensky, J. L. (2006). Equipping school psychologists to address another risky behavior: The case for understanding youth problem gambling. *Canadian Journal of School Psychology*, 21(1-2), 59-72. doi:10.1177/0829573506298689
- Dodou, D., & de Winter, J. C. F. (2014). Social desirability is the same in offline, online, and paper surveys: A meta-analysis. *Computers in Human Behavior*, 36, 487-495. doi:10.1016/j.chb.2014.04.005
- Durlak, J. A., Weissberg, R. P., Dymnicki, A. B., Taylor, R. D., & Schellinger, K. B. (2011). The impact of enhancing students' social and emotional learning: A meta-analysis of school-based universal interventions. *Child Development*, 82(1), 405-432. doi:10.1111/j.1467-8624.2010.01564.x
- Eaton, D. K., Brener, N., & Kann, L. K. (2008). Associations of health risk behaviors with school absenteeism. Does having permission for the absence make a difference? *Journal of School Health*, 78(4), 223-229. doi:10.1111/j.1746-1561.2008.00290.x
- Eaton, D. K., Brener, N. D., Kann, L., Denniston, M. M., McManus, T., Kyle, T. M., . . . Ross, J. G. (2010). Comparison of paper-and-pencil versus web administration of the Youth Risk Behavior Survey (YRBS): Risk behavior prevalence estimates. *Evaluation Review*, 34(2), 137-153. doi:10.1177/0193841x10362491
- Eaton, D. K., Lowry, R., Brener, N. D., Grunbaum, J. A., & Kann, L. (2004). Passive versus active parental permission in school-based survey research: Does the type of permission affect prevalence estimates of risk behaviors? *Evaluation Review*, 28(6), 564-577. doi:10.1177/0193841x04265651
- Elgar, F. J., & Stewart, J. M. (2008). Validity of self-report screening for overweight and obesity: Evidence from the Canadian Community Health Survey. *Canadian Journal of Public Health*, 99(5), 423-427.
- Espelage, D. L., & Holt, M. K. (2013). Suicidal ideation and school bullying experiences after controlling for depression and delinquency. *Journal of Adolescent Health*, 53(1, Supplement), S27-S31. doi:10.1016/j.jadohealth.2012.09.017
- Estevez, A., Herrero-Fernández, D., Sarabia, I., & Jauregui, P. (2013). The impulsivity and sensation-seeking mediators of the psychological consequences of pathological gambling in adolescence. *Journal of Gambling Studies*, 1-13. doi:10.1007/s10899-013-9419-0
- Farhat, T., Iannotti, R. J., & Simons-Morton, B. G. (2010). Overweight, obesity, youth, and health-risk behaviors. *American Journal of Preventive Medicine*, 38(3), 258-267. doi:10.1016/j.amepre.2009.10.038

- Farrington, D. P., & Ttofi, M. M. (2011). Bullying as a predictor of offending, violence and later life outcomes. *Criminal Behaviour and Mental Health, 21*(2), 90-98. doi:10.1002/cbm.801
- Faulkner, G. E. J., Adlaf, E. M., Irving, H. M., Allison, K. R., & Dwyer, J. (2009). School disconnectedness: Identifying adolescents at risk in Ontario, Canada. *Journal of School Health, 79*(7), 312-318. doi:10.1111/j.1746-1561.2009.00415.x
- Faulkner, G. E. J., Adlaf, E. M., Irving, H. M., Allison, K. R., Dwyer, J. J. M., & Goodman, J. (2007). The relationship between vigorous physical activity and juvenile delinquency: A mediating role for self-esteem? *Journal of Behavioral Medicine, 30*(2), 155-163. doi:10.1007/s10865-006-9091-2
- Fischer, B., Ialomiteanu, A., Boak, A., Adlaf, E. M., Rehm, J., & Mann, R. E. (2013). Prevalence and key covariates of non-medical prescription opioid use among the general secondary student and adult populations in Ontario, Canada. *Drug and Alcohol Review, 32*(3), 276-287. doi:10.1111/dar.12025
- Fosse, N. E., & Haas, S. A. (2009). Validity and stability of self-reported health among adolescents in a longitudinal, nationally representative survey. *Pediatrics, 123*(3), e496-e501. doi:10.1542/peds.2008-1552
- Galea, S., & Tracy, M. (2007). Participation rates in epidemiologic studies. *Annals of Epidemiology, 17*(9), 643-653. doi:10.1016/j.annepidem.2007.03.013
- Gentile, D. A., Choo, H., Liau, A., Sim, T., Li, D., Fung, D., & Khoo, A. (2011). Pathological video game use among youths: A two-year longitudinal study. *Pediatrics, 127*(2), e319-e329. doi:10.1542/peds.2010-1353
- Gentile, D. A., Swing, E. L., Lim, C. G., & Khoo, A. (2012). Video game playing, attention problems, and impulsiveness: Evidence of bidirectional causality. *Psychology of Popular Media Culture, 1*(1), 62-70. doi:10.1037/a0026969
- Gershon, A. S., Guan, J., Wang, C., & To, T. (2010). Trends in asthma prevalence and incidence in Ontario, Canada, 1996–2005: A population study. *American Journal of Epidemiology*. doi:10.1093/aje/kwq189
- Gfroerer, J., Wright, D., & Kopstein, A. (1997). Prevalence of youth substance use: The impact of methodological differences between two national surveys. *Drug and Alcohol Dependence, 47*(1), 19-30. doi:10.1016/S0376-8716(97)00063-X
- Gilmore, J. (2010). Trends in dropout rates and the labour market outcomes of young dropouts. *Education Matters: Insights on Education, Learning and Training in Canada, 7*(4), Statistics Canada Catalogue no. 81-004-X.
- Gini, G., & Pozzoli, T. (2009). Association between bullying and psychosomatic problems: A meta-analysis. *Pediatrics, 123*(3), 1059-1065. doi:10.1542/peds.2008-1215
- Goodman, A. (2010). Substance use and common child mental health problems: Examining longitudinal associations in a British sample. *Addiction, 105*(8), 1484-1496. doi:10.1111/j.1360-0443.2010.02981.x
- Goodman, E., Adler, N. E., Kawachi, I., Frazier, A. L., Huang, B., & Colditz, G. A. (2001). Adolescents' perceptions of social status: Development and evaluation of a new indicator. *Pediatrics, 108*(2), e31-e31. doi:10.1542/peds.108.2.e31
- Gore, S., Aseltine, R. H., Jr., & Colton, M. E. (1992). Social structure, life stress and depressive symptoms in a high school-aged population. *Journal of Health and Social Behavior, 33*(2), 97-113.
- Gotlib, I. H., & Wheaton, B. (Eds.). (1997). *Stress and adversity over the life course: Trajectories and turning points*. Cambridge: Cambridge University Press.
- Government of Ontario. (2011). *Open minds, healthy minds: Ontario's comprehensive mental health and addictions strategy*. Toronto, ON: Government of Ontario. Retrieved from http://www.health.gov.on.ca/en/common/ministry/publications/reports/mental_health2011/mentalhealth.aspx.
- Green, J. G., Gruber, M. J., Sampson, N. A., Zaslavsky, A. M., & Kessler, R. C. (2010). Improving the K6 short scale to predict serious emotional disturbance in adolescents in the USA. *International Journal of Methods in Psychiatric Research, 19*(S1), 23-35. doi:10.1002/mpr.314
- Greitemeyer, T., & Mügge, D. O. (2014). Video games do affect social outcomes: A meta-analytic review of the effects of violent and prosocial video game play. *Personality and Social Psychology Bulletin, 40*(5), 578-589. doi:10.1177/0146167213520459
- Griesler, P. C., Kandel, D. B., Schaffran, C., Hu, M.-C., & Davies, M. (2008). Adolescents' inconsistency in self-reported smoking: A comparison of reports in school and in household settings. *Public Opinion Quarterly, 72*(2), 260-290. doi:10.1093/poq/nfn016
- Groves, R. M. (2006). Nonresponse rates and nonresponse bias in household surveys. *Public Opinion Quarterly, 70*(5), 646-675. doi:10.1093/poq/nfl033
- Groves, R. M., Fowler, F. J., Couper, M. P., Lepkowski, J. M., Singer, E., & Tourangeau, R. (2009). *Survey methodology* (2nd ed.). New York: Wiley.
- Gupta, R., & Derevensky, J. L. (1998). Adolescent gambling behavior: A prevalence study and examination of the correlates associated with problem gambling. *Journal of Gambling Studies, 14*(4), 319-345. doi:10.1023/A:1023068925328
- Hallal, P., Victora, C., Azevedo, M., & Wells, J. K. (2006). Adolescent physical activity and health. *Sports Medicine, 36*(12), 1019-1030. doi:10.2165/00007256-200636120-00003
- Hallfors, D., Khatapoush, S., Kadushin, C., Watson, K., & Saxe, L. (2000). A comparison of paper vs computer-assisted self interview for school alcohol, tobacco, and other drug surveys. *Evaluation and Program Planning, 23*(2), 149-155. doi:10.1016/S0149-7189(00)00011-2
- Hall-Lande, J. A., Eisenberg, M. E., Christenson, S. L., & Neumark-Sztainer, D. (2007). Social isolation, psychological health, and protective factors in adolescence. *Adolescence, 42*(166), 265-286.
- Hamilton, H. A., van der Maas, M., Boak, A., & Mann, R. E. (2014). Subjective social status, immigrant generation, and cannabis and alcohol use among adolescents. *Journal of Youth and Adolescence, 43*(7), 1163-1175. doi:10.1007/s10964-013-0054-y
- Hardoon, K. K., & Derevensky, J. L. (2002). Child and adolescent gambling behavior: Current knowledge. *Clinical Child Psychology and Psychiatry, 7*(2), 263-281. doi:10.1177/1359104502007002012

- Harrison, L. D. (2001). Understanding the differences in youth drug prevalence rates produced by the MTF, NHSDA, and YRBS studies. *Journal of Drug Issues, 31*(3), 665-694.
- Health Canada. (2002). *A report on mental illness in Canada*. Ottawa: Health Canada.
- Heeringa, S. G., West, B. T., & Berglund, P. A. (2010). *Applied survey data analysis*. Boca Raton: Taylor & Francis Group.
- Hibell, B., Adlaf, E. M., Andersson, B., Bjarnason, T., Delapenha, C., Hasbun, J., . . . Sathianathan, R. (2003). *Conducting school surveys on drug abuse. Toolkit module 3*. Vienna: United Nations Office on Drugs and Crime.
- Huang, J.-H., & Boyer, R. (2007). Epidemiology of youth gambling problems in Canada: A national prevalence study. *Canadian Journal of Psychiatry, 52*(10), 657-665.
- Idler, E. L., & Benyamini, Y. (1997). Self-rated health and mortality: A review of twenty-seven community studies. *Journal of Health and Social Behavior, 38*(1), 21-37.
- Ilie, G., Boak, A., Adlaf, E. M., Asbridge, M., & Cusimano, M. D. (2013). Prevalence and correlates of traumatic brain injuries among adolescents. *JAMA, 309*(24), 2550-2552. doi:10.1001/jama.2013.6750
- Ilie, G., Mann, R. E., Boak, A., Adlaf, E. M., Hamilton, H., Asbridge, M., . . . Cusimano, M. D. (2014). Suicidality, bullying and other conduct and mental health correlates of traumatic brain injury in adolescents. *PloS One, 9*(4), e94936. doi:10.1371/journal.pone.0094936
- Inchley, J., Currie, D., Young, T., Samdal, O., Torsheim, T., Augustson, L., . . . Barnekow, V. (Eds.). (2016). *Growing up unequal: gender and socioeconomic differences in young people's health and well-being. Health Behaviour in School-aged Children (HBSC) study: International report from the 2013/2014 survey*. Copenhagen: WHO Regional Office for Europe.
- Janssen, I. (2007). Physical activity guidelines for children and youth. *Applied Physiology, Nutrition, and Metabolism, 32*(Suppl. 2E), S109-121. doi:10.1139/H07-109
- Janssen, I. (2008). Healthy living and healthy weight. In W. F. Boyce, M. A. King, & J. Roche (Eds.), *Healthy settings for young people in Canada*. Ottawa: Public Health Agency of Canada.
- Jelenchick, L. A., Eickhoff, J., Zhang, C., Kraninger, K., Christakis, D. A., & Moreno, M. A. (2015). Screening for adolescent problematic internet use: Validation of the Problematic and Risky Internet Use Screening Scale (PRIUSS). *Academic Pediatrics, 15*(6), 658-665. doi:10.1016/j.acap.2015.07.001
- Jelsma, J., Burgess, T., & Henley, L. (2012). Does the requirement of getting active consent from parents in school-based research result in a biased sample? An empirical study. *Journal of Empirical Research on Human Research Ethics 7*(5), 56-62.
- Johnson, T. P., & Wislar, J. S. (2012). Response rates and nonresponse errors in surveys. *JAMA, 307*(17), 1805-1806. doi:10.1001/jama.2012.3532
- Kairouz, S., & Adlaf, E. M. (2003). Schools, students and heavy drinking: A multilevel analysis. *Addiction Research & Theory, 11*(6), 427-439. doi:10.1080/1606635021000058485
- Kandel, D. B., Johnson, J. G., Bird, H. R., Weissman, M. M., Goodman, S. H., Lahey, B. B., . . . Schwab-Stone, M. E. (1999). Psychiatric comorbidity among adolescents with substance use disorders: Findings from the MECA Study. *Journal of the American Academy of Child and Adolescent Psychiatry, 38*(6), 693-699. doi:10.1097/00004583-199906000-00016
- Kann, L., Brener, N. D., Warren, C. W., Collins, J. L., & Giovino, G. A. (2002). An assessment of the effect of data collection setting on the prevalence of health risk behaviors among adolescents. *Journal of Adolescent Health, 31*(4), 327-335. doi:10.1016/S1054-139X(02)00343-9
- Karvonen, S., & Rahkonen, O. (2011). Subjective social status and health in young people. *Sociology of Health and Illness, 33*(3), 372-383. doi:10.1111/j.1467-9566.2010.01285.x
- Kelleher, K. J., McInerney, T. K., Gardner, W. P., Childs, G. E., & Wasserman, R. C. (2000). Increasing identification of psychosocial problems: 1979-1996. *Pediatrics, 105*(6), 1313-1321. doi:10.1542/peds.105.6.1313
- Kessler, R. C., Adler, L., Ames, M., Demler, O., Faraone, S., Hiripi, E., . . . Walters, E. E. (2005a). The World Health Organization adult ADHD self-report scale (ASRS): A short screening scale for use in the general population. *Psychological Medicine, 35*(2), 245-256. doi:10.1017/S0033291704002892
- Kessler, R. C., Adler, L. A., Gruber, M. J., Sarawate, C. A., Spencer, T., & Van Brunt, D. L. (2007). Validity of the World Health Organization Adult ADHD Self-Report Scale (ASRS) screener in a representative sample of health plan members. *International Journal of Methods in Psychiatric Research, 16*(2), 52-65. doi:10.1002/mpr.208
- Kessler, R. C., Avenevoli, S., Costello, E., Georgiades, K., Green, J. G., Gruber, M. J., . . . Sampson, N. A. (2012). Prevalence, persistence, and sociodemographic correlates of DSM-IV disorders in the National Comorbidity Survey Replication Adolescent Supplement. *Archives of General Psychiatry, 69*(4), 372-380. doi:10.1001/archgenpsychiatry.2011.160
- Kessler, R. C., Barker, P. R., Colpe, L. J., Epstein, J. F., Gfroerer, J. C., Hiripi, E., . . . Zaslavsky, A. M. (2003). Screening for serious mental illness in the general population. *Archives of General Psychiatry, 60*(2), 184-189. doi:10.1001/archpsyc.60.2.184
- Kessler, R. C., Berglund, P., Demler, O., Jin, R., Merikangas, K. R., & Walters, E. E. (2005b). Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the National Comorbidity Survey Replication. *Archives of General Psychiatry, 62*(6), 593-602. doi:10.1001/archpsyc.62.6.593
- Kessler, R. C., McGonagle, K. A., Zhao, S., Nelson, C. B., Hughes, M., Eshleman, S., . . . Kendler, K. S. (1994). Lifetime and 12-month prevalence of DSM-III-R psychiatric disorders in the United States: Results from the National Comorbidity Survey. *Archives of General Psychiatry, 51*(1), 8-19. doi:10.1001/archpsyc.1994.03950010008002
- Kessler, R. C., Nelson, C. B., McGonagle, K. A., Edlund, M. J., Frank, R. G., & Leaf, P. J. (1996). The epidemiology of co-occurring addictive and mental disorders: Implications for prevention and service utilization. *American Journal of Orthopsychiatry, 66*(1), 17-31. doi:10.1037/h0080151
- King, D. L., Haagsma, M. C., Delfabbro, P. H., Gradisar, M., & Griffiths, M. D. (2013). Toward a consensus definition of pathological video-gaming: A systematic review of psychometric assessment tools. *Clinical Psychology Review, 33*(3), 331-342. doi:10.1016/j.cpr.2013.01.002

- Knight, J. R., Shrier, L. A., Bravender, T. D., Farrell, M., Vander Bilt, J., & Shaffer, H. J. (1999). A new brief screen for adolescent substance abuse. *Archives of Pediatrics and Adolescent Medicine*, *153*(6), 591-596. doi:10.1001/archpedi.153.6.591
- Korn, E. L., & Graubard, B. I. (1999). *Analysis of health surveys*. New York: Wiley.
- Kowalski, R. M., Giumetti, G. W., Schroeder, A. N., & Lattanner, M. R. (2014). Bullying in the digital age: A critical review and meta-analysis of cyberbullying research among youth. *Psychological Bulletin*, *140*(4), 1073-1137. doi:10.1037/a0035618
- Kreuter, F. (2013). Facing the nonresponse challenge. *The Annals of the American Academy of Political and Social Science*, *645*(1), 23-35. doi:10.1177/0002716212456815
- Kumpulainen, K. (2000). Psychiatric symptoms and deviance in early adolescence predict heavy alcohol use 3 years later. *Addiction*, *95*(12), 1847-1857. doi:10.1046/j.1360-0443.2000.9512184713.x
- Li, F., Green, J. G., Kessler, R. C., & Zaslavsky, A. M. (2010). Estimating prevalence of serious emotional disturbance in schools using a brief screening scale. *International Journal of Methods in Psychiatric Research*, *19*(S1), 88-98. doi:10.1002/mpr.315
- Litt, D. M., & Stock, M. L. (2011). Adolescent alcohol-related risk cognitions: The roles of social norms and social networking sites. *Psychology of Addictive Behaviors*, *25*(4), 708-713. doi:10.1037/a0024226
- MacKay, S., Paglia-Boak, A., Henderson, J., Marton, P., & Adlaf, E. (2009). Epidemiology of firesetting in adolescents: Mental health and substance use correlates. *Journal of Child Psychology and Psychiatry*, *50*(10), 1282-1290. doi:10.1111/j.1469-7610.2009.02103.x
- Madruga, C. S., Laranjeira, R., Caetano, R., Pinsky, I., Zaleski, M., & Ferri, C. P. (2012). Use of licit and illicit substances among adolescents in Brazil — A national survey. *Addictive Behaviors*, *37*(10), 1171-1175. doi:10.1016/j.addbeh.2012.05.008
- Martin, G., Copeland, J., Gates, P., & Gilmour, S. (2006). The Severity of Dependence Scale (SDS) in an adolescent population of cannabis users: Reliability, validity and diagnostic cut-off. *Drug and Alcohol Dependence*, *83*(1), 90-93. doi:10.1016/j.drugalcdep.2005.10.014
- Mawani, F. N., & Gilmour, H. (2010). Validation of self-rated mental health. *Health Reports (Statistics Canada, Catalogue no. 82-003-XPE)*, *21*(3), 1-15.
- May, A., & Klonsky, E. D. (2011). Validity of suicidality items from the Youth Risk Behavior Survey in a high school sample. *Assessment*, *18*(3), 379-381. doi:10.1177/1073191110374285
- McGee, R., & Williams, S. (2000). Does low self-esteem predict health compromising behaviours among adolescents? *Journal of Adolescence*, *23*(5), 569-582. doi:10.1006/jado.2000.0344
- McMullen, K., & Gilmour, J. (2010). A note on high school graduation and school attendance, by age and province, 2009/2010. *Education Matters: Insights on Education, Learning and Training in Canada*, *7*(4), Statistics Canada Catalogue no. 81-004-X.
- Meiklejohn, J., Connor, J., & Kypri, K. (2012). The effect of low survey response rates on estimates of alcohol consumption in a general population survey. *PloS One*, *7*(4), e35527. doi:10.1371/journal.pone.0035527
- Meltzer, H., Vostanis, P., Ford, T., Bebbington, P., & Dennis, M. S. (2011). Victims of bullying in childhood and suicide attempts in adulthood. *European Psychiatry*, *26*(8), 498-503. doi:10.1016/j.eurpsy.2010.11.006
- Mental Health Commission of Canada. (2012). *Changing directions, changing lives: A mental health strategy for Canada*. Calgary, AB: Mental Health Commission of Canada.
- Merikangas, K. R., He, J.-p., Burstein, M., Swanson, S. A., Avenevoli, S., Cui, L., . . . Swendsen, J. (2010). Lifetime prevalence of mental disorders in U.S. Adolescents: Results from the National Comorbidity Survey Replication—Adolescent Supplement (NCS-A). *Journal of the American Academy of Child and Adolescent Psychiatry*, *49*(10), 980-989. doi:10.1016/j.jaac.2010.05.017
- MHASEF Research Team. (2015). *The mental health of children and youth in Ontario: A baseline scorecard*. Toronto, ON: Institute for Clinical Evaluative Sciences.
- Michaud M.D, P.-A., Delbos-Piot M.Sc, I., & Narring M.D, M. P. H. F. (1998). Silent dropouts in health surveys: Are nonrespondent absent teenagers different from those who participate in school-based health surveys? *Journal of Adolescent Health*, *22*(4), 326-333. doi:10.1016/S1054-139X(97)00240-1
- Miech, R. A., Johnston, L. D., O'Malley, P. M., Bachman, J. G., & Schulenberg, J. E. (2015). *Monitoring the Future national survey results on drug use, 1975–2014: Volume I, secondary school students*. Ann Arbor: Institute for Social Research, The University of Michigan. Available at <http://monitoringthefuture.org/pubs.html#monograp>
- Moffitt, T. E. (1993). Adolescence-limited and life-course-persistent antisocial behavior: A developmental taxonomy. *Psychological Review*, *100*(4), 674-701. doi:10.1037/0033-295X.100.4.674
- Mohanty, M. S., & Ullah, A. (2012). Why does growing up in an intact family during childhood lead to higher earnings during adulthood in the United States? *American Journal of Economics and Sociology*, *71*(3), 662-695. doi:10.1111/j.1536-7150.2012.00828.x
- Navaneelan, T. (2012). Suicide rates: An overview. *Health at a Glance (Statistics Canada Catalogue no. 82-624-X)*.
- Offord, D. R. (1995). Child psychiatric epidemiology current status and future prospects. *Canadian Journal of Psychiatry*, *40*(6), 284-288.
- Offord, D. R., Boyle, M. H., Campbell, D., Goering, P., & et al. (1996). One-year prevalence of psychiatric disorder in Ontarians 15 to 64 years of age. *Canadian Journal of Psychiatry*, *41*(9), 559-563.
- O'Keeffe, G. S., & Clarke-Pearson, K. (2011). The impact of social media on children, adolescents, and families. *Pediatrics*, *127*(4), 800-804. doi:10.1542/peds.2011-0054
- Olfson, M., Blanco, C., Liu, L., Moreno, C., & Laje, G. (2006). National trends in the outpatient treatment of children and adolescents with antipsychotic drugs. *Archives of General Psychiatry*, *63*(6), 679-685. doi:10.1001/archpsyc.63.6.679

- O'Malley, P. M., Bachman, J. G., & Johnston, L. D. (1983). Reliability and consistency in self-reports of drug use. *Substance Use and Misuse, 18*(6), 805-824. doi:10.3109/10826088309033049
- O'Malley, P. M., Johnston, L. D., Bachman, J. G., & Schulenberg, J. (2000). A comparison of confidential versus anonymous survey procedure: Effects on reporting of drug use and related attitudes and beliefs in a national study of students. *Journal of Drug Issues, 30*(1), 35-54.
- O'Malley, P. M., Johnston, L. D., Bachman, J. G., Schulenberg, J. E., & Kumar, R. (2006). How substance use differs among American secondary schools. *Prevention Science, 7*(4), 409-420. doi:10.1007/s11121-006-0050-5
- O'Neil, K. A., Conner, B. T., & Kendall, P. C. (2011). Internalizing disorders and substance use disorders in youth: Comorbidity, risk, temporal order, and implications for intervention. *Clinical Psychology Review, 31*(1), 104-112. doi:10.1016/j.cpr.2010.08.002
- Ontario Ministry of Education. (2015, April). News Release - More Ontario Students Graduating High School Than Ever Before. Retrieved from <http://news.ontario.ca/opo/en/2015/04/more-ontario-students-graduating-high-school-than-ever-before.html>
- Ortega, F. B., Ruiz, J. R., Castillo, M. J., & Sjostrom, M. (2008). Physical fitness in childhood and adolescence: A powerful marker of health. *International Journal of Obesity, 32*(1), 1-11. doi:10.1038/sj.ijo.0803774
- Pan, S. Y., Desmeules, M., Morrison, H., Semenciw, R., Ugnat, A. M., Thompson, W., & Mao, Y. (2007). Adolescent injury deaths and hospitalization in Canada: Magnitude and temporal trends (1979-2003). *Journal of Adolescent Health, 41*(1), 84-92. doi:10.1016/j.jadohealth.2007.02.011
- Park, S. (2015). *The design and implementation of the Ontario Student Drug Use and Health Survey (OSDUHS) 2015; Technical documentation for Centre for Addiction and Mental Health (CAMH)*. Toronto, ON: Institute for Social Research, York University.
- Patel, V., Flisher, A. J., Hetrick, S., & McGorry, P. (2007). Mental health of young people: A global public-health challenge. *The Lancet, 369*(9569), 1302-1313. doi:10.1016/S0140-6736(07)60368-7
- Patton, G. C., Coffey, C., Romaniuk, H., Mackinnon, A., Carlin, J. B., Degenhardt, L., . . . Moran, P. (2014a). The prognosis of common mental disorders in adolescents: A 14-year prospective cohort study. *The Lancet, 383*(9926), 1404-1411. doi:10.1016/S0140-6736(13)62116-9
- Patton, G. C., Ross, D. A., Santelli, J. S., Sawyer, S. M., Viner, R. M., & Kleinert, S. (2014b). Next steps for adolescent health: A Lancet Commission. *The Lancet, 383*(9915), 385-386. doi:10.1016/S0140-6736(14)60039-8
- Patton, G. C., & Viner, R. (2007). Pubertal transitions in health. *The Lancet, 369*(9567), 1130-1139. doi:10.1016/S0140-6736(07)60366-3
- Paxton, R. J., Valois, R. F., & Drane, J. W. (2007). Is there a relationship between family structure and substance use among public middle school students? *Journal of Child and Family Studies, 16*(5), 593-605. doi:10.1007/s10826-006-9109-y
- Peiper, N., Clayton, R., Wilson, R., & Illback, R. (2015). The performance of the K6 Scale in a large school sample. *Psychological Assessment, 27*(1), 228-238. doi:10.1037/pas0000025
- Perren, S., Dooley, J., Shaw, T., & Cross, D. (2010). Bullying in school and cyberspace: Associations with depressive symptoms in Swiss and Australian adolescents. *Child and Adolescent Psychiatry and Mental Health, 4*(1), 1-10. doi:10.1186/1753-2000-4-28
- Petty, K. H., Davis, C. L., Tkacz, J., Young-Hyman, D., & Waller, J. L. (2009). Exercise effects on depressive symptoms and self-worth in overweight children: A randomized controlled trial. *Journal of Pediatric Psychology, 34*(9), 929-939. doi:10.1093/jpepsy/jsp007
- Peytcheva, E., & Groves, R. M. (2009). Using variation in response rates of demographic subgroups as evidence of nonresponse bias in survey estimates. *Journal of Official Statistics, 25*(2), 193.
- Porter, S. R. (2004). Raising response rates: What works? *New Directions for Institutional Research, 2004*(121), 5-21. doi:10.1002/ir.97
- Public Health Agency of Canada. (2009). *Child and youth injury in review, 2009 edition – spotlight on consumer product safety*. Ottawa: Public Health Agency of Canada.
- Public Health Agency of Canada. (2011). *The Chief Public Health Officer's report on the state of public health in Canada, 2011: Youth and young adults - life in transition*. Retrieved from Ottawa: <http://www.phac-aspc.gc.ca/cphorsphc-respcacsp/2011/index-eng.php>
- Ratnasingham, S., Cairney, J., Rehm, J., Manson, H., & Kurdyak, P. A. (2012). *Opening eyes, opening minds: The Ontario burden of mental illness and addictions report. An ICES/PHO Report*. Toronto, ON: Institute for Clinical Evaluative Sciences and Public Health Ontario.
- Rehm, J., Monga, N., Adlaf, E. M., Taylor, B., Bondy, S. J., & Fallu, J. S. (2005). School matters: Drinking dimensions and their effects on alcohol-related problems among Ontario secondary school students. *Alcohol and Alcoholism, 40*(6), 569-574. doi:10.1093/alcalc/agh212
- Reilly, J. J. (2006). Obesity in childhood and adolescence: Evidence based clinical and public health perspectives. *Postgraduate Medical Journal, 82*(969), 429-437. doi:10.1136/pgmj.2005.043836
- Roberts, K. C., Shields, M., de Groh, M., Aziz, A., & Gilbert, J.-A. (2012). Overweight and obesity in children and adolescents: Results from the 2009 to 2011 Canadian Health Measures Survey. *Health Reports, 23*(3), 37-41.
- Roberts, R. E., Roberts, C. R., & Xing, Y. (2007). Comorbidity of substance use disorders and other psychiatric disorders among adolescents: Evidence from an epidemiologic survey. *Drug and Alcohol Dependence, 88*(Suppl. 1), S4-S13. doi:10.1016/j.drugalcdep.2006.12.010
- Romano, E., Tremblay, R. E., Vitaro, F., Zoccolillo, M., & Pagani, L. (2001). Prevalence of psychiatric diagnoses and the role of perceived impairment: Findings from an adolescent community sample. *Journal of Child Psychology and Psychiatry, 42*(4), 451-461.

