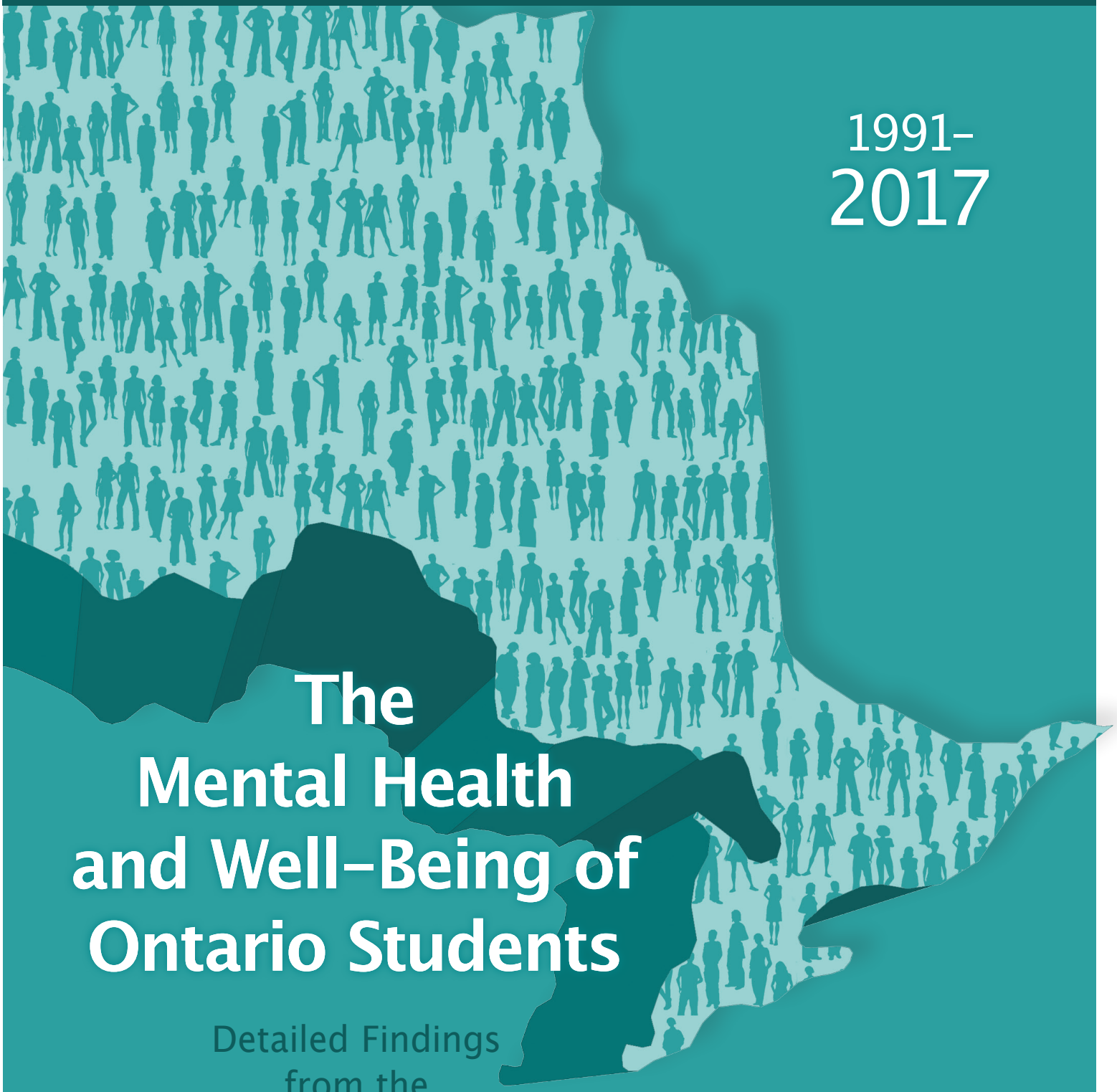
Celebrating 40 Years of OSDUHS

1991–
2017



The Mental Health and Well-Being of Ontario Students

Detailed Findings from the Ontario Student Drug Use and Health Survey

with French summary within | avec resumé en français à l'interieur

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The Mental Health and Well-Being of Ontario Students

1991–2017

Detailed Findings from the Ontario Student Drug Use and Health Survey

CAMH Research Document Series No. 47

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The 2017 OSDUHS Mental Health and Well-Being Report Summary

The Study

The Centre for Addiction and Mental Health's *Ontario Student Drug Use and Health Survey* (OSDUHS) has been conducted every two years since 1977, making it the longest ongoing school survey of adolescents in Canada, and one of the longest in the world. The 2017 cycle of the OSDUHS marked the study's 40th anniversary. A total of 11,435 students in grades 7 through 12 from 764 classes in 214 schools in 52 boards participated in the 2017 OSDUHS. The survey was administered in schools across Ontario by the Institute for Social Research, York University between November 2016 and June 2017.

This report describes physical health indicators, mental health indicators, bullying, gambling and related problems, video gaming and related problems, and other risk behaviours among Ontario students in 2017 and changes since 1991, where available. Although the OSDUHS began in 1977, most mental health and physical health measures were introduced in the survey in the early 1990s. **New indicators** in this descriptive report include parental support, experiencing a concussion, experiencing a traumatic life event (nonspecific), cyberbullying others, gambling on video games, and problematic technology use. All data presented are based on students' self-reports derived from anonymous questionnaires administered in classrooms.

Home Life

- One-in-five (20%) Ontario students report living with a single parent or no parent (birth, adoptive, or step). One-in-seven (14%) students report splitting their time between two or more homes.
- Over one-third (39%) of students report that they rarely or never talk to their parents about their problems or feelings.
- Nearly half (43%) of secondary school students have a part-time job. Five percent work more than 20 hours per week.

School Life

- Almost half (47%) of students report that they like school very much or quite a lot. One-third (34%) of students like school to some degree. About 19% do not like school very much or at all.
- ➢ The percentage of students who report that they like school very much or quite a lot has significantly increased since the 1990s.
- Although most students feel safe in their school, one-in-eight (13%) express worry about being harmed or threatened at school.
- One-in-six (17%) students report being suspended or expelled from school at least once in their lifetime.

- About one-in-five (19%) students report low subjective social status at school (i.e., feeling that other students exclude them and do not respect them).

- Over one-quarter (29%) of students believe that their mental health affects their school grades a "great deal" or "quite a lot."

Physical Health

- Although the majority (62%) of students rate their health as excellent or very good, about 9% (an estimated 78,200 Ontario students in grades 7–12) report fair or poor physical health.

➢ Ratings of fair or poor physical health have been stable in recent years, and the current estimate resembles estimates seen in the early 1990s.

- Only one-quarter (23%) of 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, about one-in-eleven (9%) students were physically inactive on each of the past seven days.

- Nearly half (45%) of students do not engage in physical activity in a physical education class at school.

- Almost two-thirds (64%) of students spend three hours or more per day in front of an electronic screen 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 64%.

- Over one-quarter (28%) of students are classified as overweight or obese (an estimated 236,000 Ontario students).

➢ The percentage of students classified as overweight or obese has remained stable in recent years, but there has been a significant increase since 2007 (23%), the first year of monitoring.

- Less than half (39%) of students report that they usually get eight or more hours of sleep on an average school night. Therefore, most students (61%) are not getting at least eight hours of sleep.

- About 7% of students report always or often going to bed or school hungry. This percentage represents about 60,000 students in Ontario.

➢ There was a small, but significant, increase between 2015 and 2017 in the percentage of students reporting going to bed or school hungry, from 5% to 7%.

Body Image

- Almost two-thirds (64%) of students are satisfied with their weight. One-quarter (24%) believe they are "too fat," and one-in-eight (12%) believe they are "too thin."

➢ The perception of being "too fat" has remained stable in recent years, but there has been a significant increase since 2001 (19%), the first year of monitoring. The increase in this perception over time is evident among females (from 24% in 2001 to 31% in 2017), but not among males.

- One-third (35%) of students are not attempting to change their weight. Another 29% are attempting to lose weight, 22% want to keep from gaining weight, and 14% want to gain weight.

Injuries and Related Behaviours

- Almost half (43%) of students were treated for an injury at least once during the past year (representing about 345,700 Ontario students).

➢ The percentage of students reporting a medically treated injury has remained stable in the past few years, but it is currently significantly higher than in 2003 (35%), the first year of monitoring.

- Over one-third (36%) of students report experiencing a concussion in their lifetime. One-in-seven (15%) report experiencing a concussion in the past year (about 130,700 students in Ontario). Of the specific causes asked about, playing hockey or another team sport were among the most commonly reported causes of a concussion.

- One-quarter (24%) of students report that they do not always wear a seatbelt when in a motor vehicle (about 199,500 Ontario students).

- One-third (33%) of drivers in grades 10–12 report texting while driving at least once in the past year. This percentage represents an estimated 85,300 adolescent drivers.

➢ The percentage of adolescent drivers reporting texting while driving has not significantly changed since 2013 (36%), the first year of monitoring.

- About 8% of drivers in grades 10–12 (about 22,000 adolescent drivers) report being involved in a collision as a driver at least once in the past year.

Health Care Utilization

Physician Health Care Visit

- One-third (34%) 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-quarter (25%) of 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. This estimate represents about 235,100 students in Ontario.

➢ The percentage of students reporting visiting a mental health professional has remained stable in the past few years, but it is currently significantly higher than in 1999 (12%), the first year of monitoring.

Seeking Support for a Mental Health Problem

- About 3% 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 32,900 Ontario students.

- Almost one-third (31%) 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 299,800 Ontario students.

Use of Drugs for Medical Reasons

- One-in-six (18%) students report the medical use of prescription opioid pain relievers (e.g., Tylenol #3, Percocet) in the past year. About 3% of students used prescribed drugs for ADHD (e.g., Ritalin, Adderall, Concerta) in the past year. About

4% of secondary school students used prescribed tranquillizers/sedatives (e.g., Valium, Ativan, Xanax) in the past year.

➢ The percentage of students who report medical use of prescription opioid pain relievers has remained stable in recent years, but has significantly decreased since 2007 (41%), the first year of monitoring. The percentage who report medical use of ADHD drugs has not significantly changed since monitoring first began in 2007. The percentage who report medical use of tranquillizers/sedatives has remained stable since the 1990s.

- About 5% of secondary school students report they were prescribed medication for anxiety, depression, or both conditions in the past year. This estimate represents about 37,600 secondary school students in Ontario.

Mental Health

Self-Rated Mental Health

- While the majority (54%) of students rate their mental health as excellent or very good, almost one-in-five (19%) 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 estimates seen between 2007 (the first year of monitoring) and 2013 (about 11%-13%).

Low Self-Esteem

- About 7% of students report low self-esteem (feeling very unsatisfied with oneself).

Elevated Stress

- About 30% of students report experiencing an elevated level of stress or pressure in their lives.

Psychological Distress

- Over one-third (39%) of students indicate a moderate-to-serious level of psychological distress (symptoms of anxiety and depression). One-in-six (17%) students indicate a serious level of psychological distress (representing about 159,400 students).

➢ Both measures of psychological distress remained stable between 2015 and 2017, but are significantly higher today than in 2013, the first year of monitoring.

Traumatic Event

- About one-third (35%) of secondary school students report experiencing a traumatic or negative event (nonspecific) in their lifetime. This estimate represents about 252,100 secondary school students in Ontario.

Suicidal Ideation and Suicide Attempt

- One-in-seven (14%) students had serious thoughts about suicide in the past year (an estimated 118,000 Ontario students), and 4% report a suicide attempt in the past year (an estimated 33,400 Ontario students).

➢ The percentage reporting suicidal ideation has been stable in recent years, and is currently similar to the estimate seen in 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-five (20%) students report symptoms of ADHD (such as trouble with organizing, completing tasks, remembering obligations). This percentage represents about 186,000 Ontario students.

➢ The percentage of students reporting symptoms of ADHD significantly increased between 2015 and 2017 (from 16% to 20%).

Antisocial Behaviour and Bullying

Antisocial Behaviour

- About 7% of students report engaging in antisocial behaviour (defined as three or more of nine specific behaviours) during the past year (about 62,300 students).

➢ 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 in the past year, and a similar percentage (6%) report carrying a weapon in the past year (about 50,500 students).

➢ The percentage of students reporting assaulting someone and the percentage reporting carrying a weapon have both shown significant declines since the early 1990s.

School Violence

- One-in-nine (11%) students report physically fighting on school property at least once during the past year (representing about 105,900 students).
- About 6% of students were threatened or injured with a weapon on school property at least once during the past year (representing about 50,700 students).

➢ Both of these indicators have remained stable in recent years, but show significant declines since the early 2000s, when monitoring first began.

Bullying at School

- One-in-five (21%) students report being bullied at school since the beginning of the school year (representing about 197,400 students). The most prevalent form of bullying victimization at school is verbal (17%), while 2% report that they are primarily bullied physically, and 2% of students are victims of theft/vandalism.
- One-in-nine (11%) students report bullying others at school since September. The most prevalent form of bullying others at school is through verbal attacks (10%), followed by physical attacks (1%), and theft/vandalism (less than 1%).

➢ The percentage of students reporting being bullied at school did not significantly change since the last survey in 2015, but the current estimate is significantly lower than all estimates between 2003 (the first year of monitoring) and 2013.

➢ Similarly, the percentage reporting bullying others at school in 2017 is significantly lower than all estimates between 2003 and 2013.

Cyberbullying

- One-in-five (21%) students report being bullied over the Internet in the past year. This estimate represents about 191,600 students.

- One-in-ten (10%) students report bullying others over the Internet in the past year.

➢ The percentage reporting being cyberbullied has remained stable since 2011 (22%), the first year of monitoring.

Gambling, Video Gaming, and Technology Use

Gambling Activities

- Of the gambling activities surveyed in 2017, the most prevalent is betting money on a dare or private bet (12%), followed by betting in sports pools (10%). The least prevalent activity is casino gambling (less than 1%).

- Gambling money on video games is reported by about 8% of students. Gambling money over the Internet is reported by about 4% of students.

- One-third (31%) of students report gambling at one or more activities in the past year (about 258,300 Ontario students). About 2% of students gambled at five or more activities in the past year (about 19,200 students).

➢ The percentage of students reporting any gambling activity in the past year has remained stable in recent years, but is significantly lower today compared to 2003 (57%), the first year of monitoring. Similarly, multi-gambling activity is significantly lower today than in 2003 (6%).

➢ The percentage reporting any Internet gambling has remained stable since 2003.

Gambling Problem

- About 7% of secondary school students indicate symptoms of a low-to-moderately severe gambling problem. About 2% indicate a high-severity gambling problem (representing about 12,200 secondary school students in Ontario).

Video Gaming

- One-quarter (23%) of students play video games daily or almost daily. About one-in-ten (9%) students play video games for five hours or more per day.

- One-in-eight (12%) students (an estimated 107,200 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 reporting symptoms of a video gaming problem remained stable in recent years and the current estimate is similar to the estimate in 2007 (9%), the first year of monitoring.

Technology Use

- The majority (86%) of students visit social media sites daily. One-in-five (20%) students spend five hours or more on social media daily.

➢ The percentage of students who report spending five hours or more on social media per day is significantly higher in 2017 than in 2015 (16%) and 2013 (11%), the first year of monitoring.

- Almost one-third (30%) of secondary school students spend five hours or more per day on electronic devices (smartphones, tablets, laptops, computers, gaming consoles) in their free time.

- About one-in-six (18%) secondary school students report symptoms that may suggest a moderate-to-serious problem with technology use (preoccupation, loss of control, withdrawal, problem with family/friends). About 5% of secondary school students report symptoms that may suggest a serious problem with technology use (representing about 33,300 secondary school students).

Coexisting Problems

- About half (48%) of secondary school students report none of the following four problems: psychological distress, antisocial behaviour, hazardous/harmful drinking, or a drug use problem. About 36% of secondary school students report one of these problems, 10% report two of these problems, 4% 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 report:
  - engaging in daily physical activity
  - getting at least eight hours of sleep
  - wanting to gain weight
  - using ADHD drugs medically
  - engaging in antisocial behaviour
  - carrying a weapon
  - fighting at school
  - being threatened/harmed at school
  - gambling money
  - playing video games daily and spending more hours playing video games, and
  - symptoms of a video gaming problem.
- Females are significantly more likely than males to report:
  - fair or poor physical health
  - being physically inactive
  - the belief that they are too fat
  - wanting to lose weight
  - using prescription opioid pain relievers medically
  - seeking mental health counselling
  - unmet need for mental health support
  - using prescription tranquillizers medically
  - being prescribed medication for anxiety, depression, or both
  - fair or poor mental health
  - low self-esteem
  - elevated stress
  - symptoms of psychological distress
  - experiencing a traumatic event
  - suicidal ideation and attempt
  - symptoms of ADHD
  - worrying about being harmed or threatened at school
  - being bullied at school
  - being cyberbullied
  - spending more hours daily on social media
  - spending more hours daily on electronic devices, and
  - symptoms of problematic technology use.

Grade Differences

- Grade is also significantly related to mental health and well-being. Generally, poor physical health indicators (e.g., sedentary behaviour), health risk behaviours (e.g., not wearing a seatbelt, texting while driving), mental health problems (e.g., fair or poor self-rated mental health, stress, psychological distress), excessive social media and technology use, and coexisting problems significantly increase with grade. Daily physical activity, experiencing a concussion, getting at least eight hours of sleep, bullying and physical fighting at school are more prevalent among younger students and decline in later adolescence.

Regional Differences

The survey design divided the province into four regions: Greater Toronto Area (Toronto, Durham Region, York Region, Peel Region, and Halton Region); Northern Ontario (Parry Sound District, Nipissing District and farther north); Western Ontario (Dufferin County and farther west); and Eastern Ontario (Simcoe County and farther east).

The following regional differences were found:

- Compared with the provincial average, **Greater Toronto Area** students are significantly *more* likely to report being physically inactive, symptoms of a video gaming problem, and symptoms of a serious problem with technology use. Compared with the provincial average, they are significantly *less* likely to report meeting the daily physical activity guideline, getting at least eight hours of sleep on a school night, experiencing a concussion in the past year, being prescribed medication for anxiety or depression, and to rate their mental health as poor or fair.

- Compared with the provincial average, **Northern** Ontario students are *more* likely to report getting at least eight hours of sleep on a school night, and being prescribed medication for anxiety or depression.

- Compared with the provincial average, **Western** Ontario students are *more* likely to report experiencing a concussion in the past year, being cyberbullied, texting while driving, and to rate their mental health as fair or poor.

- Compared with the provincial average, **Eastern** Ontario students are *more* likely to report meeting the daily physical activity guideline, and experiencing a concussion in the past year. Compared with the average, they are significantly *less* likely to report bullying others at school, being cyberbullied, and symptoms of a video gaming problem.

An overview of results according to Ontario's Local Health Integration Networks (LHINs) is also provided in the report.

Percentage Reporting Selected Mental Health and Well-Being Indicators by Sex, 2017 OSDUHS (Grades 7–12)

Indicator	Total %	(95% CI)	Estimated Number†	Males %	Females %	
fair or poor self-rated physical health	**8.7**	(7.7-9.7)	78,200	6.6	10.9	*
daily physical activity (60 mins. activity daily past week)	**23.0**	(21.7-24.4)	207,000	29.5	16.2	*
physically inactive (no days of activity in past week)	**8.9**	(7.8-10.2)	80,300	6.7	11.4	*
sedentary behaviour (3+ hours of screen time daily)	**64.2**	(61.8-66.5)	539,100	63.4	65.1	
overweight or obese	**28.0**	(26.1-29.9)	236,000	29.8	26.0	
8 or more hours of sleep on an average school night	**39.2**	(37.1-41.3)	349,400	42.2	35.9	*
often or always go to bed or school hungry	**6.7**	(5.9-7.7)	60,000	7.1	6.3	
medically treated injury (past year)	**42.5**	(39.9-45.2)	345,700	43.2	41.8	
concussion (past year)	**14.8**	(13.7-16.0)	130,700	15.4	14.2	
medical use of opioid pain relievers (past year)	**17.6**	(15.6-19.9)	148,800	15.9	19.5	*
not always wear a seatbelt when in motor vehicle	**23.7**	(21.4-26.1)	199,500	22.8	24.6	
texting while driving (G10-12 with licence, past year)	**32.5**	(29.0-36.2)	85,300	32.8	32.2	
mental health care visit (past year)	**24.5**	(22.0-27.3)	235,100	22.0	27.2	
sought counselling over phone or Internet (past year)	**3.4**	(2.3-5.1)	32,900	2.1	4.8	*
unmet need for mental health support	**31.2**	(27.5-35.2)	299,800	20.9	42.2	*
medical use of tranquillizers/sedatives (past year)††	**3.6**	(2.8-4.6)	23,700	2.6	4.7	*
medical use of ADHD drugs (past year)	**2.9**	(2.1-4.1)	28,300	4.2	1.6	*
prescribed medication for depression/anxiety/both††	**5.2**	(4.2-6.6)	37,600	3.0	7.6	*
fair or poor self-rated mental health	**18.8**	(17.2-20.5)	180,900	11.9	26.2	*
low self-esteem	**6.5**	(5.5-7.7)	61,400	4.5	8.6	*
elevated stress	**30.4**	(27.7-33.3)	289,900	20.0	41.5	*
moderate-to-serious psychological distress (past month)	**38.7**	(34.9-42.6)	361,300	26.8	51.3	*
serious psychological distress (past month)	**17.1**	(14.9-19.4)	159,400	9.1	25.5	*
experienced a traumatic event (lifetime) ††	**35.2**	(32.8-37.7)	252,100	27.7	43.0	*
suicidal ideation (past year)	**13.6**	(12.4-15.0)	118,000	8.5	19.0	*
suicide attempt (past year)	**3.9**	(3.0-4.9)	33,400	2.5	5.3	*
symptoms of ADHD (past 6 months)	**20.1**	(18.2-22.2)	186,000	16.5	24.0	*
antisocial behaviour (3+/9 behaviours in past year)	**6.9**	(5.8-8.1)	62,300	8.7	5.0	*
carried a weapon (past year)	**5.7**	(4.2-7.5)	50,500	8.6	2.7	*
physical fight at school (past year)	**11.4**	(9.7-13.3)	105,900	16.8	5.6	*
threatened/injured with weapon at school (past year)	**5.5**	(4.5-6.6)	50,700	7.7	3.2	*
worried about being harmed or threatened at school	**13.0**	(11.3-14.8)	123,900	10.7	15.4	*
been bullied at school (since September)	**21.0**	(19.3-22.9)	197,400	17.7	24.5	*
bullied others at school (since September)	**11.1**	(10.0-12.4)	104,100	12.0	10.2	
been cyberbullied (past year)	**20.5**	(18.8-22.3)	191,600	16.4	24.9	*
cyberbullied others (past year)	**9.7**	(8.3-11.3)	100,100	9.7	9.7	
any gambling activity (past year)	**31.3**	(29.5-33.2)	285,300	37.8	24.6	*
any online gambling (past year)	**3.5**	(2.6-4.6)	31,500	5.1	s	
multi-gambling activity (5 or more activities in past year)	**2.1**	(1.4-3.2)	19,200	2.9	s	
high gambling problem severity (past 3 months)††	**1.8**	(1.4-2.2)	12,200	2.5	s	
video gaming problem (past year)	**11.7**	(9.5-14.2)	107,200	16.6	6.5	*
5 or more hours per day on social media	**20.1**	(17.4-23.1)	194,300	14.9	25.8	*
problematic technology use (serious) ††	**4.9**	(3.3-7.2)	33,300	3.2	6.6	*
3 or all 4 coexisting problems††	**5.7**	(4.7-6.9)	41,500	5.9	5.5	

Notes: the total sample size is 11,435 students; some estimates based on a random half sample; CI=confidence interval; † the estimated number of students is based on a population of about 917,800 in grades 7–12 in Ontario, and 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, 2017 OSDUHS (Grades 7–12)

Indicator	G7	G8	G9	G10	G11	G12	
fair or poor self-rated physical health	4.7	5.3	8.1	9.4	10.0	11.7	*
daily physical activity (60 mins. activity daily past week)	31.9	29.9	28.8	21.6	18.3	14.4	*
physically inactive (no days of activity in past week)	5.0	3.5	6.3	7.1	12.3	15.0	*
sedentary behaviour (3+ hours of screen time daily)	53.2	59.8	61.2	69.0	66.4	69.5	*
overweight or obese	21.9	25.7	26.1	29.7	33.7	28.1	*
8 or more hours of sleep on an average school night	72.3	60.8	41.8	30.4	26.5	21.1	*
often or always go to bed or school hungry	5.5	5.3	6.7	8.9	5.5	7.6	
medically treated injury (past year)	41.8	42.5	46.4	43.2	46.9	36.7	
concussion (past year)	16.2	22.0	12.3	13.7	14.1	12.8	*
medical use of opioid pain relievers (past year)	12.1	12.0	13.1	20.0	23.5	22.5	*
not always wear a seatbelt when in motor vehicle	18.8	14.6	25.1	28.3	31.2	23.9	*
texting while driving (G10-12 with licence, past year)	--	--	--	s	18.1	42.6	*
mental health care visit (past year)	28.9	28.7	24.2	22.5	22.1	23.6	
sought counselling over phone or Internet (past year)	2.1	2.8	s	3.9	1.6	4.3	
unmet need for mental health support	25.5	24.0	30.7	29.5	32.9	38.3	*
medical use of tranquillizers/sedatives (past year)††	--	--	3.2	3.2	4.6	3.4	
medical use of ADHD drugs (past year)	4.7	2.8	2.4	s	3.0	1.8	
prescribed medication for depression/anxiety/both††	--	--	4.5	2.6	4.0	8.6	*
fair or poor self-rated mental health	8.9	11.4	17.5	21.8	20.0	26.0	*
low self-esteem	4.8	4.2	7.7	6.8	6.6	7.4	
elevated stress	14.9	17.1	25.3	35.5	40.9	37.8	*
moderate-to-serious psychological distress (past month)	24.9	32.8	31.2	39.9	46.8	47.0	*
serious psychological distress (past month)	9.4	12.0	15.0	17.9	19.8	22.4	*
experienced a traumatic event (lifetime)	--	--	30.6	31.9	32.6	42.9	*
suicidal ideation (past year)	8.9	11.7	14.7	14.3	11.0	17.5	
suicide attempt (past year)	s	2.9	4.4	4.9	1.9	5.4	*
symptoms of ADHD (past 6 months)	16.2	12.7	17.3	19.9	24.0	25.1	*
antisocial behaviour (3+/9 behaviours in past year)	4.2	6.6	4.5	8.4	7.6	8.3	
carried a weapon (past year)	4.5	3.9	5.5	6.7	6.5	5.8	
physical fight at school (past year)	20.5	16.9	14.4	8.2	9.6	5.3	*
threatened/injured with weapon at school (past year)	6.2	6.9	5.1	7.2	3.5	4.9	
worried about being harmed or threatened at school	14.3	16.6	16.6	11.7	8.4	12.1	
been bullied at school (since September)	27.4	28.8	22.7	20.6	18.3	15.0	*
bullied others at school (since September)	11.1	13.2	12.6	11.3	8.8	10.7	
been cyberbullied (past year)	21.7	22.1	24.7	19.9	20.9	16.3	
cyberbullied others (past year)	9.8	9.2	9.3	11.3	10.0	8.7	
any gambling activity (past year)	27.2	29.4	28.1	31.1	32.3	36.2	
any online gambling (past year)	2.6	3.1	3.1	4.0	s	2.8	
multi-gambling activity (5 or more activities in past year)	s	s	s	s	s	s	
high gambling problem severity (past 3 months)††	--	--	s	s	s	s	
video gaming problem (past year)	11.2	10.8	9.6	11.1	16.4	10.7	
5 or more hours per day on social media	11.5	15.0	22.9	20.6	24.2	22.1	*
problematic technology use (serious) ††	--	--	3.6	4.5	s	3.2	
3 or all 4 coexisting problems††	--	--	1.3	6.0	5.1	9.1	*

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, 2017 OSDUHS (Grades 7–12)

Indicator	GTA	North	West	East	
fair or poor self-rated physical health	9.0	8.7	8.9	7.7	
daily physical activity (60 mins. activity daily past week)	20.6	24.6	24.4	26.4	*
physically inactive (no days of activity in past week)	10.4	8.2	7.0	8.4	*
sedentary behaviour (3+ hours of screen time daily)	66.0	58.0	63.7	62.3	
overweight or obese	27.6	31.3	29.7	25.2	
8 or more hours of sleep on an average school night	36.5	45.5	42.7	38.5	*
often or always go to bed or school hungry	7.8	7.9	5.5	5.6	
medically treated injury (past year)	41.0	47.1	46.0	38.2	
concussion (past year)	11.5	14.4	18.1	18.0	*
medical use of opioid pain relievers (past year)	18.7	17.6	18.6	14.6	
not always wear a seatbelt when in motor vehicle	24.5	17.5	25.1	21.4	
texting while driving (G10-12 with licence, past year)	28.7	30.7	39.8	26.3	*
mental health care visit (past year)	24.3	32.8	24.7	22.4	
sought counselling over phone or Internet (past year)	s	3.9	3.6	2.3	
unmet need for mental health support	32.2	26.4	31.7	29.2	
medical use of tranquillizers/sedatives (past year)††	3.6	4.6	3.3	3.7	
medical use of ADHD drugs (past year)	2.4	4.0	3.7	s	
prescribed medication for depression/anxiety/both††	3.3	11.6	7.7	6.1	*
fair or poor self-rated mental health	16.9	22.6	23.2	17.7	*
low self-esteem	5.9	5.0	8.9	5.4	
elevated stress	30.9	32.3	31.1	27.7	
moderate-to-serious psychological distress (past month)	40.2	36.5	39.2	34.3	
serious psychological distress (past month)	17.4	16.6	18.7	14.0	
experienced a traumatic event (lifetime)	34.9	35.8	38.1	32.5	
suicidal ideation (past year)	14.2	12.4	14.8	11.1	
suicide attempt (past year)	4.0	4.9	3.9	3.1	
symptoms of ADHD (past 6 months)	20.4	16.5	19.5	21.4	
antisocial behaviour (3+/9 behaviours in past year)	7.8	5.8	6.1	5.6	
carried a weapon (past year)	6.0	4.6	6.8	3.5	
physical fight at school (past year)	12.1	11.3	11.3	9.1	
threatened/injured with weapon at school (past year)	5.5	3.4	6.8	4.1	
worried about being harmed or threatened at school	12.5	9.8	13.9	14.0	
been bullied at school (since September)	18.9	21.9	25.3	21.1	
bullied others at school (since September)	12.2	10.4	11.3	7.8	*
been cyberbullied (past year)	20.0	23.0	23.8	16.9	*
cyberbullied others (past year)	10.3	9.5	10.0	7.3	
any gambling activity (past year)	31.3	33.0	32.1	29.7	
any online gambling (past year)	3.8	5.2	3.5	1.7	
multi-gambling activity (5 or more activities in past year)	s	s	s	s	
high gambling problem severity (past 3 months)††	s	s	s	s	
video gaming problem (past year)	13.5	10.4	11.3	7.0	*
5 or more hours per day on social media	21.8	18.8	19.4	16.6	
problematic technology use (serious) ††	7.1	2.7	2.9	1.6	*
3 or all 4 coexisting problems††	5.1	8.0	7.1	5.1	

Notes: GTA=Greater Toronto Area; * indicates a significant regional 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 or poor self-rated physical health	7, 9, 11	1991–2017	Stable
% daily physical activity (60 mins. per day)	7–12	2009–2017	Stable
% sedentary behaviour (3+ hours screen time daily)	7–12	2009–2017	Increased from 57% to 64%
% overweight or obese	7–12	2009–2017	Increased from 23% to 28%
% medically treated injury	7–12	2003–2017	Increased from 35% to 43%
% medical use of prescription opioid pain relievers	7–12	2007–2017	Decreased from 41% to 18%
% texting and driving (G10-12 with a licence)	10–12	2013–2017	Stable
% 1+ mental health care visit (past year)	7–12	1999–2017	Increased from 12% to 25%
% medical use of ADHD prescription drugs	7–12	2007–2017	Stable
% prescription for anxiety, depression, or both	9–12	2001–2017	Stable
% fair or poor self-rated mental health	7–12	2007–2017	Increased from 11% to 19%
% moderate-to-serious psychological distress	7–12	2013–2017	Increased from 24% to 39%
% serious psychological distress	7–12	2013–2017	Increased from 11% to 17%
% suicidal ideation (past year)	7–12	2001–2017	Stable
% suicide attempt (past year)	7–12	2007–2017	Stable
% antisocial behaviour (past year)	7, 9, 11	1993–2017	Decreased from 16% to 6%
% carried a weapon (past year)	7, 9, 11	1993–2017	Decreased from 16% to 6%
% physical fighting at school (past year)	7–12	2001–2017	Decreased from 17% to 11%
% threatened/injured with a weapon at school	7–12	2003–2017	Decreased from 8% to 6%
% worried about being harmed/threatened at school	7–12	1999–2017	Stable
% been bullied at school (since September)	7–12	2003–2017	Decreased from 33% to 21%
% been cyberbullied (past year)	7–12	2011–2017	Stable
% any gambling activity (past year)	7–12	2003–2017	Decreased from 57% to 31%
% online gambling (past year)	7–12	2003–2017	Stable
% video gaming problem (past year)	7–12	2007–2017	Stable
% 5 hours or more per day on social media	7–12	2013–2017	Increased from 11% to 20%

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

Methodology

The Centre for Addiction and Mental Health's *Ontario Student Drug Use and Health Survey* (OSDUHS) is an Ontario-wide survey of elementary/middle school students in grades 7 and 8 and secondary school students in grades 9 through 12. This repeated cross-sectional survey has been conducted every two years since its inception in 1977. The 2017 survey, which used a stratified (region by school level) two-stage (school, class) cluster design, was based on 11,435 students in grades 7 through 12 in 764 classes in 214 schools in 52 English and French public and Catholic school boards. Excluded from selection were schools on military bases, in First Nations communities, hospitals and other institutions, and private schools. Special Education classes and English as a Second Language (ESL) classes were excluded from selection.