- Rootman, I., & Smart, R. G. (1985). A comparison of alcohol, tobacco and drug use as determined from household and school surveys. *Drug and Alcohol Dependence*, *16*(2), 89-94.
- Rosema, S., Muscara, F., Anderson, V., Godfrey, C., Hearps, S., & Catroppa, C. (2015). The trajectory of long-term psychosocial development 16 years following childhood traumatic brain injury. *Journal of Neurotrauma*, *32*(13), 976-983. doi:10.1089/neu.2014.3567
- Rosenberg, M., Schooler, C., & Schoenbach, C. (1989). Self-esteem and adolescent problems: Modeling reciprocal effects. *American Sociological Review*, *54*(6), 1004-1018. doi:10.2307/2095720
- Saab, H., & Klinger, D. (2010). School differences in adolescent health and wellbeing: Findings from the Canadian Health Behaviour in School-aged Children Study. *Social Science and Medicine*, *70*(6), 850-858. doi:10.1016/j.socscimed.2009.11.012
- Saunders, J. B., Aasland, O. G., Babor, T. F., De La Fuente, J. R., & Grant, M. (1993). Development of the Alcohol Use Disorders Identification Test (AUDIT): WHO collaborative project on early detection of persons with harmful alcohol consumption-II. *Addiction*, *88*(6), 791-804. doi:10.1111/j.1360-0443.1993.tb02093.x
- Sawyer, S. M., Affifi, R. A., Bearinger, L. H., Blakemore, S.-J., Dick, B., Ezech, A. C., & Patton, G. C. (2012). Adolescence: A foundation for future health. *The Lancet*, *379*(9826), 1630-1640. doi:10.1016/S0140-6736(12)60072-5
- Shaffer, H. J., & Hall, M. N. (2001). Updating and refining prevalence estimates of disordered gambling behaviour in the United States and Canada. *Canadian Journal of Public Health*, *92*(3), 168-172.
- Shaw, T., Cross, D., Thomas, L. T., & Zubrick, S. R. (2014). Bias in student survey findings from active parental consent procedures. *British Educational Research Journal*. doi:10.1002/berj.3137
- Shead, N. W., Derevensky, J. L., & Gupta, R. (2011). Youth problem gambling: Our current knowledge of risk and protective factors. In J. L. Derevensky, D. T. L. Shek, & J. Merrick (Eds.), *Youth gambling: The hidden addiction* (pp. 21-56). Berlin/Boston: Walter de Gruyter.
- Sherry, B., Jefferds, M., & Grummer-Strawn, L. M. (2007). Accuracy of adolescent self-report of height and weight in assessing overweight status: A literature review. *Archives of Pediatrics and Adolescent Medicine*, *161*(12), 1154-1161. doi:10.1001/archpedi.161.12.1154
- Shields, M. (2006). Overweight and obesity among children and youth. *Health Reports*, *17*(3), 27-42.
- Simons, R. L., Lin, K.-H., Gordon, L. C., Conger, R. D., & Lorenz, F. O. (1999). Explaining the higher incidence of adjustment problems among children of divorce compared with those in two-parent families. *Journal of Marriage and the Family*, *61*(4), 1020-1033. doi:10.2307/354021
- Singh, A. S., Mulder, C., Twisk, J. W. R., Van Mechelen, W., & Chinapaw, M. J. M. (2008). Tracking of childhood overweight into adulthood: A systematic review of the literature. *Obesity Reviews*, *9*(5), 474-488. doi:10.1111/j.1467-789X.2008.00475.x
- Skinner, R., & McFaul, S. (2012). Suicide among children and adolescents in Canada: Trends and sex differences, 1980-2008. *Canadian Medical Association Journal*, *184*(9), 1029-1034. doi:10.1503/cmaj.111867
- Sonnby, K., Åslund, C., Leppert, J., & Nilsson, K. W. (2011). Symptoms of ADHD and depression in a large adolescent population: Co-occurring symptoms and associations to experiences of sexual abuse. *Nordic Journal of Psychiatry*, *65*(5), 315-322. doi:10.3109/08039488.2010.545894
- Spies Shapiro, L. A., & Margolin, G. (2014). Growing up wired: Social networking sites and adolescent psychosocial development. *Clinical Child and Family Psychology Review*, *17*(1), 1-18. doi:10.1007/s10567-013-0135-1
- Starcevic, V., & Aboujaoude, E. (2015). Cyberchondria, cyberbullying, cybersuicide, cybersex: "New" psychopathologies for the 21st century? *World Psychiatry*, *14*(1), 97-100. doi:10.1002/wps.20195
- StataCorp. (2013). Stata statistical software: Release 13.0. College Station, TX: StataCorp LP.
- Statistics Canada. (2014). Table 051-0001 - Estimates of population, by age group and sex for July 1, Canada, provinces and territories, annual, CANSIM (database). Retrieved from <http://www5.statcan.gc.ca/cansim/a26?lang=eng&retrLang=eng&id=0510001&pattern=&csid=>
- Statistics Canada. (2015). The 10 leading causes of death, 2012. *Health Fact Sheets (Statistics Canada Catalogue no. 82-625-X)*. Retrieved from <http://www.statcan.gc.ca/pub/82-625-x/2015001/article/14296-eng.htm>
- Stinchfield, R. (2010). A critical review of adolescent problem gambling assessment instruments. *International Journal of Adolescent Medicine and Health*, *22*(1), 77-93.
- Sweeting, H., & Hunt, K. (2014). Adolescent socio-economic and school-based social status, health and well-being. *Social Science and Medicine*, *121*, 39-47. doi:10.1016/j.socscimed.2014.09.037
- Sweeting, H., West, P., Young, R., & Der, G. (2010). Can we explain increases in young people's psychological distress over time? *Social Science and Medicine*, *71*(10), 1819-1830. doi:10.1016/j.socscimed.2010.08.012
- Sweeting, H., Young, R., & West, P. (2009). GHQ increases among Scottish 15 year olds 1987-2006. *Social Psychiatry and Psychiatric Epidemiology*, *44*(7), 579-586. doi:10.1007/s00127-008-0462-6
- Tejeiro, R. A., Gomez-Vallecillo, J. L., Pelegrina, M., Wallace, A., & Emberley, E. (2012). Risk factors associated with the abuse of video games in adolescents. *Psychology (Savannah, Ga.)*, *3*(4), 310-314. doi:10.4236/psych.2012.34044
- Tejeiro Salguero, R. A., & Morán, R. M. B. (2002). Measuring problem video game playing in adolescents. *Addiction*, *97*(12), 1601-1606. doi:10.1046/j.1360-0443.2002.00218.x
- Thomas, C. P., Conrad, P., Casler, R., & Goodman, E. (2006). Trends in the use of psychotropic medications among adolescents, 1994 to 2001. *Psychiatric Services*, *57*(1), 63-69. doi:10.1176/appi.ps.57.1.63
- Tigges, B. B. (2003). Parental consent and adolescent risk behavior research. *Journal of Nursing Scholarship*, *35*(3), 283-289. doi:10.1111/j.1547-5069.2003.00283.x
- Tourangeau, R., & Yan, T. (2007). Sensitive questions in surveys. *Psychological Bulletin*, *133*(5), 859-883. doi:10.1037/0033-2909.133.5.859

- Tremblay, J., Stinchfield, R., Wiebe, J., & Wynne, H. (2010). *Canadian Adolescent Gambling Inventory (CAGI) Phase III Final Report*. Ottawa: Canadian Centre on Substance Abuse and the Interprovincial Consortium on Gambling Research.
- Tremblay, M. S., LeBlanc, A. G., Janssen, I., Kho, M. E., Hicks, A., Murumets, K., . . . Duggan, M. (2011). Canadian Sedentary Behaviour Guidelines for Children and Youth. *Applied Physiology, Nutrition, and Metabolism*, *36*(1), 59-64. doi:10.1139/H11-012
- Tremblay, M. S., Shields, M., Laviolette, M., Craig, C. L., Janssen, I., & Connor-Gorber, S. (2010). Fitness of Canadian children and youth: Results from the 2007-2009 Canadian Health Measures Survey. *Health Reports*, *21*(1), 1-14.
- Trzesniewski, K. H., & Donnellan, M. B. (2010). Rethinking "Generation Me": A study of cohort effects from 1976–2006. *Perspectives on Psychological Science*, *5*(1), 58-75. doi:10.1177/1745691609356789
- Tsigilis, N. (2006). Can secondary school students' self-reported measures of height and weight be trusted? An effect size approach. *The European Journal of Public Health*, *16*(5), 532-535. doi:10.1093/eurpub/ckl050
- Ttofi, M. M., & Farrington, D. P. (2011). Effectiveness of school-based programs to reduce bullying: A systematic and meta-analytic review. *Journal of Experimental Criminology*, *7*(1), 27-56. doi:10.1007/s11292-010-9109-1
- Twenge, J. M. (2000). The age of anxiety? The birth cohort change in anxiety and neuroticism, 1952–1993. *Journal of Personality and Social Psychology*, *79*(6), 1007-1021. doi:10.1037/0022-3514.79.6.1007
- Twenge, J. M., Gentile, B., DeWall, C. N., Ma, D., Laceyfield, K., & Schurtz, D. R. (2010). Birth cohort increases in psychopathology among young Americans, 1938–2007: A cross-temporal meta-analysis of the MMPI. *Clinical Psychology Review*, *30*(2), 145-154. doi:10.1016/j.cpr.2009.10.005
- U.S. Department of Health and Human Services. (1999). *Mental health: A report of the Surgeon General*. Retrieved from Rockville, MD:
- Viner, R. M., Ozer, E. M., Denny, S., Marmot, M., Resnick, M., Fatusi, A., & Currie, C. (2012). Adolescence and the social determinants of health. *The Lancet*, *379*(9826), 1641-1652. doi:10.1016/S0140-6736(12)60149-4
- Vingilis, E., Smart, R. G., Mann, R. E., Paglia-Boak, A., Stoduto, G., & Adlaf, E. M. (2011). Prevalence and correlates of street racing among Ontario high school students. *Traffic Injury Prevention*, *12*(5), 443-450. doi:10.1080/15389588.2011.602148
- Volberg, R. A., Gupta, R., Griffiths, M. D., Olason, D. T., & Delfabbro, P. (2011). An international perspective on youth gambling prevalence studies. In J. L. Derevensky, D. T. Shek, & J. Merrick (Eds.), *Youth gambling: The hidden addiction* (pp. 21-56). Berlin/Boston: Walter de Gruyter.
- Wang, J. L., & El-Guebaly, N. (2004). Sociodemographic factors associated with comorbid major depressive episodes and alcohol dependence in the general population. *Canadian Journal of Psychiatry*, *49*(1), 37-44.
- Weare, K., & Nind, M. (2011). Mental health promotion and problem prevention in schools: What does the evidence say? *Health Promotion International*, *26*(suppl 1), i29-i69. doi:10.1093/heapro/dar075
- Weitzman, B. C., Guttmacher, S., Weinberg, S., & Kapadia, F. (2003). Low response rate schools in surveys of adolescent risk taking behaviours: Possible biases, possible solutions. *Journal of Epidemiology and Community Health*, *57*(1), 63-67. doi:10.1136/jech.57.1.63
- Wells, L. E., & Rankin, J. H. (1991). Families and delinquency: A meta-analysis of the impact of broken homes. *Social Problems*, *38*(1), 71-93. doi:10.2307/800639
- Welsh, W. N. (2000). The effects of school climate on school disorder. *The Annals of the American Academy of Political and Social Science*, *567*(1), 88-107. doi:10.1177/000271620056700107
- White, V. M., Hill, D. J., & Effendi, Y. (2004). How does active parental consent influence the findings of drug-use surveys in schools? *Evaluation Review*, *28*(3), 246-260. doi:10.1177/0193841x03259549
- Wolfe, D. A., Crooks, C. V., Hughes, R., Chiodo, D., & Jaffe, P. G. (2008). The Fourth R: A school-based program to reduce violence and risk behaviours among youth. In D. Pepler & W. Craig (Eds.), *Understanding and addressing bullying: An international perspective* (pp. 184-197). Bloomington, IN: AuthorHouse.
- Wolitzky-Taylor, K., Bobova, L., Zinbarg, R. E., Mineka, S., & Craske, M. G. (2012). Longitudinal investigation of the impact of anxiety and mood disorders in adolescence on subsequent substance use disorder onset and vice versa. *Addictive Behaviors*, *37*(8), 982-985. doi:10.1016/j.addbeh.2012.03.026
- Wolke, D., Copeland, W. E., Angold, A., & Costello, E. J. (2013). Impact of bullying in childhood on adult health, wealth, crime, and social outcomes. *Psychological Science*, *24*(10), 1958-1970. doi:10.1177/0956797613481608
- World Health Organization. (1948). Preamble to the Constitution of the World Health Organization as adopted by the International Health Conference, New York, 19-22 June, 1946; signed on 22 July 1946 by the representatives of 61 States (Official Records of the World Health Organization, no. 2, p. 100) and entered into force on 7 April 1948. Geneva: WHO.
- World Health Organization. (2014). *Mental health: Strengthening our response. Fact Sheet No. 220*. Geneva: WHO. Retrieved from <http://www.who.int/mediacentre/factsheets/fs220/en/>.
- Zametkin, A. J., Zoon, C. K., Klein, H. W., & Munson, S. (2004). Psychiatric aspects of child and adolescent obesity: A review of the past 10 years. *FOCUS: The Journal of Lifelong Learning in Psychiatry*, *2*(4), 625-641.

6. APPENDIX TABLES

Table A3.1.1 School Performance and Attitudes, 1991–2015 OSDUHS

	Grades 7, 9, 11 only													Grades 7-12									
	1991 (n=) (2961)	1993 (2617)	1995 (2907)	1997 (3072)	1999 (2421)	2001 (2013)	2003 (3389)	2005 (3969)	2007 (3215)	2009 (4424)	2011 (4669)	2013 (5211)	2015 (5225)	1999 (4447)	2001 (3898)	2003 (6616)	2005 (7726)	2007 (6323)	2009 (9112)	2011 (9288)	2013 (10272)	2015 (10426)	
Usually Receive As (80%-100%) in School	28.4	29.0	32.3	35.5	39.1	37.5	34.8	37.0	43.4	44.3	51.2	50.4	54.6	37.8	36.4	36.2	40.5	43.8	45.9	52.1	52.1	56.3	
Hours of Homework per Week *																							
0 or less than 1 hour	—	16.9	15.3	17.6	21.2	15.0	19.7	21.4	21.9	22.3	26.1	23.1	25.5	22.2	16.3	19.3	20.7	21.1	23.4	24.9	23.0	24.4	
1–2 hours	—	24.3	27.2	24.6	28.7	28.3	28.6	26.4	29.2	28.4	27.8	28.2	26.5	28.4	27.5	27.0	25.7	28.1	26.9	26.7	26.9	26.9	
3–4	—	27.6	29.4	28.8	26.1	28.6	26.1	26.7	25.8	23.1	24.1	22.6	21.9	24.8	28.6	25.8	26.1	25.5	24.2	24.0	21.7	20.9	
5–6	—	19.5	18.2	18.4	14.9	16.6	14.9	15.7	13.9	16.2	12.4	13.1	13.3	15.0	16.6	15.9	16.1	15.3	15.0	13.8	14.2	14.2	
7+	—	11.7	9.9	10.6	9.1	11.5	10.8	9.9	9.2	10.0	9.5	13.0	12.9	9.6	10.9	12.1	11.4	10.0	10.5	10.6	14.1	13.6	
Feelings About School *																							
like it a lot/very much	—	36.0	34.7	35.6	32.2	28.7	28.6	29.8	33.7	37.5	47.0	44.3	34.9	29.6	26.8	28.3	30.6	33.3	35.5	44.1	44.1	32.3	
like it to some degree	—	51.1	49.7	47.4	50.7	51.6	49.4	49.9	46.7	45.4	39.8	42.0	49.5	51.8	52.8	49.9	48.8	48.9	46.6	42.1	41.3	49.5	
do not like it very much/at all	—	12.9	15.5	17.0	17.2	19.8	22.0	20.4	19.7	17.1	13.2	13.7	15.6	18.5	20.4	21.8	20.6	17.8	17.9	13.7	14.6	18.2	
Relative School Performance *																							
above average	—	28.8	35.3	32.7	30.2	31.2	29.4	30.5	34.2	34.1	—	—	—	30.6	31.0	30.5	31.7	33.7	34.0	—	—	—	
slightly above average	—	27.8	25.5	26.8	25.6	24.8	23.3	23.6	24.4	23.5	—	—	—	24.2	24.7	23.0	24.1	23.6	25.0	—	—	—	
slightly below average	—	35.5	30.8	31.0	32.6	32.5	34.7	33.5	30.9	29.1	—	—	—	33.8	33.1	33.3	31.6	30.9	27.2	—	—	—	
below average	—	5.9	6.6	6.4	7.8	7.8	8.9	8.5	7.0	9.3	—	—	—	7.7	7.7	8.9	8.2	7.8	9.4	—	—	—	
	—	1.9	1.7	3.1	3.8	3.7	3.7	4.0	3.4	4.0	—	—	—	3.7	3.6	4.3	4.4	3.9	4.4	—	—	—	
Likely to Graduate																							
very likely	83.3	85.2	85.8	84.7	85.6	85.0	84.6	84.1	87.5	81.2	—	—	—	85.8	86.4	86.3	86.3	89.0	83.3	—	—	—	
fairly likely	15.0	13.1	12.8	13.6	12.0	12.4	12.9	13.7	10.0	17.6	—	—	—	11.7	11.2	11.6	11.5	8.9	15.5	—	—	—	
not very likely/not at all	1.7	1.7	1.4	1.7	2.4	2.6	2.5	2.2	2.5	1.2	—	—	—	2.5	2.5	2.1	2.2	2.1	1.2	—	—	—	

Notes: * question asked of a random half sample in each year; n=total number of students surveyed; numbers in cells are percentages; — data not available for that year; † data suppressed due to unreliability.
 Qs: “Overall, what marks do you usually get in school?”; “On average, how much time do you spend doing homework each week outside school?”; “How do you feel about going to school?”; “Compared to other students in your school, how do you rate yourself in the school work you do?”; “How likely is it that you will stay in school until you graduate?”
 Source: OSDUHS, Centre for Addiction and Mental Health

Table A3.1.2 Percentage Reporting Being Very or Somewhat Worried About Being Harmed or Threatened at School, 1999–2015 OSDUHS (Grades 7–12)

	(n=)	1999 (4447)	2001 (3898)	2003 (6616)	2005 (7726)	2007 (6323)	2009 (9211)	2011 (9288)	2013 (10272)	2015 (10426)
Total		14.2	13.1	12.4	12.8	11.7	12.3	18.2	15.4	12.1 ^d
(95% CI)		(12.7-15.7)	(11.7-14.6)	(11.1-13.7)	(11.8-13.8)	(10.4-13.1)	(11.2-13.5)	(16.4-20.2)	(13.8-17.1)	(10.2-14.4)
Sex	Males	11.9	11.0	12.3	12.0	11.3	11.6	16.8	13.9	11.4
		(10.5-13.5)	(9.3-13.1)	(10.7-14.0)	(10.7-13.4)	(9.8-12.9)	(10.3-13.2)	(14.5-19.5)	(12.0-16.1)	(9.4-13.8)
	Females	16.5	15.2	12.4	13.6	12.1	13.0	19.7	16.9	12.9
		(14.4-18.8)	(13.2-17.4)	(10.9-14.2)	(12.2-15.1)	(10.4-14.0)	(11.6-14.6)	(17.7-21.9)	(15.0-19.1)	(10.5-15.8)
Grade	7	15.4	15.8	16.5	15.7	14.4	18.6	21.7	19.1	16.0
		(12.6-18.8)	(12.8-19.3)	(13.1-20.7)	(13.2-18.6)	(11.4-17.9)	(15.4-22.1)	(17.5-26.5)	(15.2-23.6)	(10.1-24.4)
	8	18.6	15.7	15.2	17.4	13.7	12.2	18.9	16.3	15.6
		(15.5-22.2)	(12.5-19.5)	(12.6-18.1)	(15.3-19.7)	(11.2-16.7)	(9.3-15.8)	(15.7-22.7)	(13.2-20.1)	(9.1-25.5)
	9	16.3	14.5	12.5	14.5	14.0	14.3	19.7	18.3	12.7 ^a
		(12.9-20.4)	(11.4-18.3)	(10.1-15.4)	(12.2-17.0)	(10.9-18.0)	(11.8-17.3)	(16.9-22.9)	(15.3-21.8)	(10.1-15.9)
	10	15.6	12.0	12.7	11.5	11.4	12.9	19.7	16.3	12.0
		(12.4-19.6)	(9.5-15.0)	(10.5-15.3)	(9.5-13.9)	(9.1-14.1)	(10.6-15.6)	(17.4-22.3)	(13.5-19.6)	(9.5-15.0)
	11	9.1	9.8	10.4	9.5	9.3	9.1	14.5	13.9	10.9
		(6.9-12.0)	(6.0-15.8)	(8.2-12.9)	(7.6-11.8)	(7.0-12.2)	(7.2-11.4)	(11.6-18.0)	(11.1-17.2)	(8.3-14.2)
	12	9.6	9.6	7.6	8.6	8.2	8.8	16.4	11.5	8.3
		(7.4-12.4)	(6.4-14.4)	(5.9-9.9)	(6.7-10.9)	(6.3-10.6)	(6.8-11.2)	(12.8-20.8)	(8.2-15.9)	(6.3-10.8)
Region	Toronto	18.5	14.7	15.5	18.5	13.1	18.0	21.3	18.4	14.4
		(14.4-23.4)	(10.5-20.3)	(11.7-20.3)	(16.2-21.0)	(10.4-16.5)	(15.0-21.4)	(17.9-25.2)	(13.2-25.0)	(9.3-21.6)
	North	12.1	10.7	13.1	9.8	10.0	11.1	14.4	13.6	10.6
		(9.7-15.0)	(8.4-13.5)	(10.2-16.7)	(7.9-12.1)	(8.0-12.5)	(7.3-16.6)	(12.0-17.2)	(9.6-19.0)	(8.2-13.8)
	West	13.9	13.7	12.0	12.7	12.7	11.9	19.4	16.2	11.6 ^a
		(11.6-16.6)	(11.8-15.9)	(10.3-14.0)	(11.0-14.6)	(10.6-15.1)	(10.4-13.7)	(16.0-23.4)	(14.0-18.7)	(9.5-13.9)
	East	12.5	11.8	10.6	10.4	10.0	10.2	15.7	12.7	12.0
		(10.7-14.7)	(9.8-14.2)	(8.8-12.7)	(9.2-11.7)	(8.0-12.3)	(8.5-12.1)	(13.9-17.7)	(10.9-14.6)	(8.1-17.4)

Notes: (1) n=total number of students surveyed; (2) entries in brackets are 95% confidence intervals; (3) ^a 2015 vs. 2013 significant difference, p<.01; no significant differences 2015 vs. 1999; ^d significant nonlinear trend, p<.01.

Q: "At school, how worried are you that someone will hurt you, threaten you, or take something from you?"

Source: OSDUHS, Centre for Addiction and Mental Health

Table A3.2.1 Percentage Reporting Fair or Poor Physical Health, 1991–2015 OSDUHS (Grades 7–12)

	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015
(n ¹)					(4447)	(3898)	(6616)	(7726)	(6323)	(9112)	(9288)	(10272)	(10426)
(n ²)	(2961)	(2617)	(2907)	(3072)	(2421)	(2013)	(3389)	(3969)	(3215)	(4424)	(4669)	(5211)	(5225)
Total¹	—	—	—	—	8.9	10.3	12.6	13.1	12.9	14.5	15.6	7.0	7.6 ^{bd}
(95% CI)					(7.9-10.1)	(9.1-11.7)	(11.7-13.7)	(12.0-14.3)	(11.8-14.2)	(13.3-15.8)	(14.2-17.1)	(6.2-7.9)	(6.8-8.5)
Total²	5.8	6.3	7.4	9.3	8.7	9.0	12.0	13.0	11.8	13.1	14.0	7.0	7.2 ^{cd}
(95% CI)	(5.0-6.6)	(5.2-7.8)	(6.2-8.9)	(8.1-10.8)	(7.4-10.2)	(7.9-10.4)	(10.7-13.3)	(11.6-14.7)	(10.4-13.4)	(11.6-14.8)	(12.1-16.2)	(5.8-8.4)	(6.2-8.4)
Sex													
Males ¹	—	—	—	—	8.7	8.3	9.9	10.5	9.6	10.8	12.2	7.1	6.4 ^b
					(7.3-10.4)	(6.8-10.1)	(8.7-11.3)	(9.3-11.7)	(8.3-11.1)	(9.6-12.2)	(10.6-14.0)	(5.9-8.4)	(5.5-7.4)
Males ²	5.3	5.0	5.7	7.5	9.4	7.1	9.5	10.9	8.8	10.2	12.0	7.4	6.2
	(4.1-6.8)	(3.6-7.0)	(4.4-7.2)	(5.8-9.7)	(7.5-11.7)	(5.3-9.3)	(7.8-11.4)	(9.2-12.8)	(7.1-10.9)	(8.4-12.3)	(10.0-14.4)	(5.8-7.4)	(4.9-7.8)
Females ¹	—	—	—	—	9.2	12.3	15.2	15.9	16.6	18.5	19.2	6.9	8.9
					(7.8-10.8)	(10.1-14.8)	(13.7-16.7)	(14.2-17.8)	(14.8-18.4)	(16.7-20.4)	(17.2-21.3)	(6.0-8.0)	(7.7-10.3)
Females ²	6.3	7.6	9.1	10.9	8.0	11.0	14.3	15.3	15.0	16.3	16.1	6.6	8.3
	(5.0-7.9)	(5.7-10.1)	(7.6-10.8)	(9.5-12.5)	(6.3-10.0)	(9.1-13.2)	(12.3-16.6)	(13.2-17.6)	(12.9-17.3)	(14.1-18.7)	(13.9-19.0)	(5.4-8.0)	(6.9-10.0)
Grade													
7	3.9	5.5	5.0	5.8	3.8	6.2	6.8	5.5	4.1	6.3	6.2	5.8	4.4
	(2.7-5.0)	(1.5-9.6)	(2.5-7.5)	(4.1-7.5)	(2.7-5.5)	(4.6-8.3)	(5.0-9.2)	(4.0-7.5)	(2.8-6.1)	(4.4-8.9)	(4.5-8.6)	(3.8-8.8)	(2.7-7.2)
8	—	—	—	—	7.2	7.5	9.8	8.1	7.8	10.6	10.2	7.3	5.8
					(5.5-9.4)	(5.6-9.9)	(7.4-12.9)	(6.3-10.3)	(5.8-10.5)	(8.8-12.9)	(7.9-13.2)	(4.6-11.2)	(3.5-9.4)
9	6.9	5.8	6.6	10.0	9.8	8.9	11.4	14.6	11.7	14.3	11.4	5.8	7.5
	(5.0-8.8)	(3.0-8.6)	(5.4-7.7)	(7.2-12.8)	(7.7-12.4)	(7.1-11.2)	(9.5-13.5)	(12.6-17.0)	(9.7-14.1)	(11.6-17.5)	(9.9-13.0)	(4.5-7.5)	(5.6-9.6)
10	—	—	—	—	10.0	13.0	14.8	15.3	14.1	14.5	18.3	6.2	7.4
					(7.2-13.7)	(10.1-16.7)	(12.3-17.6)	(13.2-17.7)	(11.9-16.5)	(11.8-17.8)	(15.7-21.2)	(4.5-8.4)	(6.0-9.2)
11	6.4	7.5	10.3	11.8	11.5	12.2	16.6	18.7	18.9	17.6	22.3	8.9	9.0
	(3.3-9.6)	(4.0-11.0)	(7.7-12.9)	(9.8-13.9)	(8.8-14.8)	(9.5-15.5)	(14.3-19.3)	(16.0-21.8)	(16.1-21.9)	(14.7-20.9)	(18.5-26.6)	(6.8-11.4)	(7.3-11.1)
12	—	—	—	—	10.9	15.1	14.9	15.7	18.6	19.8	19.8	7.4	9.6
					(8.3-14.2)	(10.9-20.6)	(12.4-17.8)	(13.2-18.5)	(16.1-21.9)	(16.8-23.2)	(16.3-23.9)	(5.4-10.1)	(8.1-11.3)
Region													
Toronto ¹	—	—	—	—	9.2	9.3	13.7	13.6	13.3	17.8	17.9	7.8	9.4
					(7.7-10.8)	(7.1-12.2)	(10.8-17.3)	(10.3-17.8)	(9.8-17.8)	(14.0-22.4)	(14.7-21.7)	(5.8-10.5)	(7.5-11.6)
Toronto ²	6.5	6.5	7.4	7.1	7.4	7.5	13.4	15.2	13.0	16.1	15.3	8.0	8.0
	(5.1-8.2)	(4.6-9.1)	(3.9-13.8)	(5.5-9.2)	(5.1-10.7)	(5.6-10.0)	(9.8-17.9)	(10.9-20.9)	(9.3-17.9)	(12.4-20.5)	(11.9-19.4)	(5.8-10.9)	(6.2-10.2)
North ¹	—	—	—	—	7.9	10.0	12.9	10.5	16.0	16.0	14.4	7.3	6.1
					(6.2-9.9)	(7.8-12.7)	(10.1-16.5)	(8.3-13.2)	(12.8-19.7)	(12.4-20.3)	(11.5-18.0)	(5.5-9.4)	(4.5-8.1)
North ²	3.4	1.8	6.3	6.3	7.0	11.0	14.2	10.7	14.0	14.0	13.0	7.8	5.1
	(1.1-10.1)	(1.1-2.8)	(2.6-14.4)	(4.8-8.2)	(4.8-10.0)	(7.8-15.2)	(10.3-19.4)	(7.1-15.6)	(9.3-20.4)	(10.8-17.9)	(9.7-17.2)	(5.8-10.3)	(3.3-7.9)
West ¹	—	—	—	—	9.7	11.2	13.3	14.2	13.0	14.7	16.5	7.1	6.9
					(7.8-12.0)	(9.3-13.4)	(12.0-14.6)	(12.6-16.0)	(11.2-15.0)	(12.8-16.7)	(14.3-19.0)	(5.9-8.5)	(5.7-8.3)
West ²	5.7	5.9	8.2	10.9	9.4	10.0	13.1	14.0	12.5	13.8	13.8	6.9	6.6
	(4.7-6.8)	(3.7-9.3)	(6.6-10.1)	(8.5-13.9)	(7.3-12.0)	(7.9-12.5)	(11.2-15.3)	(11.8-16.5)	(10.4-14.9)	(11.2-16.8)	(10.2-18.4)	(5.1-9.3)	(5.1-8.6)
East ¹	—	—	—	—	8.0	9.7	11.0	12.0	12.1	12.3	13.4	6.3	8.0
					(6.4-9.9)	(7.3-12.8)	(9.3-12.9)	(10.2-14.0)	(10.6-13.8)	(10.8-14.1)	(11.6-15.4)	(5.1-7.7)	(6.5-9.8)
East ²	6.1	8.3	6.6	9.3	8.8	8.5	8.7	11.3	10.0	10.7	13.9	6.4	8.0
	(4.6-8.1)	(7.1-9.6)	(5.6-7.9)	(7.6-11.4)	(6.6-11.7)	(6.6-11.0)	(7.1-10.6)	(9.2-13.8)	(7.6-12.9)	(8.8-12.9)	(11.7-16.5)	(4.5-9.3)	(6.1-10.4)

Notes: (1) based on Grades 7-12 (full sample); (2) based on Grades 7, 9, 11 only (long-term sample); (3) n=total number of students surveyed; (4) entries in brackets are 95% confidence intervals; (5) no significant differences, 2015 vs. 2013; ^b 2015 vs. 1999 significant difference, p<.01; ^c significant linear trend, p<.01; ^d significant nonlinear trend, p<.01.

Q: "How would you rate your physical health?" (Fair/poor health is defined as a rating of "fair" or "poor.")

Source: OSDUHS, Centre for Addiction and Mental Health

Table A3.2.2 Percentage Reporting a Current Asthma Diagnosis, 2011–2015 OSDUHS (Grades 7–12)

		2011	2013	2015	
		(n=)	(4472)	(4794)	(5023)
Total		9.0	7.9	8.0	
(95% CI)		(7.0-11.3)	(6.6-9.3)	(6.8-9.4)	
Sex	Males	6.1	7.6	7.4	
		(4.9-7.6)	(5.8-10.0)	(5.7-9.5)	
	Females	12.1	8.1	8.7	
		(8.8-16.5)	(6.5-10.0)	(7.0-10.7)	
Grade	7	6.3	8.2	9.3	
		(4.3-9.0)	(5.3-12.3)	(5.2-16.2)	
	8	9.1	8.4	8.1	
		(6.4-12.9)	(5.5-12.5)	(5.1-12.4)	
	9	9.0	8.2	7.1	
		(6.6-12.3)	(6.2-10.8)	(5.0-9.9)	
	10	11.5	7.5	8.5	
		(7.5-17.4)	(4.6-11.9)	(6.1-11.5)	
	11	8.3	7.9	9.9	
		(6.3-10.9)	(5.6-11.1)	(7.5-13.0)	
	12	8.8	7.4	6.4	
		(5.7-13.5)	(5.1-10.6)	(4.5-8.9)	
Region	Toronto	6.5	5.4	6.3	
		(5.2-8.1)	(3.2-9.2)	(3.7-10.5)	
	North	10.4	6.9	11.4	
		(8.2-13.2)	(4.6-10.2)	(7.1-17.7)	
	West	9.6	9.4	9.2	
		(5.9-15.3)	(7.3-12.1)	(7.2-11.7)	
	East	9.1	7.1	6.8	
		(7.5-11.1)	(5.7-8.8)	(5.3-8.7)	

Notes: (1) n=total number of students surveyed; (2) entries in brackets are 95% confidence intervals; (3) no significant changes over time.

Q: “Has a doctor or nurse ever told you that you have asthma?” (Current asthma diagnosis is defined as reporting “Yes, I have asthma now.”)

Source: OSDUHS, Centre for Addiction and Mental Health

Table A3.2.3 Percentage Reporting Daily Physical Activity in the Past Seven Days, 2009–2015 OSDUHS (Grades 7–12)

		2009	2011	2013	2015	
		(n=)	(9112)	(9288)	(10272)	(10426)
Total		20.8	21.3	21.8	22.3	
	(95% CI)	(19.6-22.2)	(19.9-22.8)	(20.4-23.2)	(20.7-23.9)	
Sex	Males	26.2	27.0	27.2	27.0	
		(24.3-28.2)	(25.1-29.1)	(24.9-29.7)	(24.5-29.7)	
	Females	15.2	15.2	16.0	17.2	
		(13.8-16.6)	(13.8-16.6)	(14.4-17.6)	(15.4-19.2)	
Grade	7	28.2	27.0	31.1	28.3	
		(24.5-32.3)	(23.8-30.4)	(26.7-35.8)	(23.9-33.2)	
	8	26.7	27.8	27.4	19.0 ^{ab}	
		(23.4-30.1)	(24.4-31.4)	(24.1-30.9)	(16.3-22.1)	
	9	23.1	24.3	25.0	28.0	
		(20.2-26.4)	(21.3-27.7)	(21.9-28.4)	(24.4-31.9)	
	10	19.9	22.5	20.0	21.5	
		(17.1-22.9)	(19.4-26.0)	(16.8-23.7)	(17.8-25.6)	
	11	17.5	15.7	19.2	19.7	
		(14.5-21.0)	(13.2-18.6)	(16.0-22.9)	(17.2-22.5)	
	12	14.1	15.6	15.2	19.4 ^b	
		(12.4-16.0)	(12.8-18.9)	(12.8-18.0)	(16.0-23.3)	
Region	Toronto	18.4	17.9	21.9	22.3	
		(14.9-22.5)	(15.4-20.7)	(17.9-26.6)	(17.7-27.8)	
	North	21.8	24.6	24.8	24.4	
		(18.3-25.6)	(22.4-27.0)	(21.4-28.5)	(21.4-27.6)	
	West	20.7	21.4	21.8	20.8	
		(18.8-22.7)	(19.0-24.1)	(19.7-24.0)	(18.8-23.1)	
	East	22.1	22.4	21.1	23.8	
		(20.1-24.2)	(20.2-24.7)	(19.2-23.1)	(21.2-26.6)	

Notes: (1) n=total number of students surveyed; (2) entries in brackets are 95% confidence intervals; (3) ^a 2015 vs. 2013 significant difference, p<.01; ^b 2015 vs. 2009 significant difference, p<.01.

Q: “On how many days of the last 7 days were you 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.”

Source: OSDUHS, Centre for Addiction and Mental Health

Table A3.2.4 Percentage Reporting No Days of Physical Activity in the Past Seven Days, 2009–2015 OSDUHS (Grades 7–12)

		(n=)	2009 (9112)	2011 (9288)	2013 (10272)	2015 (10426)
Total			8.5	8.4	7.3	6.4 ^{bc}
(95% CI)			(7.6-9.5)	(7.4-9.6)	(6.4-8.3)	(5.5-7.5)
Sex	Males		7.9 (6.6-9.3)	8.9 (7.4-10.8)	6.3 (5.2-7.7)	5.4 (4.2-6.9)
	Females		9.1 (8.0-10.4)	7.9 (6.6-9.3)	8.3 (7.1-9.7)	7.4 (6.4-8.6)
Grade	7		6.9 (5.4-8.8)	7.9 (6.1-10.3)	4.4 (3.0-6.3)	2.1 ^b (1.3-3.4)
	8		7.3 (5.5-9.6)	6.5 (4.8-8.8)	2.4 (1.2-4.5)	4.1 (2.8-6.0)
	9		6.8 (5.1-9.0)	6.2 (4.4-8.6)	4.3 (2.8-6.6)	4.0 ^b (3.0-5.3)
	10		7.6 (5.7-10.1)	7.4 (5.2-10.3)	7.4 (5.5-9.8)	6.5 (5.1-8.3)
	11		9.5 (7.3-12.2)	10.6 (8.3-13.6)	9.0 (7.3-11.2)	9.1 (7.2-11.5)
	12		11.4 (9.1-14.3)	10.4 (7.8-13.8)	11.9 (9.3-15.1)	9.6 (7.1-12.8)
Region	Toronto		11.2 (8.7-14.3)	13.0 (10.2-16.4)	10.0 (7.9-12.5)	8.4 (6.0-11.5)
	North		7.4 (5.7-9.4)	6.8 (5.6-8.2)	7.0 (3.7-12.8)	6.3 (4.7-8.4)
	West		8.3 (6.9-10.0)	8.0 (6.3-10.1)	6.2 (4.8-8.0)	5.9 (4.9-7.2)
	East		7.6 (6.3-9.0)	6.8 (5.7-8.2)	7.4 (6.2-8.7)	6.0 (4.2-8.5)

Notes: (1) n=total number of students surveyed; (2) entries in brackets are 95% confidence intervals; (3) no significant differences 2015 vs. 2013; ^b 2015 vs. 2009 significant difference, p<.01; ^c significant linear trend, p<.01.

Q: "On how many days of the last 7 days were you 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."

Source: OSDUHS, Centre for Addiction and Mental Health

Table A3.2.5 Percentage Reporting No Days of Physical Activity at School in Physical Education Class in the Past Five School Days, 1999–2015 OSDUHS (Grades 7–12)

	(n=)	1999 (2229)	2001 (2061)	2003 (6616)	2005 (7726)	2007 (6323)	2009 (9211)	2011 (9288)	2013 (10272)	2015 (10426)
Total		43.8	44.2	46.4	49.5	44.5	45.5	48.1	51.0	41.9 ^{ad}
(95% CI)		(40.3-47.4)	(40.4-48.2)	(44.0-48.7)	(47.0-52.1)	(41.6-47.4)	(43.4-47.6)	(44.2-52.1)	(47.7-54.2)	(38.3-45.5)
Sex	Males	41.2	39.0	43.5	45.9	40.6	42.2	43.1	47.8	40.4 ^a
		(37.0-45.4)	(34.1-44.1)	(40.3-46.7)	(42.9-48.9)	(37.2-44.2)	(39.6-45.0)	(39.5-46.8)	(44.1-51.6)	(36.6-44.4)
	Females	46.5	49.4	49.0	53.4	48.6	49.0	53.5	54.3	43.4 ^a
		(42.4-50.7)	(44.9-53.8)	(46.3-51.8)	(50.5-56.4)	(45.4-51.8)	(46.3-51.6)	(48.4-58.6)	(50.5-58.0)	(39.2-47.6)
Grade	7	30.0	20.0	27.9	26.4	21.6	15.4	14.2	13.5	10.9 ^b
		(24.0-36.8)	(15.6-25.3)	(22.6-33.8)	(21.2-32.2)	(16.8-27.2)	(12.9-18.2)	(11.1-18.0)	(10.9-16.6)	(8.5-14.0)
	8	23.9	21.8	22.3	29.9	16.5	12.8	9.8	10.0	13.0 ^b
		(19.0-29.6)	(16.7-27.8)	(17.7-27.8)	(23.4-37.4)	(12.7-21.1)	(10.2-15.9)	(7.3-12.8)	(7.6-12.9)	(8.8-18.6)
	9	35.6	44.9	43.5	45.1	43.1	40.9	44.4	47.5	33.8 ^a
		(28.0-44.1)	(34.8-55.5)	(38.5-48.6)	(39.7-50.6)	(38.0-48.4)	(35.4-46.6)	(36.8-52.3)	(41.2-53.8)	(28.3-39.8)
	10	55.7	57.6	55.9	63.3	57.4	58.9	61.2	60.9	53.1
		(47.4-63.6)	(50.7-64.1)	(50.3-61.4)	(59.2-67.2)	(51.5-63.1)	(55.1-62.5)	(56.7-65.6)	(55.2-66.3)	(46.2-59.9)
	11	57.2	61.3	59.8	60.8	58.3	61.8	64.9	68.4	55.2 ^a
		(51.2-62.9)	(50.9-70.8)	(56.4-63.2)	(55.8-65.5)	(52.5-63.9)	(56.4-66.9)	(58.6-70.8)	(64.0-72.4)	(48.9-61.4)
	12	64.7	62.2	60.8	67.7	61.6	66.3	69.2	73.0	62.9
		(57.5-71.3)	(55.8-68.2)	(55.1-66.2)	(62.2-72.8)	(55.5-67.4)	(60.8-71.4)	(64.2-73.8)	(67.9-77.5)	(55.3-70.0)
Region	Toronto	44.3	39.6	48.5	49.0	41.2	46.3	44.5	46.8	39.0
		(33.7-55.5)	(29.5-50.6)	(43.2-53.8)	(40.4-57.6)	(34.3-48.5)	(38.1-54.8)	(36.0-53.3)	(37.6-56.2)	(30.6-48.2)
	North	49.1	46.9	45.6	42.3	47.6	49.5	51.4	52.3	42.1 ^a
		(43.1-55.2)	(39.2-54.8)	(41.3-49.9)	(36.2-48.6)	(42.4-52.8)	(45.8-53.2)	(48.3-54.4)	(47.6-57.0)	(37.6-46.7)
	West	45.6	44.1	46.4	51.4	43.7	47.4	48.3	51.6	42.0 ^a
		(40.2-51.1)	(39.0-49.4)	(43.4-49.5)	(47.7-55.0)	(39.1-48.4)	(44.6-50.3)	(41.2-55.5)	(46.6-56.6)	(37.3-46.8)
	East	39.8	46.7	45.2	49.0	46.5	41.9	49.3	52.1	43.2
		(34.2-45.6)	(38.7-54.8)	(39.9-50.6)	(45.2-52.8)	(41.6-51.5)	(39.1-44.8)	(44.1-54.5)	(47.1-57.1)	(35.8-50.8)

Notes: (1) n=total number of students surveyed; (2) based on a random half sample in 1999 and 2001; (3) entries in brackets are 95% confidence intervals; (4) ^a 2015 vs. 2013 significant difference, p<.01; ^b 2015 vs. 1999 significant difference, p<.01; ^d significant nonlinear trend, p<.01.

Q: “On how many of the last 5 school days did you participate in physical activity for at least 20 minutes that made you sweat and breathe hard in physical education class in your school?” (Note that students not enrolled in a physical education class at the time of the survey were assigned a value of “0 days” and remained in the analysis.)

Source: OSDUHS, Centre for Addiction and Mental Health

Table A3.2.6 Percentage Reporting Three or More Hours per Day of Recreational Screen Time (Sedentary Behaviour) in the Past Seven Days, 2009–2015 OSDUHS (Grades 7–12)

		2009	2011	2013	2015	
		(n=)	(8583)	(8827)	(9660)	(9815)
Total		57.4	60.0	58.3	62.6 ^{abc}	
(95% CI)		(55.7-59.0)	(57.4-62.6)	(56.2-60.4)	(60.7-64.4)	
Sex	Males	61.0	63.7	60.7	61.6	
		(58.7-63.2)	(61.3-66.0)	(58.2-63.2)	(59.6-63.6)	
	Females	53.5	56.1	55.7	63.6 ^{ab}	
		(51.5-55.4)	(52.4-59.7)	(53.3-58.0)	(61.0-66.1)	
Grade	7	43.0	46.4	43.5	45.7	
		(39.3-46.8)	(42.0-50.8)	(39.9-47.1)	(42.1-49.4)	
	8	51.9	54.0	56.0	56.3	
		(47.8-56.1)	(50.3-57.8)	(50.7-61.3)	(50.2-62.3)	
	9	58.6	60.7	56.8	66.0 ^{ab}	
		(54.6-62.5)	(55.5-65.6)	(52.6-60.9)	(62.2-69.6)	
	10	60.7	61.3	62.3	66.4	
		(56.4-64.8)	(54.8-67.4)	(58.5-65.9)	(62.5-70.0)	
	11	63.0	65.9	62.4	65.8	
		(58.3-67.5)	(61.4-70.2)	(58.2-66.4)	(61.8-69.5)	
	12	61.6	64.7	61.4	67.7 ^a	
		(57.9-65.2)	(58.8-70.2)	(58.2-64.6)	(64.4-70.8)	
Region	Toronto	66.8	66.2	63.1	66.4	
		(62.9-70.6)	(61.0-71.0)	(59.4-66.7)	(61.2-71.3)	
	North	57.2	50.1	54.5	58.9	
		(53.6-60.7)	(46.2-54.0)	(48.0-60.8)	(54.4-63.2)	
	West	55.8	61.0	57.2	61.3 ^b	
		(53.2-58.5)	(55.6-66.2)	(53.9-60.5)	(58.7-63.8)	
	East	54.7	57.2	57.8	62.9 ^b	
		(51.8-57.4)	(54.9-59.4)	(53.8-61.8)	(59.4-66.3)	

Notes: (1) n=total number of students who did not respond “not sure” to the question; the “not sure” responses were treated as missing values (4.2% in 2015) and excluded from the analysis; (2) entries in brackets are 95% confidence intervals; (3) ^a 2015 vs. 2013 significant difference, p<.01; ^b 2015 vs. 2009 significant difference, p<.01; ^c significant linear trend, p<.01.

Q: “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/tablet chatting, emailing, or surfing the Internet in your free time?” (Note: The Canadian Society for Exercise Physiology’s Canadian Sedentary Behaviour Guidelines for Children and Youth recommend a maximum of two hours a day of recreational screen time.)

Source: OSDUHS, Centre for Addiction and Mental Health

Table A3.2.7 Percentage Classified as Overweight or Obese, 2007–2015 OSDUHS
(Grades 7–12)

	(n=)	2007 (2935)	2009 (8575)	2011 (8861)	2013 (9637)	2015 (9797)
Total		23.2	25.2	25.5	25.1	26.4^b
(95% CI)		(21.5-25.1)	(23.8-26.7)	(23.2-28.0)	(23.5-26.7)	(24.9-28.0)
Sex	Males	27.3 (24.6-30.1)	30.0 (27.6-32.5)	29.5 (26.8-32.5)	28.9 (26.3-31.6)	30.0 (27.6-32.6)
	Females	18.7 (16.3-21.4)	20.1 (18.4-21.9)	21.3 (18.6-24.2)	21.0 (19.2-23.0)	22.5 (20.5-24.7)
Grade	7	22.2 (17.5-27.9)	23.5 (20.0-27.1)	19.7 (16.0-24.1)	21.1 (17.0-25.9)	21.9 (16.4-28.6)
	8	17.5 (13.3-22.7)	27.4 (24.4-30.7)	20.9 (18.0-24.2)	22.1 (19.2-25.2)	24.8 (20.8-29.3)
	9	23.2 (19.4-27.5)	26.1 (22.9-29.6)	27.2 (21.9-33.4)	24.0 (21.3-27.0)	24.1 (21.2-27.3)
	10	26.4 (22.2-31.0)	25.8 (23.0-28.9)	27.7 (23.5-32.3)	27.8 (23.8-32.1)	26.7 (23.9-29.8)
	11	25.6 (21.6-30.0)	25.4 (21.6-29.6)	28.7 (25.0-32.6)	28.9 (25.2-33.0)	29.8 (26.3-33.6)
	12	23.6 (19.8-27.8)	23.8 (20.6-27.2)	25.9 (22.0-30.3)	24.2 (21.3-27.4)	28.3 (25.2-31.6)
Region	Toronto	22.6 (18.2-27.7)	24.5 (21.4-27.9)	26.4 (21.9-31.4)	21.6 (17.8-26.0)	26.2 (22.4-30.4)
	North	23.8 (19.5-28.6)	31.4 (27.7-35.4)	27.9 (23.8-32.3)	31.9 (28.5-35.4)	28.3 (25.2-31.5)
	West	23.0 (20.5-25.6)	25.9 (23.5-28.5)	26.1 (21.5-31.2)	25.4 (23.0-27.9)	25.0 (22.4-27.7)
	East	23.9 (20.6-27.6)	23.6 (21.6-25.8)	24.1 (22.2-26.2)	25.3 (22.8-28.0)	28.1 (25.8-30.6)

Notes: (1) n=total number of students with a valid response for height and weight; (2) asked of a random half sample in 2007; (3) entries in brackets are 95% confidence intervals; (4) ^b 2015 vs. 2007 significant difference, p<.01.

Q: “What is your current height without shoes?”; “What is your current weight without shoes?” Body mass index (BMI) was calculated based on self-reported height and weight using age-by-sex BMI cut-off points created the *International Obesity Task Force* (Cole et al., 2000).

Source: OSDUHS, Centre for Addiction and Mental Health

Table A3.2.8 Body Image and Weight Control, 2001–2015 OSDUHS (Grades 7–12)

		2001	2003	2005	2007	2009	2011	2013	2015
TOTAL SAMPLE	(n=)	(1837)	(3152)	(3648)	(2935)	(4261)	(4472)	(4794)	(5023)
Belief:	too thin	10.3	11.1	10.8	10.3	10.0	10.9	11.8	10.3
	about right weight	70.9	69.0	69.9	70.0	67.3	64.8	64.7	67.4
	too fat	18.7	19.9	19.4	19.6	22.7	24.3	23.6	22.3
Trying to:	lose weight	31.3	29.1	28.8	28.0	29.0	30.1	29.7	28.0
	gain weight	12.2	11.6	12.0	13.4	12.9	13.8	13.8	12.8
	keep from gaining weight	18.3	20.8	22.1	22.7	22.8	22.5	22.7	25.0
	not trying to do anything	38.2	38.5	37.1	35.9	35.3	33.6	33.8	34.2
MALES		(899)	(1509)	(1786)	(1450)	(2055)	(2116)	(2182)	(2286)
Belief:	too thin	12.9	15.8	14.8	13.4	14.0	14.1	15.9	14.6
	about right weight	73.4	70.7	70.8	72.0	68.6	67.3	68.9	70.6
	too fat	13.7	13.4	14.5	14.6	17.4	18.6	15.2	14.8
Trying to:	lose weight	21.2	18.4	20.8	20.3	20.7	21.1	21.1	21.1
	gain weight	18.5	18.4	18.2	20.0	19.8	22.0	21.7	21.4
	keep from gaining weight	16.9	14.8	18.6	19.1	19.6	19.0	19.0	21.0
	not trying to do anything	43.4	48.4	42.4	40.6	39.8	38.0	38.2	36.6
FEMALES		(938)	(1643)	(1862)	(1485)	(2206)	(2356)	(2612)	(2907)
Belief:	too thin	7.9	6.7	6.4	6.9	5.4	7.4	7.5	5.8
	about right weight	68.6	67.3	68.9	67.9	65.8	62.1	60.2	64.1
	too fat	23.6	26.0	24.7	25.2	28.7	30.6	32.3	30.1 ^b
Trying to:	lose weight	40.9	39.2	37.5	36.7	38.3	40.2	38.8	35.3
	gain weight	6.2	5.4	5.2	6.0	5.1	4.7	5.5	3.7
	keep from gaining weight	19.6	26.3	26.0	26.7	26.4	26.3	26.6	29.5
	not trying to do anything	33.3	29.1	31.3	30.6	30.2	28.7	29.1	31.5
GRADE 7		(346)	(450)	(453)	(338)	(749)	(718)	(974)	(910)
Belief:	too thin	12.1	9.9	6.2	7.2	9.3	9.5	9.9	5.9
	about right weight	76.1	74.3	76.5	79.1	72.2	70.6	68.9	79.2
	too fat	11.8	15.8	17.2	13.6	18.5	19.9	21.2	14.9
Trying to:	lose weight	25.7	22.8	25.4	26.1	25.1	25.5	27.7	25.7
	gain weight	10.5	8.1	5.5	8.5	9.4	8.6	7.6	7.4
	keep from gaining weight	19.2	18.1	22.1	28.0	21.3	21.7	23.8	26.9
	not trying to do anything	44.6	51.1	47.0	33.4	44.2	44.1	41.0	39.9
GRADE 8		(312)	(464)	(470)	(350)	(784)	(729)	(925)	(942)
Belief:	too thin	10.5	9.9	9.4	9.4	5.8	7.0	10.1	8.5
	about right weight	68.1	74.3	75.3	72.7	73.9	72.6	69.9	69.9
	too fat	21.5	15.8	15.3	17.8	20.3	20.3	20.1	21.7
Trying to:	lose weight	32.3	25.2	26.7	25.7	29.8	26.2	25.5	25.2
	gain weight	9.7	8.6	9.4	8.2	7.4	9.1	12.1	7.9
	keep from gaining weight	22.2	25.1	24.8	23.8	23.8	28.2	20.6	24.7
	not trying to do anything	35.8	41.1	39.1	42.3	39.0	36.5	41.8	42.2
GRADE 9		(334)	(600)	(691)	(561)	(661)	(805)	(722)	(890)
Belief:	too thin	7.3	11.6	12.7	11.3	9.9	10.9	11.1	9.8
	about right weight	73.8	70.5	66.8	67.9	65.6	66.1	65.2	67.6
	too fat	18.9	17.9	20.5	20.8	24.6	23.0	23.7	22.6
Trying to:	lose weight	34.3	29.4	28.3	27.4	29.6	34.2	28.5	27.0
	gain weight	9.2	12.3	12.7	13.2	10.5	14.9	8.9	10.9
	keep from gaining weight	18.1	19.6	22.5	19.8	22.8	18.8	24.4	26.1
	not trying to do anything	38.4	38.7	36.5	39.5	37.2	32.0	38.2	36.0

(cont'd)

		2001	2003	2005	2007	2009	2011	2013	2015
GRADE 10		(384)	(559)	(685)	(528)	(720)	(722)	(728)	(782)
Belief:	too thin	7.7	11.7	9.9	9.8	8.4	11.3	12.0	11.9
	about right weight	73.8	64.2	68.8	68.7	66.5	60.7	66.5	65.3
	too fat	18.4	24.1	21.2	21.5	25.1	28.0	21.5	22.8
Trying to:	lose weight	34.3	32.2	29.7	28.3	33.6	35.6	33.5	27.7
	gain weight	11.0	11.9	11.3	12.4	11.3	14.4	12.5	13.8
	keep from gaining weight	16.8	21.6	23.6	20.6	21.1	17.2	20.9	23.8
	not trying to do anything	37.8	34.3	35.4	38.7	34.0	32.8	33.1	34.7
GRADE 11		(273)	(568)	(718)	(589)	(659)	(731)	(737)	(766)
Belief:	too thin	12.2	11.6	13.5	12.0	10.6	10.2	11.9	9.2
	about right weight	66.1	65.5	66.1	67.2	64.4	60.2	62.2	64.7
	too fat	21.7	23.0	20.3	20.8	24.9	29.6	25.8	26.2
Trying to:	lose weight	31.1	31.8	30.1	28.2	28.5	30.6	30.9	33.6
	gain weight	17.1	13.9	15.0	18.9	15.8	13.8	16.4	14.1
	keep from gaining weight	16.5	20.1	21.5	20.1	26.3	22.7	25.4	22.5
	not trying to do anything	35.3	34.2	33.4	32.8	29.4	33.0	27.4	29.7
GRADE 12		(188)	(511)	(631)	(569)	(688)	(767)	(708)	(733)
Belief:	too thin	15.4	11.8	12.1	11.4	13.6	14.1	13.6	13.5
	about right weight	63.0	67.0	67.1	66.7	64.5	62.6	60.3	63.9
	too fat	21.6	21.2	20.8	21.9	21.9	23.3	26.1	22.6
Trying to:	lose weight	27.4	31.5	31.7	31.2	27.5	27.8	30.2	27.4
	gain weight	18.5	13.9	16.7	17.0	18.8	18.2	20.1	17.6
	keep from gaining weight	17.6	20.6	18.9	24.2	21.7	25.6	21.3	26.3
	not trying to do anything	36.4	34.0	32.7	27.6	32.1	28.4	28.4	28.8
TORONTO		(266)	(549)	(595)	(473)	(419)	(622)	(392)	(535)
Belief:	too thin	12.4	13.7	14.4	10.6	11.4	13.4	16.4	11.5
	about right weight	74.6	69.7	66.7	72.4	71.5	63.1	63.5	66.8
	too fat	13.0	16.6	18.8	17.0	17.1	23.5	20.1	21.7
Trying to:	lose weight	28.4	26.1	29.9	25.4	30.0	33.0	27.6	28.3
	gain weight	13.6	11.5	14.3	16.2	14.9	15.9	13.9	14.6
	keep from gaining weight	20.8	18.7	20.4	19.8	19.8	16.9	23.4	24.5
	not trying to do anything	37.2	43.7	35.3	38.6	35.2	32.4	35.2	32.6
NORTH REGION		(415)	(539)	(517)	(376)	(290)	(771)	(495)	(557)
Belief:	too thin	8.3	9.7	10.8	9.7	6.7	8.0	5.9	7.3
	about right weight	67.5	70.4	70.8	68.8	68.9	68.8	68.5	71.1
	too fat	24.3	19.8	18.4	21.5	24.4	23.2	25.6	21.6
Trying to:	lose weight	31.2	26.8	27.3	28.1	31.3	29.0	29.1	29.3
	gain weight	11.9	10.6	10.9	9.4	17.1	12.0	11.9	10.2
	keep from gaining weight	19.5	19.9	21.9	22.2	19.6	24.2	29.4	25.3
	not trying to do anything	37.4	42.7	39.9	40.3	32.0	34.7	29.6	35.2
WEST REGION		(707)	(1254)	(1428)	(1316)	(1439)	(1147)	(1619)	(2169)
Belief:	too thin	9.6	11.4	9.0	11.2	10.6	11.0	10.8	10.9
	about right weight	71.3	67.2	70.1	69.0	64.4	61.9	65.0	6.8
	too fat	19.1	21.4	20.9	19.8	25.0	27.1	24.2	21.3
Trying to:	lose weight	31.4	30.6	31.6	28.6	29.7	31.1	29.3	26.9
	gain weight	11.9	11.7	11.3	13.6	12.4	14.2	14.2	12.3
	keep from gaining weight	20.0	21.2	20.2	23.4	24.0	22.2	22.5	24.2
	not trying to do anything	36.8	36.6	36.8	34.4	33.9	32.5	34.0	36.6

(cont'd)

	2001	2003	2005	2007	2009	2011	2013	2015
EAST REGION	(449)	(810)	(1108)	(770)	(2113)	(1932)	(2288)	(1762)
Belief:								
too thin	10.6	9.3	11.0	8.8	8.9	10.1	11.0	9.2
about right weight	68.8	70.9	71.4	70.5	68.8	68.8	64.3	66.7
too fat	20.6	19.8	17.6	20.7	22.3	21.2	24.7	24.0
Trying to:								
lose weight	33.4	29.5	24.4	28.9	27.1	27.6	32.0	29.3
gain weight	11.7	12.0	11.6	12.1	11.6	12.6	13.5	13.0
keep from gaining weight	13.5	21.7	25.9	23.5	23.5	25.2	21.2	26.4
not trying to do anything	41.4	36.8	38.0	35.5	37.8	34.6	33.2	31.3

Notes: (1) n=total number of students surveyed; (2) entries in cells are percentages; (3) data based on a random half sample in each year; (4) no significant differences 2015 vs. 2013; ^b 2015 vs. 2001 significant difference, p<.01.