Active parental consent procedures were used. Self-completed paper-and-pencil questionnaires, which promote anonymity, were group administered by staff from the Institute for Social Research, York University in classrooms between November 2016 and June 2017 during regular school hours. Students in French-language schools completed French questionnaires. Sixty-one percent (61%) of randomly selected schools, 94% of selected classes, and 61% of eligible students in those classes completed the survey. The 2017 total sample of 11,435 students is representative of just under one million students in grades 7 to 12 enrolled in Ontario's publicly funded schools.

Please visit the OSDUHS webpage for reports and FAQs:

www.camh.ca/osduhs

Résumé du rapport du SCDSEO de 2017 sur la santé mentale et le bien-être

Le sondage

Réalisé tous les deux ans, depuis 1977, pour le Centre de toxicomanie et de santé mentale, le Sondage sur la consommation de drogues et la santé des élèves de l'Ontario (SCDSEO) est la plus ancienne étude canadienne menée en milieu scolaire auprès d'adolescents et l'une des plus anciennes au monde. Le cycle 2017 du SCDSEO marque le 40e anniversaire de sa création. Au total, 11 435 élèves de la 7e à la 12e année, répartis dans 52 conseils scolaires, 214 écoles et 764 classes de toute la province ont participé au sondage, qui a été administré par l'Institut de recherche sociale de l'Université York entre novembre 2016 et juin 2017.

Le rapport examine les indicateurs de santé physique et mentale et divers comportements à risque, dont l'intimidation, les jeux de hasard et d'argent et la pratique des jeux vidéo, ainsi que les problèmes associés. Il indique aussi les changements survenus depuis 1991, lorsque les données existent. Précisons que bien que le premier SCDSEO date de 1977, la plupart des indicateurs de santé mentale et physique ont été introduits au début des années 1990. Parmi les **nouveaux indicateurs** figurant dans le présent rapport, citons le soutien parental, le fait d'avoir eu un traumatisme crânien, d'avoir vécu un évènement traumatique (toutes catégories confondues), de se livrer à la cyberintimidation, de parier de l'argent à des jeux vidéo et de faire un usage problématique d'appareils électroniques. Toutes les données présentées découlent des réponses faites par les élèves à des questionnaires anonymes administrés en classe.

Vie familiale

- Un élève ontarien sur cinq (20 %) a déclaré habiter avec un seul parent ou ne pas avoir de parent ou tuteur parental (parent biologique, adoptif ou par alliance) et un élève sur sept (14 %) a déclaré répartir son temps entre deux foyers ou plus.

- Plus d'un tiers (39 %) des élèves ont déclaré qu'ils parlaient rarement à leurs parents de leurs problèmes ou de leurs sentiments ou qu'ils ne leur en parlaient jamais.

- Près de la moitié (43 %) des élèves du secondaire avaient un emploi à temps partiel et 5 % travaillaient plus de 20 heures par semaine.

Vie scolaire

- Près de la moitié (47 %) des élèves ont déclaré aimer « beaucoup » ou « assez » l'école. Un tiers (34 %) étaient plutôt tièdes et environ 19 % ont dit qu'ils ne l'aimaient « pas beaucoup » ou « pas du tout ».

➢ Le pourcentage d'élèves ayant déclaré aimer beaucoup ou assez l'école s'est considérablement accru depuis le début des années 1990, quand on a commencé à interroger les élèves à ce sujet.

- La majorité des élèves se sentent en sécurité à l'école, mais un élève sur huit (13 %) craint qu'on le menace ou qu'on lui fasse du mal.

- Un élève sur six (17 %) a déclaré avoir fait l'objet d'un renvoi temporaire ou définitif de l'école au moins une fois dans sa vie.

- Près d'un élève sur cinq (19 %) a déclaré avoir un statut social subjectif bas à l'école (sentiment d'être exclu et de ne pas être respecté par les autres élèves).

- Plus d'un quart (29 %) des élèves ont dit que leur santé mentale avait un impact très important ou important sur leurs résultats scolaires.

Santé physique

- La majorité des élèves (62 %) de la 7e à la 12e année se disent en excellente ou en très bonne santé, mais environ 9 % (ce qui correspond à un total estimatif de 78 200 élèves ontariens) jugent que leur état de santé n'est pas très bon ou qu'il est franchement mauvais.

➢ Les déclarations de santé physique « pas très bonne » ou « mauvaise » ont été stables au cours des dernières années, l'estimation actuelle étant similaire aux estimations du début des années 1990.

- Seulement un quart (23 %) des élèves avaient observé les *Directives canadiennes en matière de mouvement sur 24 heures* (moyenne d'au moins 60 minutes d'activité physique modérée à vigoureuse) au cours des sept derniers jours et environ un élève sur onze (9 %) n'avait fait aucune activité physique lors des sept derniers jours.

- Près de la moitié (45 %) des élèves ne faisaient aucune activité physique dans un cours d'éducation physique à l'école.

- Près des deux tiers (64 %) des élèves passaient au moins trois heures par jour de leur temps libre devant un écran électronique (« comportement sédentaire associé au temps d'écran »).

➢ Le pourcentage d'élèves ayant un comportement sédentaire associé au temps d'écran s'est accru de façon significative (57 % à 64 %) depuis 2009, année où cet indicateur a été introduit.

- Plus d'un quart (28 %) des élèves entrent dans les catégories « en surpoids » ou « obèses » (total estimatif de 236 000 élèves ontariens).

➢ Le pourcentage d'élèves considérés comme étant en surpoids ou obèses est stable depuis les dernières années, mais on a noté une augmentation significative (23 %) depuis 2007, année où cet indicateur a été introduit.

- Moins de la moitié (39 %) des élèves ont déclaré dormir huit heures ou plus, en moyenne, la veille des jours d'école. La plupart des élèves (61 %) dorment donc moins de huit heures par nuit.

- Environ 7 % des élèves (total estimatif de 60 000 élèves ontariens) ont déclaré qu'ils avaient toujours ou souvent faim quand ils se mettaient au lit ou qu'ils arrivaient à l'école.

➢ Entre 2015 et 2017, il y a eu une hausse faible mais significative (de 5 à 7 %) du pourcentage d'élèves ayant déclaré se coucher ou arriver à l'école sans avoir mangé à leur faim.

Image corporelle

- Près des deux tiers (64 %) des élèves se sont dits satisfaits de leur poids. Un quart des élèves (24 %) se trouvaient trop gros et un élève sur huit (12 %) se trouvait trop maigre.

- Le sentiment d'être en surpoids est resté stable au cours des dernières années, mais il y a eu une hausse significative (19 %) depuis 2001, année où cet indicateur a été introduit. Notons que ce sentiment a pris de l'ampleur chez les filles (de 24 % en 2001 à 31 % en 2017), mais pas chez les garçons.

- Un tiers des élèves (35 %) ont déclaré ne pas chercher à altérer leur poids, tandis que 29 % ont déclaré chercher à maigrir, 22 % ont déclaré vouloir éviter de grossir et 14 % ont déclaré vouloir prendre du poids.

Blessures et comportements connexes

- Près de la moitié (43 %) des élèves ont été soignés pour une blessure au moins une fois durant l'année écoulée (total estimatif de 345 700 élèves ontariens).

- Le pourcentage d'élèves ayant déclaré avoir reçu des soins médicaux pour une blessure est demeuré stable au cours des dernières années, mais il est significativement plus élevé (35 %) en 2017 qu'en 2003, année où cet indicateur a été introduit.

- Plus d'un tiers (36 %) des élèves ont déclaré avoir subi un traumatisme crânien au cours de leur vie et un élève sur sept (15 %) a déclaré en avoir subi un durant l'année écoulée (total estimatif de 130 700 élèves ontariens). Au nombre des causes précisées dans le questionnaire, la pratique de sports d'équipe, dont le hockey, figure parmi celles qui ont été le plus souvent signalées.

- Un quart (24 %) des élèves ont déclaré ne pas toujours porter de ceinture de sécurité lorsqu'ils étaient à bord d'un véhicule automobile (total estimatif de 199 500 élèves ontariens).

- Un tiers (33 %) des élèves de la 10e à la 12e année qui conduisaient ont déclaré avoir, au moins une fois durant l'année écoulée, envoyé des messages textes alors qu'ils étaient au volant. Ce pourcentage représente un total estimatif de 85 300 conducteurs adolescents en Ontario.

- Le pourcentage d'adolescents ayant déclaré avoir envoyé des messages textes alors qu'ils étaient au volant n'a pas changé de façon significative depuis 2013 (36 %), année où cet indicateur a été introduit.

- Environ 8 % des élèves ontariens de la 10e à la 12e année qui conduisaient (total estimatif de 22 000 conducteurs adolescents) ont déclaré que, durant l'année écoulée, ils avaient été impliqués au moins une fois dans une collision alors qu'ils étaient au volant.

Recours aux services de santé

Consultation d'un médecin

- Un tiers (34 %) des élèves n'ont pas consulté de médecin au sujet de leur santé physique, pas même pour un bilan de routine, durant l'année écoulée.

Consultation d'un professionnel de la santé mentale

- Un quart (25 %) des élèves ont consulté un professionnel de la santé mentale (médecin, infirmière ou conseiller) au moins une fois durant l'année écoulée, ce qui représente un total estimatif de 235 100 élèves ontariens.

- Le pourcentage d'élèves ayant déclaré avoir consulté un professionnel de la santé mentale est demeurée stable au cours des dernières années, mais il est actuellement significativement plus élevé (à 12 %) qu'en 1999, année où cet indicateur a été introduit.

Demande de soutien pour un problème de santé mentale

- Environ 3 % des élèves ont déclaré avoir, au moins une fois durant l'année écoulée, cherché du soutien en téléphonant à une ligne d'écoute ou en consultant Internet (total estimatif de 32 900 élèves ontariens).

- Près du tiers des élèves (31 %) ont déclaré avoir voulu parler d'un problème de santé mentale à quelqu'un durant l'année écoulée, sans savoir à qui s'adresser (total estimatif de de 299 800 élèves ontariens).

Usage de médicaments en raison de problèmes de santé

- Un élève sur six (18 %) a déclaré avoir pris des analgésiques opioïdes sur ordonnance (p. ex., Tylenol 3, Percocet) durant l'année écoulée, Pour cette même période, environ 3 % des élèves ont déclaré avoir pris un médicament qui leur avait été prescrit pour un THADA (trouble d'hyperactivité avec déficit de l'attention – p. ex., Ritalin, Adderall, Concerta). Et environ 4 % des élèves du secondaire ont dit avoir pris, en cours d'année, des calmants ou des tranquillisants sur ordonnance (p. ex., Valium, Ativan, Xanax).

➢ Le pourcentage d'élèves ayant déclaré avoir pris des analgésiques opioïdes qui leur avaient été prescrits par un médecin est demeuré stable au cours des dernières années, mais il a significativement baissé depuis 2007 (41 %), année où cet indicateur a été introduit. Le pourcentage d'élèves ayant déclaré avoir pris des médicaments qui leur avaient été prescrits pour un THADA n'a pas varié de façon significative depuis 2007, date où cet indicateur a été introduit. Le pourcentage d'élèves ayant déclaré avoir pris des calmants ou des tranquillisants sur ordonnance est demeuré stable depuis les années 1990.

- Environ 5 % des élèves du secondaire ont déclaré qu'on leur avait prescrit des médicaments pour l'anxiété, la dépression ou les deux durant l'année écoulée. Ce pourcentage représente un total estimatif de 37 600 élèves du secondaire en Ontario.

Santé mentale

Auto-évaluation de la santé mentale

- Si la majorité (54 %) des élèves ont qualifié leur santé mentale d'excellente ou de très bonne, près d'un élève sur cinq (19 %) a dit qu'elle n'était pas très bonne ou qu'elle était franchement mauvaise.

➢ Le pourcentage d'élèves qualifiant leur santé mentale de pas très bonne ou de mauvaise est actuellement nettement plus élevé qu'entre 2007 – année d'introduction de cet indicateur – et 2013 (entre 11 et 13 % environ).

Faible estime de soi

- Environ 7 % des élèves ont déclaré avoir une faible estime d'eux-mêmes (c.-à-d. être très insatisfaits d'eux-mêmes).

Niveau élevé de stress

- Environ 30 % des élèves ont déclaré avoir éprouvé un niveau élevé de stress ou de pression à un moment de leur vie.

Détresse

- Plus d'un tiers (39 %) des élèves ont signalé éprouver des niveaux de détresse allant de modérée à grave (symptômes d'anxiété et de dépression) et un élève sur six (17 %) a dit connaître un niveau de détresse grave (total estimatif de 159 400 élèves ontariens).

➢ Ces deux indicateurs de détresse sont demeurés stables entre 2015 et 2017, mais ils sont significativement plus élevés actuellement qu'en 2013, année où ils ont été introduits.

Évènement traumatique

- Environ un tiers (35 %) des élèves du secondaire ont déclaré avoir vécu un évènement traumatique ou négatif (non spécifié) au cours de leur vie, un pourcentage qui représente un total estimatif de 252 100 élèves du secondaire en Ontario.

Idées suicidaires et tentative de suicide

- Un élève sur sept (14 %) a déclaré avoir sérieusement envisagé le suicide durant l'année écoulée (total estimatif de 118 000 élèves ontariens) et 4 % des élèves ont signalé avoir fait une tentative de suicide au cours de la même période (total estimatif de 33 400 élèves ontariens).

➢ Le pourcentage d'élèves (11 %) ayant déclaré avoir eu des idées suicidaires est demeuré stable ces dernières années, et le pourcentage actuel est actuellement semblable à celui de 2001 (11 %), année où cet indicateur a été introduit. Quant au pourcentage d'élèves ayant déclaré avoir fait une tentative de suicide, il est resté inchangé au cours des années.

Symptômes de THADA

- Un élève sur cinq (20 %) a déclaré présenter des symptômes de THADA (p. ex., difficulté à s'organiser, à terminer des tâches et à se souvenir de ses obligations), ce qui représente un total estimatif de 186 000 élèves ontariens.

➢ Le pourcentage d'élèves ayant déclaré présenter des symptômes de THADA s'est significativement accru entre 2015 et 2017 (de 16 à 20 %).

Comportement antisocial et intimidation

Comportement antisocial

- Environ 7 % des élèves ont déclaré avoir eu un comportement antisocial (défini comme le fait de s'être livré à au moins trois comportements précisés sur neuf) durant l'année écoulée (total estimatif de 62 300 élèves ontariens).

➢ Le pourcentage d'élèves ayant déclaré se livrer à l'intimidation est actuellement significativement moindre qu'au début des années 1990.

Comportement violent

- Environ 5 % des élèves ont déclaré avoir agressé quelqu'un au moins une fois durant l'année écoulée, et un pourcentage similaire d'élèves (6 %) ont déclaré avoir porté une arme durant cette période (total estimatif de 50 500 élèves ontariens).

➢ Le pourcentage d'élèves ayant commis une agression et le pourcentage d'élèves ayant déclaré porter une arme ont tous deux accusé une baisse significative depuis le début des années 1990.

Violence à l'école

- Un élève sur neuf (11 %) a déclaré s'être bagarré à l'école au moins une fois durant l'année écoulée (total estimatif de 105 900 élèves ontariens).

- Environ 6 % des élèves ont été menacés ou blessés avec une arme à l'école au moins une fois durant l'année écoulée (total estimatif de 50 700 élèves ontariens).

- Ces deux indicateurs sont demeurés stables ces dernières années, mais on a enregistré une baisse significative depuis leur introduction, au début des années 2000.

Intimidation à l'école

- Un élève sur cinq (21 %) a déclaré avoir été victime d'intimidation à l'école depuis le début de l'année scolaire (total estimatif de 197 400 élèves ontariens). La principale forme d'intimidation subie à l'école est l'intimidation verbale (17 %), mais 2 % des élèves ont déclaré avoir surtout été victimes d'intimidation physique, et 2 % des élèves ont dit avoir été victimes de vol ou de vandalisme.

- Un élève sur neuf (11 %) a déclaré avoir intimidé d'autres élèves à l'école depuis le mois de septembre. La principale forme d'intimidation infligée était l'intimidation verbale (10 %), mais il y a aussi eu des agressions physiques (1 %) ainsi que des vols et du vandalisme (moins de 1 %).

- Le pourcentage d'élèves ayant déclaré avoir été victimes d'intimidation à l'école n'a pas significativement changé depuis le sondage de 2015. Toutefois, l'estimation actuelle est significativement inférieure à toutes les estimations faites entre 2003 (année où l'indicateur a été introduit) et 2013.

- De même, le pourcentage d'élèves ayant déclaré avoir intimidé d'autres élèves à l'école a été, en 2017, significativement inférieur à toutes les estimations faites entre 2003 et 2013.

Cyberintimidation

- Un élève sur cinq (21 %) a déclaré avoir été victime d'intimidation sur Internet durant l'année écoulée, ce qui représente un total estimatif de 191 600 élèves ontariens.

- Un élève sur dix (10 %) a déclaré avoir intimidé d'autres élèves sur Internet durant l'année écoulée.

- Le pourcentage d'élèves ayant déclaré avoir été victimes d'intimidation est demeuré stable depuis 2011 (22 %), année où cet indicateur a été introduit.

Jeux de hasard et d'argent, jeux vidéo et usage d'appareils électroniques

Jeux de hasard et d'argent

- Parmi les jeux de hasard et d'argent examinés lors du sondage de 2017, les plus courants étaient les paris relevant de la chance et les paris privés (12 %), suivis des paris mutuels sportifs (10 %). Les jeux de casino arrivaient en queue (moins de 1 %).

- Environ 8 % des élèves ont déclaré avoir parié de l'argent sur les résultats de jeux vidéo et environ 4 % des élèves ont déclaré avoir parié de l'argent sur Internet.

- Un tiers (31 %) des élèves ont déclaré avoir parié de l'argent dans le cadre d'une ou de plusieurs activités durant l'année écoulée (total estimatif de 258 300 élèves ontariens) et environ 2 % des élèves ont déclaré avoir parié de l'argent dans le cadre de cinq activités ou plus durant l'année écoulée (total estimatif de 19 200 élèves ontariens).

- Le pourcentage d'élèves ayant déclaré s'être adonnés à des jeux de hasard et d'argent durant l'année écoulée est demeuré stable ces dernières années, mais il est actuellement significativement inférieur à l'estimation de 2003 (57 %), quand l'indicateur a été introduit. Le pourcentage actuel d'élèves s'adonnant à plusieurs jeux est lui aussi significativement inférieur à ce qu'il était en 2003 (6 %).

➢ Le pourcentage d'élèves ayant déclaré avoir parié de l'argent sur Internet est demeuré stable depuis 2003.

Problèmes liés aux jeux de hasard et d'argent

- Environ 7 % des élèves du secondaire ont signalé des symptômes d'un problème de jeu modéré à modérément grave, tandis qu'environ 2 % ont signalé des symptômes d'un grave problème de jeu (total estimatif de 12 200 élèves du secondaire en Ontario).

Jeux vidéo

- Un quart (23 %) des élèves s'adonnent à des jeux vidéo tous les jours ou presque. Et un élève sur dix (9 %) consacre au moins cinq heures par jour à la pratique des jeux vidéo.

- Un élève sur huit (12 %, soit un total estimatif de 107 200 élèves ontariens) a signalé des symptômes de jeu vidéo problématique (obsession, tolérance, perte de contrôle, symptômes de sevrage, fuite de la réalité, indifférence quant aux conséquences, ennuis au foyer et à l'école).

➢ Le pourcentage d'élèves ayant déclaré présenter des symptômes de jeu vidéo problématique est demeuré stable ces dernières années, et l'estimation actuelle est similaire à celle de 2007 (9 %), l'année où cet indicateur a été introduit.

Usage des technologies

- La majorité (86 %) des élèves visitent tous les jours des sites de médias sociaux et un élève sur cinq (20 %) passe cinq heures par jour ou plus sur les médias sociaux.

➢ Le pourcentage d'élèves ayant déclaré passer cinq heures par jour ou plus sur les médias sociaux est significativement plus élevé en 2017 qu'en 2015 (16%) et en 2013 (11%), l'année où cet indicateur a été introduit.

- Plus d'un tiers (30 %) des élèves du secondaire ont déclaré passer cinq heures ou plus de leur temps libre par jour sur des appareils électroniques (téléphones intelligents, tablettes, ordinateurs ou ordinateurs portatifs, consoles de jeux).

- Environ un élève du secondaire sur six (18 %) a signalé des symptômes semblant indiquer un usage problématique des technologies modéré à grave (obsession, perte de contrôle, symptômes de sevrage, problèmes avec la famille et les amis). Environ 5 % des élèves du secondaire signalent des symptômes semblant indiquer un grave problème d'usage des technologies (total estimatif de 33 300 élèves du secondaire en Ontario).

Problèmes concomitants

- Près de la moitié (48 %) des élèves du secondaire ont déclaré n'avoir aucun des quatre problèmes suivants : état de détresse, comportement antisocial, consommation dangereuse ou nocive d'alcool, trouble lié à l'usage de drogues. Environ 36 % des élèves du secondaire ont déclaré avoir un de ces problèmes; environ 10 % ont dit en avoir deux; 4 % ont dit en avoir trois, et 2 % ont dit avoir les quatre problèmes à la fois.

Variations selon le sexe

- En matière de santé mentale et de bien-être, il existe de nombreuses différences entre les garçons et les filles. Les garçons ont été significativement plus nombreux que les filles à déclarer :
  - faire de l'activité physique tous les jours;
  - dormir au moins huit heures par nuit;

- souhaiter prendre du poids;
- prendre des médicaments pour un THADA à des fins médicales;
- avoir un comportement antisocial;
- porter une arme;
- se bagarrer à l'école;
- s'être fait menacer ou blesser à l'école;
- parier de l'argent;
- jouer tous les jours à des jeux vidéo (ils y passent plus d'heures que les filles);
- avoir des symptômes indiquant un usage problématique des jeux vidéo.

- Les filles ont été significativement plus nombreuses que les garçons à déclarer :
  - avoir un état de santé physique pas très bon ou mauvais;
  - être physiquement inactives;
  - se trouver en surpoids;
  - vouloir perdre du poids;
  - prendre des analgésiques opioïdes à des fins médicales;
  - rechercher du counseling pour des problèmes de santé mentale;
  - avoir un besoin de soutien non satisfait en matière de santé mentale;
  - prendre des tranquillisants à des fins médicales;
  - prendre sur ordonnance des anxiolytiques ou des antidépresseurs;
  - avoir un état de santé mentale pas très bon ou mauvais;
  - avoir une faible estime de soi;
  - éprouver un degré élevé de stress;
  - avoir des symptômes de détresse;
  - avoir connu un évènement traumatique;
  - avoir des idées suicidaires ou avoir fait une tentative de suicide;
  - avoir des symptômes de THADA;
  - craindre d'être blessées ou menacées à l'école;
  - être victimes d'intimidation à l'école;
  - être victimes de cyberintimidation;
  - passer de nombreuses heures par jour sur les médias sociaux;
  - passer plus d'heures par jour sur des appareils électroniques.
  - avoir des symptômes d'usage problématique d'appareils électroniques.

Variations selon l'année d'études

- L'année d'études est elle aussi significativement liée à la santé mentale et au bien-être. De façon générale, les indicateurs d'une santé médiocre (p. ex., inactivité, comportement sédentaire) et les comportements à risque pour la santé (p. ex., ne pas porter de ceinture de sécurité ou d'envoyer des messages textes en conduisant), les problèmes de santé mentale (p. ex., auto-évaluation de sa santé mentale comme mauvaise ou très mauvaise, stress, état de détresse), l'usage excessif des médias sociaux et des appareils électroniques et les problèmes associés augmentent significativement au fil des années. À l'inverse, l'activité physique quotidienne, les traumatismes crâniens, huit heures de sommeil au moins par nuit, la pratique de l'intimidation et les bagarres à l'école sont des comportements plus répandus chez les jeunes élèves, et ils diminuent vers la fin de l'adolescence.

Différences régionales

Aux fins du sondage, la province a été divisée en quatre régions : la région du grand Toronto (Toronto et régions de Durham, York, Peel et Halton), le Nord de l'Ontario (districts de Parry Sound et 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 et régions situées plus à l'est).

On a relevé les différences suivantes entre les régions :

- Comparativement à la moyenne provinciale, les élèves de la **région du grand Toronto** ont été significativement *plus nombreux* à déclarer être physiquement inactifs, présenter des symptômes indiquant un usage problématique des jeux vidéo et faire un usage problématique des technologies. À l'inverse, toujours comparativement à la moyenne provinciale, ils ont été significativement *moins nombreux* à déclarer observer les *Directives canadiennes en matière de mouvement sur 24 heures*, dormir huit heures ou plus, en moyenne, la veille des jours d'école, avoir subi un traumatisme crânien durant l'année écoulée et avoir pris des anxiolytiques ou des antidépresseurs sur ordonnance, ainsi qu'à juger que leur santé mentale n'était pas très bonne ou qu'elle était franchement mauvaise.

- Comparativement à la moyenne provinciale, les élèves du **Nord de l'Ontario** ont été *plus nombreux* à déclarer dormir huit heures ou plus, en moyenne, la veille des jours d'école, et à prendre des anxiolytiques ou des antidépresseurs sur ordonnance.

- Comparativement à la moyenne provinciale, les élèves de l'**Ouest de l'Ontario** ont été *plus nombreux* à déclarer avoir subi un traumatisme crânien durant l'année écoulée, à avoir été victimes de cyberintimidation et à avoir envoyé des messages textes alors qu'ils étaient au volant, ainsi qu'à juger que leur santé mentale n'était pas très bonne ou qu'elle était franchement mauvaise.

- Comparativement à la moyenne provinciale, les élèves de l'**Est de l'Ontario** ont été *plus nombreux* à déclarer avoir observé les *Directives canadiennes en matière de mouvement sur 24 heures* et à avoir subi un traumatisme crânien durant l'année écoulée. À l'inverse, toujours comparativement à la moyenne provinciale, ils ont été significativement *moins nombreux* à déclarer s'être livrés à l'intimidation à l'école, avoir été victimes de cyberintimidation et présenter des symptômes de jeu vidéo problématique.

Le rapport contient également un aperçu des résultats par réseau local d'intégration des services de santé (RLISS) de l'Ontario.