Qs: "Do you think of yourself as being too thin, about the right weight, or too fat?"; "Which of the following are you doing about your weight?"

Source: OSDUHS, Centre for Addiction and Mental Health

Table A3.2.9 Percentage Reporting Using an Indoor Tanning Device in the Past Year, 2013–2015 OSDUHS (Grades 7–12)

		(n=)	2013 (4794)	2015 (5023)
Total			4.4	3.6
(95% CI)			(3.6-5.5)	(2.9-4.6)
Sex	Males		2.7 (1.9-3.8)	4.1 (3.2-5.4)
	Females		6.3 (4.6-8.5)	3.1^a (2.2-4.2)
Grade	7		†	3.7 (2.0-6.8)
	8		†	†
	9		†	3.8 (2.2-6.4)
	10		3.9 (2.2-6.8)	3.2 (1.9-5.2)
	11		5.4 (3.2-9.0)	4.1 (2.7-6.2)
	12		8.0 (5.7-11.1)	3.4^a (2.1-5.2)
Region	Toronto		2.4 (1.4-4.3)	2.9 (1.7-5.1)
	North		†	3.7 (2.2-6.2)
	West		4.4 (3.1-6.2)	3.2 (2.3-4.4)
	East		5.8 (4.1-8.3)	4.6 (3.0-7.1)

Notes: (1) n=total number of students surveyed; (2) entries in brackets are 95% confidence intervals; (3) †=estimate suppressed due to unreliability; (4) asked of a random half sample since 2013; (5) ^a 2015 vs. 2013 significant difference, p<.01.

Q: “In the last 12 months, how often did you use an indoor tanning device such as a sunlamp, sunbed, or tanning booth? (Do not include getting a spray-on tan or tanning cream.)”

Source: OSDUHS, Centre for Addiction and Mental Health

Table A3.2.10 Percentage Reporting a Medically Treated Injury at Least Once in the Past Year, 2003–2015 OSDUHS (Grades 7–12)

		2003 (6616)	2005 (7726)	2007 (2935)	2009 (4261)	2011 (4472)	2013 (4794)	2015 (5023)
Total		35.4	33.8	37.4	40.5	41.9	41.0	43.7 ^{bc}
(95% CI)		(33.7-37.1)	(32.2-35.5)	(35.2-39.6)	(38.5-42.5)	(39.4-44.4)	(38.2-43.9)	(41.0-46.3)
Sex	Males	38.0	37.9	39.4	43.0	44.2	43.6	45.4 ^b
		(35.6-40.5)	(35.8-40.0)	(36.3-42.6)	(40.2-46.0)	(41.3-47.1)	(39.8-47.5)	(41.7-49.1)
	Females	33.0	29.5	35.2	37.6	39.3	38.4	41.8 ^b
		(30.9-35.2)	(27.6-31.4)	(32.2-38.2)	(35.0-40.3)	(35.3-43.5)	(35.2-41.7)	(38.9-44.8)
Grade	7	32.5	29.6	31.3	39.1	34.9	39.5	40.1
		(27.9-37.4)	(26.7-32.6)	(25.3-37.9)	(33.9-44.6)	(30.4-39.8)	(33.4-46.0)	(35.4-45.0)
	8	36.3	35.3	31.4	40.8	41.0	47.1	48.0 ^b
		(32.2-40.5)	(31.2-39.6)	(26.8-36.3)	(37.0-44.8)	(34.9-47.4)	(41.0-53.4)	(41.4-54.6)
	9	38.3	35.1	39.9	42.9	43.2	41.5	41.5
		(34.9-41.8)	(32.2-38.1)	(34.4-45.7)	(38.2-47.7)	(37.9-48.7)	(36.4-46.8)	(36.9-46.2)
	10	35.1	33.3	37.7	42.0	45.7	39.4	44.9 ^b
		(31.6-38.8)	(30.1-36.6)	(33.5-42.1)	(37.8-46.5)	(40.8-50.6)	(33.0-46.1)	(41.4-48.6)
	11	36.0	33.1	38.9	40.8	38.5	39.7	43.5
		(32.2-40.0)	(30.1-36.4)	(34.7-43.2)	(36.4-45.3)	(33.1-44.1)	(34.4-45.4)	(38.4-48.6)
	12	33.6	36.0	42.7	37.8	44.8	40.4	43.8 ^b
		(30.1-37.4)	(32.1-40.0)	(37.3-48.3)	(33.5-42.4)	(34.9-55.2)	(35.6-45.4)	(37.5-50.4)
Region	Toronto	26.4	26.7	33.0	34.7	34.6	33.7	33.5
		(22.4-31.0)	(22.7-31.1)	(27.9-38.6)	(28.6-41.4)	(31.0-38.3)	(24.8-43.9)	(27.4-40.2)
	North	41.8	39.1	40.7	34.6	49.3	47.8	50.8 ^b
		(38.1-45.6)	(35.7-42.7)	(33.9-47.8)	(26.3-41.5)	(45.3-53.4)	(40.4-55.3)	(45.8-55.8)
	West	36.2	33.5	38.4	41.7	43.6	42.0	45.1 ^b
		(33.4-39.0)	(31.0-36.2)	(35.6-41.4)	(38.8-44.6)	(38.9-48.4)	(37.8-46.2)	(42.0-48.2)
	East	38.1	36.8	37.8	43.2	42.3	43.4	46.1
		(35.0-41.3)	(34.5-39.3)	(33.5-42.3)	(40.4-46.0)	(39.5-45.2)	(40.4-46.4)	(40.1-52.2)

Notes: (1) n=total number of students surveyed; (2) entries in brackets are 95% confidence intervals; (3) asked of a random half sample since 2007; (4) no significant differences 2015 vs. 2013; ^b 2015 vs. 2003 significant difference, p<.01; ^c significant linear trend, p<.01.

Q: "In the last 12 months, how many times were you hurt or injured, and had to be treated by a doctor or nurse?"

Source: OSDUHS, Centre for Addiction and Mental Health

Table A3.2.11 Percentage of Bicyclists Reporting Not Always Wearing a Bicycle Helmet in the Past Year, 2013–2015 OSDUHS (Grades 7–12)

		2013	2015
		(3676)	(3894)
		(n=)	
Total		78.7	76.9
	(95% CI)	(76.4-80.8)	(74.3-79.4)
Sex	Males	80.4	78.6
		(77.4-83.1)	(75.1-81.7)
	Females	76.5	74.9
		(73.3-79.4)	(71.2-78.2)
Grade	7	53.1	58.2
		(45.9-60.2)	(50.9-65.1)
	8	71.0	65.5
		(62.8-78.1)	(58.4-71.9)
	9	82.2	76.7
		(77.6-86.1)	(73.1-80.0)
	10	79.8	80.0
		(73.2-85.0)	(74.6-84.5)
	11	86.3	84.9
		(81.1-90.3)	(79.9-88.9)
	12	88.7	86.1
		(84.3-92.0)	(81.2-89.8)
Region	Toronto	81.4	82.2
		(76.1-85.7)	(74.5-87.9)
	North	72.4	65.4
		(67.9-76.5)	(59.5-70.9)
	West	79.9	75.7
		(76.2-83.2)	(71.1-79.7)
	East	76.0	78.0
		(71.9-79.7)	(74.5-81.1)

Notes: (1) n=total number of students who reported riding a bicycle in the past year (79% of total sample surveyed); (2) entries in brackets are 95% confidence intervals; (3) asked of a random half sample since 2013; (4) no significant differences 2015 vs. 2013.

Q: "In the last 12 months, how often did you wear a helmet while riding a bicycle?" (Students had the option of responding that they "did not ride a bicycle in the last 12 months.")

Source: OSDUHS, Centre for Addiction and Mental Health

Table A3.2.12 Percentage Reporting Not Always Wearing a Seatbelt When in a Vehicle, 2011–2015 OSDUHS (Grades 7–12)

		(n=)	2011 (4472)	2013 (4794)	2015 (5023)
Total			28.4	23.7	23.9^b
(95% CI)			(25.9-31.0)	(21.5-26.0)	(21.8-26.3)
Sex	Males		28.8	26.7	22.5^b
			(25.0-33.0)	(23.3-30.3)	(19.7-25.6)
	Females		27.8	20.5	25.5
			(25.6-30.2)	(17.7-23.7)	(22.7-28.5)
Grade	7		19.8	16.0	17.3
			(15.8-24.6)	(12.2-20.8)	(12.7-23.1)
	8		27.8	20.4	18.9
			(23.2-32.9)	(14.8-27.3)	(13.9-25.2)
	9		35.3	23.7	25.3
			(28.1-43.3)	(19.4-28.6)	(21.5-29.5)
	10		30.8	29.2	25.3
			(26.1-36.0)	(24.4-34.5)	(20.8-30.4)
	11		29.0	26.1	24.2
			(25.1-33.2)	(21.8-30.8)	(20.0-29.0)
	12		26.3	23.7	27.9
			(19.3-34.8)	(18.5-29.8)	(22.6-34.0)
Region	Toronto		28.6	26.9	26.7
			(23.5-34.2)	(20.8-34.0)	(21.7-32.4)
	North		26.4	22.9	20.7
			(21.4-32.1)	(17.2-29.7)	(14.8-28.1)
	West		29.6	22.2	22.1^b
			(25.0-34.7)	(18.8-25.8)	(19.0-25.5)
	East		27.0	24.1	25.6
			(24.2-29.9)	(21.4-27.2)	(21.6-30.1)

Notes: (1) n=total number of students surveyed; (2) entries in brackets are 95% confidence intervals; (3) asked of a random half sample since 2011; (4) no significant differences 2015 vs. 2013; ^b 2015 vs. 2011 significant difference, p<.01.

Q: "How often do you wear a seat belt when you are in a vehicle?"

Source: OSDUHS, Centre for Addiction and Mental Health

Table A3.2.13 Percentage of Drivers in Grades 10–12 Reporting Texting While Driving at Least Once in the Past Year, 2013–2015 OSDUHS

		2013	2015
		(1139)	(1171)
		(n=)	
Total		35.9	35.3
(95% CI)		(32.2-39.7)	(31.0-39.9)
Sex	Males	34.9	35.5
		(28.9-41.4)	(29.6-42.0)
	Females	37.1	35.1
		(32.4-42.1)	(30.7-39.8)
Grade	10	†	†
	11	25.0	24.7
		(19.2-32.0)	(19.4-30.9)
	12	45.9	44.4
		(40.9-51.1)	(37.6-51.5)
Region	Toronto	23.5	21.7
		(13.2-38.4)	(14.3-31.5)
	North	40.1	40.8
		(34.3-46.2)	(30.2-52.2)
	West	39.0	33.8
		(33.5-44.7)	(27.4-31.0)
	East	35.5	41.1
		(30.0-41.5)	(34.3-48.3)

Notes: (1) n=total number of drivers; (2) entries in brackets are 95% confidence intervals; (3) †=estimate suppressed due to unreliability; (4) asked of a random half sample of secondary student since 2013; (5) no significant differences 2015 vs. 2013.

Q: “In the last 12 months, how often did you send or read a text message or an email while you were driving a vehicle? (Note that the phrase “or read” was added to the question in 2015.)

Source: OSDUHS, Centre for Addiction and Mental Health

Table A3.3.1 Percentage Reporting No Physician Health Care Visit in the Past Year, 1999–2015 OSDUHS (Grades 7–12)

		1999	2001	2003	2005	2007	2009	2011	2013	2015
	(n=)	(4447)	(3898)	(6616)	(7726)	(2935)	(4261)	(4207)	(4794)	(5023)
Total		30.0	34.0	39.8	38.9	39.0	33.6	32.7	27.4	28.6^{cd}
(95% CI)		(28.2-31.9)	(31.8-36.2)	(38.3-41.3)	(37.0-40.8)	(36.6-41.5)	(31.2-36.0)	(30.4-35.0)	(25.1-29.8)	(26.6-30.8)
Sex	Males	34.0	38.9	46.2	43.4	44.6	39.3	36.1	30.8	31.9
		(31.7-36.5)	(35.9-41.9)	(44.1-48.4)	(40.6-46.3)	(40.9-48.2)	(35.6-43.1)	(33.2-39.0)	(27.9-34.0)	(29.1-34.9)
	Females	25.9	29.2	33.8	34.0	32.8	27.2	28.9	23.7	25.1
		(23.6-28.4)	(27.0-31.6)	(31.9-35.8)	(32.0-36.1)	(30.0-35.8)	(24.3-30.4)	(26.1-31.8)	(20.6-27.2)	(22.3-28.2)
Grade	7	33.6	33.8	42.6	44.8	40.9	33.6	33.4	29.0	29.8
		(29.5-38.0)	(29.0-38.9)	(37.9-47.5)	(38.6-51.2)	(34.7-47.3)	(27.8-40.0)	(27.3-40.2)	(21.6-37.7)	(25.8-34.0)
	8	31.5	33.0	43.2	44.0	45.5	33.4	34.7	26.3	28.1
		(27.9-35.2)	(28.4-38.0)	(39.4-47.1)	(39.1-49.1)	(38.6-52.6)	(27.7-39.6)	(29.4-40.4)	(20.5-32.9)	(22.6-34.4)
	9	31.4	35.3	39.4	37.1	42.4	31.1	31.2	30.5	25.5
		(28.6-34.3)	(31.3-39.5)	(35.7-43.2)	(33.6-40.8)	(37.4-47.5)	(27.0-35.6)	(26.5-36.4)	(25.9-35.5)	(21.8-29.7)
	10	26.9	36.0	38.4	36.7	35.4	30.3	30.8	26.7	28.9
		(22.5-31.9)	(31.3-41.0)	(34.8-42.1)	(33.5-40.0)	(30.5-40.7)	(25.0-36.2)	(24.4-38.0)	(21.7-32.5)	(24.7-33.4)
	11	26.9	29.3	37.8	35.8	31.1	35.0	34.9	28.1	29.6
		(22.6-31.6)	(24.2-34.9)	(34.4-41.3)	(32.9-38.7)	(27.2-35.2)	(30.4-39.8)	(29.2-41.1)	(24.4-32.0)	(24.9-34.8)
	12	29.6	35.0	38.6	35.9	39.7	36.9	31.9	25.0	29.6
		(24.2-35.5)	(29.6-42.8)	(34.5-42.8)	(33.0-39.0)	(35.2-44.4)	(31.7-42.4)	(26.2-38.2)	(19.7-31.2)	(25.1-34.5)
Region	Toronto	25.5	30.3	38.7	36.1	39.2	35.8	31.2	24.7	26.3
		(21.7-29.8)	(26.7-34.2)	(36.8-40.6)	(31.5-41.1)	(32.3-46.5)	(30.8-41.0)	(27.2-35.6)	(18.6-32.1)	(21.8-31.4)
	North	39.5	39.7	45.9	49.3	47.5	39.1	40.7	34.5	31.3
		(35.4-43.7)	(35.1-44.4)	(43.5-48.2)	(43.8-54.8)	(40.8-54.2)	(29.4-49.8)	(33.6-48.2)	(28.7-40.9)	(25.6-37.5)
	West	32.4	37.5	42.0	41.4	40.1	33.2	33.2	29.0	28.8
		(29.2-35.7)	(34.1-41.1)	(39.9-44.2)	(39.0-43.8)	(37.1-43.3)	(29.5-37.2)	(29.1-37.7)	(26.0-32.3)	(25.8-32.0)
	East	26.6	29.2	35.5	35.1	35.2	31.7	31.5	25.2	29.3
		(23.8-29.6)	(24.9-33.9)	(31.9-39.2)	(31.6-38.8)	(30.5-40.1)	(27.6-36.1)	(28.5-34.7)	(21.6-29.1)	(25.5-33.3)

Notes: (1) n=total number of students surveyed; (3) asked of a random half sample since 2007; (3) entries in brackets are 95% confidence intervals; (4) no significant differences 2015 vs. 2013; ^c significant linear trend, p<.01; ^d significant nonlinear trend, p<.01.
 Q: "In the last 12 months, how many times have you seen a doctor about your physical health or for a check-up?" (Note that in 2013 the response option format changed to closed-ended categories. An open-ended format was used from 1999 to 2011.)
 Source: OSDUHS, Centre for Addiction and Mental Health

Table A3.3.2 Percentage Reporting at Least One Mental Health Care Visit in the Past Year, 1999–2015 OSDUHS (Grades 7–12)

	(n=)	1999 (4447)	2001 (3898)	2003 (6616)	2005 (7726)	2007 (3388)	2009 (4851)	2011 (4816)	2013 (5478)	2015 (5403)
Total		12.4	10.9	11.0	11.7	21.2	23.8	15.1	21.9	20.9 ^{bcd}
(95% CI)		(11.3-13.7)	(9.8-12.2)	(10.0-12.2)	(10.5-12.9)	(19.4-23.1)	(22.0-25.8)	(12.8-17.6)	(19.8-24.3)	(18.9-23.0)
Sex	Males	9.5	8.1	8.1	8.7	19.5	22.3	11.1	17.9	17.1 ^b
		(8.0-11.2)	(6.9-9.5)	(7.1-9.3)	(7.4-10.2)	(17.1-22.1)	(19.6-25.2)	(9.0-13.5)	(15.6-20.4)	(14.6-20.0)
	Females	15.5	13.6	13.7	14.8	23.0	25.4	19.1	26.3	24.9 ^b
		(13.6-17.6)	(12.0-15.4)	(12.1-15.4)	(13.3-16.4)	(20.7-25.4)	(23.1-28.0)	(16.4-22.3)	(23.4-29.4)	(22.2-27.8)
Grade	7	8.9	7.4	10.0	9.8	23.3	28.9	15.0	20.9	26.5 ^b
		(7.0-11.3)	(5.8-9.4)	(8.2-12.1)	(7.4-12.9)	(18.7-28.6)	(24.3-34.0)	(11.7-19.0)	(16.7-25.8)	(20.8-33.0)
	8	11.3	9.3	10.3	11.4	18.5	23.2	13.9	26.0	21.9 ^b
		(8.9-14.3)	(7.2-11.9)	(7.5-14.0)	(8.6-15.0)	(14.3-23.6)	(19.4-27.5)	(10.5-18.3)	(19.5-33.7)	(15.3-30.4)
	9	14.4	11.0	9.0	11.2	22.4	26.1	12.1	21.7	16.8
		(11.4-18.1)	(8.9-13.6)	(7.1-11.3)	(9.4-13.1)	(18.8-26.5)	(21.9-30.8)	(9.0-15.9)	(18.3-25.5)	(13.5-20.8)
	10	14.8	12.4	11.1	14.2	19.0	24.6	16.6	20.6	20.0
		(11.3-19.1)	(10.6-14.6)	(8.5-14.2)	(12.0-16.7)	(15.4-23.2)	(21.0-28.6)	(11.6-23.0)	(16.0-26.1)	(16.8-23.7)
	11	14.6	12.4	14.4	12.7	21.3	23.3	17.6	24.4	19.5
		(11.2-18.8)	(10.6-14.6)	(12.0-17.3)	(10.2-15.8)	(17.6-25.6)	(18.1-29.5)	(10.9-27.1)	(19.7-30.0)	(15.7-24.0)
	12	9.3	13.0	11.0	10.7	22.5	19.0	14.9	19.6	21.3 ^b
		(7.2-12.1)	(7.8-21.0)	(9.0-13.4)	(8.9-12.8)	(18.5-27.1)	(15.4-23.3)	(12.2-18.1)	(15.4-24.7)	(17.5-25.6)
Region	Toronto	10.5	10.8	8.3	11.2	25.2	27.0	13.3	22.1	20.5 ^b
		(8.3-13.2)	(9.0-12.8)	(6.4-10.6)	(7.9-15.6)	(20.7-30.3)	(21.5-33.3)	(10.4-16.7)	(14.3-32.5)	(16.9-24.7)
	North	11.7	11.0	12.0	14.6	21.2	19.8	16.5	22.8	23.9 ^b
		(8.9-15.3)	(8.8-13.6)	(10.0-14.4)	(12.0-17.7)	(15.8-27.8)	(15.6-24.7)	(12.5-21.6)	(19.1-27.0)	(20.1-28.1)
	West	13.5	10.8	10.6	12.1	18.9	23.1	16.5	21.3	20.1 ^b
		(11.4-16.0)	(8.7-13.2)	(8.9-12.5)	(10.3-14.1)	(16.2-21.8)	(20.4-26.0)	(12.4-21.5)	(18.3-24.6)	(17.1-23.4)
	East	12.3	11.2	13.2	10.7	22.0	24.1	13.8	22.7	21.6 ^b
		(10.6-14.2)	(9.6-13.2)	(11.2-15.4)	(9.3-12.3)	(18.9-25.4)	(21.3-27.1)	(11.6-16.5)	(20.0-25.5)	(17.8-25.9)

Notes: (1) n=total number of students surveyed; (2) asked of a random half sample since 2007; (3) entries in brackets are 95% confidence intervals; (4) no significant differences 2015 vs. 2013; ^b 2015 vs. 1999 significant difference, p<.01; ^c significant linear trend, p<.01; ^d significant nonlinear trend, p<.01.

Q: “In the last 12 months, how many times have you seen a doctor, nurse, or counsellor about your emotional or mental health?” (Note that in 2013 the response option format changed to closed-ended categories. An open-ended format was used from 1999 to 2011.)

Source: OSDUHS, Centre for Addiction and Mental Health

Table A3.3.3 Percentage Reporting Medical Use of a Tranquillizer/Sedative Drug at Least Once in the Past Year, 1977–2015 OSDUHS (Grades 9–12)

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015
(n ¹)												(2883)	(2457)	(4693)	(5794)	(4834)	(5783)	(6383)	(6159)	(6597)
(n ²)	(2640)	(2653)	(1894)	(2075)	(2092)	(2137)	(1919)	(2020)	(1723)	(1980)	(2221)	(1655)	(1263)	(2442)	(3008)	(2494)	(2792)	(3223)	(3111)	(3351)
Total ¹ (95% CI)	—	—	—	—	—	—	—	—	—	—	—	3.5 (2.8-4.4)	3.7 (3.0-4.5)	3.0 (2.4-3.9)	2.5 (1.9-3.4)	5.0 (4.1-6.1)	4.3 (3.3-5.6)	4.2 (3.4-5.3)	2.9 (2.3-3.7)	3.3 (2.9-3.7)
Total ² (95% CI)	9.5 (8.4-10.9)	7.4 (6.4-8.6)	8.9 (7.6-10.4)	7.7 (6.4-9.1)	5.2 (4.5-6.0)	5.5 (4.0-7.5)	3.3 (2.3-4.5)	3.3 (2.4-4.5)	2.6 (1.7-4.2)	1.8 (1.2-2.8)	2.5 (2.0-3.1)	3.5 (2.6-4.6)	3.7 (2.7-5.0)	3.3 (2.2-4.9)	2.6 (1.8-3.6)	4.3 (3.2-5.7)	3.9 (2.8-5.4)	3.8 (2.6-5.6)	3.3 (2.4-4.4)	2.8 ^{cd} (2.2-3.7)
Sex																				
Males ¹	—	—	—	—	—	—	—	—	—	—	—	3.3 (2.4-4.6)	4.7 (3.5-6.2)	3.7 (2.7-5.1)	2.8 (1.8-4.2)	3.4 (2.6-4.5)	3.3 (2.3-4.7)	3.5 (2.3-5.2)	2.6 (1.8-3.7)	1.8 (1.3-2.4)
Males ²	8.5 (7.0-10.3)	7.4 (6.0-9.0)	8.5 (6.7-10.6)	6.5 (5.4-7.6)	5.4 (4.3-6.7)	4.6 (2.5-8.4)	2.9 (1.4-5.7)	3.4 (2.4-4.7)	3.1 (2.0-4.7)	2.0 (1.2-3.2)	2.6 (1.8-3.7)	2.9 (1.8-4.7)	4.4 (2.8-7.0)	4.4 (2.7-6.9)	2.5 (1.7-3.8)	3.1 (2.1-4.7)	2.8 (1.6-4.7)	3.5 (1.8-6.3)	3.1 (1.9-4.8)	1.7 (1.1-2.7)
Females ¹	—	—	—	—	—	—	—	—	—	—	—	3.7 (2.6-5.1)	2.6 (1.9-3.6)	2.3 (1.5-3.6)	2.2 (1.5-3.4)	6.7 (5.2-8.6)	5.2 (3.8-7.3)	5.1 (4.2-6.1)	3.2 (2.4-4.3)	4.9 (4.0-5.9)
Females ²	10.4 (8.9-12.2)	7.5 (6.1-9.1)	9.3 (7.6-11.4)	8.8 (7.0-11.2)	5.0 (3.9-6.4)	6.2 (5.1-7.6)	3.6 (2.9-4.6)	3.1 (1.8-5.4)	2.2 (1.3-3.9)	1.7 (0.9-3.4)	2.4 (1.4-3.9)	4.1 (2.7-6.2)	2.8 (1.7-4.4)	2.3 (1.1-4.5)	2.6 (1.5-4.4)	5.5 (3.9-7.7)	5.0 (3.4-7.2)	4.2 (3.2-5.6)	3.5 (2.3-5.2)	3.9 (2.8-5.4)
Grade																				
9	8.9 (7.4-10.7)	6.2 (4.9-7.7)	8.1 (6.5-10.0)	6.4 (4.6-8.9)	3.7 (2.9-4.7)	4.7 (3.6-6.2)	2.3 (1.4-3.6)	2.8 (1.6-4.9)	1.8 (0.7-4.4)	1.0 (0.5-2.0)	1.8 (1.2-2.6)	3.8 (2.6-5.4)	2.3 (1.4-3.8)	2.8 (1.4-5.4)	2.0 (1.2-3.3)	3.4 (2.2-5.3)	2.3 (1.3-4.1)	2.7 (1.7-4.3)	3.7 (2.5-5.4)	3.0 (2.0-4.5)
10	—	—	—	—	—	—	—	—	—	—	—	3.1 (2.0-4.7)	2.6 (1.8-4.0)	2.3 (1.2-4.2)	2.7 (1.5-4.8)	4.0 (2.6-6.2)	4.5 (2.5-7.7)	4.5 (3.1-6.7)	2.7 (1.7-4.1)	3.4 (2.5-4.5)
11	10.5 (8.8-12.5)	9.1 (7.5-11.1)	9.9 (7.9-12.3)	9.2 (8.2-10.4)	6.8 (5.9-7.9)	6.1 (3.7-9.9)	4.5 (3.0-6.6)	3.7 (2.6-5.4)	3.4 (2.2-5.4)	2.6 (1.6-4.4)	3.1 (2.4-4.2)	3.1 (1.9-5.0)	5.4 (3.6-8.0)	3.8 (2.3-6.2)	3.2 (2.1-4.9)	5.1 (3.4-7.6)	5.4 (3.6-8.0)	4.9 (2.8-8.7)	2.9 (1.8-4.7)	2.6 (1.8-3.8)
12	—	—	—	—	—	—	—	—	—	—	—	4.0 (2.5-6.4)	5.9 (4.1-8.3)	3.2 (1.8-5.6)	2.2 (1.0-4.8)	7.1 (5.0-10.2)	4.8 (3.3-6.9)	4.6 (3.3-6.4)	2.6 (1.7-3.8)	3.8 (2.7-5.4)

(cont'd)

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	
(n ¹)												(2883)	(2457)	(4693)	(5794)	(4834)	(5783)	(6383)	(6159)	(6597)	
(n ²)	(2640)	(2653)	(1894)	(2075)	(2092)	(2137)	(1919)	(2020)	(1723)	(1980)	(2221)	(1655)	(1263)	(2442)	(3008)	(2494)	(2792)	(3223)	(3111)	(3351)	
Region																					
Toronto ¹	—	—	—	—	—	—	—	—	—	—	—	3.2 (1.7-5.9)	2.9 (1.6-5.2)	2.6 (1.4-4.5)	† (1.3-4.4)	2.4 (1.3-4.4)	† (1.4-3.2)	2.1 (1.1-3.6)	2.0 (1.1-3.6)	†	
Toronto ²	—	—	7.8 (6.6-9.1)	4.3 (2.7-6.6)	4.0 (3.3-4.9)	4.8 (3.2-7.3)	†	2.6 (1.6-4.4)	1.5 (0.7-3.0)	†	†	†	2.3 (1.6-3.3)	†	†	†	†	†	†	3.5 (2.1-5.7)	†
North ¹	—	—	—	—	—	—	—	—	—	—	—	2.7 (1.6-4.6)	4.3 (2.9-6.4)	†	†	3.8 (2.3-6.2)	†	5.0 (3.8-6.6)	†	4.3 (2.6-7.0)	
North ²	—	—	10.9 (6.5-17.8)	10.1 (5.8-17.2)	7.5 (5.6-9.8)	7.2 (4.2-12.0)	4.0 (2.8-5.7)	5.1 (2.3-10.6)	2.4 (1.8-3.3)	†	2.5 (1.9-3.2)	†	4.7 (2.9-7.5)	†	†	†	†	†	5.4 (3.6-7.9)	†	4.2 (2.5-7.1)
West ¹	—	—	—	—	—	—	—	—	—	—	—	2.7 (1.8-3.9)	3.4 (2.5-4.7)	3.0 (2.0-4.5)	2.2 (1.3-3.7)	4.3 (2.9-6.4)	4.7 (2.8-7.6)	4.7 (3.1-7.2)	3.1 (2.1-4.5)	4.1 (3.4-5.0)	
West ²	—	—	9.2 (7.6-11.1)	7.9 (6.4-9.8)	5.1 (4.1-6.3)	5.7 (3.2-10.2)	4.1 (2.4-6.9)	3.0 (1.5-4.8)	3.1 (1.6-5.9)	2.2 (1.3-3.8)	2.8 (1.9-4.1)	2.3 (1.3-4.0)	3.5 (1.8-6.7)	3.8 (2.2-6.5)	†	3.6 (2.2-6.1)	3.9 (2.1-7.2)	†	2.9 (1.7-4.7)	3.6 (2.4-5.2)	
East ¹	—	—	—	—	—	—	—	—	—	—	—	5.1 (3.7-7.0)	4.4 (3.3-5.9)	3.5 (2.3-5.1)	3.0 (1.9-4.8)	7.2 (5.7-9.0)	4.4 (3.3-5.7)	4.4 (3.4-5.7)	3.3 (2.2-4.7)	3.2 (2.7-3.9)	
East ²	—	—	8.4 (4.8-14.3)	8.9 (6.2-12.8)	5.5 (3.9-7.5)	5.1 (2.5-10.0)	3.3 (1.9-5.6)	3.7 (2.4-5.8)	†	†	2.8 (2.0-4.0)	5.7 (3.9-8.3)	5.1 (3.3-7.8)	†	3.1 (2.0-4.7)	6.0 (4.1-8.9)	4.0 (2.9-5.5)	4.0 (3.0-5.4)	3.9 (2.3-6.4)	2.5 (1.6-3.9)	

Notes: (1) based on Grades 9-12 (full sample); (2) based on Grades 9 and 11 only (long-term sample); (3) n=total number of students surveyed; (4) asked of a random half sample starting in 2003; (5) entries in brackets are 95% confidence intervals; (6) regional stratification differed in 1977 and 1979 and therefore regions are not presented; (7) †=estimate suppressed due to unreliability; (8) no significant changes between 1999 and 2015 (total sample); ^c significant linear trend, p<.01; ^d significant nonlinear trend, p<.01.

Q: “Sedatives or tranquillizers are sometimes prescribed by doctors to help people sleep, calm them down, or to relax their muscles. In the last 12 months, how often did you use sedatives or tranquillizers (such as Valium, Ativan, Xanax) with a prescription or because a doctor told you to take them?” (Note that “sedatives” was added to the question in 2007.)

Source: OSDUHS, Centre for Addiction and Mental Health

Table A3.3.4 Percentage Reporting Medical Use of an ADHD Drug at Least Once in the Past Year, 2007–2015 OSDUHS (Grades 7–12)

		2007 (n=) (6323)	2009 (4851)	2011 (9288)	2013 (10272)	2015 (5403)
Total		2.3	2.7	2.5	3.2	2.6
(95% CI)		(1.9-2.9)	(2.1-3.5)	(2.1-3.1)	(2.5-4.2)	(2.1-3.3)
Sex	Males	3.2 (2.5-4.1)	3.9 (2.8-5.3)	3.0 (2.3-3.9)	4.6 (3.3-6.3)	2.9 (2.2-3.8)
	Females	1.3 (0.9-2.0)	1.4 (0.9-2.2)	2.1 (1.4-3.2)	1.8 (1.3-2.4)	2.4 (1.7-3.3)
Grade	7	3.4 (2.1-5.6)	3.2 (1.9-5.4)	3.1 (2.0-4.8)	4.1 (2.5-6.5)	†
	8	1.7 (0.9-3.1)	2.8 (1.5-5.1)	3.2 (2.0-5.0)	3.6 (2.6-4.9)	3.3 (2.0-5.5)
	9	3.0 (1.9-4.4)	4.2 (2.6-6.7)	3.0 (2.2-4.1)	2.0 (1.2-3.4)	†
	10	2.2 (1.4-3.4)	2.4 (1.3-4.4)	3.5 (2.2-5.4)	3.5 (2.2-5.4)	3.4 (2.3-5.2)
	11	1.7 (1.0-2.9)	2.6 (0.9-7.1)	†	4.0 (2.7-5.8)	3.4 (2.0-5.7)
	12	2.1 (1.2-3.6)	1.4 (0.6-2.9)	1.4 (0.8-2.5)	†	†
Region	Toronto	1.3 (0.7-2.2)	†	2.0 (1.2-3.3)	†	†
	North	2.7 (1.4-5.1)	†	3.0 (2.1-4.2)	3.4 (2.0-5.6)	4.0 (2.4-6.6)
	West	2.3 (1.6-3.2)	2.6 (1.7-3.8)	2.6 (1.9-3.6)	3.7 (2.4-5.5)	2.3 (1.7-3.1)
	East	2.8 (2.0-4.0)	3.7 (2.5-5.3)	2.7 (2.0-3.6)	3.3 (2.4-4.5)	3.5 (2.3-5.3)

Notes: (1) ADHD=attention-deficit/hyperactivity disorder; (2) n=total number of students surveyed; (3) asked of a random half sample in 2009 and 2015; (4) entries in brackets are 95% confidence intervals; (5) †=estimate suppressed due to unreliability; (6) no significant changes over time.

Q: "Sometimes doctors give medicine to students who are hyperactive or have problems concentrating in school. This is called Attention Deficit Hyperactivity Disorder (ADHD). In the last 12 months, how often did you use medicine to treat ADHD (such as Ritalin, Concerta, Adderall, Dexedrine) *with a prescription* or because a doctor told you to take it?"

Source: OSDUHS, Centre for Addiction and Mental Health

Table A3.3.5 Percentage Reporting Medical Use of a Prescription Opioid Pain Reliever at Least Once in the Past Year, 2007–2015 OSDUHS (Grades 7–12)

		2007	2009	2011	2013	2015
(n=)		(6323)	(9112)	(9288)	(10272)	(5023)
Total		40.6	31.8	21.4	20.9	21.1 ^{bcd}
(95% CI)		(39.0-42.1)	(30.3-33.3)	(19.6-23.2)	(19.6-22.3)	(19.2-23.2)
Sex	Males	35.8	26.7	18.4	19.7	19.3 ^b
		(33.8-37.9)	(24.7-28.8)	(16.9-20.1)	(17.7-21.9)	(16.9-21.8)
	Females	45.7	37.3	24.5	22.2	23.1 ^b
		(43.3-48.1)	(35.2-39.3)	(21.8-27.4)	(20.6-24.0)	(20.3-26.2)
Grade	7	33.4	23.9	12.5	14.2	13.6 ^b
		(29.5-37.4)	(20.7-27.3)	(10.3-15.0)	(11.5-17.3)	(9.7-18.7)
	8	39.5	28.7	16.8	16.5	14.1 ^b
		(35.7-43.4)	(25.2-32.3)	(14.4-19.7)	(13.7-19.8)	(10.6-18.6)
	9	44.6	33.9	19.5	18.9	17.9 ^b
		(41.2-48.0)	(30.1-38.0)	(17.9-21.2)	(16.0-22.2)	(14.6-21.8)
	10	44.0	33.6	22.8	23.7	19.3 ^b
		(40.7-47.4)	(30.4-37.1)	(19.4-26.6)	(20.4-27.4)	(16.1-23.0)
	11	41.0	33.9	24.1	22.0	28.2 ^b
		(37.7-44.4)	(30.1-38.0)	(19.1-30.0)	(18.8-25.5)	(23.9-32.9)
	12	40.3	34.1	27.2	25.1	27.0 ^b
		(36.9-43.8)	(30.6-37.9)	(24.2-30.3)	(21.6-28.8)	(22.4-32.2)
Region	Toronto	36.4	26.9	15.8	20.9	16.3 ^b
		(32.5-40.5)	(22.4-31.9)	(13.9-17.8)	(16.4-26.3)	(13.0-20.2)
	North	39.7	31.1	21.5	17.7	17.3 ^b
		(35.7-43.9)	(26.7-35.9)	(19.0-24.3)	(14.4-21.5)	(14.0-21.1)
	West	40.9	31.9	22.8	19.9	21.9 ^b
		(38.9-42.9)	(29.6-34.3)	(19.7-26.3)	(18.1-21.9)	(19.2-24.9)
	East	42.5	34.1	22.2	23.1	23.2 ^b
		(39.3-45.6)	(32.2-36.1)	(20.0-24.5)	(21.4-24.8)	(19.2-27.8)

Notes: (1) n=total number of students surveyed; (2) asked of a random half sample in 2015; (3) entries in brackets are 95% confidence intervals; (4) no significant differences 2015 vs. 2013; ^b 2015 vs. 2007 significant difference, p<.01; ^c significant linear trend, p<.01; ^d significant nonlinear trend, p<.01.

Q: "In the last 12 months, how often did you use pain relief pills (such as Percocet, Percodan, Tylenol #3, Demerol, OxyNeo, OxyContin, codeine) with a prescription or because a doctor told you to take them? (We do not mean regular Tylenol, Advil, or Aspirin that anyone can buy in a drugstore.)"

Source: OSDUHS, Centre for Addiction and Mental Health

Table A3.3.6 Percentage Reporting Having Been Prescribed Medication to Treat Anxiety, Depression, or Both in the Past Year, 2001–2015 OSDUHS (Grades 9–12)

		2001 (1278)	2003 (2455)	2005 (3069)	2007 (2587)	2009 (3055)	2011 (3358)	2013 (3264)	2015 (3426)
Total		3.0	4.7	4.3	4.6	3.8	3.9	5.5	5.6 ^{bc}
(95% CI)		(2.0-4.5)	(3.-5.9)	(3.5-5.4)	(3.6-5.9)	(3.0-4.7)	(2.9-5.4)	(4.3-7.0)	(4.4-6.9)
Sex	Males	†	2.9 (1.9-4.4)	3.0 (2.1-4.3)	3.2 (2.1-4.7)	2.8 (1.8-4.3)	2.5 (1.4-4.5)	3.4 (2.4-4.8)	2.8 (1.9-4.2)
	Females		4.2 (2.6-6.7)	6.4 (4.8-8.3)	5.7 (4.4-7.3)	6.1 (4.5-8.1)	4.8 (3.7-6.1)	5.4 (3.9-7.5)	7.9 (6.0-10.2)
									8.4 ^b (6.4-10.9)
Grade	9	†	3.8 (2.5-5.7)	3.2 (2.1-4.7)	2.7 (1.5-4.8)	2.3 (1.3-4.2)	†	4.2 (2.7-6.3)	3.3 (2.1-5.0)
	10	†	6.1 (4.0-9.2)	3.8 (2.6-5.6)	4.0 (2.4-6.7)	2.8 (1.8-4.4)	†	2.5 (1.4-4.3)	4.9 (3.2-7.4)
	11		5.5 (3.4-8.8)	4.4 (2.7-7.0)	6.5 (4.4-9.5)	4.1 (2.8-6.0)	†	6.6 (4.6-9.5)	5.8 (3.6-9.4)
	12		4.4 (2.4-8.0)	4.6 (3.0-6.9)	3.9 (2.6-6.0)	7.2 (4.9-10.3)	5.0 (3.2-7.8)	3.8 (2.2-6.5)	7.9 (5.3-11.5)
Region	Toronto	†	3.5 (1.9-6.3)	4.2 (2.5-6.9)	3.6 (2.4-5.3)	2.9 (1.5-5.4)	†	†	†
	North		4.6 (2.5-8.2)	3.6 (2.3-5.5)	3.7 (2.5-5.3)	4.3 (2.5-7.5)	†	5.0 (2.8-8.8)	†
	West		3.2 (1.8-5.7)	4.4 (2.8-6.9)	4.6 (3.1-6.7)	4.0 (2.4-6.4)	3.6 (2.6-4.8)	4.4 (2.8-6.8)	4.5 (3.0-6.8)
	East	†	6.1 (4.6-8.2)	4.2 (3.0-5.9)	5.8 (4.1-8.2)	4.3 (2.8-6.3)	3.9 (2.2-7.0)	5.9 (4.3-8.1)	6.4 (4.0-10.0)

Notes: (1) n=total number of students surveyed; (2) asked of a random half sample in each cycle; (3) entries in brackets are 95% confidence intervals; (4) †=estimate suppressed due to unreliability; (5) no significant differences 2015 vs. 2013; ^b 2015 vs. 2001 significant difference, p<.01; ^c significant linear trend, p<.01.

Q: "In the last 12 months, have you been prescribed medicine to treat anxiety or depression?"

Source: OSDUHS, Centre for Addiction and Mental Health

Table A3.3.7 Percentage Reporting Seeking Counselling Over the Phone, Over the Internet, or Both in the Past Year, 2011–2015 OSDUHS (Grades 7–12)

		(n=)	2011 (4816)	2013 (5478)	2015 (5403)
Total			2.1	3.0	3.0
(95% CI)			(1.6-2.9)	(2.4-3.7)	(2.3-3.7)
Sex	Males		1.7 (1.1-2.7)	1.8 (1.2-2.7)	1.8 (1.2-2.6)
	Females		2.5 (1.8-3.7)	4.2 (3.3-5.5)	4.2 (3.2-5.6)
Grade	7		†	2.3 (1.2-4.4)	1.1 (0.6-2.1)
	8		1.8 (1.0-3.3)	3.1 (1.9-5.0)	3.2 (1.7-6.1)
	9		2.6 (1.7-4.0)	3.2 (2.0-5.1)	3.6 (2.3-5.7)
	10		1.8 (1.0-3.3)	1.5 (0.9-2.5)	3.3 (2.1-5.0)
	11		†	4.5 (2.8-7.0)	4.5 (3.2-6.2)
	12		1.3 (0.8-2.4)	3.1 (1.9-5.2)	2.1 (1.2-3.6)
Region	Toronto		2.9 (1.9-4.5)	3.8 (2.1-6.9)	3.0 (1.7-5.3)
	North		2.8 (1.6-5.0)	†	3.4 (2.1-5.4)
	West		†	2.1 (1.4-3.2)	3.2 (2.1-4.8)
	East		3.4 (2.5-4.7)	3.9 (3.0-5.0)	2.5 (2.0-3.1)

Notes: (1) n=total number of students surveyed; (2) entries in brackets are 95% confidence intervals; (3) asked of a random half sample since 2011; (4) †=estimate suppressed due to unreliability; (5) no significant changes over time.

Q: "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?"

Source: OSDUHS, Centre for Addiction and Mental Health

Table A3.3.8 Percentage Reporting an Unmet Need for Mental Health Support, 2013–2015 OSDUHS (Grades 7–12)

		(n=)	2013 (5478)	2015 (5403)
Total			27.9	28.4
(95% CI)			(25.8-30.1)	(26.1-30.9)
Sex	Males		19.0 (16.4-21.8)	18.6 (16.2-21.3)
	Females		37.5 (34.9-40.2)	39.0 (35.8-42.3)
Grade	7		25.5 (21.7-29.8)	17.6 (11.5-26.0)
	8		26.4 (21.2-32.4)	28.7 (23.4-34.5)
	9		29.0 (24.7-33.6)	24.6 (20.6-29.1)
	10		27.8 (23.2-32.8)	33.5 (28.4-38.9)
	11		29.4 (24.8-34.4)	32.6 (27.5-38.2)
	12		28.1 (23.7-33.1)	30.9 (27.2-34.9)
Region	Toronto		29.2 (22.5-36.9)	27.6 (23.8-31.9)
	North		25.7 (21.1-30.9)	27.5 (24.3-30.9)
	West		26.6 (23.1-30.4)	28.2 (25.5-30.9)
	East		29.6 (27.6-31.7)	29.3 (23.7-35.7)

Notes: (1) n=total number of students surveyed; (2) entries in brackets are 95% confidence intervals; (3) asked of a random half sample since 2013; (4) no significant differences 2015 vs. 2013.

Q: “In the last 12 months, was there a time when you wanted to talk to someone about a mental health or emotional problem you had, but did not know where to turn?”

Source: OSDUHS, Centre for Addiction and Mental Health

Table A3.4.1 Percentage Reporting Fair or Poor Mental Health, 2007–2015 OSDUHS (Grades 7–12)

		2007	2009	2011	2013	2015
		(n=)	(3388)	(4851)	(4816)	(5478)
		(3388)	(4851)	(4816)	(5478)	(5403)
Total		11.4	11.7	13.7	15.3	16.5 ^{bc}
(95% CI)		(10.0-12.9)	(10.3-13.2)	(12.0-15.7)	(13.5-17.4)	(14.5-18.9)
Sex	Males	7.1	8.4	9.4	10.5	10.3 ^b
		(5.7-8.8)	(6.9-10.3)	(7.7-11.3)	(8.8-12.6)	(8.4-12.6)
	Females	15.8	15.0	18.2	20.5	23.2 ^b
		(13.7-18.2)	(13.2-17.0)	(15.1-21.7)	(18.1-23.2)	(20.2-26.6)
Grade	7	6.1	6.9	7.7	8.8	7.7
		(4.0-9.2)	(4.5-10.4)	(4.9-11.7)	(6.5-11.9)	(4.7-12.4)
	8	9.1	9.1	10.1	13.8	13.4
		(6.5-12.5)	(6.4-12.7)	(7.3-13.8)	(11.0-17.2)	(8.3-21.0)
	9	12.4	12.6	12.6	16.4	14.2
		(9.6-15.9)	(9.6-16.1)	(9.7-16.3)	(12.9-20.6)	(11.4-17.7)
	10	12.3	10.9	17.3	16.5	18.8 ^b
		(9.2-16.3)	(8.3-14.3)	(13.5-21.8)	(12.1-22.2)	(16.0-22.0)
	11	12.5	13.2	14.7	18.1	23.2 ^b
		(9.7-16.0)	(10.5-16.4)	(11.8-18.2)	(14.4-22.6)	(19.2-27.8)
	12	14.5	15.1	16.5	15.7	18.9
		(11.3-18.4)	(12.0-18.8)	(13.2-20.3)	(12.2-20.0)	(15.3-23.2)
Region	Toronto	8.8	14.4	14.7	19.8	12.2
		(5.9-12.9)	(11.2-18.4)	(11.9-18.1)	(13.9-27.2)	(9.0-16.4)
	North	14.6	12.3	14.2	12.2	20.0 ^a
		(10.7-19.7)	(9.4-16.0)	(10.6-18.9)	(8.9-16.4)	(16.6-23.9)
	West	12.3	12.2	13.2	13.9	18.0 ^b
		(10.4-14.5)	(10.0-14.8)	(9.9-17.4)	(11.5-16.7)	(15.0-21.3)
	East	11.0	9.7	13.9	15.8	16.2
		(8.5-14.1)	(7.8-12.1)	(12.3-15.6)	(12.8-19.4)	(12.0-21.5)

Notes: (1) n=total number of students surveyed; (2) asked of a random half sample in each year; (3) entries in brackets are 95% confidence intervals; (4) ^a 2015 vs. 2013 significant difference, p<.01; ^b 2015 vs. 2007 significant difference, p<.01; ^c significant linear trend, p<.01.

Q: "How would you rate your mental or emotional health?"

Source: OSDUHS, Centre for Addiction and Mental Health

Table A3.4.2 Percentage Indicating Moderate-to-Serious Psychological Distress (8+ on the K6 Scale), 2013–2015 OSDUHS (Grades 7–12)

		(n=)	2013 (5478)	2015 (5403)
Total			23.5	34.0 ^a
(95% CI)			(21.4-25.8)	(31.5-36.7)
Sex	Males		15.5 (13.3-18.0)	22.7 ^a (19.9-25.8)
	Females		32.1 (29.2-35.2)	45.9 ^a (42.9-49.0)
Grade	7		12.6 (9.3-16.8)	18.7 (14.0-24.5)
	8		22.4 (17.8-27.8)	30.7 (24.6-37.5)
	9		24.0 (20.3-28.2)	27.6 (23.4-32.2)
	10		25.8 (21.2-30.9)	37.2 ^a (33.1-41.4)
	11		27.5 (22.5-33.1)	42.4 ^a (37.4-47.5)
	12		24.4 (19.6-30.0)	40.8 ^a (36.5-45.3)
Region	Toronto		27.2 (21.1-34.4)	36.1 (29.4-43.3)
	North		18.9 (14.6-24.2)	35.9 ^a (31.8-40.2)
	West		21.6 (18.3-25.4)	33.1 ^a (29.5-37.0)
	East		25.4 (22.4-28.6)	33.8 ^a (29.3-38.7)

Notes: (1) “Moderate- to- Serious Psychological Distress” is defined as a score of 8 or higher out of 24 on the 6-item version of the *Kessler Psychological Distress Scale* (K6; the reference period is the past 4 weeks); (2) n=total number of students surveyed; (3) entries in brackets are 95% confidence intervals; (4) asked of a random half sample since 2013; (5)^a 2015 vs. 2013 significant difference, p<.01.

Source: OSDUHS, Centre for Addiction and Mental Health

Table A3.4.3 Percentage Indicating Serious Psychological Distress (13+ on the K6 Scale), 2013–2015 OSDUHS (Grades 7–12)

		(n=)	2013 (5478)	2015 (5403)
Total			10.7	14.2^a
			(9.4-12.1)	(12.5-16.0)
Sex	Males		5.8	7.0
			(4.5-7.4)	(5.7-8.7)
	Females		15.9	21.7^a
			(14.0-18.0)	(19.0-24.6)
Grade	7		5.0	6.4
			(3.0-8.2)	(4.0-10.1)
	8		9.8	11.7
			(6.8-14.0)	(7.4-18.2)
	9		13.4	11.1
			(10.7-16.7)	(8.4-14.5)
	10		11.5	14.6
			(8.6-15.1)	(12.1-17.4)
	11		11.0	19.1^a
			(8.1-14.9)	(15.9-22.6)
	12		11.0	18.3^a
			(8.3-14.5)	(14.8-22.5)
Region	Toronto		12.9	13.7
			(8.4-19.2)	(9.9-18.6)
	North		8.8	15.2^a
			(6.3-12.0)	(12.7-18.0)
	West		9.8	14.3^a
			(8.2-11.8)	(12.4-16.4)
	East		11.1	14.1
			(9.5-13.0)	(10.6-18.6)

Notes: (1) “Serious Psychological Distress” is defined as a score of 13 or higher out of 24 on the 6-item version of the *Kessler Psychological Distress Scale* (K6; the reference period is the past 4 weeks); (2) n=total number of students surveyed; (3) entries in brackets are 95% confidence intervals; (4) asked of a random half sample since 2013; (5)^a 2015 vs. 2013 significant difference, p<.01.

Source: OSDUHS, Centre for Addiction and Mental Health

Table A3.4.4 Percentage Reporting Suicidal Ideation in the Past Year, 2001–2015 OSDUHS (Grades 7–12)

	(n=)	2001 (2061)	2003 (3464)	2005 (4078)	2007 (3388)	2009 (4851)	2011 (4816)	2013 (5478)	2015 (5403)
Total		11.4	12.5	11.2	9.8	9.5	10.3	13.4	12.4 ^d
(95% CI)		(9.5-13.8)	(11.1-14.2)	(10.0-12.5)	(8.6-11.1)	(8.3-10.8)	(9.0-11.8)	(11.8-15.1)	(10.9-14.1)
Sex	Males	8.9 (7.0-11.3)	7.9 (6.4-9.5)	7.0 (5.8-8.5)	5.9 (4.7-7.5)	7.6 (6.1-9.4)	7.0 (5.7-8.7)	9.4 (7.6-11.6)	8.2 (6.8-9.9)
	Females	14.0 (11.2-17.3)	16.8 (14.6-19.2)	15.5 (13.4-17.9)	13.7 (11.8-15.9)	11.4 (9.7-13.4)	13.7 (12.1-15.4)	17.6 (15.3-20.2)	16.9 (14.2-20.1)
Grade	7	8.4 (5.7-12.2)	9.8 (6.7-14.0)	8.4 (5.7-12.1)	7.9 (5.5-11.3)	5.9 (3.9-8.9)	7.2 (4.7-10.7)	9.1 (6.2-13.0)	6.4 (3.7-10.8)
	8	12.5 (8.2-18.6)	16.7 (11.1-24.3)	11.6 (8.7-15.2)	9.2 (6.6-12.8)	8.7 (6.1-12.3)	8.1 (5.4-11.9)	13.8 (10.2-18.6)	10.1 (6.5-15.4)
	9	8.8 (4.9-15.3)	11.1 (8.9-13.9)	12.6 (10.2-15.4)	11.5 (8.7-15.2)	9.7 (6.9-13.4)	10.1 (7.6-13.3)	14.5 (11.2-18.6)	9.6 (7.3-12.6)
	10	12.8 (9.5-17.0)	12.4 (9.1-16.8)	13.1 (9.8-17.3)	11.4 (8.9-14.5)	10.6 (8.8-12.8)	12.4 (9.0-16.7)	14.9 (11.2-19.6)	15.4 (12.8-18.4)
	11	13.9 (9.8-19.4)	14.8 (11.4-18.9)	12.9 (10.5-15.8)	10.0 (7.8-12.6)	10.7 (8.3-13.7)	14.0 (11.4-17.2)	16.2 (12.8-20.3)	16.4 (13.0-20.4)
	12	14.1 (9.4-20.5)	10.5 (8.1-13.4)	8.8 (6.6-11.5)	8.7 (6.3-11.8)	10.3 (8.0-13.1)	9.0 (6.2-12.8)	11.4 (8.5-15.0)	14.6 (11.6-18.1)
Region	Toronto	11.0 (6.7-17.6)	9.3 (6.8-12.6)	10.8 (8.5-13.5)	6.8 (4.8-9.5)	11.0 (8.2-14.5)	9.7 (7.4-12.6)	15.5 (8.2-27.2)	9.3 (6.0-14.3)
	North	11.9 (9.5-14.8)	13.0 (10.2-16.4)	12.0 (10.0-14.3)	11.7 (8.4-15.9)	9.0 (5.4-14.7)	7.8 (5.8-10.5)	12.3 (8.1-18.2)	13.4 (9.8-18.0)
	West	12.1 (8.9-16.3)	13.8 (11.3-16.7)	12.8 (10.5-15.5)	10.1 (8.4-12.1)	10.1 (7.9-12.8)	9.9 (7.6-12.8)	12.9 (11.0-15.1)	12.8 (11.2-14.7)
	East	10.6 (7.6-14.7)	12.5 (10.0-15.5)	9.4 (7.7-11.5)	10.5 (8.3-13.2)	8.2 (6.8-9.8)	11.5 (9.9-13.5)	13.6 (11.6-16.0)	12.6 (9.5-16.5)

Notes: (1) n=total number of students surveyed; (2) asked of a random half sample in each year; (3) entries in brackets are 95% confidence intervals; (4) no significant differences 2015 vs. 2013; ^d significant nonlinear trend, p<.01.