Pourcentages relatifs à certains indicateurs de la santé mentale et du bien-être des élèves de l'Ontario, ventilés par sexe – SCDSEO 2017 (7e à 12e année)

Indicateur	Total %	(IC à 95%)	Nombre estimatif†	Garçons %	Filles %	
santé physique jugée pas très bonne ou mauvaise	**8,7**	(7,7-9,7)	78 200	6,6	10,9	*
activité physique (60 min/jour durant les 7 derniers jours)	**23,0**	(21,7-24,4)	207 000	29,5	16,2	*
inactivité physique (durant chacun des 7 derniers jours)	**8,9**	(7,8-10,2)	80 300	6,7	11,4	*
comportement sédentaire (≥ 3 h/jour devant un écran)	**64,2**	(61,8-66,5)	539 100	63,4	65,1	
excès de poids ou obésité	**28,0**	(26,1-29,9)	236 000	29,8	26,0	
≥ 8 h de sommeil en moyenne, la veille des jours d'école	**39,2**	(37,1-41,3)	349 400	42,2	35,9	*
toujours ou souvent se coucher ou arriver à l'école en ayant faim	**6,7**	(5,9-7,7)	60 000	7,1	6,3	
soins médicaux pour une blessure (an écoulé)	**42,5**	(39,9-45,2)	345 700	43,2	41,8	
traumatisme crânien (an écoulé)	**14,8**	(13,7-16,0)	130 700	15,4	14,2	
usage médical d'analgésiques opioïdes (an écoulé)	**17,6**	(15,6-19,9)	148 800	15,9	19,5	*
usage non systématique de la ceinture en auto	**23,7**	(21,4-26,1)	199 500	22,8	24,6	
textos au volant (avec permis, 10e-12e, an écoulé)	**32,5**	(29,0-36,2)	85 300	32,8	32,2	
consultation de santé mentale (an écoulé)	**24,5**	(22,0-27,3)	235 100	22,0	27,2	
recherche de counseling (téléphone/Internet, an écoulé)	**3,4**	(2,3-5,1)	32 900	2,1	4,8	*
soutien en santé mentale non obtenu	**31,2**	(27,5-35,2)	299 800	20,9	42,2	*
usage médical de tranquillisants/sédatifs (an écoulé)††	**3,6**	(2,8-4,6)	23 700	2,6	4,7	*
usage médical de médicament pour THADA (an écoulé)	**2,9**	(2,1-4,1)	28 300	4,2	1,6	*
prescription d'antidépresseurs/anxiolytiques††	**5,2**	(4,2-6,6)	37 600	3,0	7,6	*
santé mentale jugée pas très bonne ou mauvaise	**18,8**	(17,2-20,5)	180 900	11,9	26,2	*
faible estime de soi	**6,5**	(5,5-7,7)	61 400	4,5	8,6	*
degré élevé de stress	**30,4**	(27,7-33,3)	289 900	20,0	41,5	*
état de détresse modéré ou grave (mois écoulé)	**38,7**	(34,9-42,6)	361 300	26,8	51,3	*
état de détresse grave (mois écoulé)	**17,1**	(14,9-19,4)	159 400	9,1	25,5	*
subir un évènement traumatique (sur toute la vie)††	**35,2**	(32,8-37,7)	252 100	27,7	43,0	*
idées suicidaires (an écoulé)	**13,6**	(12,4-15,0)	118 000	8,5	19,0	*
tentative de suicide (an écoulé)	**3,9**	(3,0-4,9)	33 400	2,5	5,3	*
symptômes de THADA (6 derniers mois)	**20,1**	(18,2-22,2)	186 000	16,5	24,0	*
comportement antisocial (≥ 3 actes / 9, an écoulé)	**6,9**	(5,8-8,1)	62 300	8,7	5,0	*
port d'arme (an écoulé)	**5,7**	(4,2-7,5)	50 500	8,6	2,7	*
bagarre à l'école (an écoulé)	**11,4**	(9,7-13,3)	105 900	16,8	5,6	*
blessure/menace armée subie (école, an écoulé)	**5,5**	(4,5-6,6)	50 700	7,7	3,2	*
crainte d'être blessé ou menacé à l'école	**13,0**	(11,3-14,8)	123 900	10,7	15,4	*
intimidation subie à l'école (depuis septembre)	**21,0**	(19,3-22,9)	197 400	17,7	24,5	*
intimidation infligée à l'école (depuis septembre)	**11,1**	(10,0-12,4)	104 100	12,0	10,2	
cyberintimidation subie (an écoulé)	**20,5**	(18,8-22,3)	191 600	16,4	24,9	*
cyberintimidation infligée (an écoulé)	**9,7**	(8,3-11,3)	100 100	9,7	9,7	
tout jeu de hasard et d'argent (an écoulé)	**31,3**	(29,5-33,2)	285 300	37,8	24,6	*
tout jeu de hasard et d'argent en ligne (an écoulé)	**3,5**	(2,6-4,6)	31 500	5,1	s	
plusieurs jeux de hasard et d'argent (≥ 5 jeux, an écoulé)	**2,1**	(1,4-3,2)	19 200	2,9	s	
grave problème lié aux jeux de hasard et d'argent (3 derniers mois)††	**1,8**	(1,4-2,2)	12 200	2,5	s	
pratique problématique de jeux vidéo (an écoulé)	**11,7**	(9,5-14,2)	107 200	16,6	6,5	*
≥ 5 h/jour passées sur les médias sociaux	**20,1**	(17,4-23,1)	194 300	14,9	25,8	*
usage problématique des technologies (très grave) ††	**4,9**	(3,3-7,2)	33 300	3,2	6,6	*
présence de 3 ou de tous les 4 problèmes concomitants††	**5,7**	(4,7-6,9)	41 500	5,9	5,5	

Nota : échantillon de 11 435 élèves; certaines estimations reposant sur un demi-échantillon aléatoire; IC = intervalle de confiance; † nombre estimatif d'élèves, calculé à partir d'une population de 917 800 élèves ontariens (arrondi au nombre entier inférieur, 7e - 12e années); * différence significative entre les sexes (p < 0,05) sans égard aux autres facteurs; †† 9e à 12e année uniquement; prescription = médicaments prescrits et pris; « problèmes concomitants » renvoie à 4 problèmes : détresse, comportement antisocial, consommation dangereuse ou nocive d'alcool et problème de drogue.

Pourcentages relatifs à certains indicateurs de la santé mentale et du bien-être des élèves de l'Ontario, ventilés par année d'études – SCDSEO 2017 (7e à 12e année)

Indicateur	7e	8e	9e	10e	11e	12e	
santé physique jugée pas très bonne ou mauvaise	4,7	5,3	8,1	9,4	10,0	11,7	*
activité physique (60 min/jour durant les 7 derniers jours)	31,9	29,9	28,8	21,6	18,3	14,4	*
inactivité physique (durant chacun des 7 derniers jours)	5,0	3,5	6,3	7,1	12,3	15,0	*
comportement sédentaire (≥ 3 h/jour devant un écran)	53,2	59,8	61,2	69,0	66,4	69,5	*
excès de poids ou obésité	21,9	25,7	26,1	29,7	33,7	28,1	*
≥ 8 h de sommeil en moyenne, la veille des jours d'école	72,3	60,8	41,8	30,4	26,5	21,1	*
toujours ou souvent se coucher ou arriver à l'école en ayant faim	5,5	5,3	6,7	8,9	5,5	7,6	
soins médicaux pour une blessure (an écoulé)	41,8	42,5	46,4	43,2	46,9	36,7	
traumatisme crânien (an écoulé)	16,2	22,0	12,3	13,7	14,1	12,8	*
usage médical d'analgésiques opioïdes (an écoulé)	12,1	12,0	13,1	20,0	23,5	22,5	*
usage non systématique de la ceinture en auto	18,8	14,6	25,1	28,3	31,2	23,9	*
textos au volant (avec permis, 10e-12e, an écoulé)	--	--	--	s	18,1	42,6	*
consultation de santé mentale (an écoulé)	28,9	28,7	24,2	22,5	22,1	23,6	
recherche de counseling (téléphone/Internet, an écoulé)	2,1	2,8	s	3,9	1,6	4,3	
soutien en santé mentale non obtenu	25,5	24,0	30,7	29,5	32,9	38,3	*
usage médical de tranquillisants/sédatifs (an écoulé)††	--	--	3,2	3,2	4,6	3,4	
usage médical de médicament pour THADA (an écoulé)	4,7	2,8	2,4	s	3,0	1,8	
prescription d'antidépresseurs/anxiolytiques††	--	--	4,5	2,6	4,0	8,6	*
santé mentale jugée pas très bonne ou mauvaise	8,9	11,4	17,5	21,8	20,0	26,0	*
faible estime de soi	4,8	4,2	7,7	6,8	6,6	7,4	
degré élevé de stress	14,9	17,1	25,3	35,5	40,9	37,8	*
état de détresse modéré ou grave (mois écoulé)	24,9	32,8	31,2	39,9	46,8	47,0	*
état de détresse grave (mois écoulé)	9,4	12,0	15,0	17,9	19,8	22,4	*
subir un évènement traumatique (sur toute la vie)	--	--	30,6	31,9	32,6	42,9	*
idées suicidaires (an écoulé)	8,9	11,7	14,7	14,3	11,0	17,5	
tentative de suicide (an écoulé)	s	2,9	4,4	4,9	1,9	5,4	*
symptômes de THADA (6 derniers mois)	16,2	12,7	17,3	19,9	24,0	25,1	*
comportement antisocial (≥ 3 actes / 9, an écoulé)	4,2	6,6	4,5	8,4	7,6	8,3	
port d'arme (an écoulé)	4,5	3,9	5,5	6,7	6,5	5,8	
bagarre à l'école (an écoulé)	20,5	16,9	14,4	8,2	9,6	5,3	*
blessure/menace armée subie (école, an écoulé)	6,2	6,9	5,1	7,2	3,5	4,9	
crainte d'être blessé ou menacé à l'école	14,3	16,6	16,6	11,7	8,4	12,1	
intimidation subie à l'école (depuis septembre)	27,4	28,8	22,7	20,6	18,3	15,0	*
intimidation infligée à l'école (depuis septembre)	11,1	13,2	12,6	11,3	8,8	10,7	
cyberintimidation subie (an écoulé)	21,7	22,1	24,7	19,9	20,9	16,3	
cyberintimidation infligée (an écoulé)	9,8	9,2	9,3	11,3	10,0	8,7	
tout jeu de hasard et d'argent (an écoulé)	27,2	29,4	28,1	31,1	32,3	36,2	
tout jeu de hasard et d'argent en ligne (an écoulé)	2,6	3,1	3,1	4,0	s	2,8	
plusieurs jeux de hasard et d'argent (≥ 5 jeux, an écoulé)	s	s	s	s	s	s	
grave problème lié aux jeux de hasard et d'argent (3 derniers mois)††	--	--	s	s	s	s	
pratique problématique de jeux vidéo (an écoulé)	11,2	10,8	9,6	11,1	16,4	10,7	
≥ 5 h/jour passées sur les médias sociaux	11,5	15,0	22,9	20,6	24,2	22,1	*
usage problématique des technologies (très grave) ††	--	--	3,6	4,5	s	3,2	
présence de 3 ou de tous les 4 problèmes concomitants††	--	--	1,3	6,0	5,1	9,1	*

Nota : * différence significative entre les années (p < 0,05) sans égard aux autres facteurs; « s » indique qu'une estimation a été supprimée parce que non fiable; ††élèves de la 9e à la 12e année uniquement; prescription = médicaments prescrits et pris; « problèmes concomitants » renvoie à 4 problèmes : état de détresse, comportement antisocial, consommation dangereuse ou nocive d'alcool et problème de drogue.

Pourcentages relatifs à des indicateurs choisis de la santé mentale et du bien-être des élèves de l'Ontario, ventilés par région – SCDSEO 2017 (7e à 12e année)

Indicateur	RGT	Nord	Ouest	Est	
santé physique jugée pas très bonne ou mauvaise	9,0	8,7	8,9	7,7	
activité physique (60 min/jour durant les 7 derniers jours)	20,6	24,6	24,4	26,4	*
inactivité physique (durant chacun des 7 derniers jours)	10,4	8,2	7,0	8,4	*
comportement sédentaire (≥ 3 h/jour devant un écran)	66,0	58,0	63,7	62,3	
excès de poids ou obésité	27,6	31,3	29,7	25,2	
≥ 8 h de sommeil en moyenne, la veille des jours d'école	36,5	45,5	42,7	38,5	*
toujours ou souvent se coucher ou arriver à l'école en ayant faim	7,8	7,9	5,5	5,6	
soins médicaux pour une blessure (an écoulé)	41,0	47,1	46,0	38,2	
traumatisme crânien (an écoulé)	11,5	14,4	18,1	18,0	*
usage médical d'analgésiques opioïdes (an écoulé)	18,7	17,6	18,6	14,6	
usage non systématique de la ceinture en auto	24,5	17,5	25,1	21,4	
textos au volant (avec permis, 10e-12e, an écoulé)	28,7	30,7	39,8	26,3	*
consultation de santé mentale (an écoulé)	24,3	32,8	24,7	22,4	
recherche de counseling (téléphone/Internet, an écoulé)	s	3,9	3,6	2,3	
soutien en santé mentale non obtenu	32,2	26,4	31,7	29,2	
prescription de tranquillisants/sédatifs (an écoulé)††	3,6	4,6	3,3	3,7	
usage médical de médicament pour THADA (an écoulé)	2,4	4,0	3,7	s	
usage médical d'antidépresseurs/anxiolytiques††	3,3	11,6	7,7	6,1	*
santé mentale jugée pas très bonne ou mauvaise	16,9	22,6	23,2	17,7	*
faible estime de soi	5,9	5,0	8,9	5,4	
degré élevé de stress	30,9	32,3	31,1	27,7	
état de détresse modéré ou grave (mois écoulé)	40,2	36,5	39,2	34,3	
état de détresse grave (mois écoulé)	17,4	16,6	18,7	14,0	
subir un évènement traumatique (sur toute la vie)	34,9	35,8	38,1	32,5	
idées suicidaires (an écoulé)	14,2	12,4	14,8	11,1	
tentative de suicide (an écoulé)	4,0	4,9	3,9	3,1	
symptômes de THADA (6 derniers mois)	20,4	16,5	19,5	21,4	
comportement antisocial (≥ 3 actes / 9, an écoulé)	7,8	5,8	6,1	5,6	
port d'arme (an écoulé)	6,0	4,6	6,8	3,5	
bagarre à l'école (an écoulé)	12,1	11,3	11,3	9,1	
blessure/menace armée subie (école, an écoulé)	5,5	3,4	6,8	4,1	
crainte d'être blessé ou menacé à l'école	12,5	9,8	13,9	14,0	
intimidation subie à l'école (depuis septembre)	18,9	21,9	25,3	21,1	
intimidation infligée à l'école (depuis septembre)	12,2	10,4	11,3	7,8	*
cyberintimidation subie (an écoulé)	20,0	23,0	23,8	16,9	*
cyberintimidation infligée (an écoulé)	10,3	9,5	10,0	7,3	
tout jeu de hasard et d'argent (an écoulé)	31,3	33,0	32,1	29,7	
tout jeu de hasard et d'argent en ligne (an écoulé)	3,8	5,2	3,5	1,7	
plusieurs jeux de hasard et d'argent (≥ 5, an écoulé)	s	s	s	s	
grave problème lié aux jeux de hasard et d'argent (3 derniers mois)††	s	s	s	s	
pratique problématique de jeux vidéo (an écoulé)	13,5	10,4	11,3	7,0	*
≥ 5 h/jour passées sur les médias sociaux	21,8	18,8	19,4	16,6	
usage problématique des technologies (très grave) ††	7,1	2,7	2,9	1,6	*
présence de 3 ou de tous les 4 problèmes concomitants ††	5,1	8,0	7,1	5,1	

Nota : RGT = région du grand Toronto; * différence significative entre les régions ($p < 0,05$) sans égard aux autres facteurs; « s » indique qu'une estimation a été supprimée parce que non fiable; †† élèves de la 9e à la 12e année uniquement; prescription = médicaments prescrits et pris; « problèmes concomitants » renvoie à 4 problèmes : état de détresse, comportement antisocial, consommation dangereuse ou nocive d'alcool et problème de drogue.

Aperçu des tendances relativement à certains indicateurs de la santé mentale et du bien-être dans l'ensemble de l'échantillon d'élèves – SCDSEO 2017

Indicateur (% d'élèves)	Années	Période	Changement
santé physique jugée pas très bonne ou mauvaise	7e, 9e, 11e	1991-2017	Stable
activité physique quotidienne (60 min/jour)	7e à 12e	2009-2017	Stable
comportement sédentaire (≥ 3 h/jour devant un écran)	7e à 12e	2009-2017	En hausse : 57 % à 64 %
excès de poids ou obésité	7e à 12e	2009-2017	En hausse : 23 % à 28 %
soins médicaux pour une blessure	7e à 12e	2003-2017	En hausse : 35 % à 43 %
usage médical d'analgésiques opioïdes	7e à 12e	2007-2017	En baisse : 41 % à 18 %
envoi de textos au volant (10e-12e, avec permis)	10e à 12e	2013-2017	Stable
≥ 1 consultation de santé mentale (an écoulé)	7e à 12e	1999-2017	En hausse : 12 % à 25 %
usage médical de médicaments pour THADA	7e à 12e	2007-2017	Stable
prescription d'antidépresseurs ou d'anxiolytiques	9e à 12e	2001-2017	Stable
santé mentale jugée pas très bonne ou mauvaise	7e à 12e	2007-2017	En hausse : 11 % à 19 %
état de détresse modéré ou grave	7e à 12e	2013-2017	En hausse : 24 % à 39 %
état de détresse grave	7e à 12e	2013-2017	En hausse : 11 % à 17 %
idées suicidaires (an écoulé)	7e à 12e	2001-2017	Stable
tentative de suicide (an écoulé)	7e à 12e	2007-2017	Stable
comportement antisocial (an écoulé)	7e, 9e, 11e	1993-2017	En baisse : 16 % à 6 %
port d'arme (an écoulé)	7e, 9e, 11e	1993-2017	En baisse : 16 % à 6 %
bagarre à l'école (an écoulé)	7e à 12e	2001-2017	En baisse : 17 % à 11 %
blessure ou menace armée subie à l'école	7e à 12e	2003-2017	En baisse : 8 % à 6 %
crainte d'être blessé ou menacé à l'école	7e à 12e	1999-2017	Stable
intimidation subie à l'école (depuis septembre)	7e à 12e	2003-2017	En baisse : 33 % à 21 %
cyberintimidation subie (an écoulé)	7e à 12e	2011-2017	Stable
tout jeu de hasard et d'argent (an écoulé)	7e-12e	2003-2017	En baisse : 57 % à 31 %
jeux de hasard et d'argent en ligne (an écoulé)	7e à 12e	2003-2017	Stable
pratique problématique de jeux vidéo (an écoulé)	7e à 12e	2007-2017	Stable
≥ 5 h/jour passées sur les médias sociaux	7e à 12e	2013-2017	En baisse : 11 % à 20 %

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

Méthodologie

Créé en 1977, le Sondage sur la consommation de drogues et la santé des élèves de l'Ontario (SCDSEO) du Centre de toxicomanie et de santé mentale est une enquête menée tous les deux ans à l'échelle de l'Ontario auprès d'élèves des 7e et 8e années (niveau élémentaire) et d'élèves de la 9e à la 12e année (niveau secondaire). L'enquête de 2017, qui utilisait un plan d'échantillonnage stratifié (par région, puis par niveau d'études) à deux degrés (école et classe), a été conduite auprès de 11 435 élèves de la 7e à la 12e année, répartis dans 52 conseils scolaires de langue anglaise et de langue française (publics et catholiques), 214 écoles et 764 classes. Les écoles des bases militaires, des communautés des Premières Nations, des hôpitaux et d'autres institutions, ainsi que les écoles privées ont été exclues de l'échantillonnage, de même que les classes d'éducation spécialisée et les classes d'anglais langue seconde (ALS).

Avant la tenue du Sondage, il a été demandé aux parents de remplir des formulaires de consentement éclairé. Afin de favoriser l'anonymat, des questionnaires crayon-papier ont été distribués aux élèves. Ces questionnaires, qui ont été administrés entre novembre 2016 et juin 2017 par du personnel de l'Institut de recherche sociale de l'Université York, ont été remplis en salle de classe durant les heures de cours. Les élèves des écoles de langue française ont rempli des questionnaires en français. Environ 61 % des écoles choisies de façon aléatoire, ainsi que 94 % des classes sélectionnées et 61 % des élèves admissibles de ces classes ont été retenus aux fins du sondage. L'échantillon total de 11 435 élèves pour 2017 est représentatif de près d'un million d'élèves des écoles financées par les fonds publics de l'Ontario, de la 7e à la 12e année.

Pour les rapports et la FAQ, veuillez visiter la page Web du SCDSEO :

www.camh.ca/osduhs

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Table of Contents

List of Tables

Text Tables

Appendix Tables

List of Figures

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 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 good chance of becoming 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. Physical inactivity, sedentary behaviour, unhealthy weight, poor diet, and lack of sleep 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 (Cali & Caprio, 2008; Sawyer et al., 2012; Singh, Mulder, Twisk, van Mechelen, & Chinapaw, 2008). Further, poor physical health is associated with concurrent negative school experiences, lower academic performance, and poor mental health (Busch et al., 2014; Farhat, Iannotti, & Simons-Morton, 2010; Ortega, Ruiz, Castillo, & Sjöström, 2008; Zametkin, Zoon, Klein, & Munson, 2004). Conversely, a healthy lifestyle that includes regular physical activity offers short-term physical and mental health benefits, such as improved fitness and weight reduction, reduced stress, reduced risk of depression, improved self-esteem, and improved academic performance (Carson et al., 2016; Faulkner et al., 2007; Janssen & LeBlanc, 2010; Petty, Davis, Tkacz, Young-Hyman, & Waller, 2009; Strong et al., 2005).

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, 2017). 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). Mild traumatic brain injury or concussion is gaining greater public awareness as a serious problem that not only has cognitive and physical adverse consequences, but also emotional and behavioural. In adolescence, concussion has been associated with academic problems, mental health problems, and behavioural problems (Ellis et al., 2015; Ilie, Boak, Adlaf, Asbridge, & Cusimano, 2013; Ilie et al., 2014; Ransom et al., 2015; Rosema, Crowe, & Anderson, 2012). The effects can last well into adulthood, negatively affecting quality of life (Anderson, Brown, Newitt, & Hoile, 2011; Rosema et al., 2015).

Mental Health

The past decade has seen increased attention paid to 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]

Adolescence is a critical juncture for mental health for various reasons. Significant life transitions occur during adolescence, such as puberty, entering and exiting high school, transitioning from school-to-work for some, and for most adolescents 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 (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). 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 (Kessler et al., 2005b; Merikangas et al., 2010; Offord, 1995; Offord et al., 1996; Romano, Tremblay, Vitaro, Zoccolillo, & Pagani, 2001;). 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; Statistics Canada, 2017). 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).

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 between 2006 and 2011 in mental health-related emergency department visits and hospitalizations among children and youth (Gandhi et al., 2016).
- A recent Canadian study showed the suicide rate for adolescents in the Prairies and the Atlantic provinces increased between 2001 and 2012, and the Ontario rate showed a nonsignificant upward trend (Renaud et al., 2018).
- In the U.S., the suicide rate increased between 1999 and 2016 for all age groups, including children and adolescents (Stone et al., 2018). The rate among adolescents, especially females, shows a sharp increase since 2007 (Curtin, Hedegaard, Minino, Warner, & Simon, 2017).
- In the U.S., emergency department visits for self-inflicted injuries increased between 2009 and 2015 among female adolescents (Mercado, Holland, Leemis, Stone, & Wang, 2017).
- Survey data in the U.S. show significant increases between 2010 and 2015 in self-reported depressive symptoms and suicidal outcomes among middle and high school students, especially among female students (Twenge, Joiner, Rogers, & Martin, 2018).

[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).

- Other survey data in the U.S. show a significant increase in self-reported major depressive episodes between 2005 and 2014 among adolescents and young adults (Mojtabai, Olfson, & Han, 2016).
- 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).
- In the U.S., researchers found generational increases in psychopathological symptoms between the 1950s and the early 2000s, suggesting cultural shifts as a possible reason (Twenge et al., 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)

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 relationships with family and peers. 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. Family factors such as structure, parental support and open communication have been associated with better mental and physical health (Currie et al., 2008; Mohanty & Ullah, 2012; Paxton, Valois, & Drane, 2007; Viner et al., 2012). School climate and school connectedness are other influential factors in adolescents' lives. Research has shown that a strong bond and positive engagement with school staff and other students is linked with positive mental health and a reduced likelihood of engaging in risk behaviours (Aldridge & McChesney, 2018; Bond et al., 2007; Faulkner, Adlaf, Irving, Allison, & Dwyer, 2009; Hall-Lande, Eisenberg, Christenson, & Neumark-Sztainer, 2007; Henry, Knight, & Thornberry, 2012; Marraccini & Brier, 2017; Rasberry et al., 2017; Viner et al., 2012).

More recently, various 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 face-to-face social interactions (de Vries, Peter, de Graaf, & Nikken, 2016; O'Keeffe & Clarke-Pearson,

2011; Perren, Dooley, Shaw, & Cross, 2010; Spies Shapiro & Margolin, 2014; Twenge, Joiner, Rogers, & Martin, 2018; Twenge, Martin, & Campbell, 2018). 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).

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 roles[2] (Moffitt, 1993). Nonetheless, for a minority, these risk behaviours are the catalyst for shaping one's life-course trajectory leading to problems in adulthood.

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; Geoffroy et al., 2018; Gini & Pozzoli, 2013; 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 despite the fact that minors are prohibited from legalized gambling (Hardoon & Derevensky, 2002; Volberg, Gupta, Griffiths, Olason, & Delfabbro, 2011). More worrisome is that estimates 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). 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 increases in 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). 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).

[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).

Problematic technology use (also referred to as problematic Internet use or electronic device use), is a relatively new field of study that has attracted much scholarly and media attention particularly in regards to young people. Generally speaking, problematic technology use (PTU) can be characterized by excessive use of, and poorly controlled preoccupation with, devices (such as smartphones or tablets/laptops that are typically connected to the Internet) which negatively interferes with one's life. The activities can include social networking, texting, gaming or watching gaming, gambling, shopping, watching videos, or browsing the Internet. In adolescents PTU has been associated with problems in other domains such as family and school, poorer physical health, sleep disturbance, and poorer mental health (Anderson, Steen, & Stavropoulos, 2017; Hoare, Milton, Foster, & Allender, 2017; Kraut et al., 1998; Pontes, Kuss, & Griffiths, 2015; Twenge, Joiner, Rogers, & Martin, 2018).

Coexisting Problems

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. 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 problems (e.g., conduct problems) and internalizing problems (e.g., 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). 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.

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

Adolescent health is now recognized as a priority for health researchers, health service providers, educators, and policy makers around the world (Gates, 2016; World Health Organization, 2014). As highlighted in the Lancet Commission on adolescent health and well-being: "Non-communicable diseases of adolescents including mental and substance use disorders, and chronic physical illnesses are becoming the dominant health problems of this age group. Substantial investment in the health-care system and approaches to prevention are required" (Patton et al., 2016, p. 2).

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 the OSDUHS are to:

- establish the relative and absolute size of the adolescent student population currently experiencing physical and mental health problems, and engaging in risk behaviours;
- identify the factors that correlate with physical and mental health indicators, such as demographics;
- examine the developmental trajectory of health indicators from early to late adolescence;
- assess changes in physical and mental health indicators in the population over time;
- assess changes in the social determinants of health;
- provide a basis for program and policy evaluation and the assessment of health goals and targets established by governmental and nongovernmental agencies;
- provide scientific, reliable data that can confirm or challenge anecdotal and media reports; and
- provide 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.

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.

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.

Impact of the OSDUHS

For 40 years, the OSDUHS findings have been used to inform public health monitoring, education and prevention, and health-related programs and policies in Ontario and beyond.

Public Health Monitoring

- Since 1977, the survey has monitored changes in alcohol, tobacco, and other drug use among students and raised awareness about several drug "epidemics" over the years, such as cigarette smoking in the late 1990s, and prescription opioid misuse in the early 2000s.
- Since 1991, the survey has monitored changes in mental health, physical health, and risk behaviours among students and raised awareness about problems, such as the elevated levels of poor mental health and bullying.
- Over the decades, the survey has provided first Canadian adolescent population estimates for the use of several emerging drugs (e.g., crack, ecstasy, OxyContin), and risk behaviours (e.g., texting and driving, vaping cannabis).

Education and Prevention

- The findings have been used in various publications including CAMH brochures and other products designed for youth and parents, and Canadian psychology and sociology textbooks.
- The findings have been used to inform the development of mental health and gambling curriculum guides for Ontario educators.
- Public Health Units and Local Health Integration Networks (LHINs) have used the findings to inform their program and service planning.
- Educators and other professionals have used the findings to facilitate outreach to parents and the wider community.
- The findings have sparked several media campaigns raising awareness about the risks of cannabis and driving, and the misuse of prescription medication.

Public Policy

- The findings have informed health-related policy initiatives in Ontario in the areas of tobacco, alcohol, and prescription opioid misuse, and impaired and distracted driving.
- The findings have informed school health policies in Ontario in the areas of smoking on school property, bullying and safe schools.

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

There are important reasons for, and benefits to, 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 methods (e.g., sampling frames for telephone surveys).
- 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 tend to be higher than household face-to-face surveys or telephone surveys (Hibell et al., 2003).
- 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

[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).

stigmatizing or illegal in a school setting than in a less anonymous setting such as the home. Data collected through anonymous, self-administered, 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 rates of drug use and their associated harms. OSDUHS research has shown that school characteristics, such as school size, policies, school climate, and connectedness are associated with student health behaviours (Allison, Adlaf, Irving, Schoueri-Mychasiw, & Rehm, 2016; 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 drug 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/devices 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 a decrease in 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 2017 cycle of the OSDUHS. We also present trend data spanning back to 1991, where possible. **New indicators in this report** include parental support, the perceived impact of one's mental health on academic performance, experiencing a concussion, experiencing a traumatic life event, cyberbullying perpetration, gambling on video games, and problematic technology use.

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 2017 OSDUHS describing the extent of licit and illicit drug use among Ontario students since 1977, which is available to download at www.camh.ca/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. In 1967, several Toronto school boards approached the former Addiction Research Foundation (now CAMH) for assistance in determining the extent of drug use among their students. Under the direction of Dr. Reginald Smart, four biennial surveys from 1968 through 1974 monitored alcohol, tobacco and other drug use among Toronto students in grades 7, 9, 11 and 13.

In 1977, the scope of the study was expanded to include students across Ontario. In 1999, the OSDUHS was further expanded to include students in grades 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 40 years, 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 studied in 1977 are now in their late 50s. Since its inception, the OSDUHS has not only been the source of data for numerous scientific and policy publications on an array of adolescent health issues, but has evolved into a well-recognized school survey globally.