Q: "During the last 12 months, did you ever seriously consider attempting suicide?" (% responding "yes" is shown)

Source: OSDUHS, Centre for Addiction & Mental Health

Table A3.4.5 Percentage Reporting a Suicide Attempt in the Past Year, 2007–2015 OSDUHS (Grades 7–12)

		2007	2009	2011	2013	2015
(n=)		(3388)	(4851)	(4816)	(5478)	(5403)
Total		3.3	2.8	2.8	3.5	3.0
(95% CI)		(2.6-4.2)	(2.2-3.4)	(2.1-3.6)	(2.8-4.3)	(2.2-3.9)
Sex	Males	1.8	2.5	1.6	2.0	1.5
		(1.2-2.6)	(1.7-3.6)	(1.0-2.6)	(1.4-3.0)	(1.0-2.4)
	Females	4.9	3.1	4.0	5.0	4.5
		(3.8-6.4)	(2.3-4.1)	(2.9-5.3)	(3.8-6.5)	(3.1-6.4)
Grade	7	2.7	†	†	†	†
		(1.4-5.1)				
	8	3.0	2.5	†	2.6	†
		(1.8-5.1)	(1.4-4.6)		(1.6-4.2)	
	9	3.2	3.4	2.5	4.2	1.9
		(2.0-5.0)	(2.0-5.8)	(1.3-4.7)	(2.5-6.9)	(1.1-3.3)
	10	5.5	2.6	3.7	4.0	3.0
		(3.7-8.2)	(1.6-4.0)	(2.2-6.3)	(2.3-6.9)	(1.9-4.7)
	11	3.1	3.1	2.3	4.3	5.3
		(2.0-4.7)	(2.0-4.8)	(1.2-4.4)	(2.7-6.6)	(3.3-8.5)
	12	2.5	3.4	3.8	2.8	2.5
		(1.4-4.6)	(1.7-6.4)	(2.1-6.5)	(1.6-4.9)	(1.3-4.8)
Region	Toronto	†	†	†	†	†
	North	3.8	†	†	4.7	3.5
		(2.2-6.3)			(2.6-8.4)	(2.5-4.7)
	West	3.4	2.4	2.7	3.3	3.4
	(2.3-4.8)	(1.7-3.6)	(1.8-4.2)	(2.2-4.9)	(2.3-5.0)	
	East	4.2	3.7	3.5	4.0	2.6
		(2.9-6.0)	(2.7-5.0)	(2.4-4.9)	(3.1-5.1)	(1.5-4.4)

Notes: (1) n=total number of students surveyed; (2) asked of a random half sample in each year; (3) entries in brackets are 95% confidence intervals; (4) †=estimate suppressed due to unreliability; (5) no significant changes over time.

Q: “During the last 12 months, did you actually attempt suicide?” (% responding “yes” is shown)

Source: OSDUHS, Centre for Addiction & Mental Health

Table A3.5.1a Percentage Reporting Antisocial Behaviours at Least Once in the Past Year, 1999–2015 OSDUHS (Grades 7–12)

	1999	2001	2003	2005	2007	2009	2011	2013	2015
TOTAL SAMPLE (n=)	(2148)	(2061)	(3464)	(4078)	(3388)	(4851)	(4816)	(5478)	(5403)
fire setting	—	—	—	—	15.9	14.5	10.8	10.4	8.9 ^{bc}
ran away from home	8.4	7.4	10.2	9.2	9.7	9.6	10.5	9.7	7.8
theft of goods worth \$50/less	17.3	14.1	14.7	14.7	14.0	14.1	9.7	8.9	7.7 ^{bc}
vandalism	24.1	16.3	15.1	15.3	15.8	13.5	9.8	8.3	7.9 ^{bc}
assault	19.9	12.8	11.5	11.7	10.6	9.8	8.7	6.4	5.4 ^{bc}
carried a weapon	13.5	10.6	9.6	9.6	8.7	7.3	4.6	6.0	5.1 ^{bc}
sold marijuana or hashish	7.8	10.1	8.3	7.6	6.8	6.4	5.2	5.6	4.2 ^{bc}
car theft/ joyriding	10.2	9.1	9.3	7.8	7.2	6.9	6.0	4.8	4.1 ^{bc}
theft of goods worth > \$50	6.6	5.8	5.3	5.5	5.1	5.2	3.8	4.1	2.3 ^{bc}
break and entering	6.4	5.0	4.4	4.7	4.6	4.4	4.4	3.3	3.3 ^{bc}
street racing (car/truck)*	—	—	—	—	—	5.6	3.8	3.9	—
gang fighting*	7.6	5.4	6.7	6.0	4.8	2.9	—	—	—
sold other drugs*	4.3	4.1	3.1	3.6	4.1	2.9	—	—	—
carried a handgun*	—	—	—	2.2	1.8	1.7	—	—	—
% 3+ behaviours /9 (95% CI)	16.0 (14.0-18.2)	13.0 (11.4-14.8)	12.8 (11.4-14.4)	11.8 (10.4-13.4)	12.1 (10.8-13.5)	10.4 (9.0-11.8)	8.0 (6.9-9.3)	7.1 (5.8-8.8)	5.2 (4.2-6.4)
MALES	(1101)	(1018)	(1654)	(1934)	(1618)	(2286)	(2218)	(2469)	(2496)
fire setting	—	—	—	—	19.6	19.5	14.4	13.4	11.1 ^b
ran away from home	5.6	7.4	7.9	7.4	6.6	8.0	7.4	8.2	6.5
theft of goods worth \$50/less	20.9	17.5	17.9	16.5	16.2	17.1	10.8	10.8	7.6 ^b
vandalism	29.3	21.2	18.2	18.0	19.1	16.4	10.4	9.6	9.6 ^b
assault	29.4	17.1	14.4	15.9	14.3	12.9	11.0	8.7	6.7 ^b
carried a weapon	21.5	17.0	14.9	14.9	13.2	11.4	7.6	9.1	7.8 ^b
sold marijuana or hashish	11.1	13.8	11.9	9.8	9.0	8.6	7.4	8.4	5.3 ^b
car theft/ joyriding	12.5	12.5	12.7	8.8	8.3	9.1	7.2	5.6	5.4 ^b
theft of goods worth > \$50	9.1	8.2	8.0	6.7	6.2	6.6	4.4	5.4	2.7 ^b
break and entering	9.6	6.5	6.7	6.0	5.5	5.8	5.4	4.4	4.2 ^b
street racing (car/truck)*	—	—	—	—	—	9.3	5.9	5.8	—
gang fighting*	11.0	9.0	10.0	9.1	7.7	5.0	—	—	—
sold other drugs*	6.5	5.9	5.1	4.7	5.1	4.4	—	—	—
carried a handgun*	—	—	—	3.8	3.0	2.7	—	—	—
% 3+ behaviours /9 (95% CI)	22.7 (19.7-26.0)	17.5 (15.1-20.3)	16.8 (14.8-19.0)	14.7 (12.5-17.2)	14.5 (12.5-16.7)	13.6 (11.5-16.1)	9.2 (7.3-11.6)	9.5 (7.5-12.0)	6.4 (5.0-8.0)
FEMALES	(1047)	(1043)	(1810)	(2144)	(1770)	(2565)	(2598)	(3009)	(2907)
fire setting	—	—	—	—	12.2	9.4	7.2	7.2	6.7 ^b
ran away from home	11.2	7.4	12.3	11.0	13.0	11.4	13.7	11.3	9.1
theft of goods worth \$50/less	13.7	10.9	11.8	12.9	11.8	11.1	8.7	6.8	7.7 ^b
vandalism	18.9	11.6	12.3	12.4	12.6	10.5	9.2	6.9	6.1 ^b
assault	10.4	8.6	8.9	7.2	6.8	6.7	6.3	3.8	4.1 ^b
carried a weapon	5.5	4.5	4.9	4.0	4.2	3.2	1.6	2.7	2.3 ^b
sold marijuana or hashish	4.4	6.5	5.1	5.3	4.5	4.2	3.0	2.6	3.1
car theft/ joyriding	7.8	5.9	6.3	6.7	6.0	4.7	4.9	4.0	2.6 ^b
theft of goods worth > \$50	4.0	3.4	2.9	4.3	4.0	3.8	3.2	5.4	2.0
break and entering	3.2	3.5	2.4	3.3	3.7	3.0	3.4	2.0	2.3
street racing (car/truck)*	—	—	—	—	—	1.7	1.6	2.0	—
gang fighting*	4.0	†	3.6	2.7	2.0	†	—	—	—
sold other drugs*	1.9	†	1.3	2.3	3.1	1.4	—	—	—
carried a handgun*	—	—	—	†	†	†	—	—	—
% 3+ behaviours /9 (95% CI)	9.2 (7.1-11.7)	8.6 (6.8-10.9)	9.3 (7.6-11.3)	8.8 (7.4-10.5)	9.6 (8.1-11.4)	7.0 (5.6-8.7)	6.8 (5.7-8.0)	4.6 (3.4-6.4)	4.1 (3.0-5.4)

(cont'd)

	1999	2001	2003	2005	2007	2009	2011	2013	2015
GRADE 7	(369)	(404)	(497)	(508)	(383)	(883)	(728)	(1126)	(964)
fire setting	—	—	—	—	6.1	8.0	5.6	10.2	4.7
ran away from home	7.4	7.2	9.7	7.4	5.0	6.3	7.3	4.7	†
theft of goods worth \$50/less	9.3	8.1	9.9	7.7	6.0	6.1	3.8	3.3	2.7 ^b
vandalism	18.9	10.3	14.7	9.6	6.7	7.5	5.0	5.0	† ^b
assault	17.1	13.5	11.1	8.6	8.1	7.6	7.2	5.2	4.6 ^b
carried a weapon	7.8	5.4	9.9	4.4	4.8	4.5	3.1	2.6	3.8
sold marijuana or hashish	†	0.8	2.0	†	†	†	†	†	†
car theft/ joyriding	†	1.1	1.8	†	†	†	†	†	†
theft of goods worth > \$50	2.4	3.2	3.2	1.9	1.7	†	†	†	†
break and entering	3.1	2.1	2.7	1.7	1.6	1.2	†	†	†
% 3+ behaviours /9 (95% CI)	7.4 (5.1-10.6)	6.4 (4.0-10.2)	9.7 (6.3-14.4)	5.5 (3.4-8.6)	5.2 (3.2-8.2)	3.8 (2.6-5.5)	2.5 (1.3-4.7)	1.9 (1.0-3.4)	† ^b
GRADE 8	(391)	(379)	(512)	(501)	(418)	(913)	(730)	(1088)	(1013)
fire setting	—	—	—	—	15.3	11.0	7.9	10.7	9.2
ran away from home	9.2	9.7	9.5	9.8	9.2	9.2	7.5	6.6	8.7
theft of goods worth \$50/less	15.6	14.3	13.3	11.1	10.5	7.6	5.3	5.0	5.4 ^b
vandalism	26.0	19.5	12.6	15.6	16.6	11.1	5.6	9.1	8.2 ^b
assault	24.8	15.5	12.3	13.6	12.1	7.4	8.8	6.9	5.9 ^b
carried a weapon	15.2	9.6	6.6	8.6	10.2	6.4	6.0	8.2	4.3 ^b
sold marijuana or hashish	4.0	4.4	3.8	3.6	†	1.9	†	†	†
car theft/ joyriding	4.3	4.4	2.2	3.1	†	2.7	†	†	† ^b
theft of goods worth > \$50	4.8	5.5	2.3	3.8	2.2	2.8	†	†	† ^b
break and entering	6.8	4.0	2.2	5.3	2.8	3.3	†	†	†
% 3+ behaviours /9 (95% CI)	15.8 (11.0-22.2)	13.8 (10.3-18.2)	8.5 (5.5-12.9)	9.3 (6.4-13.5)	8.4 (5.5-12.6)	5.5 (3.7-8.0)	4.7 (2.8-7.8)	3.9 (2.1-7.2)	4.0 (2.3-6.8)
GRADE 9	(442)	(368)	(654)	(780)	(660)	(753)	(879)	(815)	(904)
fire setting	—	—	—	—	23.8	15.7	13.1	11.1	9.6 ^b
ran away from home	7.8	6.9	9.6	10.8	11.9	13.1	8.4	9.4	7.1
theft of goods worth \$50/less	16.9	15.4	13.7	16.4	17.8	13.7	7.2	6.6	7.9 ^b
vandalism	26.8	17.4	16.1	16.6	21.8	13.7	8.8	7.6	7.2 ^b
assault	22.6	13.4	11.0	12.9	11.7	9.6	7.7	5.3	4.0 ^b
carried a weapon	13.4	12.6	12.2	11.5	11.3	7.7	3.7	6.4	4.5 ^b
sold marijuana or hashish	6.5	8.8	7.3	8.2	6.6	5.3	1.7	4.3	2.1 ^b
car theft/ joyriding	9.4	7.2	7.8	7.5	5.9	3.7	†	2.4	† ^b
theft of goods worth > \$50	6.3	6.0	5.5	5.3	6.0	4.9	2.2	†	1.8 ^b
break and entering	4.6	5.0	5.3	6.2	4.8	4.1	3.3	†	†
street racing (car/truck)	—	—	—	—	—	†	†	†	—
gang fighting	8.7	6.4	8.0	6.4	6.3	3.7	—	—	—
sold other drugs	2.0	2.3	2.9	3.4	3.4	2.4	—	—	—
carried a handgun	—	—	—	†	†	†	—	—	—
% 3+ behaviours /9 (95% CI)	14.8 (11.2-19.3)	12.8 (9.8-16.5)	12.1 (9.8-14.8)	13.0 (9.6-17.5)	15.2 (11.6-19.8)	9.3 (6.7-12.7)	5.3 (3.5-7.9)	6.0 (4.0-8.8)	4.8 (2.9-7.6)

(cont'd)

	1999	2001	2003	2005	2007	2009	2011	2013	2015
GRADE 10	(296)	(422)	(622)	(742)	(577)	(814)	(825)	(816)	(920)
fire setting	—	—	—	—	18.8	19.1	9.8	13.0	10.6 ^b
ran away from home	10.6	7.7	11.6	10.8	11.1	9.8	12.2	10.8	7.8
theft of goods worth \$50/less	24.8	16.6	17.5	17.1	15.6	17.8	11.3	10.9	10.5 ^b
vandalism	34.2	20.0	16.3	17.3	17.0	17.6	14.4	11.7	8.4 ^b
assault	23.5	13.5	10.1	14.4	10.4	11.6	7.3	5.7	6.3 ^b
carried a weapon	18.3	15.9	8.6	12.6	8.6	10.0	4.6	8.6	5.6 ^b
sold marijuana or hashish	12.8	15.5	10.4	10.0	9.3	8.6	6.3	5.9	4.8 ^b
car theft/ joyriding	12.8	14.5	13.3	7.8	7.0	6.7	2.9	5.0	4.9 ^b
theft of goods worth > \$50	9.3	8.4	5.1	7.3	6.1	5.4	3.4	4.6	3.1 ^b
break and entering	8.1	6.7	4.8	7.5	6.1	5.2	4.2	5.0	3.5
street racing (car/truck)	—	—	—	—	—	†	†	2.3	—
gang fighting	10.3	6.7	5.2	7.0	4.1	3.4	—	—	—
sold other drugs	3.5	4.8	2.3	3.4	3.6	2.0	—	—	—
carried a handgun	—	—	—	2.7	†	1.8	—	—	—
% 3+ behaviours /9 (95% CI)	24.4 (18.6-31.4)	16.5 (12.9-20.9)	16.2 (12.6-20.5)	14.2 (11.0-18.3)	13.3 (10.7-16.5)	13.4 (10.8-16.4)	8.9 (5.8-13.3)	10.1 (6.5-15.3)	6.6 (4.8-8.9)
GRADE 11	(357)	(288)	(620)	(819)	(684)	(719)	(808)	(837)	(791)
fire setting	—	—	—	—	18.8	17.9	12.5	10.0	8.3 ^b
ran away from home	9.8	7.1	12.6	9.9	11.3	10.0	17.0	12.7	9.8
theft of goods worth \$50/less	20.1	14.0	18.2	19.5	18.0	18.1	18.0	11.6	8.7 ^b
vandalism	21.4	16.0	16.6	19.3	18.1	15.2	10.7	7.7	7.9 ^b
assault	20.1	9.5	15.1	11.0	11.9	9.7	10.1	6.0	5.2 ^b
carried a weapon	16.2	8.5	11.8	11.3	10.1	5.9	6.8	5.7	4.6 ^b
sold marijuana or hashish	13.8	16.1	12.6	12.5	10.2	10.6	8.2	7.7	5.8 ^b
car theft/ joyriding	20.1	14.3	16.2	13.8	13.7	12.2	10.5	7.1	5.2 ^b
theft of goods worth > \$50	9.2	5.1	9.1	7.5	7.7	7.5	8.0	7.3	2.7 ^b
break and entering	10.4	7.2	6.4	4.6	6.6	4.4	6.1	4.1	4.3 ^b
street racing (car/truck)	—	—	—	—	—	8.5	5.3	3.6	—
gang fighting	6.9	2.8	6.8	6.0	6.4	2.2	—	—	—
sold other drugs	8.3	5.0	3.6	4.0	6.3	3.4	—	—	—
carried a handgun	—	—	—	2.2	2.6	1.8	—	—	—
% 3+ behaviours /9 (95% CI)	19.7 (15.0-25.4)	14.4 (10.2-20.0)	16.6 (13.1-20.9)	16.2 (13.4-19.4)	17.0 (13.4-21.2)	13.0 (9.2-18.2)	13.1 (10.2-16.7)	8.6 (6.2-11.7)	6.2 (4.6-8.5)
GRADE 12	(293)	(200)	(559)	(728)	(666)	(769)	(846)	(796)	(811)
fire setting	—	—	—	—	12.2	14.4	12.8	8.4	10.0
ran away from home	5.6	5.6	7.5	6.5	9.4	9.1	9.3	10.9	7.7
theft of goods worth \$50/less	18.0	15.9	14.0	16.2	14.9	18.4	9.7	11.7	9.1 ^b
vandalism	16.7	11.9	13.3	13.2	14.0	14.4	11.4	7.9	8.8
assault	9.0	9.6	9.0	9.5	9.5	11.8	10.0	6.1	6.1
carried a weapon	9.6	8.3	8.0	8.7	7.1	8.7	3.5	4.6	6.9
sold marijuana or hashish	10.0	15.5	11.6	10.3	10.0	9.2	9.9	8.6	8.1
car theft/ joyriding	12.9	14.4	11.4	12.6	12.0	12.8	14.1	9.1	7.8
theft of goods worth > \$50	7.5	7.1	5.4	6.8	6.1	7.9	4.1	6.3	3.7
break and entering	5.5	4.0	4.3	2.8	5.1	7.0	6.7	4.8	4.3
street racing (car/truck)	—	—	—	—	—	9.8	6.0	7.0	—
gang fighting	4.4	4.9	6.7	4.7	2.9	2.5	—	—	—
sold other drugs	3.2	5.1	3.7	3.5	3.2	3.7	—	—	—
carried a handgun	—	—	—	2.1	1.0	1.6	—	—	—
% 3+ behaviours /9 (95% CI)	14.3 (9.5-21.0)	13.4 (7.9-21.8)	12.0 (9.2-15.7)	12.2 (9.6-15.3)	12.3 (9.5-15.8)	14.6 (11.1-18.8)	10.2 (7.1-14.4)	9.1 (5.4-14.9)	7.3 (4.3-12.1)

(cont'd)

	1999	2001	2003	2005	2007	2009	2011	2013	2015
TORONTO	(369)	(267)	(548)	(577)	(470)	(417)	(621)	(377)	(518)
fire setting	—	—	—	—	11.7	11.8	8.9	13.3	6.5 ^a
ran away from home	5.4	4.5	6.2	7.6	5.5	7.1	8.3	†	4.6
theft of goods worth \$50/less	13.0	10.5	14.3	15.8	12.8	12.2	11.0	12.2	6.4 ^b
vandalism	17.6	13.0	16.1	15.3	14.4	9.1	11.5	9.7	9.3 ^b
assault	17.9	9.1	8.8	11.0	9.6	7.5	6.6	5.3	5.0 ^b
carried a weapon	11.9	7.9	11.4	7.7	8.5	5.8	4.6	4.6	5.6
sold marijuana or hashish	4.4	5.1	10.6	4.6	4.2	3.3	5.2	†	4.0
car theft/ joyriding	8.2	4.1	8.3	8.2	4.6	3.7	3.0	3.2	4.5
theft of goods worth > \$50	6.0	5.9	7.4	6.4	6.7	4.8	5.4	6.0	2.4
break and entering	3.3	3.6	3.8	3.9	3.9	4.7	4.3	3.2	3.3
street racing (car/truck)*	—	—	—	—	—	†	†	†	—
gang fighting*	10.2	3.1	7.2	7.5	5.1	†	—	—	—
sold other drugs*	†	†	†	†	†	†	—	—	—
carried a handgun*	—	—	—	†	†	2.4	—	—	—
% 3+ behaviours /9 (95% CI)	10.7 (7.2-15.7)	9.2 (6.2-13.6)	13.1 (10.6-16.0)	11.5 (8.5-15.3)	9.4 (6.7-13.0)	7.4 (4.8-11.1)	7.5 (5.5-10.1)	8.0 (5.0-12.8)	5.1 (3.2-8.1)
NORTH REGION	(384)	(599)	(746)	(728)	(421)	(359)	(1022)	(769)	(798)
fire setting	—	—	—	—	19.1	10.3	10.5	7.8	10.2 ^b
ran away from home	8.2	6.2	14.8	12.9	11.2	11.4	12.8	11.3	11.7
theft of goods worth \$50/less	16.7	9.6	15.6	15.3	13.4	14.9	12.6	3.8	5.9 ^b
vandalism	23.0	15.7	16.6	15.5	19.2	14.8	10.8	8.3	8.7 ^b
assault	16.7	13.1	15.1	12.2	10.7	11.1	8.3	4.8	5.1 ^b
carried a weapon	12.1	11.3	9.5	9.6	12.0	7.6	7.0	6.3	7.4
sold marijuana or hashish	7.9	5.8	9.8	8.0	9.2	6.9	7.6	3.3	7.0
car theft/ joyriding	11.9	8.4	9.4	10.5	8.5	6.2	7.8	6.4	6.1 ^b
theft of goods worth > \$50	4.1	3.8	4.9	4.8	6.9	7.1	5.1	†	2.6
break and entering	7.8	5.2	7.6	6.2	6.4	4.2	6.1	†	5.5
street racing (car/truck)*	—	—	—	—	—	5.7	5.1	4.3	—
gang fighting*	3.4	3.8	5.5	7.5	4.7	†	—	—	—
sold other drugs*	†	2.7	4.6	1.7	†	†	—	—	—
carried a handgun*	—	—	—	†	†	†	—	—	—
% 3+ behaviours /9 (95% CI)	13.8 (10.5-18.1)	10.1 (7.1-14.0)	14.4 (11.1-18.4)	13.3 (10.5-16.8)	14.6 (10.6-19.8)	11.5 (8.0-16.3)	10.4 (6.9-15.5)	6.1 (4.1-8.9)	6.3 (4.6-8.5)
WEST REGION	(763)	(718)	(1259)	(1437)	(1323)	(1422)	(1245)	(1686)	(2238)
fire setting	—	—	—	—	17.1	16.1	10.8	10.4	8.6 ^b
ran away from home	8.6	9.7	10.6	9.9	9.2	10.2	12.0	9.7	6.2
theft of goods worth \$50/less	19.8	16.6	14.4	15.4	15.1	14.4	8.7	8.8	8.4 ^b
vandalism	25.6	16.3	14.8	15.5	15.9	14.9	8.8	7.2	6.6 ^b
assault	22.2	13.3	12.0	13.2	11.9	10.0	9.4	7.2	5.0 ^b
carried a weapon	14.5	9.7	9.5	11.7	8.6	7.8	3.9	7.3	4.2 ^{ab}
sold marijuana or hashish	9.3	13.2	7.8	8.7	6.9	7.5	†	7.3	3.5 ^{ab}
car theft/ joyriding	10.5	10.9	10.4	8.0	7.7	7.4	6.1	5.6	2.5 ^b
theft of goods worth > \$50	7.3	5.8	5.1	6.0	4.6	4.9	3.0	4.0	2.1 ^b
break and entering	7.5	5.7	4.0	4.8	4.5	3.9	3.1	2.8	2.4 ^b
street racing (car/truck)*	—	—	—	—	—	6.8	3.6	3.5	—
gang fighting*	7.9	5.6	6.7	6.6	4.3	1.8	—	—	—
sold other drugs*	5.1	6.5	3.2	3.9	3.4	2.2	—	—	—
carried a handgun*	—	—	—	2.8	1.4	1.8	—	—	—
% 3+ behaviours /9 (95% CI)	17.6 (14.2-21.6)	14.8 (12.4-17.7)	13.3 (11.2-15.6)	13.8 (11.8-16.0)	12.6 (10.8-14.6)	10.6 (8.9-12.7)	7.6 (5.8-9.9)	7.9 (5.5-11.2)	3.9 (2.9-5.3)

(cont'd)

	1999	2001	2003	2005	2007	2009	2011	2013	2015
EAST REGION	(632)	(477)	(911)	(1336)	(1174)	(2653)	(1928)	(2646)	(1849)
fire setting	—	—	—	—	15.9	14.7	11.6	9.6	10.3
ran away from home	10.0	6.5	10.8	8.2	11.8	9.7	9.3	11.2	10.5
theft of goods worth \$50/less	16.5	14.5	15.2	13.4	13.5	14.5	10.0	8.3	7.6 ^b
vandalism	26.1	18.8	14.4	14.9	15.9	13.6	10.3	9.2	8.7 ^b
assault	18.6	14.4	11.3	10.2	9.6	10.4	8.8	5.9	6.3 ^b
carried a weapon	13.4	13.6	8.8	8.0	8.3	7.5	5.0	4.8	5.7 ^b
sold marijuana or hashish	7.5	10.5	7.3	7.7	7.3	6.5	5.5	3.9	4.7
car theft/ joyriding	10.2	10.3	8.3	6.7	7.4	8.0	7.3	4.1	5.5 ^b
theft of goods worth > \$50	6.5	6.3	4.5	4.6	4.6	5.5	3.9	3.9	2.6 ^b
break and entering	6.4	4.7	4.6	4.5	4.7	5.0	5.9	4.1	3.9
street racing (car/truck)*	—	—	—	—	—	5.6	4.8	5.0	—
gang fighting*	7.0	7.5	6.6	4.7	5.3	3.6	—	—	—
sold other drugs*	4.7	†	2.8	†	5.3	4.1	—	—	—
carried a handgun*	—	—	—	†	†	1.3	—	—	—
% 3+ behaviours /9	17.3	13.9	11.6	9.4	12.3	11.2	8.4	5.8	6.8^b
(95% CI)	(14.3-20.8)	(10.6-18.0)	(8.9-15.1)	(6.8-12.8)	(10.0-15.0)	(8.6-14.3)	(6.8-10.4)	(4.5-7.4)	(4.6-9.9)

Notes: (1) percentages reflect engaging in the behaviour at least once during the 12 months before the survey; (2) n=the number of students surveyed; (3) based on a random half sample in each year; (4) — indicates data not available; (5) * results among grades 9-12 only; (6) †=estimate suppressed due to unreliability; (7) “% 3+ behaviours /9” shows the percentage reporting three or more behaviours out of nine (excludes fire setting, street racing, gang fighting, sold other drugs, and carried a handgun); (8) ^a 2015 vs. 2013 significant difference, p<.01; ^b 2015 vs. 1999 (vs. 2007 for fire-setting) significant difference, p<.01; ^c significant linear trend, p<.01.