OSDUHS surveys have been funded in part through ongoing 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 21 biennially repeated 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 sectors (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 (which include non-Catholic faith-based schools), those who were home-schooled, those institutionalized for correctional or health reasons, those schooled in First Nations communities, military bases, or in the remote northern region of Ontario. These out-of-scope groups who are not sampled represent a small proportion of the Ontario student population (about 9%). Therefore, although our target population represents students, it captures the vast majority (91%) of all Ontario children and adolescents aged 12–18 years, based on Statistics Canada's population estimate (Statistics Canada, 2015).

Table 2.1 Forty Years (21 Cycles) of the OSDUHS

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017
No. School Boards	20	20	31	31	20	24	25	27	25	20	22	38	41	37	42	43	47	40	42	43	52
No. Schools	104	87	182	227	193	170	171	179	165	137	168	111	106	126	137	119	181	181	198	220	214
No. Classes	196	195	198	261	205	215	224	221	233	223	234	285	272	383	445	385	573	581	671	750	764
No. Students	4687	4794	3270	4737	4154	4267	3915	3945	3571	3870	3990	4894	4211	6616	7726	6323	9112	9288	10272	10426	11435
Student Completion Rate	70	78	85	85	82	84	81	83	77	76	77	76	71	72	72	68	65	62	63	59	61
Design Features	3-stage selection (board; school; class), proportionately stratified by grade and region; grades 7, 9, 11 & 13; self-weighted estimates		**single-stage 2-per-stratum** selection (board clusters), **disproportionately** stratified by grade and region; grades 7, 9, 11 & 13 (OAC); **weighted estimates**									**2-stage** cluster selection (**school**, class), disproportionately stratified by region and **school level**; **North oversampled**; sponsored public health regions oversampled in 2009 (n=6), 2011 (n=5), 2013 (n=7), 2015 (n=7), 2017 (n=6); weighted estimates									
												grades 7–13 (OAC)		grades 7–12 (OAC eliminated in 2003)							

Notes: (1) bolded entries indicate a design change; (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 achieved by 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, practices, 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 spanning four decades: 1977–1979, 1981–1997,[4] 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).[5] The proportionate allocation of students by grade and region yielded self-weighted (i.e., unweighted) estimates.[6] In 1981, the design was modified to a *disproportionately stratified single-stage cluster design* with paired selection (two-per-stratum) of first-stage school board district clusters designed to improve the precision and efficiency of estimates.[7] This design entailed the selection of more schools and school boards.[8]

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

Current Sampling Design[9]

In 1999, the OSDUHS transitioned to a *disproportionately stratified* [10] (region by school level[11]), *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).[12] 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 yields greater age variation and more developmentally relevant detail on the relationship between health compromising behaviours and age. The revised design also

[4] The initial two data series were conducted under the auspices of the Addiction Research Foundation (ARF) prior to the formation of CAMH in 1998.

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

[6] The original design of every odd grade (grade 7, 9, 11, 13) in every odd year (1977, 1979, etc.) yielded 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 grade × year cohort design can also be constructed for later survey cycles.

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

[8] 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 about drug using behaviours.

[9] In addition to the authors, the 2017 OSDUHS sample design team included Stella Park, Hugh McCague, David Northrup, and Tammy Chi, all from the Institute for Social Research (ISR) at York University.

[10] The primary stage stratification of region is disproportionate to the enrolled population.

[11] 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).

[12] Prior to 1999, the allocation of students from Northern Ontario was proportionate 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 weak statistical power. This redesign was lead by Professor Michael Ornstein, York University/ISR.

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 stage 1, rather than selection of school board clusters. In sum, the revised design yields more students per school and a wider geographical dispersion of schools (due to school selection being independent of school board) with more precise school-level estimates.[13]

OSDUHS Base Regions

The 2017 sample design divided Ontario into four regional strata based on the following boundaries: (1) *Greater Toronto Area* (City of Toronto, Durham Region, York Region, Peel Region, and Halton Region); (2) *Northern Ontario* (Parry Sound District, Nipissing District, and areas farther north); (3) *Western Ontario* (Dufferin County and areas farther west); and (4) *Eastern Ontario* (Simcoe County and areas farther east).[14]

Supplemental Oversamples Sponsored by Ontario Public Health Units/Departments in 2017

In addition to the four regional strata of the base design just described, the 2017 OSDUHS included an additional six 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.[15] Schools in the following six regions of the province were oversampled: Durham Region, York Region, Peel Region, City of Ottawa, Leeds-Grenville-Lanark District, and Haliburton-Kawartha-Pine-Ridge District.

The addition of these six regional oversamples resulted in 10 *mutually exclusive* regions. This produced 18 region-by-school level strata ([4 × 2] + [6 × 2]) = 20 – 2 (elementary students were not sampled in two regions) = 18 total design-based strata). Mutually exclusive school samples were drawn for each of these 18 strata.[16]

School Selection (Stage 1)

Publicly funded schools represented by four school sectors in Ontario – English and French language schools in the public and Catholic school sectors – were eligible to participate.[17] Schools excluded as being out-of-scope were private schools, schools in First Nations

[13] The disadvantages of wider 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, wider school dispersion provides better estimation with more PSUs (schools) and richer, more precise school-level data necessary for multilevel analysis. OSDUHS examples of this type of analysis include Allison et al. (2016), Kariouz and Adlaf (2003), and Rehm et al. (2005).

[14] The base regional strata were redesigned in 2017. Between 1977 and 2015, the following four regions were used: *City of Toronto*; *Northern Ontario* (Parry Sound District, Nipissing District, and areas farther north); *Western Ontario* (Peel Region, Dufferin County and areas farther west); and *Eastern Ontario* (Simcoe County, York County and areas farther east). For this report, the regional estimates between 1999 and 2015 were recalculated to reflect the new base regional strata (trends prior to 1999 for the new region categories are not available). Due to this redesign, estimates for the City of Toronto are no longer provided.

[15] Since 2009, 12 public health regions have sponsored supplemental oversamples of their jurisdictions for producing precise local estimates (see Table A2). Although such strategies serve to provide local data, the trade-off is variance inflation partly due to the increased variability in the inclusion weights. This effect is evident in the design effects shown in Table A5.

[16] Although each oversample was an independent stratum, for our analyses and presentation in this report, the oversamples were assigned to one of the four corresponding base regions.

[17] In Ontario, each regional county usually has schools under two public (English and French) and two Catholic (English and French) school boards.

communities, on Canadian Forces Bases, and schools in geographically inaccessible northern areas.[18]

The 2017 OSDUHS school selection proceeded as follows:[19]

1) The sampling frame used to randomly draw the school sample was the Ontario Ministry of Education's 2013/2014 school enrolment database (most recently available at the time). This frame included all publicly funded schools in Ontario with grades in our target (grades 7–12). As noted earlier, this comprised schools in four sectors: English language public, English language Catholic, French language public, and French language Catholic. To reduce costs and estimation difficulties with sparse data, schools with low enrolment (i.e., fewer than 30 students in schools with grades 7 and 8, fewer than 80 students in secondary schools, or secondary schools without all four grades), and schools in the remote northern region of the province, were excluded from the sampling frame.

2) Within *each* of the 18 region-by-school level primary-stage strata, a probability proportionate-to-size (PPS) selection of schools by means of systematic selection[20] was drawn (i.e., larger schools had a greater probability of being selected). Following a random start, schools were selected with systematic sampling (i.e., every nth school) 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 all public health region oversamples with elementary/middle school students, *two* 7th-grade and *two* 8th-grade classes were sampled to participate (or all students in these grades if there were fewer than two classes in each grade). For certain public health units with a smaller secondary school population, the number of classes selected in the secondary schools was doubled (i.e., *two* classes in each grade between 9 and 12).

If a selected class could not participate, a replacement class from the same school and same grade was randomly selected, time permitting (otherwise this loss was incorporated in the class nonresponse adjustments). Classes excluded (out-of-scope) were special education classes, English as a Second Language (ESL) classes, and classes with fewer than four students enrolled or returning a consent form.[21] All students in the selected classes who could read English or French with a returned signed consent form were eligible to participate.

[18] School exclusions are likely not equally distributed throughout the province. For example, geographically remote school exclusions are typically in the North. Thus, exclusions may differentially affect population coverage by region.

[19] 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 school sample.

[20] A systematic selection of schools is typically efficient. Firstly, such samples usually produce samples similar to SRSs. Secondly, systematic samples have been shown to perform well in sampling frames such as ours, wherein listings of schools show little periodic or cyclical ordering (Lohr, 1999, p. 43).

[21] Small classes were excluded because they impede the creation of weights and within-class estimates.

Sample Exclusions

School Exclusions

- private schools
- schools in First Nations communities
- schools on military 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 or schools without all four grades.

Class Exclusions

- special education classes
- English as a Second Language (ESL) classes
- classes with fewer than four students enrolled/returning a consent form

Student Exclusions

- institutionalized or home schooled
- students who cannot comprehend English or French

Selection of Units

School Selection

- PPS/WOR: Probability-proportionate-to-school size via systematic sampling; sampled without replacement; stratified by region and school type

Class Selection

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

Student Selection

- None: All students in a class with a signed consent form (who could read English or French) were eligible to participate.

Administrative and Recruitment Procedures

The 2017 OSDUHS protocol was approved by the Research Ethics Boards (REBs) at CAMH and York University,[22] as well as 31 school board research review committees (RRC).[23]

Student participation required the consent/permission of several entities, including school boards, school principals, classroom teachers, parents (if under 18 years) and students themselves. For each school board associated with the selected schools, permission to survey students was first requested from the Director of Education. For most school boards contacted in 2017, the decision to participate was conditional upon approval from the board RRC. 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. Following board approval, school principals were sent an invitation letter and accompanying material describing the study and the purpose. Once a school was recruited, the principal provided ISR with a grade-stratified list of classes, from which random selections were drawn by ISR. The date of survey administration was typically selected by the school, and usually all selected classes were surveyed on the same day.

All recruited schools were provided with active (also known as explicit or opt-in) parental consent forms,[24] which were available in six

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

[23] Not all school boards in Ontario have Research Review Committees, which accounts for fewer RRCs than sampled boards.

[24] 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, &

languages (English, French, Spanish, Portuguese, Russian, and Mandarin). Well in advance of the survey date, teachers of the selected classes 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 precluded from participating. To limit costs, all selected classes in a school were surveyed in one day when possible. Thus, 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 inclusion weights were adjusted upward for this student unit nonresponse.

Administration procedures were designed to protect students' privacy by ensuring anonymous and voluntary participation. The survey was administered across the province by 31 trained ISR field staff in the sampled classrooms during regular class periods between November 2016 and June 2017.[25] 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.[26] 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. Neither schools nor students were compensated for their participation.[27]

The ISR field staff collected all completed questionnaires, which were then couriered to ISR for 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.[28]

Ditterline, 2009; Jelsma, Burgess, & Henley, 2012). It is the policy of almost all school boards in Ontario to require active consent for external research studies.

[25] While some data collection predates 2017, 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 schools more time to schedule an acceptable administration date.

[26] The survey administrators also recorded information pertinent to the classroom, such as the number of students enrolled, number absent, presence of teacher during administration, whether the class was randomly selected, and whether any unusual events occurred during administration.

[27] In most schools (board permitting), teachers of participating classes were given a $15 gift card for a national-chain restaurant to thank them for their assistance.

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

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 questionnaire topics is as follows: demographics, family and school life, tobacco, alcohol, cannabis 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 gaming and problems, problematic technology use, 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,[29] depending on school level, in a paper booklet format. As in past cycles, we used split ballot modularized questionnaires whose item content was distributed according to questionnaire form (Form A vs. Form B).[30] To better tailor the instrument, we reduced the number of questions in the forms for elementary school students (i.e., the 7th and 8th graders). The elementary school questionnaires excluded the following topics: gender identity, sexual orientation, the use of cocaine, crack, heroin, fentanyl, methamphetamine, hallucinogens, club drugs and new synthetic drugs, prescription tranquillizers, modes of cannabis use, alcohol and drug use problem screeners, gambling problem screener, problematic technology use, and driving-related behaviours. See Table 2.2 for an overview of the questionnaire content in the four forms. The item count was 179 in Form A-SS, 151 in Form B-SS, 130 in Form A-ES, and 113 in Form B-ES. Roughly 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 an estimate 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.[31] The 2017 questionnaires can be accessed at www.camh.ca/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.[32] The average completion time was 30 minutes for secondary school students, and 31 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 ensuring comparable time to completion, thereby reducing the risk of disclosure such as the likelihood of identifying drug-using students (or those reporting other sensitive behaviours or problems) who would take longer to complete additional questions.[33] 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

[29] Customized questionnaire forms were developed for schools in three school boards who requested the removal of certain questions deemed too sensitive (suicide, school expulsions, and family subjective socio-economic status).

[30] 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, and increased costs.

[31] Form B versions were not translated into French.

[32] We must recognize that this distribution of questionnaire forms to students is not strictly random due to the absence of a random start, which would pose administration difficulties for field staff. Nonetheless, this alternating distribution strategy (essentially k=2 in systematic sampling) should result in two balanced samples of students. An assessment of this alternating distribution showed good characteristics, as there were few differences between the samples completing each form regarding demographics and drug use variables.

[33] A similar strategy is used in the CDC's national *Youth Risk Behavior Survey* (YRBS).

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 et al., 2003) and recognized student surveys such as NIDA's *Monitoring the Future* (MTF) survey,[34] the CDC's *Youth Risk Behavior Survey* (YRBS),[35] and the WHO's *Health Behaviour in School-aged Children* (HBSC) survey,[36] and have been shown to produce valid responses (Brener et al., 2002; Fosse & Haas, 2009; Inchly et al., 2016; Mawani & Gilmour, 2010; May & Klonsky, 2011; Miech, Johnston, O'Malley, Bachman, & Schulenberg, 2016; 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 2017 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), the *Canadian Adolescent Gambling Inventory's Gambling Problem Severity Subscale* (CAGI-GPSS) assessing gambling problems (Stinchfield, 2010; Temblay, Stinchfield, Wiebe, & Wynne, 2010), the *Problem Video Game Playing* (PVP) scale assessing problems with video gaming (Tejeiro Salguero & Morán, 2002), and the *Short Problematic Internet Use Test* (SPIUT) assessing problematic technology use (Siciliano et al., 2015).

All newly introduced items in the 2017 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 2017 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 comprehensibility and sensitive nature of the questionnaire. The majority of students indicated positive assessments: 97% of students (96% of 7th graders) indicated that the questionnaire was "fairly" or "very easy" to understand; only 10% of students (7% of 7th graders) indicated that the questionnaire was "much too long"; and only 5% 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.

[34] See www.monitoringthefuture.org

[35] See www.cdc.gov/healthyyouth/data/yrbs

[36] See www.hbsc.org

Table 2.2 Topic Overview of the Four Questionnaire Forms Used in the 2017 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, grade, how long lived in Canada, language spoken at home, living situation, ethno-racial identity, social media use	age, sex, grade, how long lived in Canada, language spoken at home, living situation, ethno-racial identity	age, sex, **gender identity**, grade, how long lived in Canada, language spoken at home, living situation, ethno-racial identity, **sexual orientation**, social media use, hours spent weekly at part-time job	age, sex, **gender identity**, grade, how long lived in Canada, language spoken at home, living situation, ethno-racial identity, **sexual orientation**
School Life			
usual marks, hours spent on homework, ever been suspended, attitudes about school, subjective social status at school, **days absent**, school transportation	usual marks, attitudes about school, subjective social status at school, **days absent**, school transportation	usual marks, hours spent on homework, ever been suspended, attitudes about school, subjective social status at school, **days absent**, school transportation	usual marks, attitudes about school, subjective social status at school, **days absent**, school transportation
Family Life			
parents' education, parents born in Canada, **parental support**, subjective socio-economic status		parents' education, parents born in Canada, **parental support**, 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, waterpipe, electronic cigarettes, **source of electronic cigarettes**, 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, waterpipe, **content in waterpipe**, electronic cigarettes, **source of electronic cigarettes**, 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, **fentanyl**, prescription tranquillizers	hallucinogens, cocaine, crack, ecstasy, methamphetamine, heroin, **fentanyl**, synthetic "club" drugs, prescription tranquillizers
Alcohol			
first use, past month use, heavy episodic 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, **opinion about purchasing beer in grocery stores**
Cannabis			
first use, past month use	first use, past month use, usual source of cannabis, **opinions about cannabis legalization**	first use, past month use, drug use problem screener	first use, past month use, cannabis dependence, usual source of cannabis, **opinions about cannabis legalization**, **modes of cannabis use**, **medical cannabis use, ever received legal warning for cannabis use**
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

(continued)

Grades 7 and 8 (ES)		Grades 9–12 (SS)	
Form A-ES	**Form B-ES**	**Form A-SS**	**Form B-SS**
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
Perceptions About Drugs, Education, and Exposure			
	availability and risk perceptions (alcohol, cigarettes, electronic cigarettes, cannabis, prescription opioid pain relievers), recall of drug education, intoxicated at school, exposure to drugs		availability and risk perceptions (alcohol, cigarettes, electronic cigarettes, cannabis, prescription opioid pain relievers, cocaine, ecstasy, LSD), recall of drug education, intoxicated at school, exposure to drugs
Physical Health			
self-rated health, physical activity, **outdoor play**, sedentary behaviour, healthy eating, go to bed/school hungry, hours of sleep on school night, height and weight, head injuries	self-rated health, physical activity, **outdoor play**, sedentary behaviour, healthy eating, **coffee and tea consumption**, go to bed/school hungry, hours of sleep on school night, height and weight, body image, doctor visits, head injuries	self-rated health, physical activity, **outdoor play**, sedentary behaviour, healthy eating, go to bed/school hungry, hours of sleep on school night, height and weight, head injuries	self-rated health, physical activity, **outdoor play**, sedentary behaviour, healthy eating, **coffee and tea consumption**, go to bed/school hungry, hours of sleep on school night, height and weight, body image, doctor visits, head injuries
Mental Health			
self-rated mental health, psychological distress, perceived stress, self-esteem, suicide ideation and attempt, help-seeking behaviour, **how much mental health affects grades**, ADHD screener		self-rated mental health, psychological distress, perceived stress, self-esteem, suicide ideation and attempt, help-seeking behaviour, prescription medication for anxiety or depression, **how much mental health affects grades**, **traumatic life event**, ADHD screener	
Other Risk Behaviours			
bullying perpetration and victimization at school, cyberbullying victimization and **perpetration**, school violence, gambling activities, internet gambling, video gaming and problems, antisocial behaviours		bullying perpetration and victimization at school, cyberbullying victimization and **perpetration**, school violence, gambling activities, internet gambling, problem gambling, video gaming and problems, **problematic technology use**, antisocial behaviours	
questionnaire evaluation			

Notes: (1) **bolded text** in the table indicates a new topic in 2017; (2) Form A-ES and Form A-SS were translated into French.

Data Quality

2017 Sample Participation and Characteristics

A central objective of the OSDUHS is to produce a representative, unbiased sample of Ontario students in grades 7 through 12 in publicly funded schools. The allocated sample size for the 2017 OSDUHS was set at 11,500 students.

Schools

In total, 353 schools (285 initial selections plus 68 replacements) were invited to participate. Of these, **214 schools** (94 elementary/middle – of which 10 were French language – and 120 secondary – of which 15 were French language) from 52 school boards participated in the survey, resulting in a school participation rate of **61%**. The most cited 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 another randomly selected school from the same stratum using our standard procedures.

Although we could not conduct a systematic follow-up of students in the nonparticipating schools, we do not expect the school refusals to have produced appreciable bias. Our analysis showed that this group of nonparticipating schools were more likely to be located in the GTA or West region of the province, more likely to be secondary schools, more likely to be public rather than Catholic schools, and more likely to be English language rather than French language schools. Any distortions by region or grade were corrected by selecting replacement schools or by adjusting the final sampling weights. A further analysis was conducted to examine whether replacement schools[37] differed from initially selected schools. Results showed no substantial differences in the drug use measures 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 school type, size, and 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., 2016) – a factor that is controlled for in the replacement sampling from within the same regional stratum. This would imply that which particular schools in the same region participate might not have an appreciable impact on estimates. Furthermore, a recent study using school survey data showed that school nonresponse does not introduce any considerable bias to student-level drug use estimates, suggesting that school attributes such as size or type have less influence than previously assumed (Thrul, Pabst, & Kraus, 2016).

Classes

A total of **764 classes** met the class inclusion criteria and participated in the survey (255 from elementary/middle schools, 509 from secondary schools). The class participation rate was **94%**. We must note that about 30% of classes were not randomly selected. In most of these cases, these classes were convenient same-grade replacements, typically identified by principals, for classes that were originally selected but declined to participate for logistical reasons.[38]

[37] Of the 214 participating schools, 40 were replacements.

[38] Statistical tests comparing drug use prevalence estimates between students in randomly selected versus those in nonrandomly selected classes showed no significant differences. Further, prevalence estimates were also evaluated with and without the inclusion of the nonrandomly selected classes, and results did not significantly differ. Therefore, the non-random selection of

Students[39]

A total of 18,773 eligible students were enrolled in the 764 participating classes. Of these eligible students, 11,596 (62%) participated in the survey.[40] However, after the data quality criteria were applied, **11,435 cases** were considered "completions,"[41] resulting in a conditional student **completion rate of 61%**.[42] Twelve percent (12%) of students were lost due to absenteeism, and 27% were lost due to either unreturned consent forms or parental refusal. The sources of nonresponse varied by grade: the major source of nonresponse in the lower grades was unreturned consent or parental refusal (30% in grade 7 versus 21% in grade 12, whereas in the upper grades absenteeism was higher than in the lower grades (18% in grade 12 versus 10% in grade 7).[43] The student completion rates according to the four base regions presented in this report were 64% in the Greater Toronto Area, 59% in the North, 60% in the West, and 59% in the East.[44]

Trends in Student Participation

Like many ongoing population surveys, student participation in the OSDUHS has trended downward over the long-term. Between 1977 and 2017, the student participation rate fell from 70% to 61%, with a peak in 1981–1983 at 85%. This decline is strongly associated with an increase in consent loss, which rose steeply from 4% to 27% during this period. In contrast, the loss due to absent students held steady (11%–15%). While the loss due to absenteeism has remained stable 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 likely 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 and is not unique to the OSDUHS (de Leeuw & de Heer, 2002; Galea & Tracy, 2007; Groves et al., 2009; Kreuter, 2013).

Still, our student completion rate of 61% is acceptable for a school survey that uses full active parental-student consent procedures (Courser, Shamblen, Lavrakas, Collins, & Ditterline, 2009; Draugalis, Coons, & Plaza, 2008; Shaw, Cross, Thomas, & Zubrick, 2015; Tigges, 2003; White, Hill, & Effendi, 2004). For example, Health Canada's 2014/2015 *Canadian Student Tobacco, Alcohol, and Drugs Survey* (CSTADS), which uses a combination of active and passive parental consent procedures, achieved a national student response rate of 66%, yet the response rate in Ontario – where active consent is required by almost all school

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a subset of classes does not appear to have biased estimates.

[39] Although students are neither a stage of selection nor a sampling unit, they are the unit of observation within clusters, from which data are collected. Consequently, their participation is a component of the overall participation rate.

[40] The participation rate (62%) is defined as the number of eligible students who participated/the total number of eligible students in the selected classes.

[41] An "incomplete" case met any one of the following criteria: (1) had a missing value for sex, (2) reported using a fictitious drug, (3) reported using the core illicit drugs 40 or more times in the past year, (4) only completed the demographic questions in the questionnaire and nothing further, or (5) completed the questionnaire with assistance from the teacher. Cases that met any one of these criteria were excluded from the final data set. See the section on Data Editing.

[42] This shows the *unweighted* student completion rate. The *weighted* rate is based on the sum of the product of the regional weighted distribution and regional completion rate: Toronto-Halton (.211×.57) + Peel Region (.127×.63) + Durham Region (.057×.67) + York Region (.065×.69) + North (.053×.59) + West (.285×.60) + East (.114×.55) + Ottawa (.067×.65) + Leeds-Grenville-Lanark District (.009×.43) + Haliburton-Kawartha-Pine Ridge District (.011×.58) = 60%.

[43] The completion rate for secondary school students (grades 9–12 only) was 61% (13% absent, 25% no consent returned).

[44] For further details about the 2017 sample selection and completion rates for the 10 regional strata, please see Northrup et al., 2017.

boards – was 49% (Rynard, Cumming, Burkhalter, & Manske, 2015). The American *Monitoring the Future* (MTF) survey also employs a blend of active and passive consent procedures and typically reaches national student response rates above 80%.[45] Furthermore, the OSDUHS considers students who are absent from class on the day of the survey as part of the target population. Thus, absent students (about 12% in 2017) are considered eligible and therefore remain in the denominator in the calculation of the completion rate, thereby reducing the rate. This is a conservative approach compared with other student surveys that exclude absent students from their target population, which results in higher rates (e.g., The ESPAD Group, 2016).

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).[46] 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.[47]

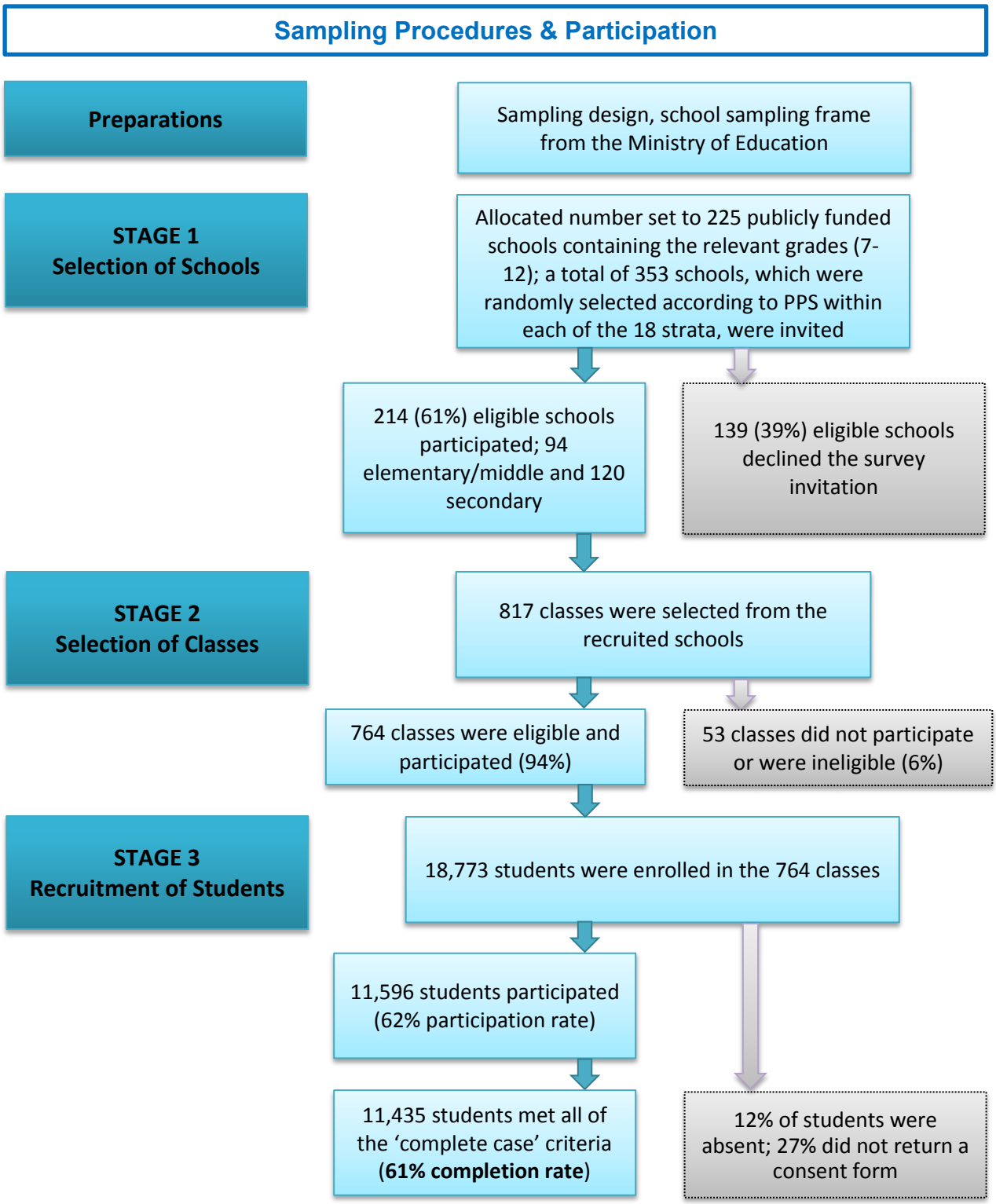
Existing research examining the impact of nonconsent (nonparticipation) on estimates of student drug use, mental health, and risk behaviours has not been conclusive. Some studies have found that students not providing parental consent or not participating in research studies are more likely to use drugs, 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., 2015; 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).

[45] 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 U.S. 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, information letters/consent forms are mailed directly to the parents. Fifth, participating schools in the MTF are given a relatively substantial monetary incentive to commit to the study for two cycles.

[46] Specifically, bias = nonresponse rate × ($\text{mean}_{\text{respondents}} - \text{mean}_{\text{nonrespondents}}$)

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

Figure 2.1 Sampling Procedures and Participation in the 2017 OSDUHS



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 and drug-related measures in classes in which the class participation rate was below 70% (n=455 classes) with classes in which the rate was 70% or higher (n=309 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) for risk behaviours and problem indicators due to the absence of the 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 more likely to be in the East region. Of the over 50 drug-related, mental health-related, and school-related measures compared between the two groups, none showed a significant difference. This suggests that students who participated in the survey were not only "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.[48] 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).

[48] 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,[49] 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 2015/2016 was 87% (Ontario Ministry of Education, May 2017). However, we cannot assume that the dropout rate was 13% because some students remain in school without graduating (i.e., take more years to graduate). Statistics Canada measures the dropout rate using the *Labour Force Survey* and found that about 5%-7% of 16-19 year-olds in Ontario were not attending high school (and did not already graduate) in 2009/2010 (McMullen & Gilmore, 2010). Another 2016 study found that 5%-8% of 25-34 year-olds in Ontario did not graduate from high school (Uppal, 2017).

School leavers are more likely to be male, Canadian-born, and live outside of large urban centres (Gilmore, 2010; Uppal, 2017). The exclusion of school leavers from our sample does introduce some degree of bias in the estimation of drug use and risk behaviours if one wants to generalize to the wider adolescent population (rather than just enrolled students). This omission would not affect our trend findings if the proportion of school leavers 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.

[49] Prior to 2006, the compulsory age of education in Ontario was 16 years.

Postsurvey Processing

Data Editing

As mentioned earlier, data editing rules were established to enhance data quality. Cases that met any one of the following conditions were removed from the final data set: did not report their sex (at birth), answered only the demographic questions,[50] received assistance from the teacher when completing the survey,[51] reported using a fictitious drug,[52] or reported using all the core illicit drugs 40 or more times during the past year ("faking bad").[53] This data editing process resulted in a **final dataset consisting of 11,435 minimally complete cases** used in the data analyses (Form A-ES n=2,066 students; Form B-ES n=1,782 students; Form A-SS n=4,298 students; Form B-SS n=3,289 students).

Item Missingness

Both the single item missing rate and the cumulated item missing rate were low, suggesting quality responding. Across the 56 core questions (i.e., items in all four questionnaire forms), the item missingness average was about 1.5%. In addition, there is no evidence that item nonresponse inflates with the transition from the demographic questions to the more sensitive drug use questions.[54] Missing responses to questions were not statistically imputed, and, furthermore, any inconsistent responses provided by respondents were not corrected.

Poststratification

We compared the 2017 OSDUHS sample with the most currently available school enrolment numbers from the Ministry of Education, which were from the 2014/2015 school year. Table 2.3 shows that there were slight discrepancies between the 2017 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 10 regional strata separately to restore each region's demographic composition to the population composition.[55] 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.[56] Table 2.4 and Figure 2.2 show the demographic characteristics of the final weighted sample.

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[50] We contend that if a student is unwilling to complete more than the demographics section, the data quality of responses is dubious and the utility of the data provided is limited.

[51] Teacher assistance would likely compromise anonymity and affect the truthfulness of responses.

[52] The fictitious drug was called "adrenochromes." Seventy-four cases were removed due to reporting use of the fictitious drug, and this number is consistent with prior survey cycles.

[53] Note that this data editing rule and the fictitious drug rule both address the potential bias of overreporting drug use ("faking bad"). This bias should be minimal given the small number of cases dropped.

[54] 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 (1.0%).

[55] The sex-by-grade population distribution was not available according to each of the 10 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.

[56] After adjustment, the difference between the weighted sample and enrolment figures did not exceed half a percentage point in any of the 12 poststratification groups.

Table 2.3 The 2017 OSDUHS Sample vs. Ontario 2014/2015 School Enrolment

	OSDUHS Preadjusted		Population Enrolment		OSDUHS Postadjusted	
	% Male	% Female	% Male	% Female	% Male	% Female
Grade 7	5.6	8.2	7.5	7.2	6.9	6.6
Grade 8	6.8	6.9	7.8	7.4	7.2	6.9
Grade 9	6.9	9.4	8.0	7.5	8.2	7.8
Grade 10	7.4	9.3	8.3	7.8	8.5	8.1
Grade 11	7.6	9.5	8.5	8.1	8.7	8.3
Grade 12	9.7	12.6	11.7	10.4	12.0	10.7
Total	44.2	55.9	51.6	48.4	51.6	48.4

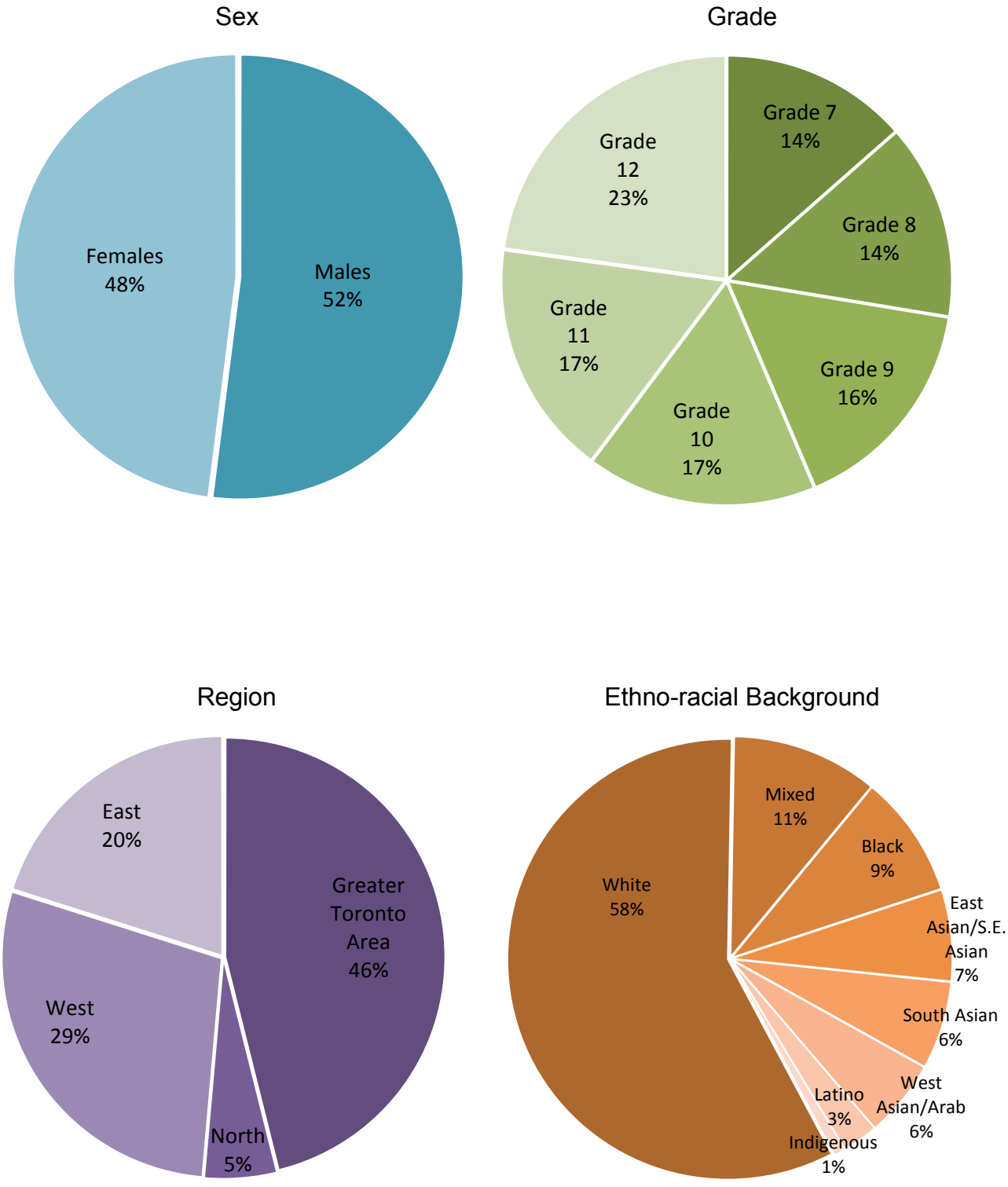
Notes: (1) OSDUHS cell entries are total sample percentages and are based on weighted data; (2) enrolment cell entries are total enrolment percentages and are based on 917,800 students in grades 7-12 enrolled in Ontario's publicly funded schools during the 2014/2015 school year.

Table 2.4 Final Sample Characteristics, 2017 OSDUHS

	Final Number (n)	Weighted %
Total	**11,435**	
Males	5,026	51.6
Females	6,409	48.4
Grade 7	1,800	13.5
Grade 8	2,048	14.1
Grade 9	2,175	16.0
Grade 10	1,953	16.6
Grade 11	1,711	17.0
Grade 12	1,748	22.8
Greater Toronto Area	854	21.1
Durham Region (OS)	1,199	5.7
York Region (OS)	992	6.5
Peel Region (OS)	1,680	12.7
North	1,486	5.3
West	2,068	28.5
East	188	11.4
City of Ottawa (OS)	1,430	6.7
Leeds-Grenville-Lanark District (OS)	323	0.9
Haliburton-Kawartha-Pine Ridge District (OS)	1,215	1.1
Public School	6,360	58.4
Catholic School	5,075	41.6

Notes: (1) mean age=15.0 years (SD=1.8); (2) OS=oversample for the public health unit/department; (3) the 10 regional strata were mutually exclusive; (4) for the four regional estimates presented in this report, the Greater Toronto Area includes the City of Toronto, Halton Region, and the oversamples in Durham Region, York Region, and Peel Region (combined n=4,725), and the East region includes the oversamples in the City of Ottawa, the Leeds-Grenville-Lanark District, and the Haliburton-Kawartha-Pine Ridge District (combined n=3,156).

Figure 2.2 Sample Demographics, 2017 OSDUHS (Weighted Percentages of Total Sample, N=11,435)



Data Analysis, Interpretation, and Presentation

Data Weighting

Our deliberate oversampling of students in certain regions and our equal allocation of students within grade 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.[57]

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 **11,435 students to represent about 917,800 Ontario students** in grades 7 through 12, while ensuring that the sample composition corresponds to the population.[58]

Sample Weights

One intuitive way of thinking of the sampling weight is that each student in the sample represents or "stands in" for 80 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 use a specified drug. 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

[57] 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).

[58] The population-scaled weights range in value from 2.46 to 3893.17 (mean=80.26, median=47.33) and inflates to the population count of 917,796. The sample-scaled weights range in value from 0.03 to 48.50 (mean=1.00, median=0.59).

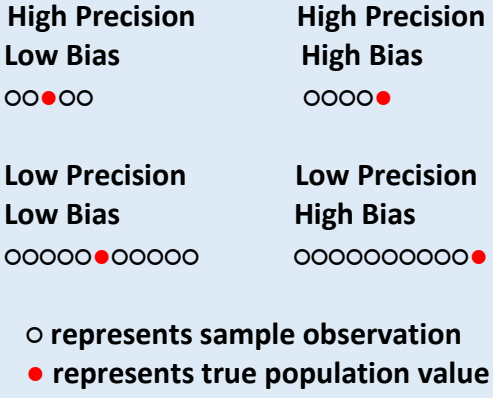
misreporting (e.g., unintentional errors of memory and recall, or intentional errors of underreporting or overreporting).

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 5.7% (4.2%–7.5%), 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;[59] 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.[60] 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.

Precision and Bias



[59] 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.

[60] 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, not administered by school staff) are the optimal conditions under which to survey adolescents about sensitive topics such as drug use, other illegal behaviours, and mental health problems (Bjarnason & Adalbjarnardottir, 2000; 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 demographics, aggressive and other problem behaviours, and school problems (for examples see Cook et al., 2015; Fischer et al., 2013; Hamilton et al., 2015; 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., 2016; Tourangeau & Yan, 2007). In addition to intentional misreporting, 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). 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 lines provides support for this assertion.

2017 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.[61]

All 2017 percentages, confidence intervals, and population count estimates 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).[62]

The 2017 OSDUHS sampling design was comprised of **18 strata (**region by school level),[63] **214 primary sampling units** (schools), and **11,435 students**. The design-based degrees of freedom (*df*) for our complex sample was 196 (*df*=214 [# school PSUs] – 18 [# 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).[64] In addition, our negligible sampling fraction allows us to ignore the finite population correction (fpc) in our estimation.[65]

The statistical significance of subgroup (i.e., sex, grade, region) differences in 2017 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.[66]

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[61] 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's *svy* suite of survey commands, SPSS's Complex Samples module, SAS's SURVEY procedures, R's survey package, and dedicated systems including SUDAAN, WesVar, and Mplus.

[62] 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.

[63] Elementary/middle schools were not sampled in two of the 10 regions, resulting in 18 rather than 20 strata. Note also that there is one stratum with a single PSU (called a "singleton" or "lonely" PSU). This was accounted for in Stata using the `singleunit(centered)` option when specifying the complex survey design variables.

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

[65] 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 2017 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).

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.[67]

Trend Analysis

In this report, we describe three patterns of change in our data: the first describes changes between 2015 and 2017 (changes since the previous survey); the second describes trends from 1999 to 2017; and the third describes long-term trends from 1991 to 2017. To evaluate the time trends, a merged or "stacked" dataset was used.[68] All estimates were accommodated for the respective survey design effects.

2017 vs. 2015 and 1999–2017 Trends

We first evaluated changes since the previous survey (i.e., 2017 vs. 2015). 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 2017 and 2015 estimates and estimates since 1999 were based on grades 7 through 12.

For 1999–2017 trends, we assessed change with a binary-response logistic regression providing an appraisal of the cycle-to-cycle change (with 2017 contrasted to each prior survey, i.e., reference group contrasts) as well as assessing the presence of linear and nonlinear trends.[69] 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.

[66] 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.

[67] 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.

[68] Trend analyses were conducted using a stacked dataset cumulating 21 cycles for the years 1977–2017. The dataset contains 115,114 students enrolled in 2,687 schools distributed among 282 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.

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

1991–2017 Trends

The long-term trend analyses from 1991 through 2017 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 2017 contrasted to each prior survey, i.e., reference group contrasts) and a joint test of the presence of any change between 1991 and 2017. 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,[70] 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

[70] Sex at birth is the variable (binary) presented in this report. Gender identity was also measured in the survey using a separate question.

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., socio-economic 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 scales or screeners, we report the alpha reliability coefficient that 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 variation[71] (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.

[71] 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) × 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 2017 OSDUHS Method and Sample Summary

2017 OSDUHS Method and Sample Summary	
Design	▪ 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 2016/2017 school year. Students excluded as being out-of-scope were those in private schools, those schooled in correctional or health facilities, those schooled in First Nations communities, military bases, and remote areas, and those who were home-schooled. ▪ Sample selected by a disproportionately 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 (6 regions × 2 school levels), resulted in a combined total of 18 (20-2) region-by-school level strata (elementary/middle schools were not sampled in two of the 10 regions). ▪ Within each stratum, schools were selected by systematic random sampling according to PPS using the 2013/2014 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	▪ 7th–12th graders sampled from 764 classes in 214 schools, and who provided active parental consent and student assent, completed questionnaires from November 2016 to June 2017. ▪ 61% of selected schools, 94% of selected classes, and 61% of students in participating classes completed the survey. ▪ The **final (edited) sample of 11,435 students** is representative of the 917,800 7th–12th graders enrolled in Ontario's publicly funded public and Catholic schools.
Questionnaire	▪ 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 33 minutes to complete, were administered in classrooms by trained staff from the Institute for Social Research. Form A versions were available in French and used in French language schools.
Student Characteristics	▪ Males (n=5,026; 51.6% weighted); Females (n=6,409; 48.4% weighted). ▪ 7th graders (n=1,800; 13.5%); 8th graders (n=2,048; 14.1%;); 9th graders (n=2,175; 16.0%); 10th graders (n=1,953; 16.6%); 11th graders (n=1,711; 17.0%); 12th graders (n=1,748; 22.8%). ▪ GTA (n=4,725; 46.1%); North (n=1,486; 5.3%); West (n=2,068; 28.5%); East (n=3,156; 20.1%).
Data Quality	▪ Data editing rules were applied based on a definition of a "complete case," and untrustworthy cases were removed from the final data set. ▪ Nonresponse analysis comparing classes with participation rates of 70% or higher to classes with lower rates showed no significant differences in the key drug-related measures.
Analysis	▪ 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 2014/2015 enrolment for sex-by-grade groupings. ▪ The complex sample analysis model is based on a design with 214 primary sampling unit clusters (schools), 764 secondary sampling unit clusters (classes) distributed among 18 region-by-school level strata. For analysis, only stage 1 primary sampling units (schools) and strata are necessary to approximate the 2-stage sampling design used to draw the sample. One stratum has a single PSU and variance estimation was handled with the "centered" method in Stata, which uses deviations from the grand mean across PSUs to calculate the variance contribution from the stratum with the single PSU.

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 *each* 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 *International Obesity Task Force*, based on self-reported height and weight.
Concussion	Reporting experiencing any type of head injury that resulted in a headache, dizziness, blurred vision, vomiting, feeling confused or "dazed," or problems remembering.
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 *Kessler 6-Item Psychological Distress Scale* (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 *ADHD Self-Report Scale* (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.
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 Victimization and Perpetration	Reporting being bullied or bullying someone 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 "was not bullied" or "did not bully others" over the Internet.
Any Gambling Activity and Multi-Gambling Activity	Reporting gambling money (any amount) at any gambling activity during the 12 months before the survey, and at five or more gambling activities during the past 12 months.
Low-to-Moderate Gambling Problem Severity	Scoring 2 to 5 of 27 (Likert scoring) on the *Gambling Problem Severity Subscale* (GPSS) of the *Canadian Adolescent Gambling Inventory* (CAGI).
High Gambling Problem Severity	Scoring 6 or higher of 27 (Likert scoring) on the *Gambling Problem Severity Subscale* (GPSS) of the *Canadian Adolescent Gambling Inventory* (CAGI).
Video Gaming Problem	Reporting at least five of the nine symptoms on the *Problem Video Game Playing (PVP) Scale*, which measures symptoms such as preoccupation, tolerance, school and family problems due to video gaming during the 12 months before the survey.
Problematic Technology Use	Scoring 19 or higher of 24 (Likert scoring) on the *Short Problematic Internet Use Test* (SPIUT) was used to indicate a "serious" problem with technology use (e.g., smartphone, tablet). The SPIUT measures symptoms such as preoccupation, loss of control, lack of sleep, conflict with family or friends due to technology use.

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	2017
3.1 Home & School Life														
Family Living Arrangement	•	•	•	•	•	•	•	•	•	•	•	•	•	✓
Family Subjective Social Status	•	•	•	•	•	•	•	•	•	•	•	•	•	✓
Parental Support	•	•	•	•	•	•	•	•	•	•	•	•	•	✓
Part-Time Employment±	•	•	•	•	•	•	•	•	•	•	•	•	•	✓A
School Performance and Attitudes	✓	✓	✓	✓	✓	✓B	✓B	✓B	✓B	✓B	✓B	✓B	✓A	✓A
School Suspension or Expulsion	•	•	•	•	•	•	•	•	•	•	•	•	✓A	✓A
School Climate	•	•	•	•	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Subjective Social Status at School	•	•	•	•	•	•	•	•	•	•	•	•	•	✓
Effect of Mental Health on Grades	•	•	•	•	•	•	•	•	•	•	•	•	•	✓A
3.2 Physical Health														
Self-Rated Physical Health	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Physical Activity	•	•	•	•	•	•	•	•	•	✓	✓	✓	✓	✓
Physical Activity at School	•	•	•	•	✓A	✓A	✓	✓	✓	✓	✓	✓	✓	✓
Screen Time Sedentary Behaviour	•	•	•	•	•	•	•	•	•	✓	✓	✓	✓	✓
Overweight or Obese	•	•	•	•	•	•	•	•	✓	✓	✓	✓	✓	✓
Body Image and Weight Control	•	•	•	✓A	•	✓B	✓B	✓B	✓B	✓B	✓B	✓B	✓B	✓B
Go to Bed or School Hungry	•	•	•	•	•	•	•	•	•	•	•	•	✓B	✓B
8+ Hours of Sleep on a School Night	•	•	•	•	•	•	•	•	•	•	•	•	✓B	✓B
Medically Treated Injury	•	•	•	•	•	•	✓A	✓A	✓B	✓B	✓B	✓B	✓B	✓B
Concussion	•	•	•	•	•	•	•	•	•	•	•	•	•	✓B
Seatbelt Use	•	•	•	•	•	•	•	•	•	•	✓B	✓B	✓B	✓B
Texting While Driving	•	•	•	•	•	•	•	•	•	•	•	✓B	✓B	✓B
Vehicle Collision as a Driver	•	•	•	•	•	•	•	•	•	•	✓B	✓B	✓B	✓B
3.3 Health Care Utilization														
Physician Health Care Visit	•	•	•	•	✓	✓	✓	✓	✓	✓	✓B	✓B	✓B	✓B
Mental Health Care Visit	•	•	•	•	✓	✓	✓	✓	✓	✓	✓A	✓A	✓A	✓A
Medical Tranquillizer/Sedative Use±	✓	✓	✓	✓	✓	✓	✓B	✓A	✓A	✓A	✓A	✓	✓	✓
Medical ADHD Drug Use	•	•	•	•	•	•	•	•	✓	✓	✓	✓	✓A	✓A
Medical Opioid Pain Reliever Use	•	•	•	•	•	•	•	•	✓	✓	✓	✓	✓B	✓B
Prescription for Depression/Anxiety±	•	•	•	•	•	✓A	✓A	✓A	✓A	✓A	✓A	✓A	✓A	✓A
Sought Counselling Over the Phone	•	•	•	•	•	•	•	✓A	✓A	✓A	✓A	✓A	✓A	✓A
Sought Counselling Over the Internet	•	•	•	•	•	•	•	•	•	•	✓A	✓A	✓A	✓A
Unmet Need for Mental Health Support	•	•	•	•	•	•	•	•	•	•	•	✓A	✓A	✓A

(cont'd)

	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017
3.4 Mental Health														
Self-Rated Mental Health	•	•	•	•	•	•	•	•	✓[A]	✓[A]	✓[A]	✓[A]	✓[A]	✓[A]
Low Self-Esteem	•	•	•	•	•	•	•	•	•	•	•	•	✓[A]	✓[A]
Elevated Stress	•	•	•	•	•	•	•	•	•	•	•	•	✓[A]	✓[A]
Psychological Distress (K6 scale)	•	•	•	•	•	•	•	•	•	•	•	✓[A]	✓[A]	✓[A]
Traumatic Event[±]	•	•	•	•	•	•	•	•	•	•	•	•	•	✓[A]
Suicidal Ideation	•	•	•	•	•	✓[A]	✓[A]	✓[A]	✓[A]	✓[A]	✓[A]	✓[A]	✓[A]	✓[A]
Suicide Attempt	•	•	•	•	•	•	•	•	✓[A]	✓[A]	✓[A]	✓[A]	✓[A]	✓[A]
ADHD Symptoms (ASRS scale)	•	•	•	•	•	•	•	•	•	•	•	•	✓[A]	✓[A]
3.5 Antisocial Behaviour and Bullying														
Nonviolent Antisocial Behaviour	✓	✓	✓	✓[B]	✓[B]	✓[A]	✓[A]	✓[A]	✓[A]	✓[A]	✓[A]	✓[A]	✓[A]	✓[A]
Violent/Aggressive Behaviour	✓	✓	✓	✓[B]	✓[B]	✓[A]	✓[A]	✓[A]	✓[A]	✓[A]	✓[A]	✓[A]	✓[A]	✓[A]
Violence on School Property	•	•	•	•	•	✓[A]	✓[A]	✓[A]	✓[A]	✓[A]	✓[A]	✓[A]	✓[A]	✓[A]
Victim of Bullying at School	•	•	•	•	•	•	✓[A]	✓[A]	✓[A]	✓[A]	✓[A]	✓[A]	✓[A]	✓[A]
Perpetrator of Bullying at School	•	•	•	•	•	•	✓[A]	✓[A]	✓[A]	✓[A]	✓[A]	✓[A]	✓[A]	✓[A]
Victim of Cyberbullying	•	•	•	•	•	•	•	•	•	•	✓[A]	✓[A]	✓[A]	✓[A]
Perpetrator of Cyberbullying	•	•	•	•	•	•	•	•	•	•	•	•	•	✓[A]
3.6 Gambling, Video Gaming, and Technology Use														
Gambling Activities	•	•	•	•	•	✓[A]	✓[A]	✓[A]	✓[A]	✓[A]	✓[A]	✓[A]	✓[A]	✓[A]
Gambling Problems (GPSS scale)[±]	•	•	•	•	•	•	•	•	•	•	•	•	✓[A]	✓[A]
Video Gaming Problems (PVP scale)	•	•	•	•	•	•	•	•	✓[B]	✓[B]	✓[A]	✓[A]	✓[A]	✓[A]
Social Media Use	•	•	•	•	•	•	•	•	•	•	•	✓	✓[A]	✓[A]
Problematic Technology Use (SPIUT)[±]	•	•	•	•	•	•	•	•	•	•	•	•	•	✓[A]
3.7 Coexisting Problems[±]	•	•	•	•	•	•	•	•	•	•	•	•	•	✓[A]
3.8 Overview by LHIN Areas[±]	•	•	•	•	•	•	•	•	•	•	•	•	•	✓

• 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. 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.

2017 (Grades 7–12):

- An estimated 19.7% (95% CI: 17.8%-21.7%) 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 14.1% (95% CI: 12.5%-16.0%) of students report that they divide their living between two or more homes.

3.1.2 Family Subjective Social Status

The OSDUHS included the *MacArthur Scale of Subjective Social Status* to measure perceived family socioeconomic status (Goodman et al., 2001; Goodman, Huang, Schafer-Kalkhoff, & Adler, 2007; McLaughlin et al., 2012). 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 the purpose of this report, we constructed three categories to represent low family SSS (rungs 1–5 on the ladder), average SSS (rungs 6–8), and high SSS (rungs 9–10).

2017 (Grades 7–12):

- About one-in-five (19.3%) students rank their family SSS as low. Almost two-thirds (64.3%) rank their family SSS as average, and 16.4% rank their family SSS as high.

3.1.3 Parental Support

Students were asked how often they talk to a parent about their problems. The question was "*How often do you talk about your problems or feelings with at least one of your parents?*"

2017 (Grades 7–12):

- About one-in-ten (11.2%) students report that they "always" talk to a parent about their problems or feelings. Half (49.6%) report that they "usually" or "sometimes" talk to a parent about their problems or feelings, and over one-third (39.3%) report that they "rarely" or "never" talk to a parent about their problems or feelings.
    - Males (43.5%) are significantly more likely than females (34.7%) to report that they "rarely" or "never" talk to a parent about their problems or feelings.

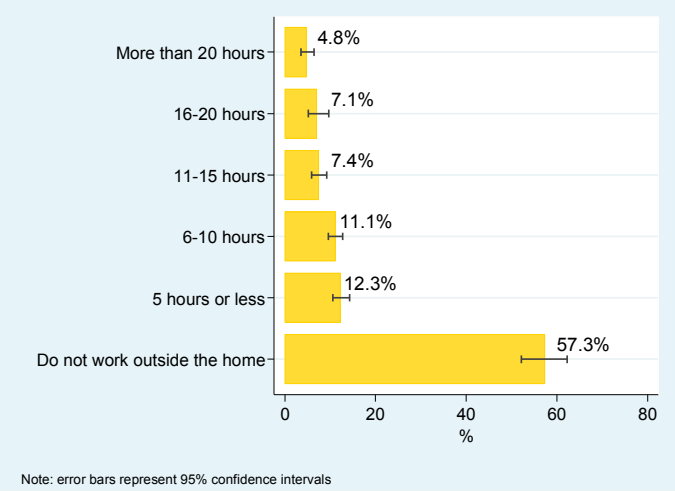
3.1.4 Part-Time Employment
(Figure 3.1.1)

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?*"

2017 (Grades 9–12):

- Over half (57.3%) of students in grades 9–12 do not work outside of the home. About 12.3% work five hours or less per week outside of the home, while 4.8% work more than 20 hours per week.

Figure 3.1.1
Hours per Week Work for Pay Outside the Home, 2017 OSDUHS (Grades 9–12)



3.1.5 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 grades usually received and time spent on homework.

2017 (Grades 7–12):

- Overall, 16% of students report usually receiving school grades of 90% or higher; 43% report grades between 80% and 89%; 35% report grades between 70% and 79%; 6% report grades between 60% and 69%; and about 1% report usually receiving grades below 60%.

- One-in-five (21.7%) 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 per week outside of school.

1999–2017 (Grades 7–12):

- The percentage of students who report usually receiving grades of 80% or higher significantly increased between 1999 (37.8%) and 2017 (58.5%).

- The percentage of students who report that they spend less than an hour on homework per week outside of school has not significantly changed since 1999.

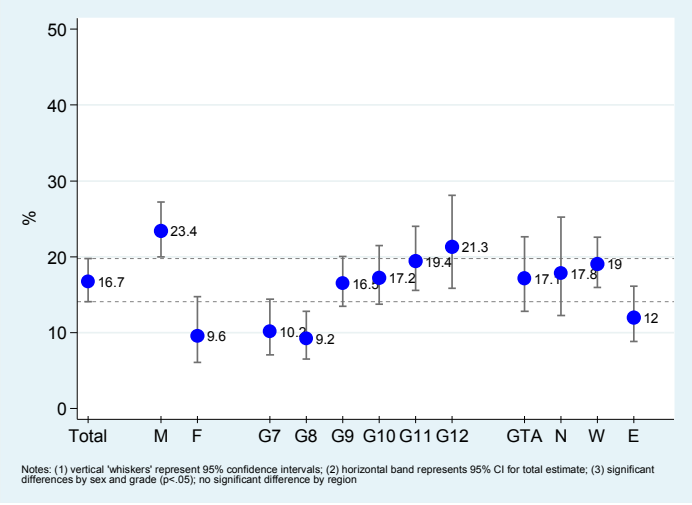
3.1.6 School Suspension or Expulsion (Figure 3.1.2)

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?*"

2017 (Grades 7–12):

- An estimated 16.7% (95% CI: 14.0%-19.8%) of students report being suspended or expelled from school at least once in their lifetime.
- Males (23.4%) are much more likely than females (9.6%) to report being suspended or expelled from school.
- There is significant grade variation showing that older students are significantly more likely than younger students to report being suspended or expelled from school.
- Despite some variation among the four regions, these differences are not statistically significant.

Figure 3.1.2
Percentage Reporting Ever Being Suspended or Expelled from School by Sex, Grade, and Region, 2017 OSDUHS



3.1.7 School Climate

(Figures 3.1.3–3.1.6; 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 policies and enforcement, perceptions of safety and equity, student conduct, and attachment to school.

Starting in 1993, 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.