Source: OSDUHS, Centre for Addiction and Mental Health

Table A3.5.1b Percentage Reporting Antisocial Behaviours at Least Once in the Past Year, 1991–2015 OSDUHS (based on Grades 7, 9, and 11 only)

	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015
TOTAL SAMPLE (n=)	(2961)	(2617)	(2907)	(1527)	(1168)	(1060)	(1771)	(2107)	(1727)	(2355)	(2415)	(2778)	(2659)
ran away from home	9.1	8.8	8.9	8.2	8.4	7.0	10.8	9.4	9.6	9.9	11.4	9.5	7.5
theft of goods worth \$50/less	19.9	20.0	21.1	17.3	15.9	12.7	14.3	14.6	14.2	12.9	10.4	7.7	6.6 ^{cd}
vandalism	19.8	20.0	20.7	18.8	22.9	14.8	15.9	15.3	15.9	12.3	8.6	7.0	7.2 ^{cd}
assault	19.6	17.3	19.7	22.0	20.3	12.3	12.5	10.9	10.6	9.0	8.5	5.5	4.6 ^{cd}
carried a weapon	—	16.2	14.8	11.8	12.8	9.2	11.4	9.2	8.9	6.1	4.7	5.2	4.4 ^c
sold marijuana or hashish	3.1	4.0	7.2	6.4	7.2	8.4	7.8	7.2	6.1	5.8	3.7	4.6	2.8 ^d
car theft/ joyriding	11.3	8.7	10.9	9.5	10.6	7.4	9.2	7.4	7.1	5.6	4.7	3.6	2.3 ^{cd}
theft of goods worth > \$50	5.8	6.4	7.1	6.2	6.2	4.8	6.2	5.0	5.3	4.7	4.2	3.6	1.7 ^{cd}
break and entering	6.2	6.1	6.8	6.6	6.2	4.7	5.0	4.2	4.4	3.3	3.8	2.2	2.5 ^c
% 3+ behaviours /9 (95% CI)	—	15.9 (15.0-16.9)	16.8 (15.4-18.3)	14.2 (12.7-15.7)	14.5 (12.3-17.0)	11.3 (9.5-13.4)	13.1 (11.3-15.1)	11.6 (9.8-13.8)	12.8 (10.8-15.0)	8.9 (7.1-11.0)	7.5 (6.3-9.0)	5.9 (4.6-7.6)	4.1 (3.0-5.6)
MALES	(1554)	(1270)	(1412)	(723)	(582)	(529)	(888)	(1024)	(842)	(1107)	(1129)	(1229)	(1260)
ran away from home	7.2	5.3	6.6	6.0	6.9	7.6	8.3	7.3	7.2	7.1	8.3	8.1	5.0
theft of goods worth \$50/less	26.1	22.0	25.4	19.0	18.8	15.5	17.4	16.6	15.8	15.7	12.5	7.4	6.4
vandalism	26.3	24.1	27.0	21.4	27.7	20.0	18.6	17.2	18.4	13.9	8.4	7.3	8.4
assault	26.1	22.6	27.7	29.6	30.6	16.9	14.6	14.8	14.9	10.8	11.2	7.4	5.0
carried a weapon	—	23.6	23.7	18.6	20.8	15.3	16.4	14.7	12.1	9.8	8.0	7.1	6.3
sold marijuana or hashish	4.9	6.0	10.0	10.1	10.6	12.2	11.0	9.2	8.3	7.8	5.0	6.2	2.8
car theft/ joyriding	15.6	11.6	14.4	12.5	15.0	10.2	12.9	8.5	8.8	7.2	5.2	3.6	2.6
theft of goods worth > \$50	8.9	8.8	10.3	9.3	9.0	7.5	8.7	6.2	6.4	5.7	4.9	3.9	1.5
break and entering	9.3	8.9	10.3	8.0	9.2	6.4	6.9	5.1	5.5	4.3	3.7	2.5	2.5
% 3+ behaviours /9 (95% CI)	—	21.0 (18.3-23.9)	22.8 (20.7-25.1)	18.2 (15.6-21.0)	20.8 (17.4-24.8)	15.5 (12.4-19.1)	16.0 (13.2-19.1)	14.1 (11.2-17.5)	14.8 (12.1-17.9)	11.2 (8.8-14.3)	8.4 (6.3-11.1)	6.8 (4.8-9.4)	3.9 (2.7-5.6)
FEMALES	(1407)	(1347)	(1495)	(804)	(586)	(531)	(883)	(1083)	(885)	(1248)	(1286)	(1549)	(1399)
ran away from home	11.1	12.1	11.1	10.1	9.8	6.5	13.2	11.6	11.9	12.7	14.4	10.9	10.2
theft of goods worth \$50/less	13.2	18.2	17.1	15.8	13.2	9.9	11.2	12.6	12.7	10.2	8.3	8.0	6.9
vandalism	12.6	16.1	14.8	16.4	18.2	9.5	13.2	13.2	13.4	10.8	8.7	6.7	5.9
assault	12.5	12.2	12.2	15.1	10.0	7.7	10.5	6.9	6.4	7.3	5.7	3.7	4.3
carried a weapon	—	9.2	6.7	5.8	4.9	3.2	6.6	3.5	5.6	2.4	1.3	3.2	2.2
sold marijuana or hashish	1.2	2.1	4.6	3.2	3.9	4.7	4.6	5.0	3.9	3.9	2.4	2.9	2.8
car theft/ joyriding	6.8	6.0	7.8	6.9	6.3	4.6	5.5	6.3	5.4	4.1	4.1	3.7	2.0
theft of goods worth > \$50	2.4	4.0	4.1	3.5	3.4	2.2	3.7	3.6	4.2	3.7	3.4	3.4	1.9
break and entering	2.7	3.4	3.6	5.4	3.2	3.1	3.1	3.4	3.4	2.3	3.9	2.0	2.5
% 3+ behaviours /9 (95% CI)	—	11.2 (9.4-13.2)	11.2 (8.9-13.9)	10.6 (8.9-12.4)	8.1 (5.9-11.0)	7.1 (4.9-10.3)	10.2 (7.9-13.1)	9.1 (7.0-11.8)	10.7 (8.2-13.8)	6.5 (4.8-8.8)	6.6 (4.5-9.5)	5.1 (3.6-7.1)	4.3 (2.8-6.6)

Notes: (1) percentages reflect engaging in the behaviour at least once during the 12 months before the survey; (2) n=number of students surveyed; (3) based on a random half sample in each year starting in 1997; (4) — indicates data not available; (5) †=estimate suppressed due to unreliability; (6) “% 3+ behaviours /9” shows the percentage reporting three or more behaviours of the nine listed; (7) ^c significant linear trend, p<.01; ^d significant nonlinear trend, p<.01.

Source: OSDUHS, Centre for Addiction and Mental Health

Table A3.5.2 Percentage Reporting Physical Fighting on School Property at Least Once in the Past Year, 2001–2015 OSDUHS (Grades 7–12)

	(n=)	2001 (2061)	2003 (3464)	2005 (4078)	2007 (3388)	2009 (4851)	2011 (4816)	2013 (5478)	2015 (5403)
Total		16.9	17.6	18.1	15.8	15.1	11.9	10.9	10.4 ^{bc}
(95% CI)		(15.0-18.9)	(15.7-19.6)	(16.6-19.7)	(14.2-17.7)	(13.4-16.9)	(9.9-14.2)	(9.6-12.4)	(9.1-11.9)
Sex	Males	25.2	26.8	27.1	24.0	23.3	17.4	17.5	15.9 ^b
		(21.9-28.7)	(24.1-29.8)	(24.9-29.5)	(21.4-26.9)	(20.6-26.1)	(15.3-19.8)	(14.8-20.5)	(13.6-18.6)
	Females	8.8	9.2	8.7	7.5	6.7	6.4	3.9	4.5 ^b
		(6.9-11.1)	(7.1-11.9)	(7.2-10.6)	(6.0-9.4)	(5.5-8.1)	(4.6-8.9)	(3.1-5.0)	(3.1-6.6)
Grade	7	23.8	29.7	30.2	22.9	21.6	24.1	15.0	17.9
		(19.4-28.9)	(23.5-36.8)	(25.4-35.4)	(17.5-29.3)	(17.9-25.8)	(19.2-29.7)	(11.2-19.8)	(14.4-22.0)
	8	25.0	26.0	23.4	26.2	21.4	20.8	18.4	18.5
		(20.0-30.7)	(19.7-33.6)	(17.7-30.3)	(21.2-32.0)	(17.7-25.7)	(17.3-24.7)	(14.5-23.0)	(13.0-25.7)
	9	19.5	19.6	16.5	18.1	16.5	9.8	12.1	8.9 ^b
		(15.3-24.7)	(16.5-23.2)	(13.5-20.0)	(14.1-22.8)	(13.5-20.0)	(6.9-13.8)	(8.9-16.3)	(6.5-12.2)
	10	12.2	14.5	15.4	11.6	11.8	9.1	8.6	8.9
		(8.5-17.2)	(11.2-18.7)	(12.7-18.7)	(8.8-15.3)	(9.1-15.3)	(6.1-13.5)	(5.8-12.6)	(6.5-12.0)
	11	8.0	11.0	13.0	12.1	12.8	7.9	9.4	7.0
		(5.7-11.3)	(8.3-14.6)	(10.4-16.1)	(9.4-15.4)	(9.4-17.2)	(5.0-12.3)	(6.8-12.7)	(4.8-10.1)
	12	11.3	8.8	11.4	7.4	10.0	7.4	7.1	5.5
		(5.8-20.7)	(6.4-12.0)	(8.7-14.9)	(4.6-11.7)	(6.8-14.5)	(4.2-12.5)	(4.7-10.6)	(3.7-8.1)
Region	Toronto	13.9	14.6	21.1	17.2	15.0	13.1	13.0	8.5
		(10.8-17.7)	(10.3-20.1)	(15.9-27.4)	(12.5-23.3)	(10.4-21.1)	(10.4-16.3)	(10.6-15.8)	(5.7-12.5)
	North	17.1	19.7	16.8	15.3	15.2	13.8	9.4	14.5 ^a
		(13.2-21.8)	(15.2-25.1)	(14.8-19.0)	(11.7-19.7)	(11.7-19.5)	(10.6-17.7)	(7.1-12.4)	(11.8-17.6)
	West	18.4	19.0	18.5	17.3	14.9	11.5	11.3	9.5 ^b
		(15.1-22.1)	(15.8-22.7)	(16.3-21.0)	(14.7-20.2)	(12.3-18.0)	(7.9-16.4)	(9.0-14.2)	(7.5-12.0)
	East	16.6	16.7	16.5	13.8	15.2	11.5	9.6	11.7 ^b
		(13.5-20.4)	(14.0-19.8)	(14.4-18.8)	(11.4-16.6)	(12.7-18.2)	(9.5-13.9)	(8.0-11.4)	(9.6-14.1)

Notes: (1) n=total number of students surveyed; (2) based on a random half sample in each year; (3) entries in brackets are 95% confidence intervals; (4) ^a 2015 vs. 2013 significant difference, p<.01; ^b 2015 vs. 2001 significant difference, p<.01; ^c significant linear trend, p<.01.

Q: "During the last 12 months, how many times were you in a physical fight on school property?"

Source: OSDUHS, Centre for Addiction and Mental Health

Table A3.5.3 Percentage Reporting Being Threatened or Injured with a Weapon on School Property at Least Once in the Past Year, 2003–2015 OSDUHS (Grades 7–12)

		2003	2005	2007	2009	2011	2013	2015
	(n=)	(3464)	(4078)	(3388)	(4851)	(4816)	(5478)	(5403)
Total		7.7	8.2	8.6	6.8	6.5	5.8	5.8
(95% CI)		(6.5-9.0)	(6.9-9.8)	(7.5-9.8)	(5.7-8.1)	(5.2-8.0)	(4.7-7.1)	(4.8-6.9)
Sex								
	Males	10.1	11.6	11.0	8.5	7.4	7.7	7.9
		(8.3-12.2)	(9.6-13.9)	(9.3-13.1)	(6.7-10.6)	(5.6-9.9)	(6.1-9.8)	(6.3-9.9)
	Females	5.5	4.8	6.0	5.1	5.5	3.7	3.6
		(4.0-7.4)	(3.7-6.2)	(4.7-7.7)	(4.0-6.5)	(4.4-7.0)	(2.7-5.0)	(2.5-5.0)
Grade								
	7	7.3	7.0	9.3	3.9	6.5	4.9	4.2
		(5.2-10.3)	(3.6-13.0)	(6.9-12.4)	(2.6-5.8)	(3.8-11.0)	(2.7-8.5)	(2.7-6.4)
	8	9.8	8.5	10.1	6.7	4.4	6.2	9.4
		(6.2-15.1)	(6.5-11.2)	(7.0-14.2)	(4.9-9.3)	(2.8-6.8)	(3.9-9.8)	(5.4-15.8)
	9	7.7	9.2	10.8	8.7	8.1	5.9	4.6
		(5.8-10.0)	(6.3-13.3)	(8.2-14.2)	(6.2-12.1)	(6.0-10.9)	(3.9-9.0)	(3.1-6.9)
	10	10.0	9.2	8.2	5.5	8.0	8.2	4.8
		(7.2-13.6)	(6.9-12.2)	(5.5-12.2)	(3.8-7.8)	(5.7-11.1)	(4.7-13.7)	(2.9-7.6)
	11	6.8	9.6	8.6	6.6	5.0	4.7	6.3
		(4.8-9.6)	(7.1-13.0)	(6.4-11.5)	(4.6-9.5)	(3.1-8.1)	(3.0-7.3)	(4.3-9.0)
	12	4.6	6.1	5.2	8.4	6.5	5.0	5.8
		(2.8-7.4)	(4.4-8.4)	(3.6-7.4)	(5.7-12.1)	(3.8-10.9)	(2.8-8.7)	(3.5-9.3)
Region								
	Toronto	7.8	9.6	7.7	6.3	7.7	8.2	4.5
		(5.6-10.7)	(7.0-13.0)	(5.3-10.9)	(3.3-11.7)	(5.4-10.8)	(5.2-12.6)	(2.7-7.5)
	North	7.4	6.4	9.0	7.7	8.0	4.5	6.6
		(5.6-9.7)	(4.0-10.0)	(5.8-13.7)	(5.0-11.6)	(5.1-12.3)	(2.8-7.4)	(4.6-9.4)
	West	8.5	8.1	9.4	6.7	7.1	5.7	5.3
		(6.7-10.8)	(6.5-10.0)	(7.9-11.1)	(5.2-8.5)	(4.7-10.5)	(4.2-7.8)	(3.8-7.2)
	East	6.4	8.2	7.9	7.0	4.9	4.8	7.0
		(4.5-9.1)	(5.4-12.1)	(6.2-10.2)	(5.1-9.5)	(3.8-6.2)	(3.3-7.1)	(5.4-9.1)

Notes: (1) n=total number of students surveyed; (2) based on a random half sample in each year; (3) entries in brackets are 95% confidence intervals; (4) no significant changes over time.

Q: "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?"

Source: OSDUHS, Centre for Addiction and Mental Health

Table A3.5.4 Percentage Reporting Being Bullied in Any Way at School Since September, 2003–2015 OSDUHS (Grades 7–12)

	(n=)	2003 (3464)	2005 (4078)	2007 (3388)	2009 (4851)	2011 (4816)	2013 (5478)	2015 (5403)
Total		32.7	30.9	29.9	28.9	28.6	25.0	23.6 ^{bc}
(95% CI)		(30.6-34.9)	(29.0-32.8)	(27.8-32.0)	(27.0-31.0)	(25.8-31.5)	(22.7-27.5)	(21.5-25.8)
Sex	Males	35.3	27.8	27.7	26.5	25.8	22.2	19.6 ^b
		(32.4-38.3)	(25.4-30.4)	(25.1-30.4)	(23.7-29.5)	(23.0-28.8)	(19.3-25.3)	(17.2-22.2)
	Females	30.3	34.0	32.1	31.4	31.3	28.1	27.8
		(27.4-33.4)	(31.3-36.9)	(29.1-35.2)	(29.1-33.8)	(27.7-35.2)	(25.1-31.3)	(24.7-31.1)
Grade	7	47.1	38.3	34.2	31.6	30.4	31.6	26.3 ^b
		(39.2-55.0)	(33.0-43.8)	(28.4-40.5)	(26.8-36.9)	(24.0-37.7)	(25.2-38.8)	(20.6-32.8)
	8	38.7	41.2	34.8	31.5	32.7	34.5	27.2 ^b
		(33.2-44.6)	(37.0-45.6)	(29.4-40.5)	(27.4-36.0)	(28.3-37.5)	(29.4-40.0)	(21.2-34.2)
	9	32.8	34.6	36.7	32.6	30.5	28.7	21.1 ^b
		(28.6-37.2)	(30.7-38.7)	(31.7-42.0)	(27.6-38.1)	(27.1-34.2)	(24.2-33.6)	(17.6-25.1)
	10	32.6	26.3	33.0	32.8	33.0	22.6	25.3
		(27.9-37.5)	(22.5-30.4)	(28.8-37.4)	(28.4-37.6)	(26.7-40.1)	(18.3-27.7)	(21.4-29.8)
	11	28.7	25.9	24.3	25.2	27.1	24.2	18.5 ^b
		(24.2-33.7)	(22.7-29.4)	(20.9-28.0)	(21.4-29.5)	(21.7-33.3)	(19.3-29.8)	(14.9-22.7)
	12	19.8	20.6	19.2	22.6	21.5	16.6	23.8
		(16.4-23.7)	(16.6-25.2)	(15.6-23.4)	(18.6-27.3)	(17.9-25.6)	(13.3-20.5)	(19.9-28.2)
Region	Toronto	24.8	30.5	23.1	23.0	21.6	20.6	21.9
		(20.4-29.7)	(26.4-35.0)	(18.3-28.8)	(18.3-28.5)	(19.0-24.5)	(17.6-23.9)	(16.8-27.9)
	North	38.1	32.2	30.3	32.1	29.2	29.6	27.7 ^b
		(33.7-42.7)	(27.6-37.2)	(24.8-36.5)	(26.8-37.8)	(24.0-34.9)	(24.1-35.8)	(24.5-31.2)
	West	33.3	30.1	32.7	30.6	30.6	26.5	23.2 ^b
		(30.0-36.8)	(27.3-33.2)	(29.4-36.0)	(27.3-34.1)	(25.5-36.1)	(22.7-30.6)	(20.0-26.7)
	East	34.9	31.6	29.7	29.1	29.2	24.3	24.1 ^b
		(30.9-39.1)	(28.1-35.2)	(26.2-33.3)	(26.1-32.4)	(26.0-32.6)	(20.1-29.1)	(20.7-27.9)

Notes: (1) n=number of students surveyed; (2) based on a random half sample in each year; (3) CI=confidence interval; (4) † indicates estimate suppressed due to unreliability; (5) no significant differences 2015 vs. 2013; ^b 2015 vs. 2003 significant difference, p<.01; ^c significant linear trend, p<.01.

Qs: “Bullying is 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. Since September, in what way were you bullied the most at school?” (Bullying victimization is defined as being bullied through either physical attacks, verbal attacks, or theft/vandalism.)

Source: OSDUHS, Centre for Addiction and Mental Health

Table A3.5.5 Percentage Reporting Bullying Others in Any Way at School Since September, 2003–2015 OSDUHS (Grades 7–12)

	(n=)	2003 (3464)	2005 (4078)	2007 (3388)	2009 (4851)	2011 (4816)	2013 (5478)	2015 (5403)	
Total		29.7	27.3	24.7	25.1	20.7	16.0	13.1	^{abcd}
(95% CI)		(27.6-32.0)	(25.2-29.5)	(22.8-26.7)	(23.2-27.2)	(16.9-25.2)	(14.4-17.8)	(11.5-14.8)	
Sex	Males	34.9	29.4	26.0	28.1	18.6	17.5	14.6	^b
		(31.7-38.3)	(26.9-32.0)	(23.4-28.8)	(25.3-31.2)	(16.3-21.2)	(15.0-20.5)	(12.2-17.3)	
	Females	25.1	25.2	23.4	22.1	22.8	14.3	11.5	^b
		(22.3-28.0)	(22.4-28.1)	(20.8-26.2)	(19.7-24.7)	(17.0-30.0)	(12.0-16.9)	(9.5-13.9)	
Grade	7	31.7	26.1	17.2	21.3	13.9	12.7	7.6	^b
		(25.6-38.6)	(21.0-31.9)	(13.6-21.4)	(17.5-25.8)	(10.5-18.1)	(8.9-17.9)	(4.6-12.2)	
	8	32.2	30.4	30.4	25.2	22.1	20.2	16.9	^b
		(25.9-39.3)	(22.5-40.0)	(25.0-36.3)	(20.3-31.0)	(17.8-27.0)	(15.8-25.5)	(11.6-23.8)	
	9	32.7	29.3	25.9	23.9	21.4	17.6	11.4	^b
		(28.8-36.8)	(25.7-33.3)	(21.6-30.6)	(20.2-28.1)	(14.0-31.3)	(14.3-21.4)	(8.5-15.2)	
	10	30.5	26.4	27.8	26.8	24.9	18.7	14.6	^b
		(26.8-34.6)	(22.4-30.8)	(23.6-32.4)	(23.3-30.5)	(21.2-29.0)	(15.4-22.6)	(11.4-18.5)	
	11	29.4	30.1	24.7	27.0	22.3	15.5	10.8	^b
		(25.7-33.4)	(26.4-34.0)	(21.8-27.9)	(23.1-31.3)	(13.9-33.8)	(12.0-19.8)	(8.4-13.8)	
	12	22.1	22.2	22.2	25.7	18.7	12.7	15.7	
		(17.5-27.5)	(18.6-26.3)	(18.4-26.5)	(21.4-30.5)	(14.6-23.6)	(9.3-17.0)	(12.8-19.1)	
Region	Toronto	22.0	27.9	23.9	23.8	17.3	16.1	14.2	
		(18.0-26.7)	(23.9-32.2)	(18.9-29.6)	(18.5-30.0)	(13.3-22.2)	(11.9-21.6)	(10.4-19.2)	
	North	36.0	26.6	25.4	27.8	19.6	16.2	14.1	^b
		(31.2-41.2)	(22.6-31.0)	(20.5-31.0)	(21.6-35.0)	(14.7-25.6)	(11.8-21.8)	(11.2-17.6)	
	West	30.7	28.5	27.0	27.3	22.8	17.2	12.0	^{ab}
		(27.7-33.8)	(25.7-31.6)	(23.7-30.5)	(23.9-30.9)	(15.4-32.4)	(14.6-20.2)	(9.6-14.9)	
	East	31.1	25.8	22.5	22.8	19.8	14.0	13.7	^b
		(26.5-36.1)	(21.7-30.5)	(19.9-25.4)	(20.2-25.7)	(17.4-22.3)	(12.0-16.3)	(11.2-16.7)	

Notes: (1) n=number of students surveyed; (2) based on a random half sample in each year; (3) CI=confidence interval; (4) † indicates estimate suppressed due to unreliability; (5) ^a 2015 vs. 2013 significant difference, p<.01; ^b 2015 vs. 2003 significant difference, p<.01; ^c significant linear trend, p<.01; ^d significant nonlinear trend, p<.01.

Qs: “Bullying is 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. Since September, in what way did you bully other students the most at school?” (Bullying others is defined as bullying through either physical attacks, verbal attacks, or stealing/vandalizing someone’s property.)

Source: OSDUHS, Centre for Addiction and Mental Health

Table A3.5.6 Percentage Reporting Being Bullied Over the Internet (Cyberbullied) in the Past Year, 2011–2015 OSDUHS (Grades 7–12)

		2011	2013	2015
		(n=)	(4816)	(5478)
		(5403)		
Total		21.6	19.0	19.8
(95% CI)		(19.5-24.0)	(17.2-21.0)	(18.0-21.7)
Sex	Males	15.2	15.8	14.0
		(13.3-17.4)	(13.6-18.2)	(12.4-15.9)
	Females	28.0	22.5	25.8
		(24.6-31.6)	(20.2-25.0)	(22.5-29.5)
Grade	7	19.8	17.5	19.0
		(15.9-24.3)	(13.8-22.0)	(13.4-26.2)
	8	22.5	24.6	19.0
		(17.7-28.1)	(18.5-32.0)	(15.0-23.8)
	9	24.6	24.1	19.7
		(19.8-30.2)	(20.0-28.6)	(16.4-23.4)
	10	20.7	16.4	21.3
		(17.9-23.8)	(12.5-21.4)	(17.8-25.4)
	11	24.4	19.2	19.7
		(20.2-29.2)	(15.5-23.5)	(16.0-24.0)
	12	18.4	15.1	19.7
		(15.2-22.0)	(12.3-18.4)	(15.5-24.7)
Region	Toronto	17.2	17.8	14.3
		(13.9-21.0)	(14.0-22.2)	(11.2-18.2)
	North	21.3	19.8	27.3
		(17.7-25.5)	(15.2-25.4)	(23.2-31.8)
	West	24.6	19.4	19.6
		(20.9-28.7)	(16.4-22.9)	(17.0-22.4)
	East	19.9	18.9	21.3
		(17.1-22.9)	(16.6-21.5)	(17.7-25.4)

Notes: (1) n=total number of students surveyed; (2) based on a random half sample in each year; (3) entries in brackets are 95% confidence intervals; (4) no significant changes over time.

Q: "In the last 12 months, how many times did other people bully or pick on you electronically or through the Internet?" (Those who reported that they do not use the Internet were classified as "not cyberbullied" and remained in the denominator.)

Source: OSDUHS, Centre for Addiction and Mental Health

Table A3.6.1 Percentage Reporting Gambling Activities at Least Once in the Past Year, 2001–2015 OSDUHS (Grades 7–12)

	2001	2003	2005	2007	2009	2011	2013	2015	
TOTAL (n=)	(2061)	(3464)	(4078)	(3388)	(4851)	(4816)	(5478)	(5403)	
Cards	24.9	24.0	32.7	28.7	20.2	15.9	10.7	9.5 ^{bed}	
Dice	—	12.7	14.7	10.7	6.1	5.2	4.6	3.1 ^{bed}	
Other Games of Skill (e.g., pool, darts)	—	—	—	—	—	—	8.3	7.0	
Bingo	11.6	9.9	8.6	7.6	7.2	5.1	4.4	4.4 ^{bc}	
Sports Pools	22.3	20.3	17.0	15.6	12.6	13.3	10.2	9.9 ^{bc}	
Sports Lottery Tickets	9.9	7.8	7.2	6.1	5.1	3.6	2.9	3.1 ^{bc}	
Other Lottery Tickets	22.1	22.4	18.5	18.8	15.5	12.7	9.6	7.8 ^{bed}	
Video Gambling or Slot Machines	6.8	6.7	6.2	4.8	3.9	2.9	3.8	2.4 ^{bc}	
Casino in Ontario	1.7	1.7	1.1	1.1	1.3	†	0.6	0.5 ^{bc}	
Any Internet Gambling	—	2.5	2.1	3.0	3.0	2.1	3.1	3.8	
Other ways not listed above	—	27.1	23.6	24.1	18.8	17.6	13.4	10.5 ^{bc}	
Internet Poker	—	—	—	3.0	2.7	—	—	—	
Any Gambling Activity (95% CI)	—	57.3 (55.2-59.4)	56.8 (54.5-59.0)	53.2 (50.8-55.5)	42.6 (40.2-45.0)	38.4 (35.6-41.2)	34.9 (32.4-37.4)	31.8 (29.3-34.5)	bed
5+ Gambling Activities (95% CI)	—	6.1 (5.0-7.4)	5.9 (4.8-7.1)	4.7 (3.8-5.8)	3.0 (2.2-4.0)	2.7 (1.9-3.7)	2.6 (2.0-3.4)	1.7 (1.3-2.3)	bc
MALES	(1018)	(1654)	(1934)	(1618)	(2286)	(2218)	(2469)	(2496)	
Cards	35.4	32.1	44.2	41.0	28.1	21.6	15.1	13.7 ^b	
Dice	—	19.1	22.0	16.5	9.6	7.8	6.5	4.8 ^b	
Other Games of Skill (e.g., pool, darts)	—	—	—	—	—	—	12.4	10.4	
Bingo	12.5	9.5	7.4	6.7	7.4	4.5	3.9	4.2 ^b	
Sports Pools	38.1	32.7	26.1	25.4	20.6	21.3	16.4	16.3 ^b	
Sports Lottery Tickets	16.3	13.7	11.2	10.0	8.3	6.0	4.7	5.0 ^b	
Other Lottery Tickets	23.2	20.4	18.5	18.0	15.3	12.7	10.4	8.5 ^b	
Video Gambling or Slot Machines	8.1	8.9	7.4	5.9	5.0	3.8	4.4	3.2 ^b	
Casino in Ontario	2.6	2.5	1.6	1.4	1.9	†	0.9	0.7 ^b	
Any Internet Gambling	—	3.4	3.0	4.1	4.8	3.1	5.0	6.4 ^b	
Other ways not listed above	—	32.9	28.8	30.3	24.1	23.2	18.7	14.2 ^b	
Internet Poker	—	—	—	4.4	4.5	—	—	—	
Any Gambling Activity (95% CI)	—	66.2 (63.2-69.1)	66.5 (63.4-69.5)	63.0 (60.0-66.0)	50.5 (46.9-54.1)	47.3 (42.7-51.8)	44.1 (40.8-47.5)	40.3 (36.9-43.8)	b
5+ Gambling Activities (95% CI)	—	9.6 (7.9-11.6)	9.1 (7.3-11.2)	7.5 (6.1-9.3)	4.5 (3.1-6.5)	3.6 (2.4-5.6)	4.4 (3.3-6.0)	3.2 (2.4-4.3)	b

(continued...)

	2001	2003	2005	2007	2009	2011	2013	2015
FEMALES	(1043)	(1810)	(2144)	(1770)	(2565)	(2598)	(3009)	(2907)
Cards	14.8	16.7	20.8	16.2	12.1	10.2	5.8	5.0 ^b
Dice	—	7.0	7.1	4.9	2.5	2.7	2.4	1.3 ^b
Other Games of Skill (e.g., pool, darts)	—	—	—	—	—	—	4.0	3.4
Bingo	10.6	10.2	9.9	8.4	6.8	5.7	4.9	4.6 ^b
Sports Pools	7.3	9.1	7.7	5.6	4.4	5.3	3.4	3.3 ^b
Sports Lottery Tickets	3.8	2.4	3.1	2.2	1.9	†	1.0	1.1 ^b
Other Lottery Tickets	21.0	24.2	18.4	19.5	15.7	12.7	8.6	7.0 ^b
Video Gambling or Slot Machines	5.7	4.7	4.9	3.8	2.8	2.0	3.2	† ^b
Casino in Ontario	0.8	1.0	0.6	0.7	†	†	†	†
Any Internet Gambling	—	1.6	1.2	1.9	1.2	1.1	1.1	1.1
Other ways not listed above	—	21.9	18.2	17.8	13.4	11.9	7.7	6.7 ^b
Internet Poker	—	—	—	1.7	0.9	—	—	—
Any Gambling Activity (95% CI)	—	49.2 (46.2-52.3)	46.8 (43.7-49.8)	43.1 (40.4-45.9)	34.3 (31.8-37.0)	29.5 (26.8-32.3)	24.8 (22.0-27.8)	22.9 (20.3-25.7) ^b
5+ Gambling Activities (95% CI)	—	3.0 (2.0-4.2)	2.6 (1.8-3.6)	1.8 (1.3-2.7)	1.5 (0.9-2.5)	1.7 (1.0-2.8)	0.7 (0.4-1.2)	† ^b
GRADE 7	(404)	(497)	(508)	(383)	(883)	(728)	(1126)	(964)
Cards	17.1	19.1	19.4	15.0	10.9	7.3	6.7	4.4 ^b
Dice	—	9.7	†	6.1	2.9	†	3.0	1.3 ^b
Other Games of Skill (e.g., pool, darts)	—	—	—	—	—	—	7.0	2.0
Bingo	8.9	10.3	7.6	8.1	7.3	6.3	4.3	†
Sports Pools	10.1	15.8	10.4	9.3	6.5	6.0	†	†
Sports Lottery Tickets	3.8	4.8	2.7	3.0	3.2	†	†	†
Other Lottery Tickets	13.8	13.6	10.7	12.4	8.9	5.3	5.2	5.4 ^b
Video Gambling or Slot Machines	3.1	7.2	†	†	3.1	†	†	†
Casino in Ontario	†	†	†	†	†	†	†	†
Any Internet Gambling	—	†	†	†	†	†	†	†
Other ways not listed above	—	27.7	20.9	16.6	15.7	14.9	13.0	11.2 ^b
Internet Poker	—	—	—	†	†	—	—	—
Any Gambling Activity (95% CI)	—	50.2 (44.6-55.8)	50.4 (42.3-58.4)	41.0 (34.0-48.3)	31.5 (26.6-36.9)	25.2 (19.7-31.6)	24.3 (20.5-28.5)	23.7 (17.7-31.0) ^b
5+ Gambling Activities (95% CI)	—	6.0 (3.5-10.2)	1.8 (0.9-3.3)	1.3 (0.5-3.2)	1.9 (0.8-4.1)	†	†	† ^b

(continued...)