2017 (Grades 7–12):

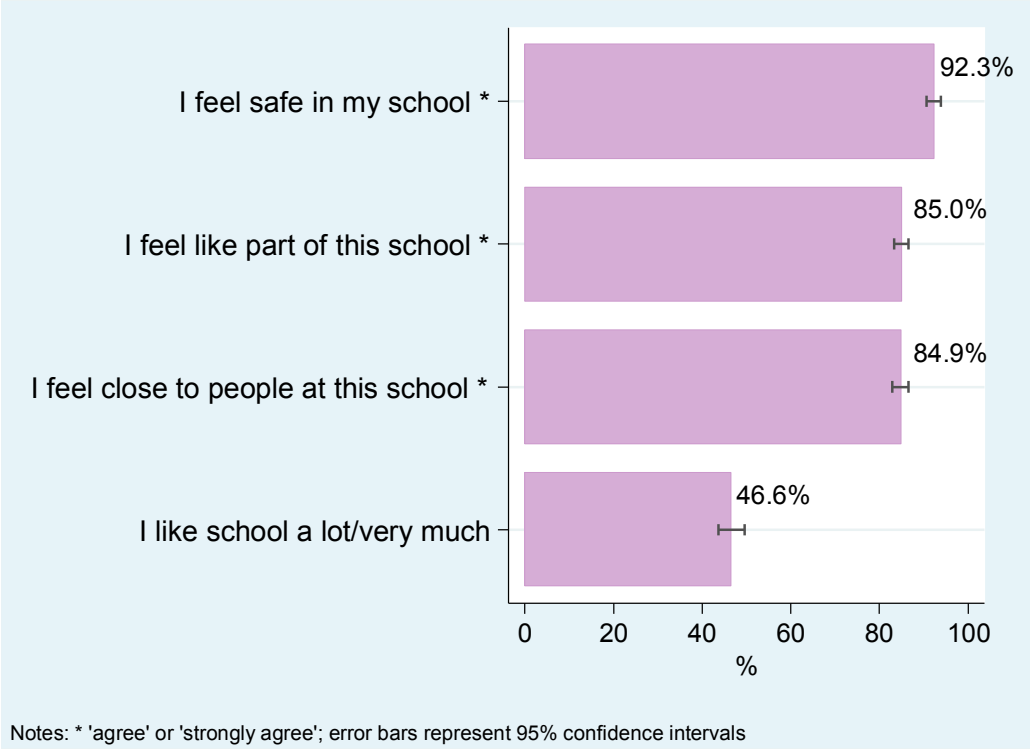
- Almost half (46.6%) of students report liking school very much or quite a lot. One-third (34.1%) like school to some degree, and about one-in-five (19.3%) do not like school very much or at all.
- Males (44.0%) and females (49.4%) are equally likely to report that they like school very much or quite a lot.
- There is significant grade variation, with students in grades 7 and 8 (55%-58%) most likely to report that they like school very much or quite a lot, whereas 12th graders are least likely (38.5%).

- There is significant regional variation, with students in the Greater Toronto Area (51.2%) and East (45.6%) more likely to report that they like school than students in the North and West (38%-41%).
- Most students feel close to people at their school (84.9%), and feel like they are part of their school (85.0%).
- Although almost all students (92.3%) generally feel safe in their school, 13.0% – an estimated 123,900 Ontario students – are worried about being harmed, threatened, or being a victim of theft at school.
- Females (15.4%) are significantly more likely than males (10.7%) to be worried about being harmed or threatened at school.
- There are no significant grade differences regarding feeling worried about being harmed or threatened at school.
- There are no significant regional differences.

1999–2017 (Grades 7–12):

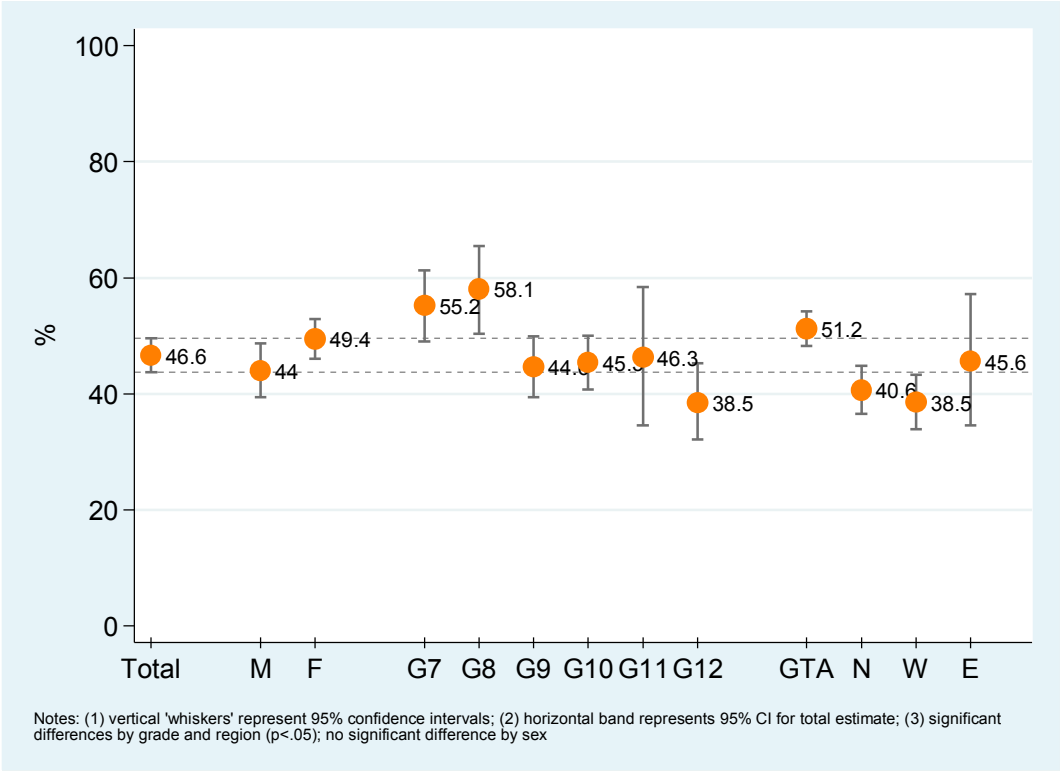
- As seen in Table 3.1.1 and Figure 3.1.6, the percentage of students who report that they like school very much or quite a lot significantly increased between 2015 (32.3%) and 2017 (46.6%), returning to a level seen in 2011 and 2013. The 2017 estimate is also significantly higher than estimates from 1999–2009.
- The percentage of students worried about being harmed or threatened at school did not significantly change between 2015 (12.1%) and 2017 (13.0%). The estimate has been relatively stable since 1999, the first year of monitoring.

Figure 3.1.3
Attitudes About School, 2017 OSDUHS (Grades 7–12)



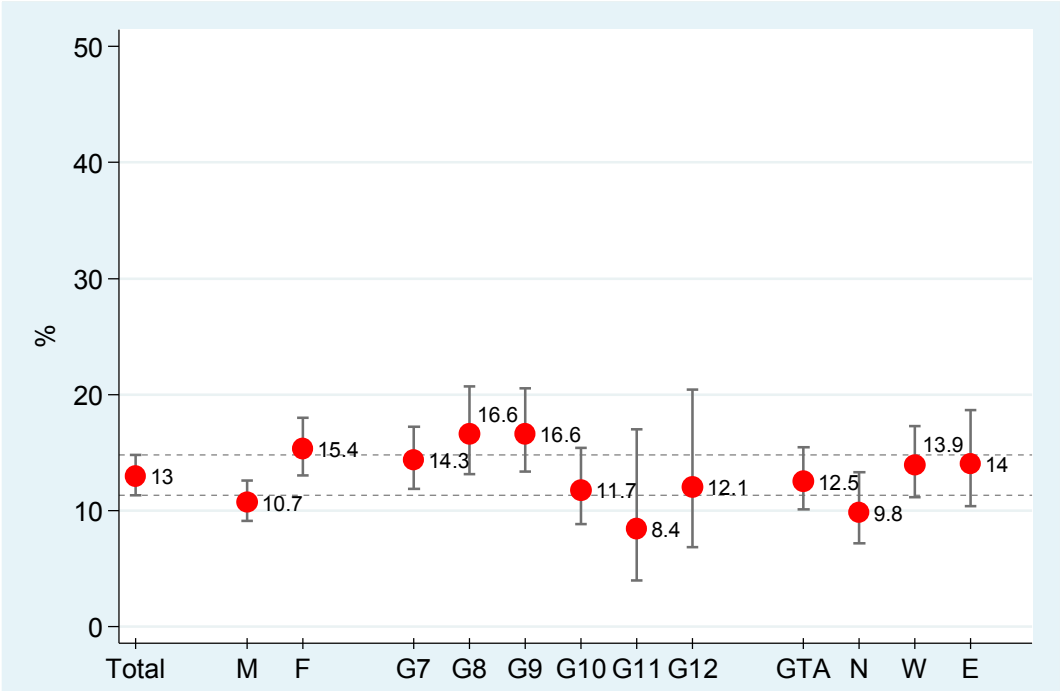
Notes: * 'agree' or 'strongly agree'; error bars represent 95% confidence intervals

Figure 3.1.4
Percentage Reporting Liking School “Very Much” or “Quite a lot” by Sex, Grade, and Region, 2017 OSDUHS



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

Figure 3.1.5
Percentage Reporting Being Worried About Being Harmed, Threatened, or a Victim of Theft at School by Sex, Grade, and Region, 2017 OSDUHS



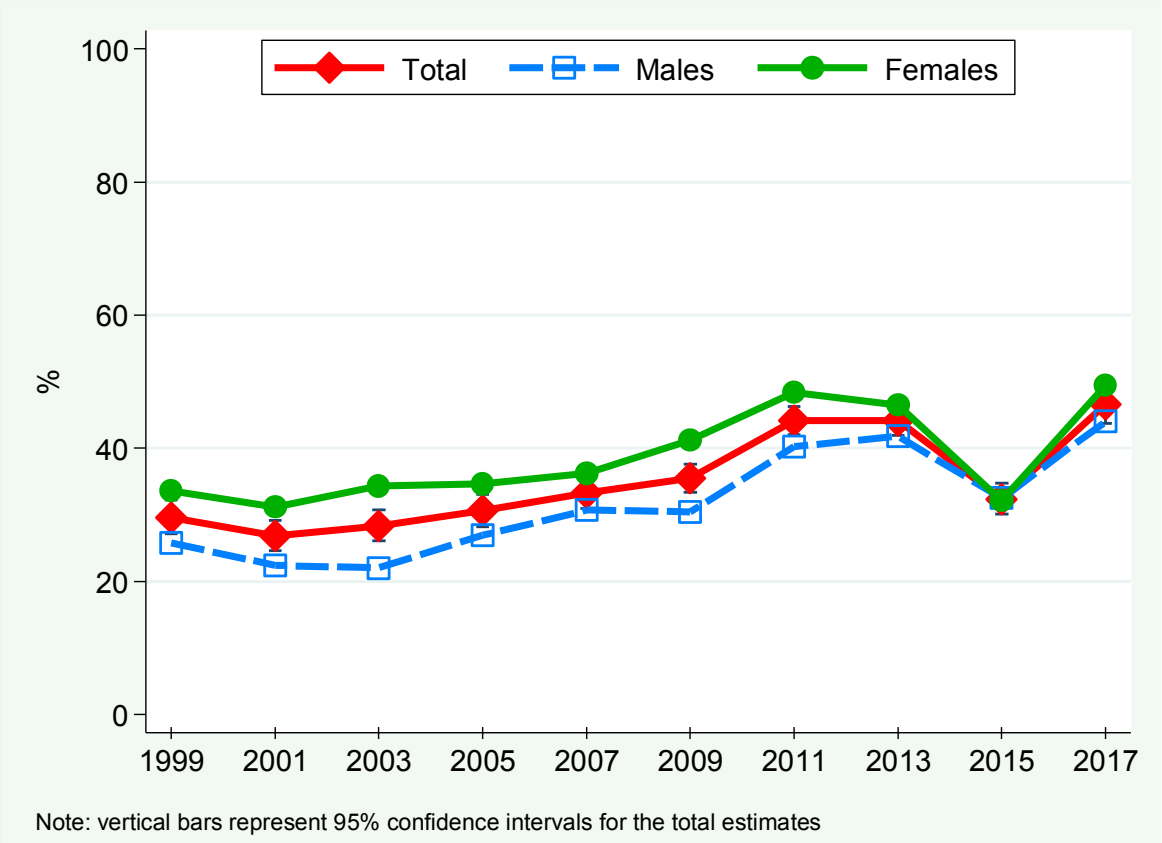
Notes: (1) vertical 'whiskers' represent 95% confidence intervals; (2) horizontal band represents 95% CI for total estimate; (3) significant difference by sex (p<.05); no significant differences by grade or region

Table 3.1.1 Attitudes About School, 1999–2017 (Grades 7–12)

	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017
TOTAL SAMPLE (n=)	(4447)	(3898)	(6616)	(7726)	(6323)	(9112)	(9288)	(10272)	(10426)	(11435)
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	84.9
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	85.0
I feel safe in my school*	90.4	91.4	90.9	92.6	92.7	93.8	95.6	95.7	95.0	92.3
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	46.6 [ab]
Worried about being harmed/threatened at school	14.2	13.1	12.4	12.8	11.7	12.3	18.2	15.4	12.1	13.0

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] 2017 vs. 2015 significant difference, p<.01; [b] 2017 vs. 1999 significant difference, p<.01.
Source: OSDUHS, Centre for Addiction and Mental Health

Figure 3.1.6
Percentage Reporting Liking School "Very Much" or "Quite a lot," 1999–2017 OSDUHS (Grades 7–12)



Note: vertical bars represent 95% confidence intervals for the total estimates

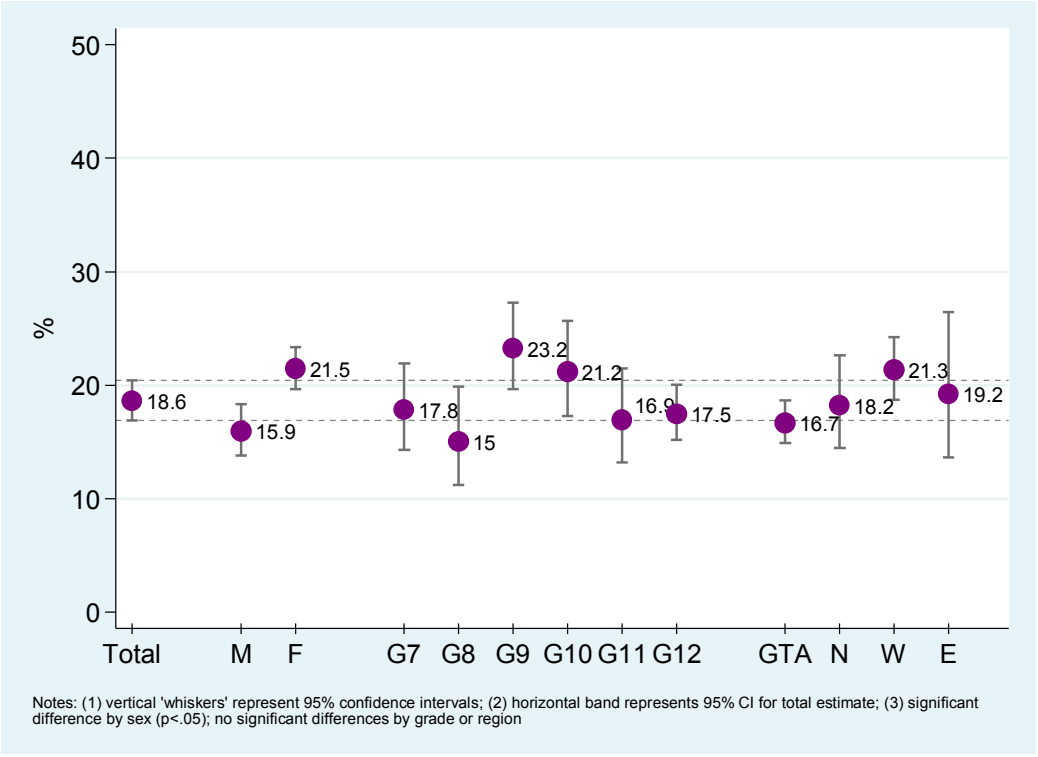
3.1.8 School Subjective Social Status (Figure 3.1.7)

Starting 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 the purpose of this report, we constructed three categories to represent low school SSS (rungs 1–5 on the ladder), average SSS (rungs 6–8), and high SSS (rungs 9–10). We also look at subgroup differences regarding low school SSS.

2017 (Grades 7–12):

- About 18.6% of students report low SSS at school, almost two-thirds (60.3%) report average SSS, and one-in-five (21.1%) report high SSS at school.
- Females are significantly more likely than males to report low SSS at school (21.5% vs. 15.9%, respectively).
- Despite some variation, there are no statistically significant grade differences regarding low SSS at school.
- There are no significant regional differences regarding low SSS at school.

Figure 3.1.7
Percentage Reporting Low Subjective Social Status (SSS) at School by Sex, Grade, and Region, 2017 OSDUHS



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

3.1.9 Perceived Effect of Mental Health on Academic Performance (Figures 3.1.8, 3.1.9)

For the first time in 2017, the OSDUHS asked students how much they think their mental health affects their academic performance. A random half sample of students was asked "*How much do you think your mental or emotional health affects the grades you get in school?*" The four response options ranged from (1) *A great deal* to (5) *Not at all*.

2017 (Grades 7–12):

- One-in-ten (10.4%) students believe that their mental health affects their grades "a great deal." About 18.2% believe that their mental health affects their grades "quite a lot." The majority of students believe that their mental health affects their grades either "a little" (35.9%) or "not at all" (35.5%).
- Over one quarter (28.6%) of students believe that their mental health affects their grades "a great deal" or quite a lot."
- Females (32.2%) are significantly more likely than males (25.2%) to believe that their mental health affects the grades they get in school.
- There is significant variation by grade showing that 12th graders (40.3%) are most likely to hold this belief.
- There is no significant regional variation.

Figure 3.1.8
Percentage Reporting How Much They Believe Mental Health Affects School Grades, 2017 OSDUHS (Grades 7-12)

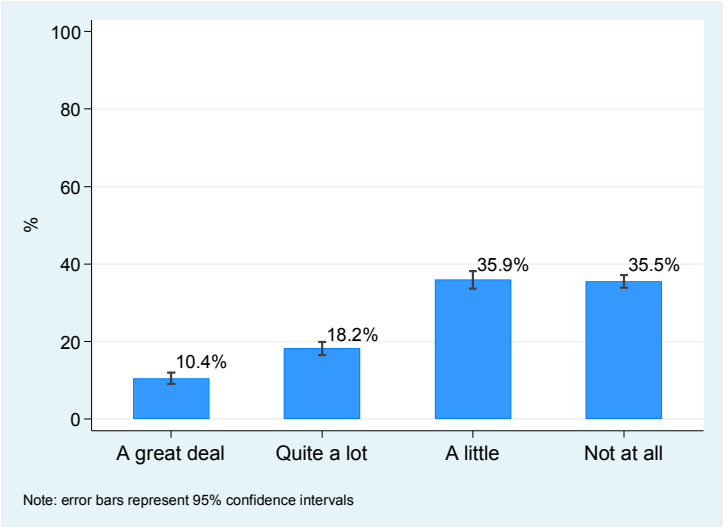
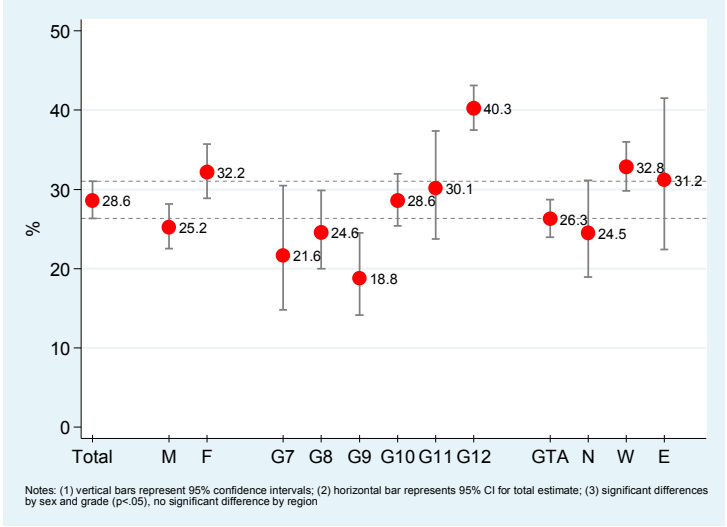


Figure 3.1.9
Percentage Indicating that Mental Health Affects Their School Grades "A Great Deal" or "Quite a lot" by Sex, Grade, and Region, 2017 OSDUHS



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, self-rated physical 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.

2017 (Grades 7–12):

- About two-thirds of Ontario students rate their health as either excellent (24.2%) or very good (37.3%). At the risk end, 8.7% report fair or poor health, which represents roughly 78,200 Ontario students.
- Females (10.9%) are significantly more likely than males (6.6%) 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 10%-12%).
- There are no significant differences among the four regions.

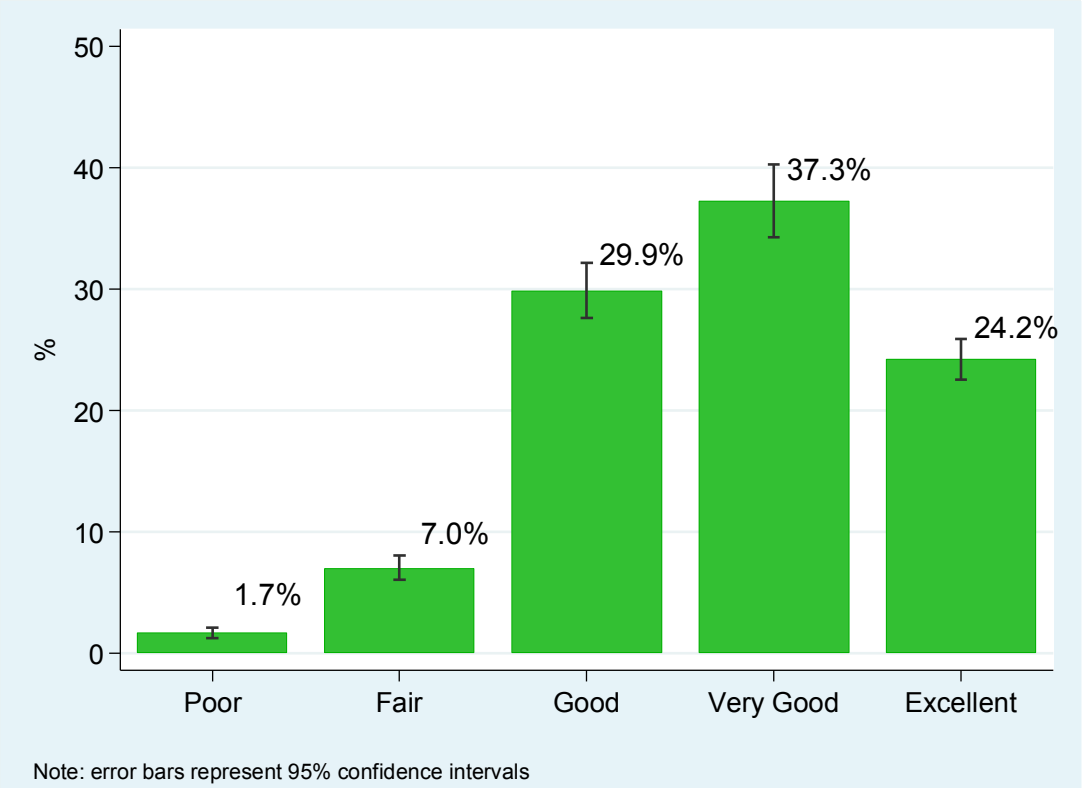
1999–2017 (Grades 7–12):

- The percentage of students in grades 7–12 who rate their physical health as fair or poor has remained relatively stable since 2013 at around 7%-9%. The current estimate is significantly lower than estimates seen between 2003 and 2011 (13%-16%), but similar to those from 1999 and 2001.
- No subgroup shows a significant change since 2015.

1991–2017 (Grades 7, 9, 11 only):

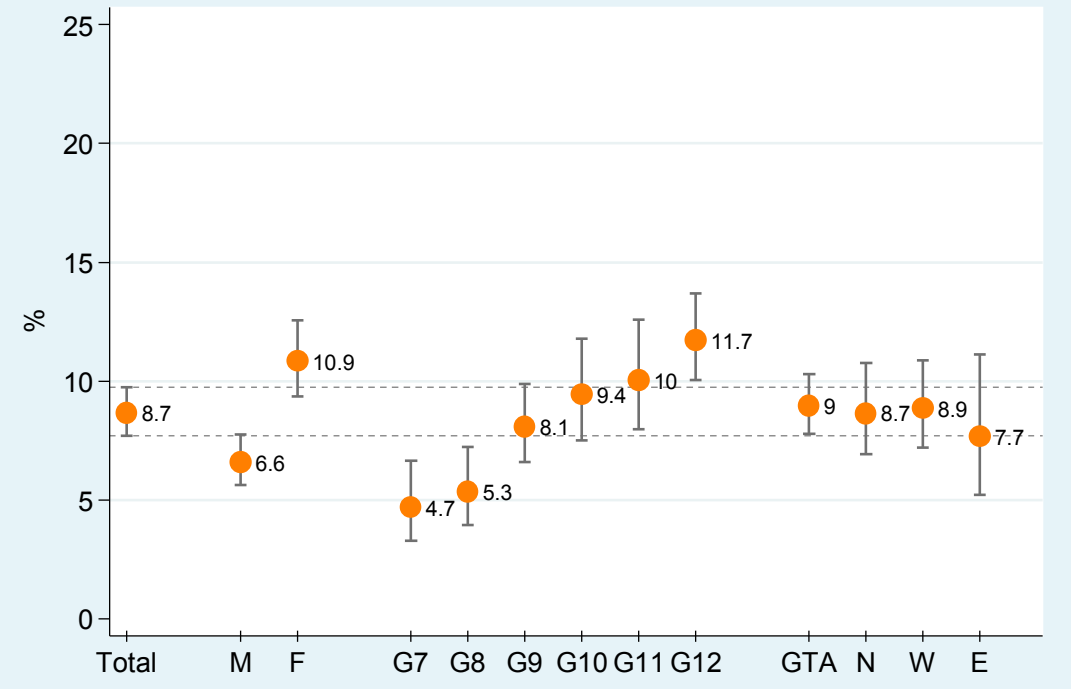
- Over the long-term (among 7th, 9th, and 11th graders only), fair or poor self-rated health increased from 1991 to 2003, remained stable until 2011, followed by a decrease and then stability since 2013. The current level resembles the low levels seen in the early 1990s.

Figure 3.2.1
Self-Rated Physical Health, 2017 OSDUHS (Grades 7–12)



Note: error bars represent 95% confidence intervals

Figure 3.2.2
Percentage Reporting Fair or Poor Physical Health by Sex, Grade, and Region, 2017 OSDUHS



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

3.2.2 Daily Physical Activity

(Figure 3.2.3; Table A3.2.2)

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 Canada, an accumulation of at least 60 minutes of moderate-to-vigorous physical activity per day is recommended for children and youth (Tremblay et al., 2016). Therefore, here we describe the percentage of students who report meeting the 60-minute daily recommendation on each of the past seven days.

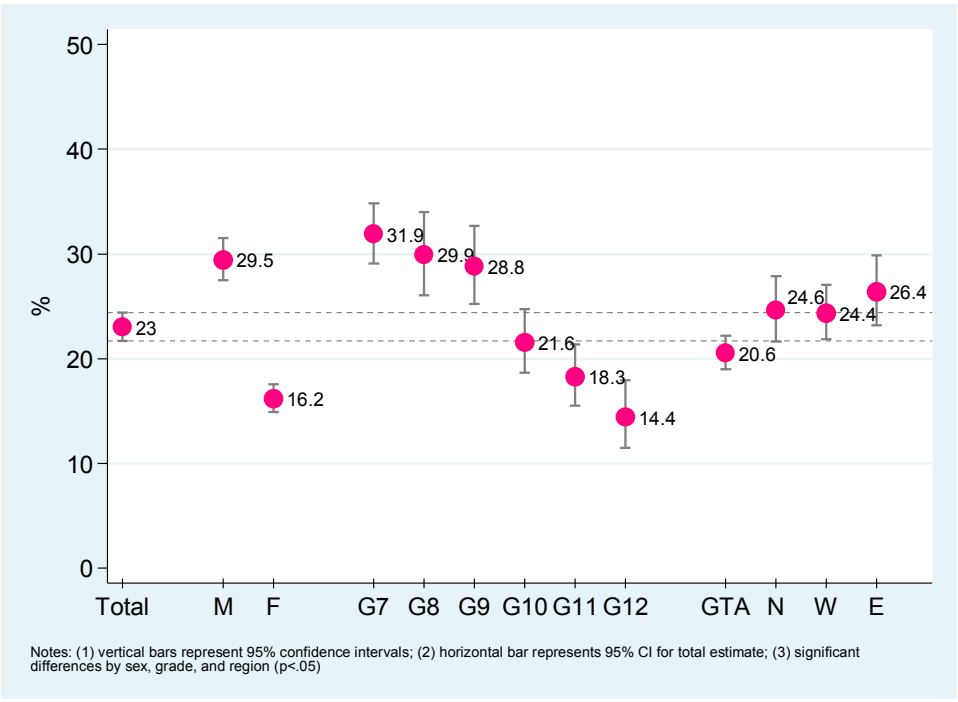
2017 (Grades 7–12):

- About one-quarter (23.0%) of students report meeting the 60-minute daily activity recommendation. This estimate represents about 207,000 Ontario students.
- Males (29.5%) are significantly more likely than females (16.2%) to be active daily.
- Daily physical activity significantly decreases with grade, from 31.9% of 7th graders down to 14.4% of 12th graders.
- There are significant differences among the regions, with Greater Toronto Area students (20.6%) least likely to be active daily compared with students in the other regions.

2009–2017 (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 2017 (23.0%).
- All subgroups have remained relatively stable since 2009.

Figure 3.2.3
Percentage Meeting the 60-Minute Daily Physical Activity Recommendation on Each of the Past Seven Days by Sex, Grade, and Region, 2017 OSDUHS



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

3.2.3 Physical Inactivity

(Figure 3.2.4; Table A3.2.3)

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.