	2001	2003	2005	2007	2009	2011	2013	2015
GRADE 8	(379)	(512)	(501)	(418)	(913)	(730)	(1088)	(1013)
Cards	24.3	20.0	24.7	24.2	14.7	12.1	9.1	8.6 ^b
Dice	—	8.3	9.2	7.9	5.4	†	2.3	2.2 ^b
Other Games of Skill (e.g., pool, darts)	—	—	—	—	—	—	5.6	4.1
Bingo	11.6	10.0	11.1	6.0	5.7	3.4	4.9	†
Sports Pools	15.5	14.2	15.2	11.4	7.0	9.8	6.5	9.8 ^b
Sports Lottery Tickets	7.9	3.8	4.6	2.5	†	†	†	1.9 ^b
Other Lottery Tickets	16.2	14.9	13.1	11.5	7.2	6.7	4.4	4.8 ^b
Video Gambling or Slot Machines	4.8	6.8	6.0	3.3	2.4	†	†	†
Casino in Ontario	†	†	†	†	†	†	†	†
Any Internet Gambling	—	†	†	†	†	†	†	3.5
Other ways not listed above	—	28.9	23.7	25.9	14.8	18.3	10.3	8.1 ^b
Internet Poker	—	—	—	†	†	—	—	—
Any Gambling Activity (95% CI)	—	51.5 (44.8-58.1)	49.2 (39.0-59.5)	46.9 (42.1-51.8)	32.4 (27.6-37.7)	30.2 (25.2-35.8)	27.4 (20.4-35.8)	27.6 (19.6-37.3) ^b
5+ Gambling Activities (95% CI)	—	4.5 (2.5-8.2)	5.6 (3.3-9.2)	2.5 (1.3-5.0)	1.7 (0.9-3.0)	†	†	†
GRADE 9	(368)	(654)	(780)	(660)	(753)	(879)	(815)	(904)
Cards	24.2	24.1	33.9	27.4	18.2	13.6	8.3	6.8 ^b
Dice	—	16.7	16.4	12.9	5.3	1.5	4.1	3.2 ^b
Other Games of Skill (e.g., pool, darts)	—	—	—	—	—	—	7.4	5.2
Bingo	13.7	9.6	8.9	8.7	8.0	6.4	3.7	3.7 ^b
Sports Pools	27.0	23.6	19.3	16.4	10.6	9.7	10.7	8.7 ^b
Sports Lottery Tickets	9.4	7.0	6.0	4.7	3.4	2.1	†	† ^b
Other Lottery Tickets	18.7	15.9	15.4	17.0	10.3	8.6	3.7	4.7 ^b
Video Gambling or Slot Machines	5.1	5.3	7.5	7.2	†	†	†	† ^b
Casino in Ontario	†	†	†	†	†	†	†	†
Any Internet Gambling	—	3.5	†	2.6	3.1	†	†	3.8
Other ways not listed above	—	31.2	24.9	28.2	21.7	17.1	9.7	7.5 ^b
Internet Poker	—	—	—	2.8	3.0	—	—	—
Any Gambling Activity (95% CI)	—	59.2 (54.2-64.1)	55.1 (49.7-60.4)	53.6 (48.8-58.4)	38.5 (33.7-43.6)	33.5 (29.4-37.8)	29.6 (24.8-34.9)	25.6 (21.8-29.9) ^b
5+ Gambling Activities (95% CI)	—	5.9 (3.8-9.0)	6.0 (3.5-10.0)	4.6 (2.9-7.3)	2.9 (1.6-5.0)	†	†	† ^b

(continued...)

	2001	2003	2005	2007	2009	2011	2013	2015
GRADE 10	(422)	(622)	(742)	(577)	(814)	(825)	(816)	(920)
Cards	29.6	25.3	36.6	29.8	20.2	14.9	15.5	7.5 ^b
Dice	—	12.3	18.5	8.9	7.3	8.8	7.4	2.7 ^b
Other Games of Skill (e.g., pool, darts)	—	—	—	—	—	—	11.5	8.0
Bingo	11.3	9.8	7.6	5.6	5.6	3.4	4.9	4.8 ^b
Sports Pools	28.7	24.1	17.4	15.4	15.2	16.9	12.7	12.4 ^b
Sports Lottery Tickets	10.0	6.9	7.0	4.4	3.5	†	†	3.5 ^b
Other Lottery Tickets	23.4	18.2	16.0	14.9	11.5	7.9	6.3	6.1 ^b
Video Gambling or Slot Machines	10.4	6.6	6.2	4.9	3.7	†	3.8	† ^b
Casino in Ontario	†	†	†	†	†	†	†	†
Any Internet Gambling	—	3.3	2.8	3.0	2.8	†	†	3.8
Other ways not listed above	—	26.9	26.2	23.4	20.9	19.8	15.5	12.0 ^b
Internet Poker	—	—	—	2.9	2.5	—	—	—
Any Gambling Activity (95% CI)	—	56.9 (52.3-61.4)	58.6 (53.7-63.4)	51.5 (47.0-56.1)	42.4 (37.4-47.6)	41.1 (34.4-48.2)	37.6 (32.4-43.1)	31.3 (26.5-36.5) ^b
5+ Gambling Activities (95% CI)	—	4.8 (3.0-7.6)	6.1 (4.2-8.8)	4.1 (2.2-7.5)	2.5 (1.6-3.9)	†	3.8 (2.2-6.4)	1.9 (1.0-3.5)
GRADE 11	(288)	(620)	(819)	(684)	(719)	(808)	(837)	(791)
Cards	28.4	27.0	39.0	36.5	25.2	22.5	8.2	10.2 ^b
Dice	—	14.7	17.2	14.0	9.2	6.4	3.3	2.9 ^b
Other Games of Skill (e.g., pool, darts)	—	—	—	—	—	—	7.7	7.2
Bingo	9.7	9.5	7.4	7.6	7.7	6.5	3.2	5.7
Sports Pools	23.1	20.5	17.1	19.0	7.3	15.8	10.0	12.9 ^b
Sports Lottery Tickets	12.8	9.6	9.4	8.9	18.8	5.3	1.7	3.1 ^b
Other Lottery Tickets	27.8	28.9	21.4	20.3	18.8	18.2	10.4	7.5 ^b
Video Gambling or Slot Machines	7.8	5.2	4.9	5.3	5.7	†	†	1.8 ^b
Casino in Ontario	†	†	†	1.6	†	†	†	†
Any Internet Gambling	—	†	†	4.7	†	†	†	4.8 ^b
Other ways not listed above	—	26.8	22.2	25.6	21.0	20.2	14.6	11.3 ^b
Internet Poker	—	—	—	4.6	†	—	—	—
Any Gambling Activity (95% CI)	—	58.8 (54.0-63.4)	60.8 (55.8-65.7)	58.9 (53.5-64.1)	47.7 (41.9-53.5)	42.9 (37.4-48.6)	36.5 (31.8-41.5)	36.3 (32.2-40.5) ^b
5+ Gambling Activities (95% CI)	—	7.2 (5.1-10.3)	6.8 (5.0-9.0)	6.0 (4.0-8.7)	4.6 (2.4-8.4)	5.6 (3.4-9.2)	1.5 (0.9-2.6)	2.0 (1.2-3.3) ^b

(continued...)

	2001	2003	2005	2007	2009	2011	2013	2015
GRADE 12	(200)	(559)	(728)	(666)	(769)	(846)	(796)	(811)
Cards	25.0	26.6	40.6	36.0	27.9	19.8	13.4	15.6 ^b
Dice	—	12.8	14.7	13.4	6.1	7.3	5.8	4.9 ^b
Other Games of Skill (e.g., pool, darts)	—	—	—	—	—	—	9.3	12.1
Bingo	14.7	10.3	8.9	9.0	8.1	4.6	5.2	4.2 ^b
Sports Pools	28.7	21.3	21.8	20.2	17.9	17.0	11.4	11.1 ^b
Sports Lottery Tickets	19.3	13.8	12.5	11.7	9.3	6.2	6.5	4.8 ^b
Other Lottery Tickets	40.3	40.5	32.1	32.6	30.1	22.0	20.2	14.3 ^b
Video Gambling or Slot Machines	10.9	9.4	6.0	5.2	5.1	4.2	5.9	2.7 ^b
Casino in Ontario	7.8	4.5	2.6	†	3.3	†	1.7	† ^b
Any Internet Gambling	—	†	1.8	2.6	3.9	†	2.8	4.7 ^b
Other ways not listed above	—	21.2	23.4	24.0	18.4	15.2	15.5	12.0
Internet Poker	—	—	—	3.9	2.8	—	—	—
Any Gambling Activity (95% CI)	—	65.1 (60.8-69.1)	65.3 (61.2-69.1)	63.3 (58.2-68.1)	56.0 (51.6-60.4)	47.6 (41.1-54.2)	44.5 (39.2-49.9)	40.5 (34.9-46.2) ^b
5+ Gambling Activities (95% CI)	—	7.9 (5.4-11.5)	8.5 (6.2-11.5)	8.5 (6.3-11.3)	4.1 (2.4-6.8)	2.4 (1.5-3.7)	4.4 (2.6-7.4)	2.5 (1.4-4.3) ^b
TORONTO	(267)	(548)	(577)	(470)	(417)	(621)	(377)	(518)
Cards	17.8	22.4	30.4	25.9	15.3	16.8	10.2	10.1 ^b
Dice	—	18.6	17.0	17.4	5.1	7.3	10.4	8.3 ^b
Other Games of Skill (e.g., pool, darts)	—	—	—	—	—	—	11.6	9.9
Bingo	8.7	8.3	7.0	4.9	6.5	4.1	5.1	2.8 ^b
Sports Pools	23.4	16.9	12.6	12.0	7.0	8.9	9.0	7.2 ^b
Sports Lottery Tickets	12.1	8.7	7.4	6.9	6.7	2.6	†	3.4 ^b
Other Lottery Tickets	18.6	19.0	14.6	15.3	13.4	11.2	11.8	7.3 ^b
Video Gambling or Slot Machines	5.2	7.9	2.8	3.3	†	3.0	†	†
Casino in Ontario	†	†	†	†	†	†	†	†
Any Internet Gambling	—	†	2.4	3.5	†	1.6	4.9	4.7
Other ways not listed above	—	28.3	22.0	25.2	14.0	16.0	14.3	14.8 ^b
Internet Poker	—	—	—	†	2.7	—	—	—
Any Gambling Activity (95% CI)	—	53.8 (48.2-59.3)	51.0 (45.2-56.7)	50.7 (44.8-56.6)	35.2 (28.2-42.9)	34.7 (30.3-39.5)	37.1 (28.8-46.3)	29.2 (23.9-35.2) ^b
5+ Gambling Activities (95% CI)	—	5.6 (3.6-8.5)	5.2 (3.0-9.0)	4.0 (2.3-6.9)	2.7 (1.0-7.0)	†	†	†

(continued...)

	2001	2003	2005	2007	2009	2011	2013	2015
NORTH REGION	(599)	(746)	(728)	(421)	(359)	(1022)	(769)	(798)
Cards	30.1	24.2	38.8	38.0	22.0	20.8	12.0	12.1 ^b
Dice	—	9.0	16.8	9.6	6.5	5.7	2.6	4.4
Other Games of Skill (e.g., pool, darts)	—	—	—	—	—	—	6.4	10.8
Bingo	17.8	12.2	14.7	12.5	11.3	6.6	7.3	12.7
Sports Pools	19.8	17.0	19.0	19.6	11.3	14.3	9.8	11.7 ^b
Sports Lottery Tickets	9.4	8.0	8.6	8.7	7.0	3.6	†	2.6 ^b
Other Lottery Tickets	25.5	27.8	25.9	23.7	20.2	16.0	13.6	12.5 ^b
Video Gambling or Slot Machines	10.5	8.1	13.5	5.6	†	†	†	†
Casino in Ontario	3.1	†	†	†	†	†	†	†
Any Internet Gambling	—	2.7	2.5	4.7	†	2.7	2.8	4.2
Other ways not listed above	—	27.1	24.6	22.9	17.5	17.6	12.4	9.7 ^b
Internet Poker	—	—	—	5.0	†	—	—	—
Any Gambling Activity (95% CI)	—	59.3 (54.0-64.4)	64.0 (58.8-69.0)	56.6 (49.8-63.2)	47.4 (39.8-55.1)	40.3 (35.8-44.9)	37.7 (31.6-44.2)	42.5 (36.1-49.2) ^b
5+ Gambling Activities (95% CI)	—	6.2 (4.0-9.3)	9.6 (7.1-12.9)	7.1 (4.6-10.8)	3.9 (1.8-8.4)	4.1 (2.6-6.5)	3.9 (2.3-6.4)	3.0 (1.6-5.7)
WEST REGION	(718)	(1259)	(1437)	(1323)	(1422)	(1245)	(1686)	(2238)
Cards	26.4	22.8	34.1	30.6	21.7	15.5	9.7	9.1 ^b
Dice	—	11.5	14.6	10.8	6.8	†	3.6	1.8 ^b
Other Games of Skill (e.g., pool, darts)	—	—	—	—	—	—	7.6	6.6
Bingo	11.7	8.9	9.5	7.5	6.9	5.8	3.9	3.9 ^b
Sports Pools	21.1	20.4	16.7	17.6	15.4	14.4	10.4	10.5 ^b
Sports Lottery Tickets	9.4	6.9	8.5	6.5	5.3	3.9	2.7	2.8 ^b
Other Lottery Tickets	22.1	22.2	20.6	20.7	16.6	13.0	8.2	7.5 ^b
Video Gambling or Slot Machines	6.9	5.3	5.0	3.7	2.4	†	3.6	1.5 ^b
Casino in Ontario	†	1.2	1.0	†	†	†	†	†
Any Internet Gambling	—	2.4	1.9	3.4	2.8	†	1.9	3.7
Other ways not listed above	—	26.2	24.1	23.4	20.2	17.3	13.4	9.2 ^b
Internet Poker	—	—	—	3.5	2.9	—	—	—
Any Gambling Activity (95% CI)	—	56.1 (53.2-59.0)	57.0 (53.8-60.2)	54.3 (50.6-58.0)	43.4 (40.0-46.9)	39.4 (34.0-45.1)	33.1 (29.8-36.6)	31.1 (28.5-33.8) ^b
5+ Gambling Activities (95% CI)	—	5.8 (4.4-7.6)	6.9 (5.5-8.5)	5.2 (3.9-7.0)	3.0 (2.2-4.3)	2.6 (1.5-4.6)	2.2 (1.4-3.2)	1.4 (0.9-2.2) ^b

(continued...)

	2001	2003	2005	2007	2009	2011	2013	2015
EAST REGION	(477)	(911)	(1336)	(1174)	(2653)	(1928)	(2646)	(1849)
Cards	25.7	26.6	30.8	26.3	20.4	15.2	12.0	9.2 ^b
Dice	—	12.1	13.1	8.1	5.7	4.4	3.5	1.8 ^b
Other Games of Skill (e.g., pool, darts)	—	—	—	—	—	—	8.2	5.5
Bingo	11.1	11.6	7.0	7.9	7.0	4.4	4.2	4.2 ^b
Sports Pools	24.3	22.9	19.0	14.4	12.2	13.8	10.4	10.2 ^b
Sports Lottery Tickets	9.1	8.5	5.4	5.1	3.9	3.8	3.1	3.4 ^b
Other Lottery Tickets	23.3	23.0	16.2	17.3	14.5	12.4	9.7	7.5 ^b
Video Gambling or Slot Machines	6.6	7.5	7.4	6.5	6.0	3.1	†	3.5
Casino in Ontario	†	2.5	†	1.6	2.2	†	1.0	†
Any Internet Gambling	—	2.9	†	2.1	3.1	2.2	†	3.4
Other ways not listed above	—	27.8	23.5	24.3	19.6	18.8	13.3	10.2 ^b
Internet Poker	—	—	—	2.2	2.7	—	—	—
Any Gambling Activity (95% CI)	—	60.5 (56.1-64.7)	57.6 (53.2-61.9)	52.4 (48.4-56.4)	43.9 (40.0-47.9)	38.4 (35.3-41.6)	35.7 (32.4-39.3)	32.0 (26.2-38.5) ^b
5+ Gambling Activities (95% CI)	—	6.8 (4.6-10.0)	4.2 (2.5-7.1)	4.1 (2.7-6.1)	3.0 (1.7-5.3)	2.9 (1.6-4.9)	2.7 (1.6-4.5)	1.4 (0.9-2.4) ^b

Notes: (1) n=number of students surveyed; (2) based on a random half sample in each year; (3) CI=confidence interval; (4) † indicates estimate suppressed due to unreliability; (5) percentages are reports of engaging in the activity at least once in the past 12 months; (6) no significant differences 2015 vs. 2013; ^b 2015 vs. 2001 (or 2003) significant difference, p<.01; ^c significant linear trend, p<.01; ^d significant nonlinear trend, p<.01.

Qs: “How often in the last 12 months have you done each of the following: Bet money on card games?; Bet money on dice games?; Bet money on other games of skill (such as pool, darts, chess, bowling)?; Played bingo for money?; Bet money in sports pools?; Bought sports lottery tickets (such as Sports Select or Proline)?; Bought any other lottery tickets including instant lottery (such as 6-49, scratch cards, pull-tabs)?; Bet money on video gambling machines, slot machines, or any other gambling machines?; Bet money at a casino in Ontario?; Bet money over the Internet (on any game)?; Bet money in other ways not listed above?”

Source: OSDUHS, Centre for Addiction and Mental Health

Table A3.6.2 Percentage Classified as Having a Video Gaming Problem (PVP Scale), 2007–2015 OSDUHS (Grades 7–12)

		2007	2009	2011	2013	2015
(n=)		(2935)	(4261)	(4816)	(5478)	(5403)
Total		9.4	10.3	11.9	10.3	12.5 ^{bc}
	(95% CI)	(8.2-10.8)	(9.0-11.7)	(9.4-14.9)	(8.6-12.2)	(11.1-14.1)
Sex	Males	15.1	16.0	18.7	16.5	20.2 ^b
		(13.1-17.3)	(13.7-18.4)	(14.5-23.6)	(13.5-20.1)	(17.8-22.7)
	Females	3.1	4.0	5.1	3.5	4.5
		(2.3-4.3)	(2.7-5.7)	(4.1-6.3)	(2.7-4.5)	(3.4-5.8)
Grade	7	10.4	8.3	8.7	12.8	8.4
		(6.9-15.3)	(5.0-13.4)	(6.3-11.8)	(9.9-16.4)	(6.1-11.5)
	8	10.8	10.9	9.0	9.4	11.8
		(7.9-14.8)	(7.5-15.4)	(6.4-12.5)	(6.9-12.8)	(9.2-15.0)
	9	8.9	11.2	9.2	9.4	12.8
		(6.4-12.2)	(7.9-15.6)	(6.3-13.1)	(6.9-12.6)	(10.4-15.6)
	10	9.1	11.4	11.9	9.8	14.1
		(6.7-12.4)	(8.6-14.9)	(8.6-16.2)	(6.1-15.4)	(10.4-18.9)
	11	9.2	9.7	12.5	11.4	14.7
		(6.7-12.7)	(6.8-13.5)	(9.3-16.5)	(8.1-15.8)	(10.9-19.6)
	12	8.6	10.0	16.9	9.4	12.7
		(6.4-11.4)	(7.0-14.0)	(9.1-29.1)	(6.9-12.8)	(9.6-16.5)
Region	Toronto	13.0	8.0	14.6	11.0	18.5
		(9.9-16.7)	(5.7-11.1)	(10.3-20.4)	(7.3-16.3)	(14.4-23.4)
	North	7.6	10.5	7.4	8.1	12.1
		(5.5-10.5)	(7.7-14.1)	(5.8-9.4)	(6.1-10.5)	(8.8-16.6)
	West	8.7	11.9	12.3	10.7	12.0
		(7.0-10.7)	(9.8-14.4)	(7.6-19.2)	(8.2-13.8)	(9.9-14.4)
	East	8.7	9.2	10.7	9.7	10.4
		(6.4-11.7)	(6.9-12.0)	(9.2-12.6)	(6.9-13.5)	(8.4-12.8)

Notes: (1) "Video Gaming Problem" is defined as positive responses to five or more of the nine symptoms in the *Problem Video Game Playing (PVP) Scale*; (2) n=total number of students surveyed; (3) entries in brackets are 95% confidence intervals; (4) based on a random half sample in each year; (5) no significant differences 2015 vs. 2013; ^b 2015 vs. 2007 significant difference, p<.01; ^c significant linear trend, p<.01.

Source: OSDUHS, Centre for Addiction and Mental Health

Selected Recent OSDUHS Peer-Reviewed Publications

- Allison, K. R., Irving, H. M., Adlaf, E. M., Faulkner, G. E. J., Boak, A., Manson, H. E., Hamilton, H. A., & Ng, B. (2016). Ten-year trends in overweight/obesity among Ontario middle and high school students and their use in establishing baseline measures for government reduction targets. *Canadian Journal of Public Health, 106*(8), e514-e519. doi:10.17269/cjph.106.5175
- Cook, S., Turner, N. E., Ballon, B., Paglia-Boak, A., Murray, R., Adlaf, E. M., Ilie, G., & Mann, R. E. (2015). Problem gambling among Ontario students: Associations with substance abuse, mental health problems, suicide attempts, and delinquent behaviours. *Journal of Gambling Studies, 31*(4), 1121-1134. doi:10.1007/s10899-014-9483-0
- Faulkner, G., Irving, H., Adlaf, E. M., & Turner, N. (2015). Subtypes of adolescent video gamers: A latent class analysis. *International Journal of Mental Health and Addiction, 13*(1), 1-18. doi:10.1007/s11469-014-9501-6
- Sampasa-Kanyinga, H., & Hamilton, H. A. (2015). Social networking sites and mental health problems in adolescents: The mediating role of cyberbullying victimization. *European Psychiatry, 30*(8), 1021-1027. doi:10.1016/j.eurpsy.2015.09.011
- Sampasa-Kanyinga, H., & Hamilton, H. A. (2015). Use of social networking sites and risk of cyberbullying victimization: A population-level study of adolescents. *Cyberpsychology, Behavior, and Social Networking, 18*(12), 704-710. doi:10.1089/cyber.2015.0145
- Sampasa-Kanyinga, H., & Lewis, R. F. (2015). Frequent use of social networking sites is associated with poor psychological functioning among children and adolescents. *Cyberpsychology, Behavior, and Social Networking, 18*(7), 380-385. doi:10.1089/cyber.2015.0055
- Trinh, L., Wong, B., & Faulkner, G. E. (2015). The independent and interactive associations of screen time and physical activity on mental health, school connectedness and academic achievement among a population-based sample of youth. *Journal of the Canadian Academy of Child and Adolescent Psychiatry, 24*(1), 17-24.
- Hamilton, H. A., van der Maas, M., Boak, A., & Mann, R. E. (2014). Subjective social status, immigrant generation, and cannabis and alcohol use among adolescents. *Journal of Youth and Adolescence, 43*(7), 1163-1175.
- Ilie, G., Mann, R. E., Boak, A., Adlaf, E. M., Hamilton, H., Asbridge, M., . . . Cusimano, M. D. (2014). Suicidality, bullying and other conduct and mental health correlates of traumatic brain injury in adolescents. *PLoS One, 9*(4), e94936. doi:10.1371/journal.pone.0094936
- Ostojic, D., Charach, A., Henderson, J., McAuley, T., & Crosbie, J. (2014). Childhood ADHD and addictive behaviours in adolescence: A Canadian sample. *Journal of the Canadian Academy of Child and Adolescent Psychiatry, 23*(2), 128-135.
- Ilie, G., Boak, A., Adlaf, E. M., Asbridge, M., & Cusimano, M. D. (2013). Prevalence and correlates of traumatic brain injuries among adolescents. *JAMA, 309*(24), 2550-2552. doi:10.1001/jama.2013.6750
- Arbour-Nicitopoulos, K. P., Faulkner, G. E., & Irving, H. M. (2012). Multiple health-risk behaviour and psychological distress in adolescence. *Journal of the Canadian Academy of Child and Adolescent Psychiatry, 21*(3), 171-178.
- Hamilton, H. A., Danielson, A. M., Mann, R. E., & Paglia-Boak, A. (2012). The roles of family, peer, school, and attitudinal factors in cannabis use across immigrant generations of youth. *Journal of Drug Issues, 42*(1), 46-58. doi:10.1177/0022042612436652
- Hamilton, H. A., Wekerle, C., Paglia-Boak, A., & Mann, R. E. (2012). The role of school connectedness in the link between family involvement with child protective services and adolescent adjustment. *Advances in Mental Health, 11*(1), 25-34. doi:10.5172/jamh.2012.11.1.25

- Turner, N. E., Paglia-Boak, A., Ballon, B., Cheung, J. T. W., Adlaf, E. M., Henderson, J., Chan, V., Rehm, J., Hamilton, H. A., & Mann, R. E. (2012). Prevalence of problematic video gaming among Ontario adolescents. *International Journal of Mental Health and Addiction, 10*(6), 877-889. doi:10.1007/s11469-012-9382-5
- Hamilton, H., Paglia-Boak, A., Wekerle, C., Danielson, A., & Mann, R. (2011). Psychological distress, service utilization, and prescribed medications among youth with and without histories of involvement with child protective services. *International Journal of Mental Health and Addiction, 9*(4), 398-409.
- Mann, R. E., Paglia-Boak, A., Adlaf, E. M., Beitchman, J., Wolfe, D., Wekerle, C., Hamilton, H. A., & Rehm, J. (2011). Estimating the prevalence of anxiety and mood disorders in an adolescent general population: An evaluation of the GHQ12. *International Journal of Mental Health and Addiction, 9*(4), 410-420. doi:10.1007/s11469-011-9334-5
- Tanaka, M., Wekerle, C., Schmuck, M. L., & Paglia-Boak, A. (2011). The linkages among childhood maltreatment, adolescent mental health, and self-compassion in child welfare adolescents. *Child Abuse and Neglect, 35*(10), 887-898. doi:10.1016/j.chiabu.2011.07.003
- Turner, N. E., Ialomiteanu, A., Paglia-Boak, A., & Adlaf, E. M. (2011). A typological study of gambling and substance use among adolescent students. *Journal of Gambling Issues, 25*, 88-107. doi:10.4309/jgi.2011.25.7
- Wong, B. Y.-M., Faulkner, G., Buliung, R., & Irving, H. (2011). Mode shifting in school travel mode: Examining the prevalence and correlates of active school transport in Ontario, Canada. *BMC Public Health, 11*(1), 618. doi:10.1186/1471-2458-11-618
- Mohapatra, S., Irving, H., Paglia-Boak, A., Wekerle, C., Adlaf, E., & Rehm, J. (2010). History of family involvement with child protective services as a risk factor for bullying in Ontario schools. *Child and Adolescent Mental Health, 15*(3), 157-163. doi:10.1111/j.1475-3588.2009.00552.x
- Hamilton, H. A., Noh, S., & Adlaf, E. M. (2009). Adolescent risk behaviours and psychological distress across immigrant generations. *Canadian Journal of Public Health, 100*(3), 221-225.
- Hamilton, H. A., Noh, S., & Adlaf, E. M. (2009). Perceived financial status, health, and maladjustment in adolescence. *Social Science & Medicine, 68*(8), 1527-1534. <http://dx.doi.org/10.1016/j.socscimed.2009.01.037>
- MacKay, S., Paglia-Boak, A., Henderson, J., Marton, P., & Adlaf, E. (2009). Epidemiology of firesetting in adolescents: Mental health and substance use correlates. *Journal of Child Psychology and Psychiatry, 50*(10), 1282-1290.
- Allison, K. R., Adlaf, E. M., Dwyer, J. J. M., Lysy, D. C., & Irving, H. M. (2007). The decline in physical activity among adolescent students: A cross-national comparison. *Canadian Journal of Public Health, 98*(2), 97-100.
- Chaiton, M. O., & Zhang, B. (2007). Environment modifies the association between depression symptoms and smoking among adolescents. *Psychology of Addictive Behaviors, 21*(3), 420-424.
- Faulkner, G., Goodman, J., Adlaf, E., Irving, H., Allison, K., & Dwyer, J. (2007). Participation in high school physical education -- Ontario, Canada, 1999-2005. *MMWR: Morbidity & Mortality Weekly Report, 56*(3), 52-54.
- Faulkner, G. E. J., Adlaf, E. M., Irving, H. M., Allison, K. R., Dwyer, J. J. M., & Goodman, J. (2007). The relationship between vigorous physical activity and juvenile delinquency: A mediating role for self-esteem? *Journal of Behavioral Medicine, 30*(2), 155-163. doi:10.1007/s10865-006-9091-2
- Adlaf, E. M., Paglia-Boak, A., & Ialomiteanu, A. (2006). Underage gambling in Ontario casinos. *Journal of Gambling Issues, 16*, doi: 10.4309/jgi.2006.4316.4303.
- Allison, K. R., Adlaf, E. M., Irving, H. M., Hatch, J. L., Smith, T. F., Dwyer, J. J. M., & Goodman, J. (2005). Relationship of vigorous physical activity to psychological distress among adolescents. *Journal of Adolescent Health, 37*(2), 164-166. <http://dx.doi.org/10.1016/j.jadohealth.2004.08.017>
- Paglia, A., & Adlaf, E. M. (2003). Secular trends in self-reported violent activity among Ontario students, 1983-2001. *Canadian Journal of Public Health, 94*, 212-217.

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