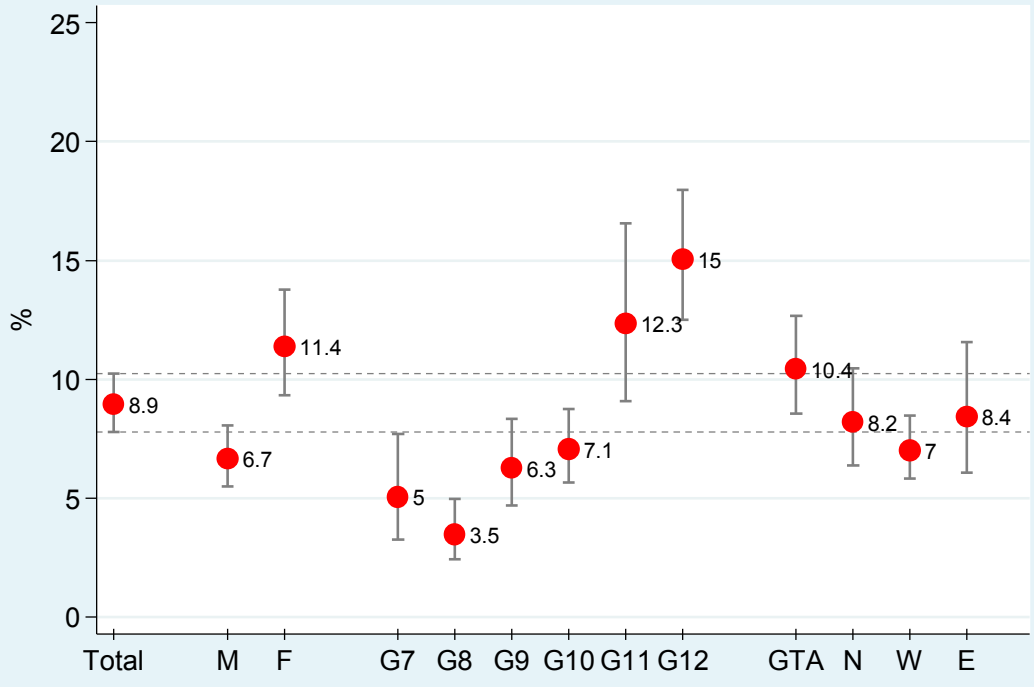
2015 (Grades 7–12):

- One-in-eleven (8.9%) students were physically inactive on each of the seven days before the survey. This estimate represents about 80,300 Ontario students.
- Females (11.4%) are significantly more likely than males (6.7%) to be inactive.
- Inactivity significantly increases with grade, peaking in 11th and 12th grades at about 12%-15%.
- There is a significant difference by region, showing that Greater Toronto Area students (10.4%) are most likely to be inactive compared with students in the other three regions (7%-8%).

2009–2017 (Grades 7–12):

- The percentage of students who report being inactive significantly increased between 2015 (6.4%) and 2017 (8.9%), returning to a level seen in prior years (2009-2013).
- Among the subgroups, there was a significant increase in reported inactivity between 2015 and 2017 for females, grades 7 and 12, and students in the Greater Toronto Area, each returning to a level seen in prior years.

Figure 3.2.4
Percentage Reporting No Physical Activity on Any of the Past Seven Days by Sex, Grade, and Region, 2017 OSDUHS



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

3.2.4 Physical Inactivity at School

(Figures 3.2.5, 3.2.6; Table A3.2.4)

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.

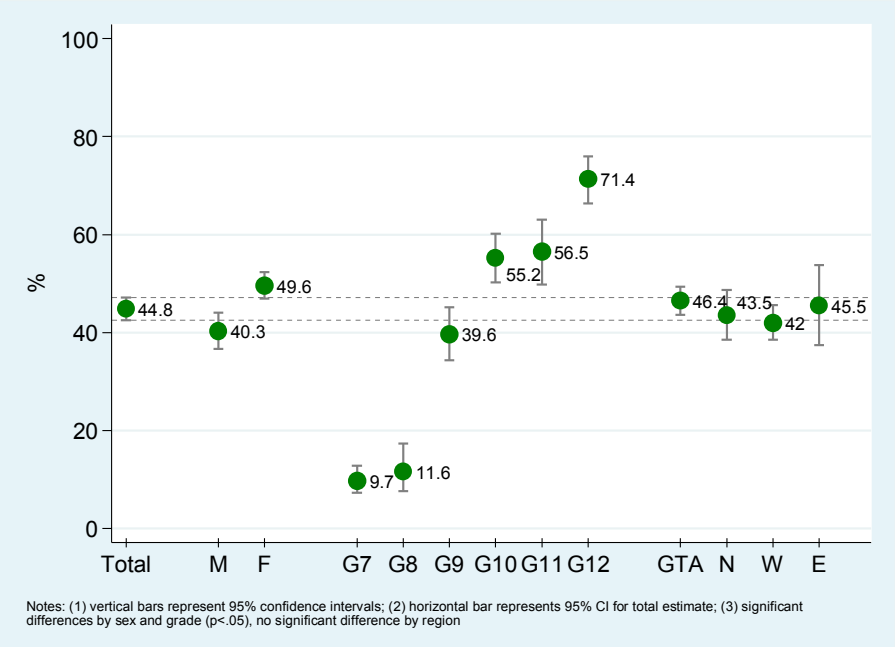
2017 (Grades 7–12):

- Less than half (44.8%) of all students do not engage in physical activity in a PE class.
- Females (49.6%) are significantly more likely than males (40.3%) to be inactive at school.
- Inactivity at school significantly increases with grade, from about 10%–12% among 7th and 8th graders to 71.4% among 12th graders.
- There are no significant regional differences.

1999–2017 (Grades 7–12):

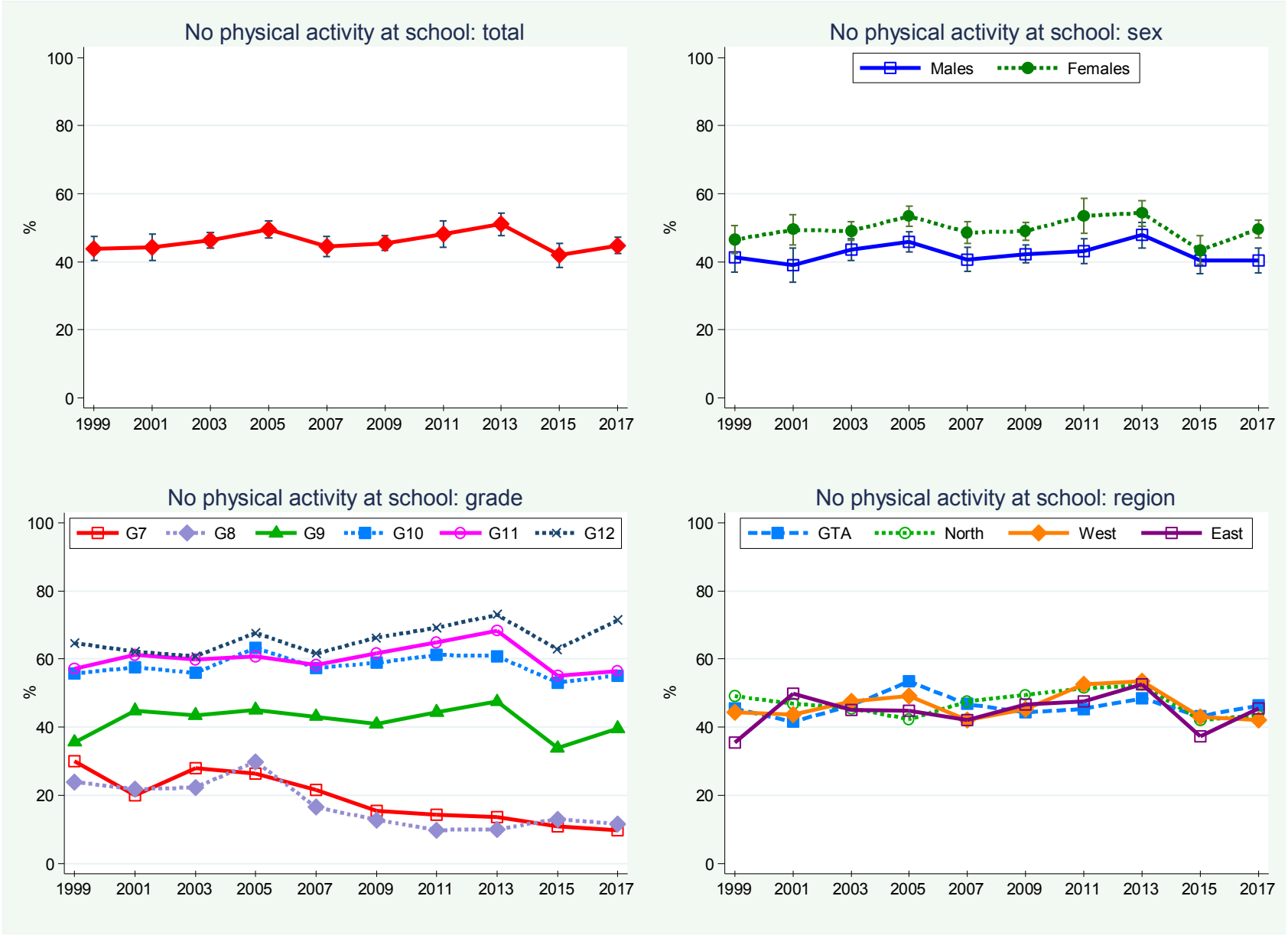
- The percentage of students who report being physically inactive at school in a PE class did not significantly change between 2015 (41.9%) and 2017 (44.8%), and has been relatively stable since 1999 (with the exception of a decrease between 2013 and 2015.)
- Among the subgroups, inactivity at school significantly increased between 2015 and 2017 among females (from 43.4% to 49.6%), returning to a level seen in prior years. Grade 7 and 8 students show a significant decrease in inactivity at school since 1999, which became more prominent starting in 2005.

Figure 3.2.5
Percentage Reporting No Physical Activity at School in Physical Education Class on Any of the Past Five School Days by Sex, Grade, and Region, 2017 OSDUHS



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

Figure 3.2.6
Percentage Reporting No Physical Activity at School in Physical Education Class on Any of the Past Five School Days, 1999–2017 OSDUHS (Grades 7–12)



3.2.5 Screen Time Sedentary Behaviour

(Figures 3.2.7, 3.2.8; Table A3.2.5)

Starting in 2009, students were asked about the usual amount of time they spend in front of a screen (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/videos, playing video/computer games, texting, emailing, or surfing the Internet in your free time?*" The *Canadian 24-Hour Movement Guidelines for Children and Youth: An Integration of Physical Activity, Sedentary Behaviour, and Sleep* recommend that children and adolescents limit recreational screen time to no more than two hours per day (Tremblay et al., 2016). 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" (6% of the total sample) were coded as missing values and were excluded from the analysis.

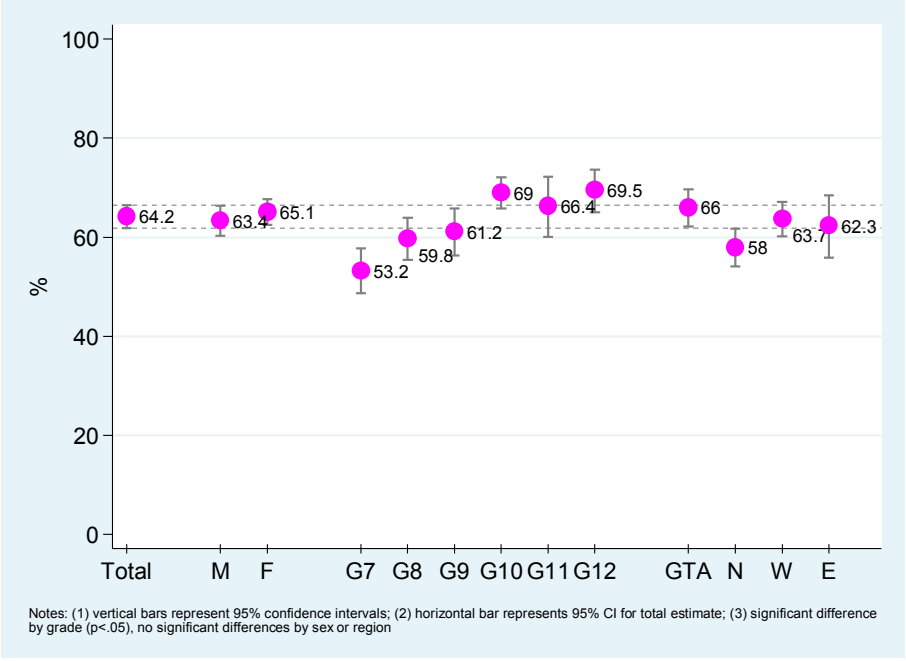
2017 (Grades 7–12):

- Almost two-thirds (64.2%) of students spend at least three hours a day on recreational screen time. This estimate represents about 539,100 Ontario students in grades 7–12. At the extreme end, 12.7% report seven or more hours a day, representing about 106,800 students.
- Males (63.4%) and females (65.1%) are equally likely to spend at least three hours a day in front of a screen.
- There is significant grade variation showing that students in grades 10–12 (about 66%-70%) are most likely to spend at least three hours a day in front of a screen.
- There are no significant regional differences.

2009–2017 (Grades 7–12):

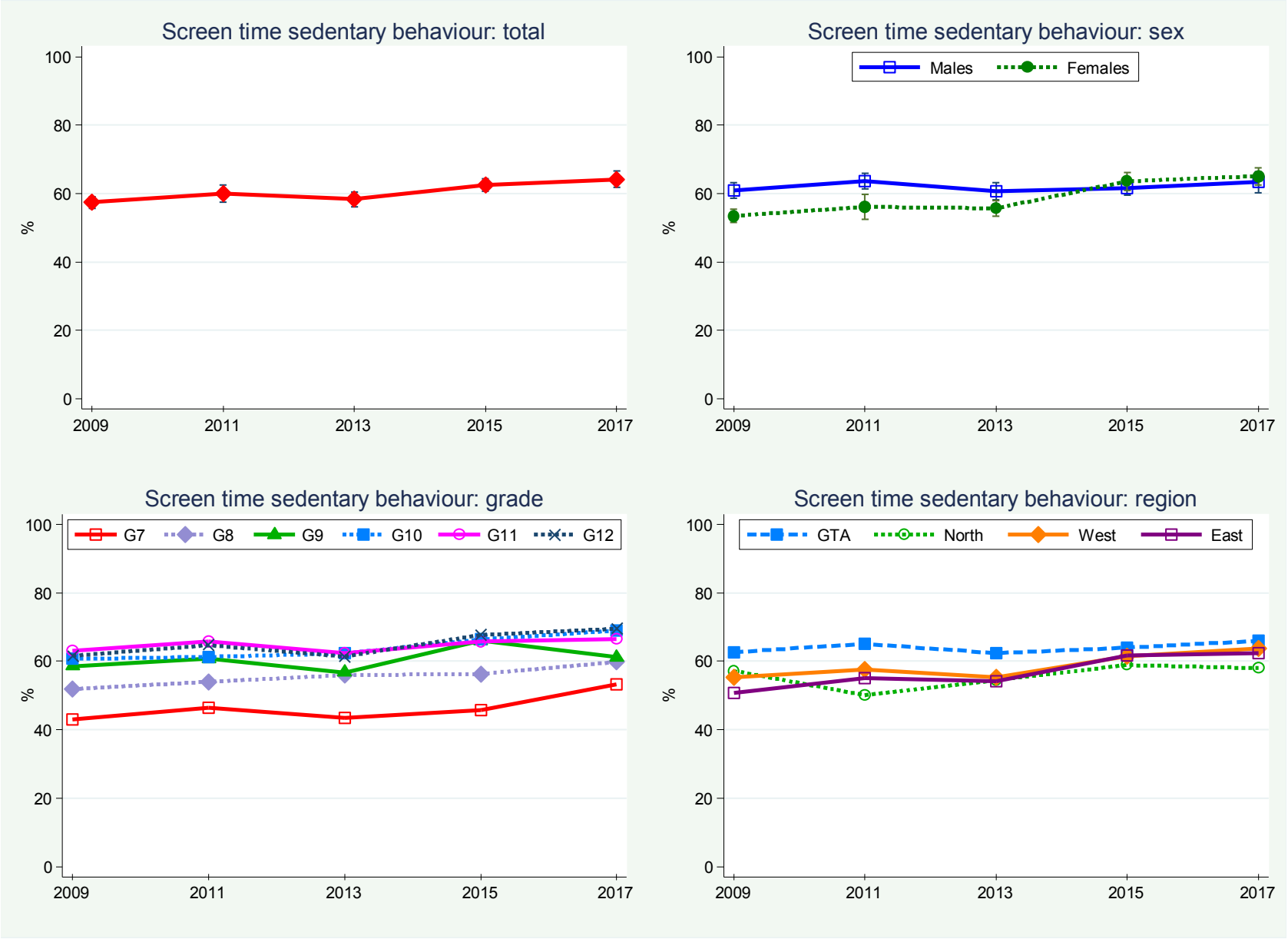
- The percentage of students who are screen time sedentary did not significantly change between 2015 (62.6%) and 2017 (64.2%). However, the current estimate is significantly higher than those seen between 2009 and 2013 (57%-60%).
- Among the subgroups, females, grades 7, 8, 10, and 12, and students in the West and East regions all show significant increases since 2009, the first year of monitoring.

Figure 3.2.7
Percentage Reporting Three or More Hours per Day of Recreational Screen Time (Sedentary Behaviour) in the Past Seven Days by Sex, Grade, and Region, 2017 OSDUHS



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

Figure 3.2.8
Percentage Reporting Three or More Hours per Day of Recreational Screen Time (Sedentary Behaviour) in the Past Seven Days, 2009–2017 OSDUHS (Grades 7–12)



3.2.6 Overweight or Obese

(Figures 3.2.9-3.2.11; Table A3.2.6)

Since 2007 the OSDUHS has asked students to report their current height and weight, using precoded response options.[72] Body mass index (BMI) was calculated as weight in kilograms divided by height in metres squared.[73] Students without valid height and weight responses (7% of the total sample, *n*=811) 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).

2017 (Grades 7–12):

- An estimated 8.5% (95% CI: 7.6%-9.6%) of students are classified as underweight, 63.5% (61.6%-65.3%) are a healthy weight, 18.4% (17.2%-19.6%) are classified as overweight, and 9.6% (8.4%-10.9%) are classified as obese.
- Over one-quarter (28.0%) of students are estimated to be either overweight or obese. This percentage represents about 236,000 7th–12th graders in Ontario.[74]
- Males (29.8%) and females (26.0%) are equally likely to be overweight or obese.
- The likelihood of being overweight or obese significantly increases with grade, from a low of 21.9% among 7th graders to 28%-34% among those in grades 10–12.
- There are no significant differences among the four regions.

2007–2017 (Grades 7–12):

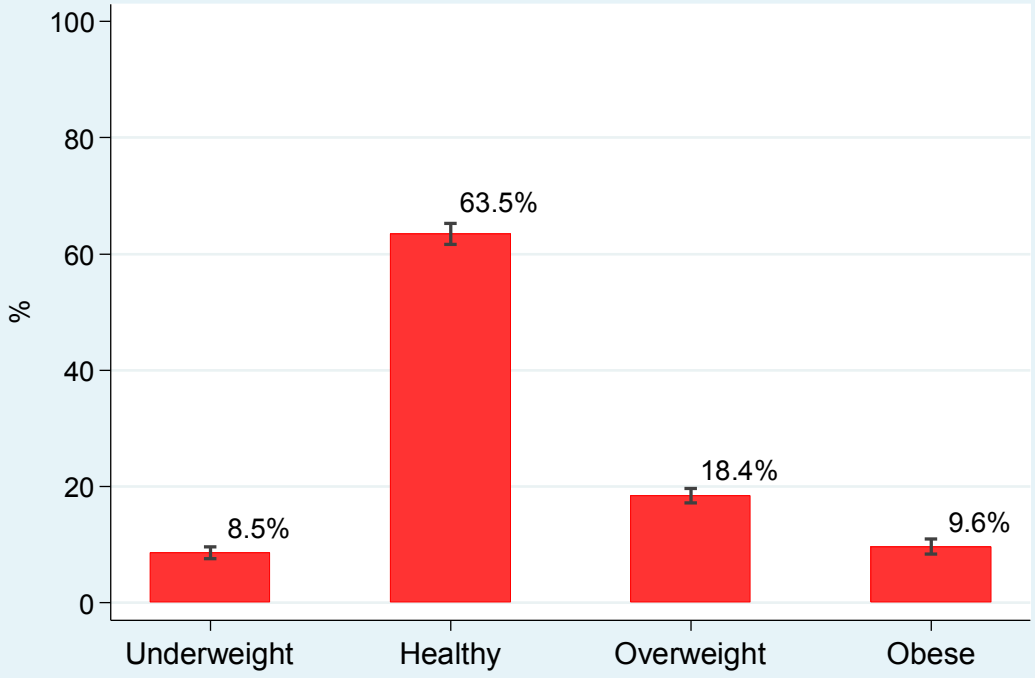
- The percentage of Ontario students who are classified as overweight or obese has remained stable in recent years at about 25%-28%. However, the current estimate of 28.0% is significantly higher than the estimate from 2007 (23.2%), the first year of monitoring.
- No subgroup shows a significant difference between 2015 and 2017. However, females, students in grades 8 and 11, and students in the North and West regions show a significantly higher 2017 estimate compared to their respective 2007 estimate.

[72] 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).

[73] Using the "zanthro" module in *Stata* 13.1.

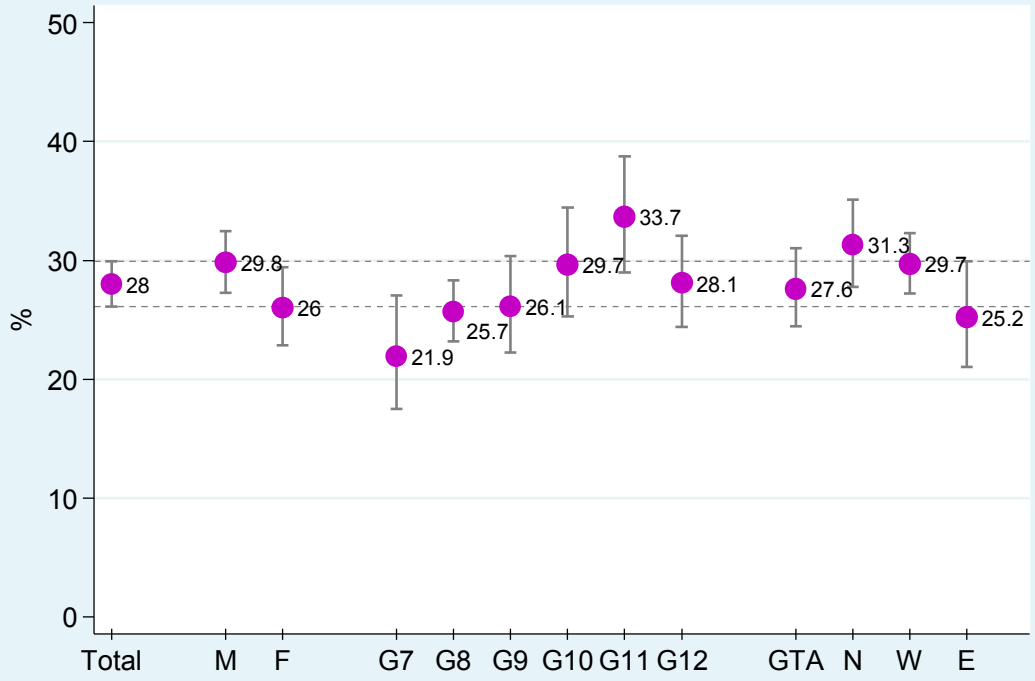
[74] The estimate for overweight/obese using the *WHO Reference 2007* cut-points (de Onis et al., 2007) is 31.5% (95% CI: 29.6%-33.4%), representing about 265,600 students.

Figure 3.2.9
Percentage Classified as Underweight, Healthy Weight, Overweight, and Obese, 2017 OSDUHS (Grades 7–12)



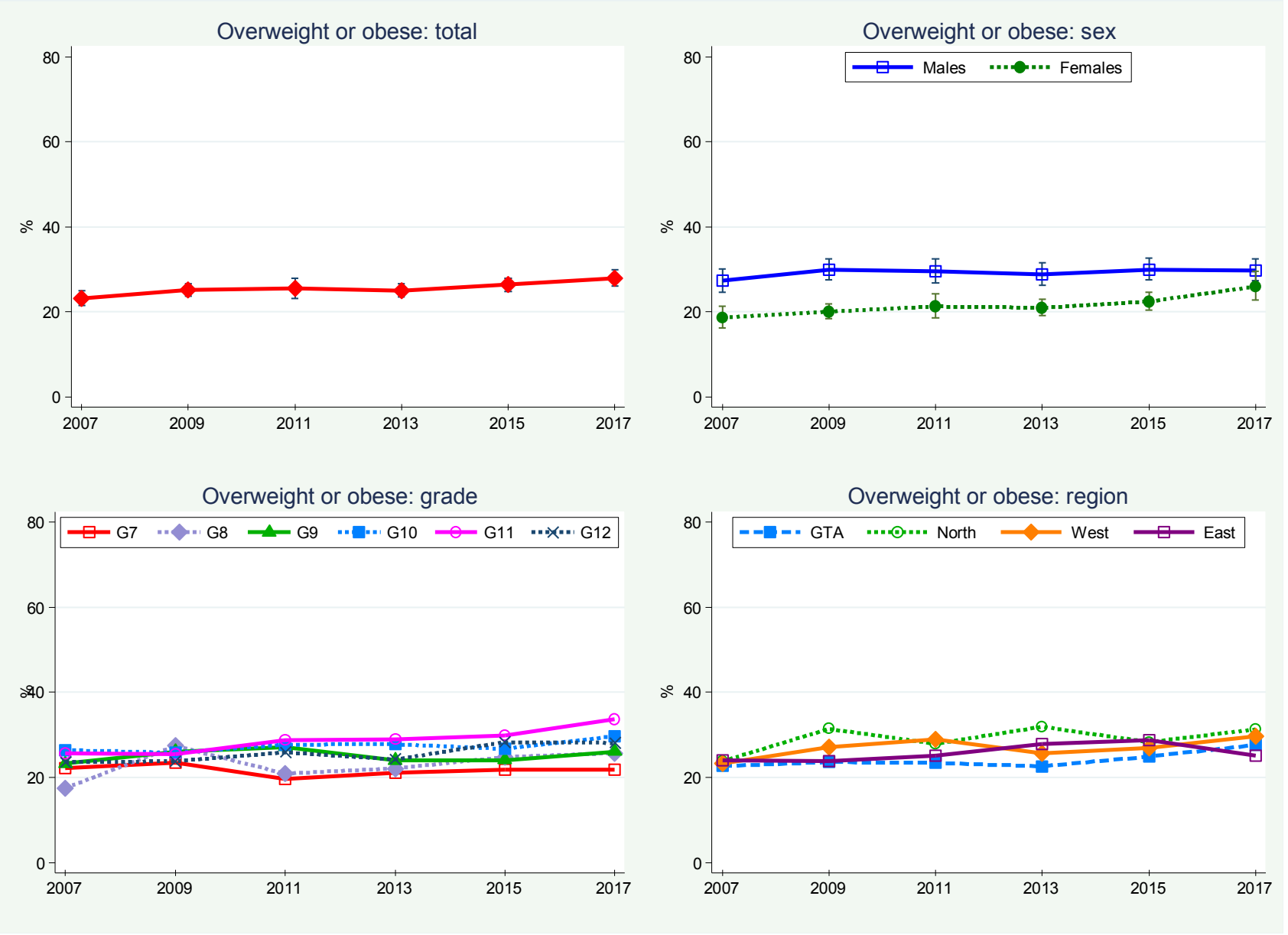
Note: error bars represent 95% confidence intervals

Figure 3.2.10
Percentage Classified as Overweight or Obese by Sex, Grade, and Region, 2017 OSDUHS



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

Figure 3.2.11
Percentage Classified as Overweight or Obese, 2007–2017 OSDUHS (Grades 7–12)



3.2.7 Body Image and Weight Control

(Figures 3.2.12, 3.2.13; Table A3.2.7)

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?"*

2017 (Grades 7–12):

- Almost two-thirds (64.1%) of students are satisfied with their weight. About one-quarter (23.7%) believe they are too fat, and about one-in-eight (12.2%) believe they are too thin.
- Females are twice as likely as males to believe that they are too fat, (31.3% vs. 16.4%, respectively), whereas males are three times more likely than females to believe that they are too thin (17.8% vs. 6.3%, 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 9.6% of 7th graders to 21.1% of 12th graders. Among females, believing one is too fat increases with grade, from 16.5% of 7th graders to 41.2% of 12th graders.
- There are no significant regional differences.
- One-third (35.2%) of students are not trying to alter their weight. Another 29.0% are attempting to lose weight, 22.2% want to keep from gaining weight, and 13.6% want to gain weight.
- Females are significantly more likely than males to report they are trying to lose weight (39.1% vs. 19.2%, respectively), whereas males are much more likely than females to report that they are trying to gain weight (22.1% vs. 4.8%, 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 13.2% of 7th graders to 26.4% of 12th graders. In contrast, among females, attempts to lose weight increase with grade, from 27.0% of 7th graders to 42.0% of 12th graders.
- There are no significant regional differences.

2001–2017 (Grades 7–12):

- The percentage of students in 2017 (23.7%) who believe they are too fat is similar to the estimates seen since 2009. However, the current estimate is significantly higher than the estimates seen between 2001 (the first year of monitoring) and 2007, when estimates were around 19%-20%. Females show a significant increase in this belief, from 23.6% in 2001 to 31.3% in 2017. Males show no significant increase.
- There have been no significant changes over time regarding weight control efforts.

Figure 3.2.12
Body Image and Weight Control by Sex, 2017 OSDUHS (Grades 7–12)

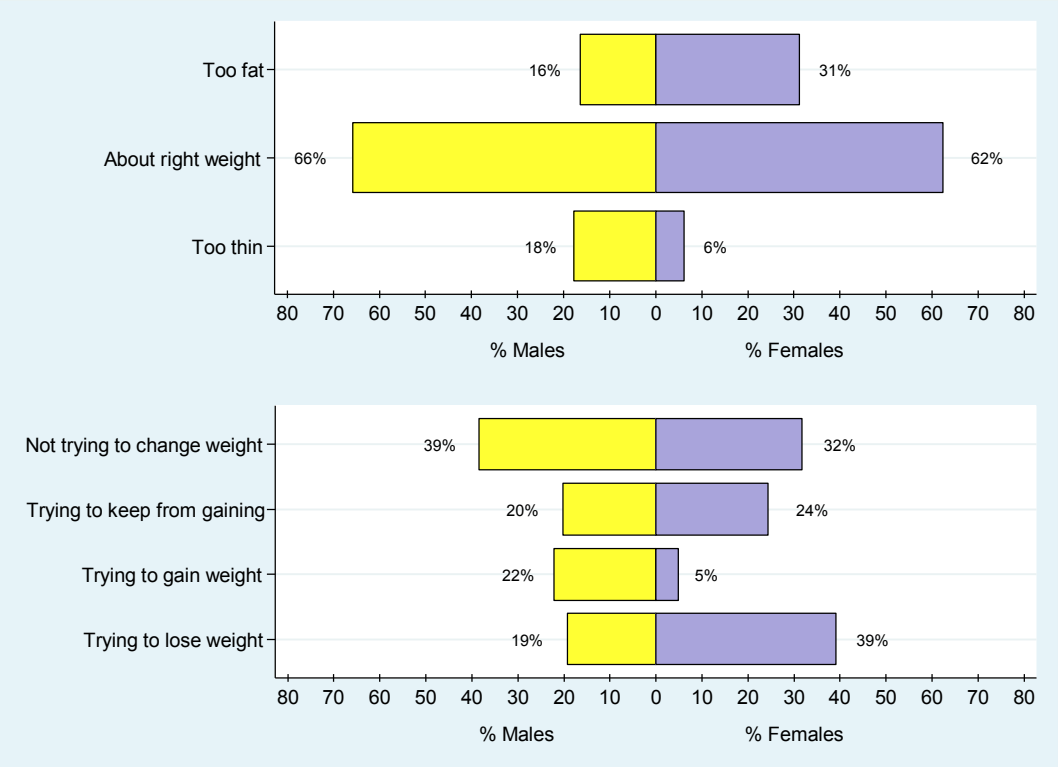
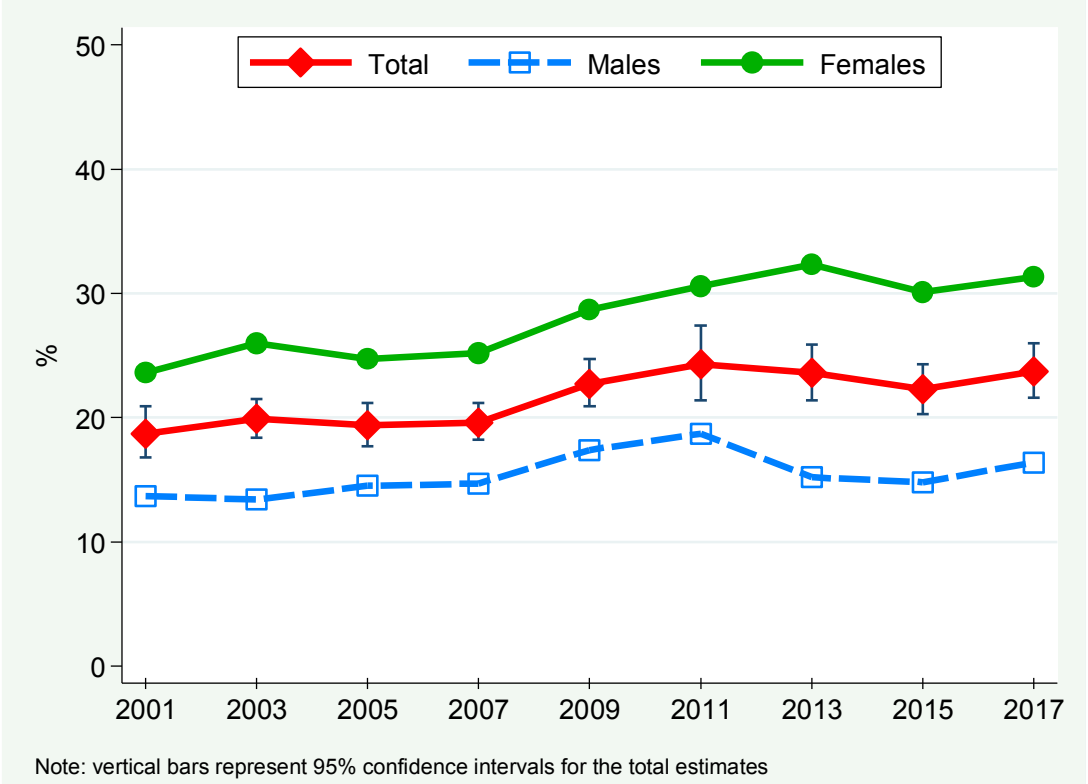


Figure 3.2.13
Percentage Reporting the Belief That They are “Too Fat” by Sex, 2001–2017 OSDUHS (Grades 7–12)



Note: vertical bars represent 95% confidence intervals for the total estimates

3.2.8 Hours of Sleep on an Average School Night

(Figure 3.2.14; Table A3.2.8)

Starting 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.

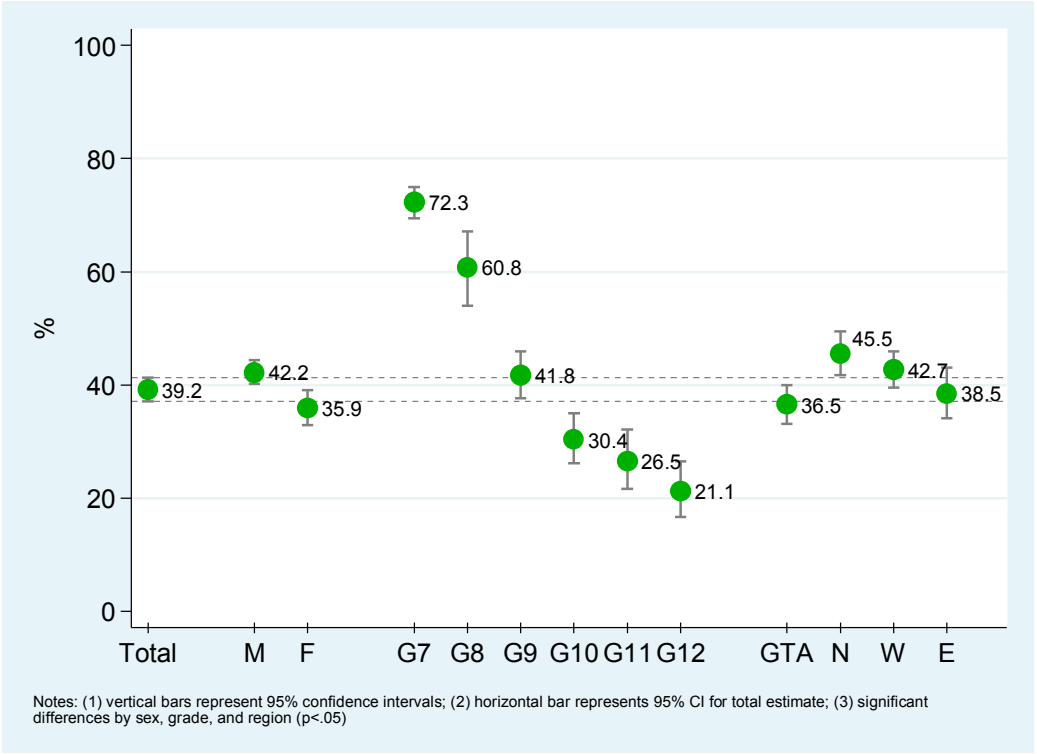
2017 (Grades 7–12):

- Less than half (39.2%) of Ontario students report that they usually get eight or more hours of sleep on an average school night. Therefore, most students (61%) are not getting at least eight hours of sleep.
- Males (42.2%) are significantly more likely than females (35.9%) to get at least eight hours of sleep on an average school night.
- Seventh graders (72.3%) are most likely to report at least eight hours of sleep on an average school night. Sufficient sleep decreases as grade increases as only about one-in-five (21.1%) 12th graders report at least eight hours of sleep.
- There are significant regional differences showing that students in the Greater Toronto Area (36.5%) are least likely, and students in the North (45.5%) are most likely, to report at least eight hours of sleep on an average school night.

2017 vs. 2015 (Grades 7–12):

- The percentage of students reporting at least eight hours of sleep on school nights did not significantly change between 2015 (41.0%) and 2017 (39.2%). No subgroup shows a significant change.

Figure 3.2.14
Percentage Reporting Eight or More Hours of Sleep on School Nights by Sex, Grade, and Region, 2017 OSDUHS



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

3.2.9 Go to Bed or School Hungry

(Figure 3.2.15; Table A3.2.9)

Starting in 2015, students were asked about going without food. 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.

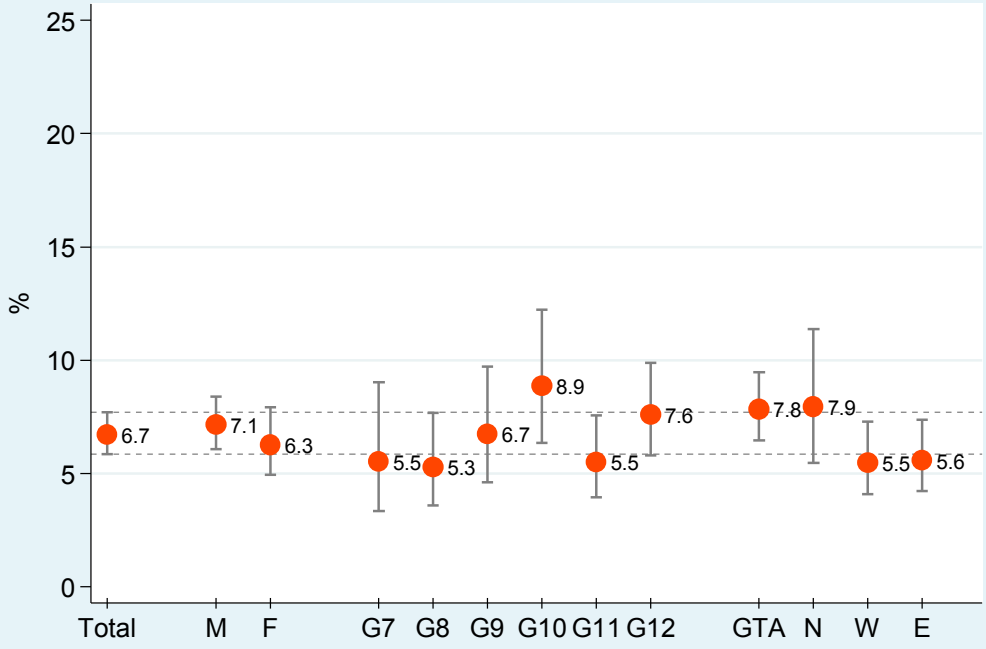
2017 (Grades 7–12):

- An estimated 6.7% of students report that they often or always go to bed or school hungry. This percentage represents about 60,000 students in Ontario.
- Males (7.1%) and females (6.3%) 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.

2017 vs. 2015 (Grades 7–12):

- There was a small, but significant, increase in the percentage of students reporting going to bed or school hungry between 2015 and 2017, from 4.6% to 6.7%.
- Among the subgroups, students in the Greater Toronto Area show a significant increase between 2015 and 2017, from 4.5% to 7.8%.

Figure 3.2.15
Percentage Reporting "Often" or "Always" Going to Bed or School Hungry by Sex, Grade, and Region, 2017 OSDUHS



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

3.2.10 Medically Treated Injury

(Figures 3.2.16, 3.2.17; Table A3.2.10)

Starting in 2003, the OSDUHS asked a random half sample of students whether they experienced medically treated injuries during the past year. The question was *"In the last 12 months, how many times were you hurt or injured, and had to be treated by a doctor or nurse?"* The response options were: *Not treated for an injury in the last 12 months, One time, 2 times, 3 times,* or *4 or more times*.

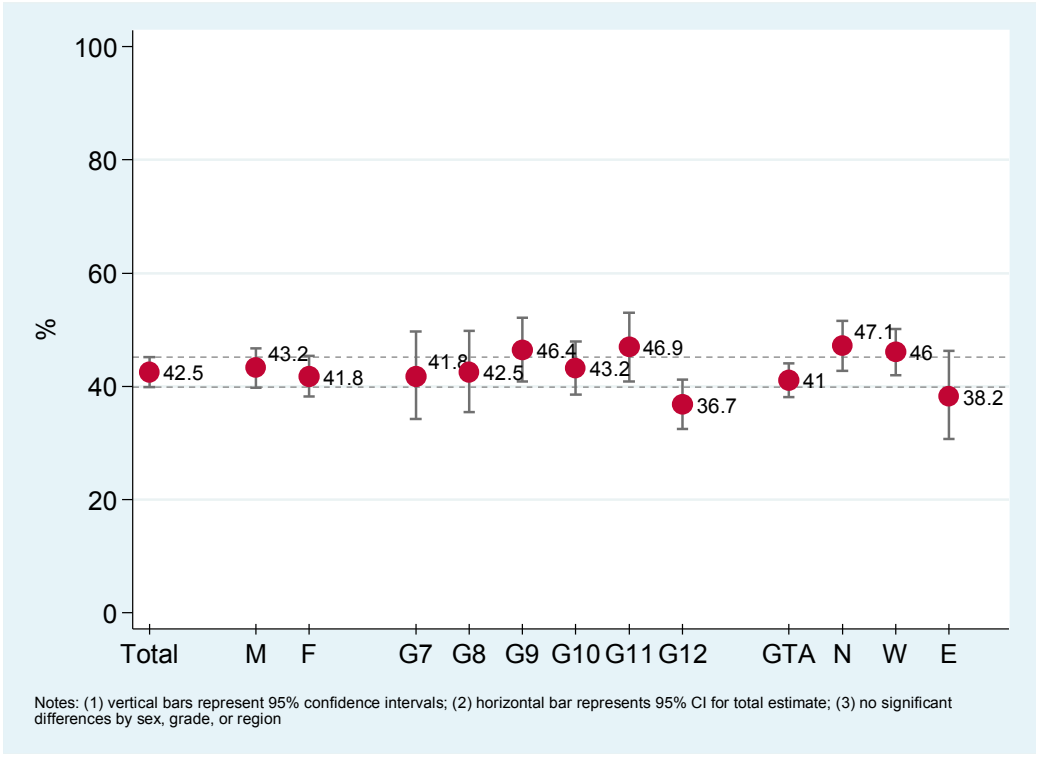
2017 (Grades 7–12):

- An estimated 42.5% of students report that they were treated for an injury at least once in the 12 months before the survey. This percentage represents about 345,700 students in Ontario. More specifically, 21.8% were treated for an injury once in the past year, 11.7% were treated twice, 4.8% were treated three times, and 4.2% four or more times.
- Males (43.2%) 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 no significant differences among the four regions.

2003–2017 (Grades 7–12):

- The percentage of students experiencing a medically treated injury in the past year has been stable since 2009 at about 41%-44%. However, there has been an increase compared to a decade or so ago (2003-2007), when estimates were about 34%-37%.
- Among the subgroups, males, females, 9th graders, 10th graders, 11th graders, students in the Greater Toronto Area and the West region all show significant increases compared to a decade or so ago.

Figure 3.2.16
Percentage Reporting a Medically Treated Injury in the Past Year by Sex, Grade, and Region, 2017 OSDUHS



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

Figure 3.2.17
Percentage Reporting a Medically Treated Injury in the Past Year, 2003–2017 OSDUHS (Grades 7–12)

3.2.11 Concussion

(Figures 3.2.18, 3.2.19)

For the first time in 2017, students were asked whether they had a concussion (head injury) in their lifetime and in the past year. A concussion was defined as "*any head injury that resulted in a headache, dizziness, blurred vision, vomiting, feeling confused or 'dazed,' or problems remembering*." Students were also asked what was the cause of their injury using a list of possible causes.

2017 (Grades 7–12):

- Over one-third (36.0%) of students report having a concussion in their lifetime (representing about 317,600 students in Ontario). One-in-seven (14.8%) students report having a concussion in the past year. This estimate represents about 130,700 students in Ontario.
- Males (15.4%) and females (14.2%) are equally likely to report having a concussion in the past year.
- There is significant grade variation showing that 8th graders (22.0%) are most likely to report a concussion in the past year.
- There is significant regional variation showing that students in the Greater Toronto Area (11.5%) are the least likely to report a concussion in the past year. Students in the West and East regions are most likely to report a concussion in the past year (18% for both).
- Playing hockey and other team sports (such as football, rugby) are among the most common causes of concussions. The least common causes include being bullied/pushed by someone and "other vehicle" accidents (such as snowmobile, ATV).

Figure 3.2.18
Percentage Reporting a Concussion in the Past Year by Sex, Grade, and Region, 2017 OSDUHS

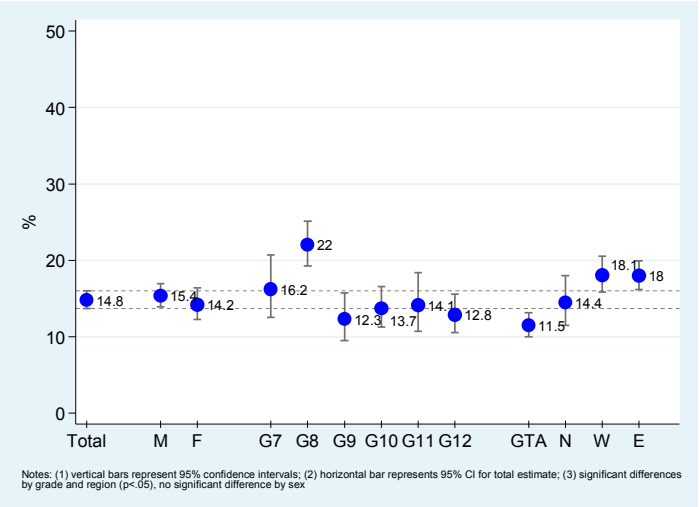
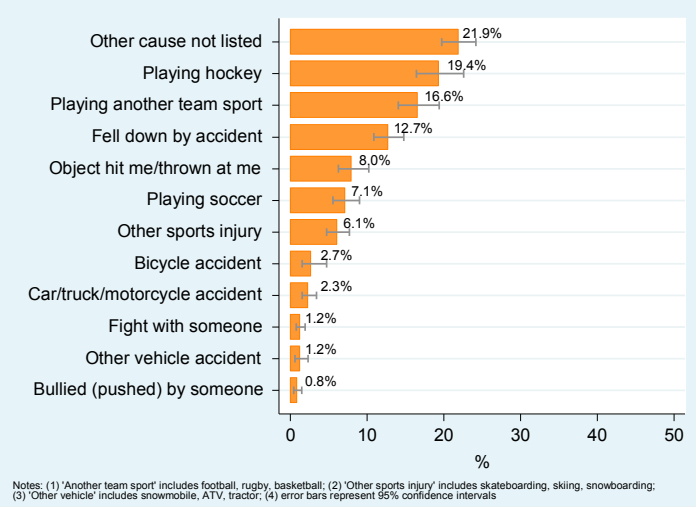


Figure 3.2.19
Main Cause of Concussion (in Lifetime or Past Year), 2017 OSDUHS



3.2.12 Seatbelt Use

(Figure 3.2.20; Table A3.2.11)

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 report they do not always wear a seatbelt when they ride in a vehicle.

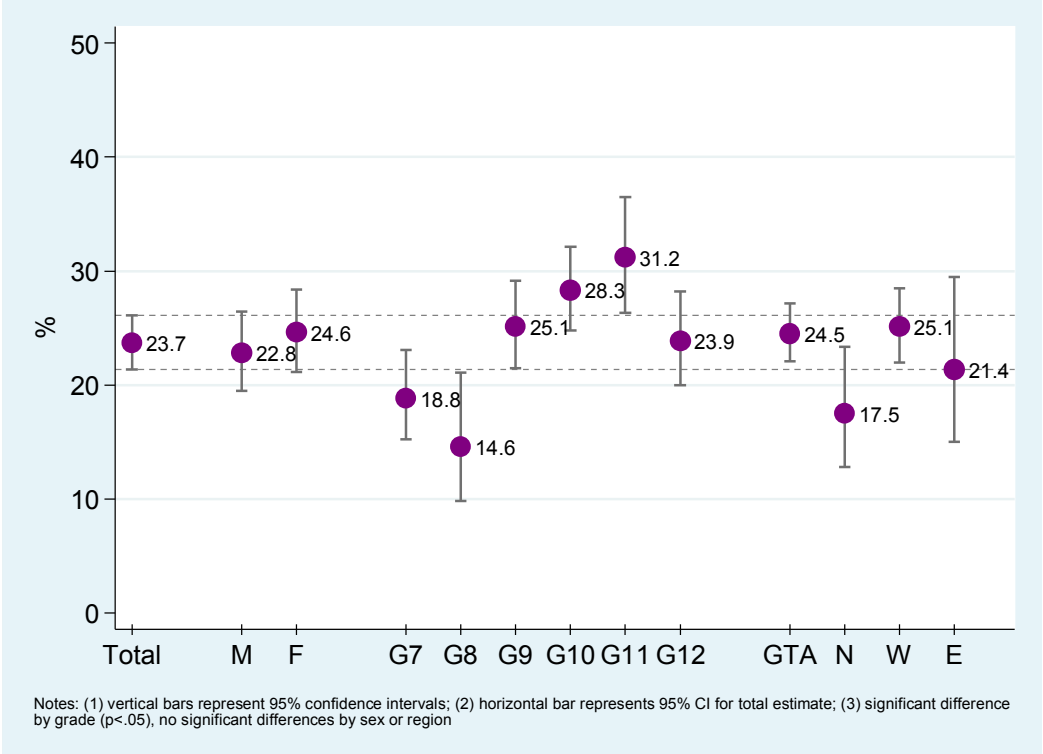
2017 (Grades 7–12):

- One-quarter (23.7%) of students report they do not always wear a seatbelt. This estimate represents about 199,500 students in Ontario.
- Males (22.8%) and females (24.6%) 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.

2011–2017 (Grades 7–12):

- The percentage of students who report not always wearing a seatbelt in 2017 (23.7%) is similar to the percentages from 2015 (23.9%) and 2013 (23.7%), but is significantly lower than the percentage in 2011 (28.4%), the first year of monitoring.
- Among the subgroups, only students in grades 8 and 9 show significantly lower estimates in 2017 compared with their respective estimates from 2011.

Figure 3.2.20
Percentage Reporting Not Always Wearing a Seatbelt When in a Vehicle by Sex, Grade, and Region, 2017 OSDUHS



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

3.2.13 Texting While Driving

(Figure 3.2.21; Table A3.2.12)

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.

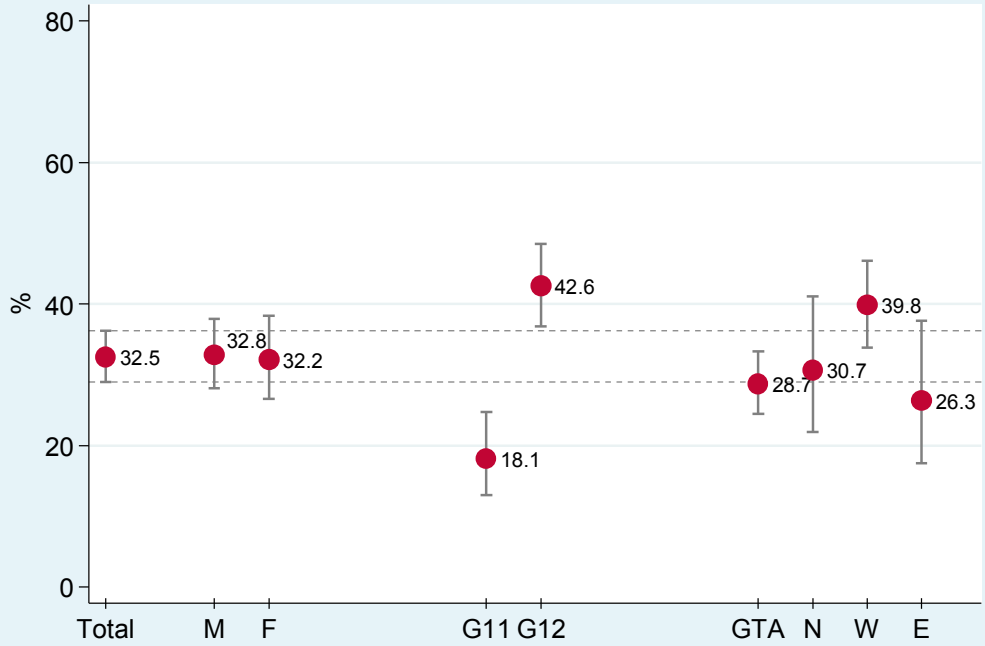
2017 (Drivers in Grades 10–12):

- Among drivers in grades 10–12, one-third (32.5%) report texting while driving at least once in the past year. This estimate represents about 85,300 adolescent drivers in Ontario.
- Male drivers (32.8%) and female drivers (32.2%) 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 (42.6%) are most likely to report texting while driving.
- There are significant regional differences showing that drivers in the West region (39.8%) are most likely to report texting while driving compared with students in the other three regions.

2013–2017 (Drivers in Grades 10–12):

- The percentage of adolescent drivers reporting texting while driving in 2017 (32.5%) is similar to the estimates from 2015 (35.3%) and 2013 (35.9%), the first year of monitoring.
- No subgroup shows a significant change since 2013.

Figure 3.2.21
Percentage of Drivers in Grades 10–12 Reporting Texting While Driving at Least Once in the Past Year by Sex, Grade, and Region, 2017 OSDUHS



Notes: (1) vertical bars represent 95% confidence intervals; (2) horizontal bar represents 95% CI for total estimate; (3) estimate for Grade 10 was suppressed; (4) significant differences by grade and region (p<.05), no significant difference by sex

3.2.14 Vehicle Collision as a Driver

(Figure 3.2.22)

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.

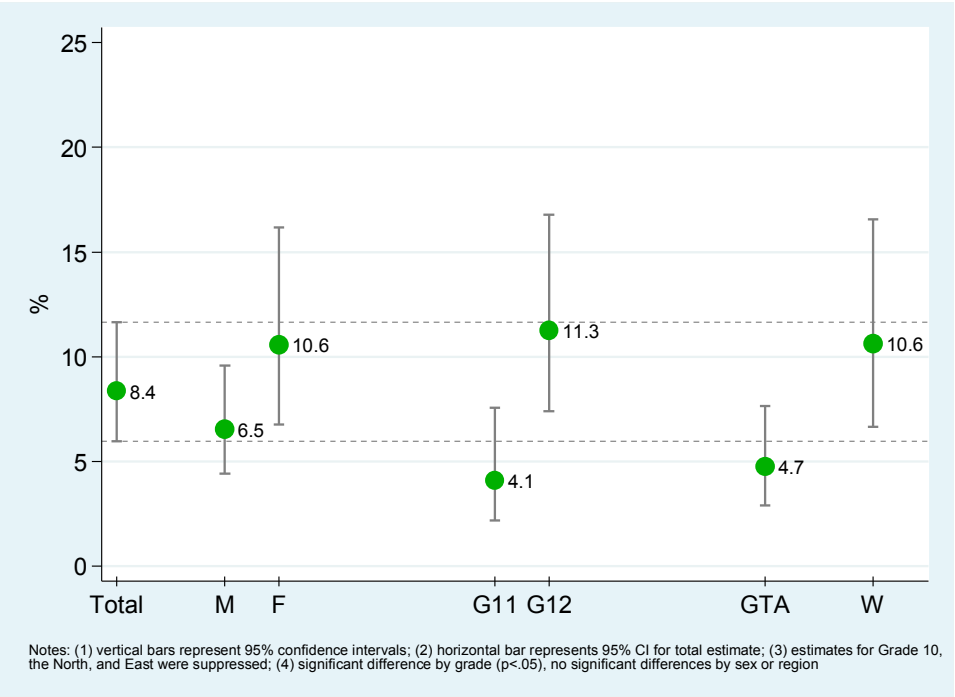
2017 (Drivers in Grades 10–12):

- Among drivers in grades 10–12, about 8.4% (95% CI: 6.0%-11.6%) report being involved in a collision as a driver at least once in the past year. This percentage represents an estimated 22,000 adolescent drivers.
- Male drivers (6.5%) and female drivers (10.6%) 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 (11.3%) are most likely to report involvement in a collision.
- There are no significant regional differences.

2011–2017 (Drivers in Grades 10–12):

- The percentage of drivers who report being in a collision in the past year has been stable since 2011, at about 8%–10%.

Figure 3.2.22
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, 2017 OSDUHS



Notes: (1) vertical bars represent 95% confidence intervals; (2) horizontal bar represents 95% CI for total estimate; (3) estimates for Grade 10, the North, and East were suppressed; (4) significant difference by grade (p<.05), no significant differences by sex or region

3.3 Health Care Utilization

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.

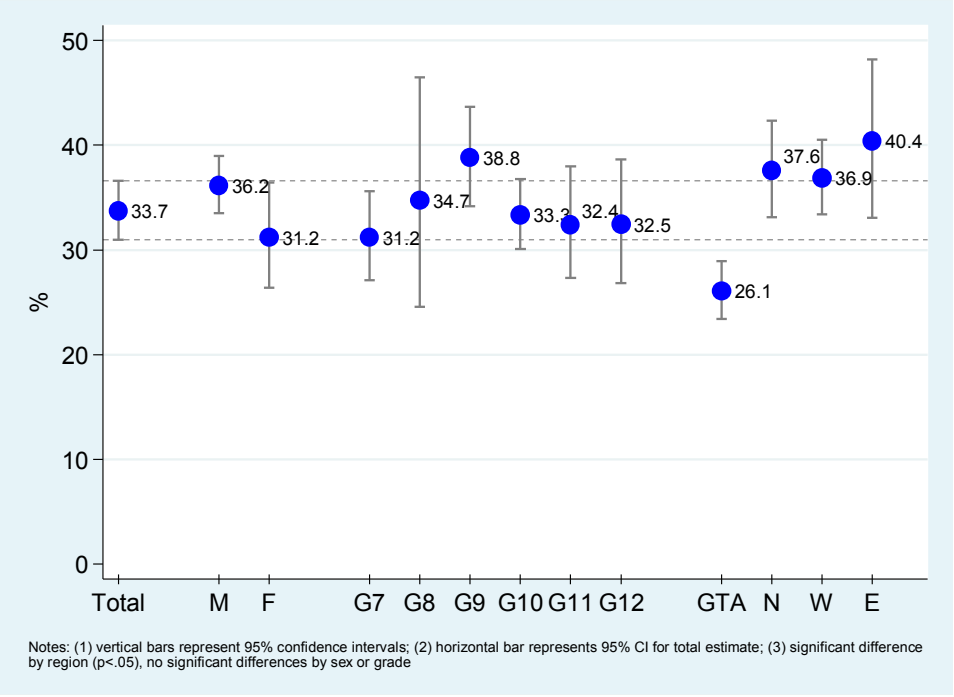
2017 (Grades 7–12):

- One-third (33.7%) of students did not visit a physician, not even for a check-up, in the past year. This estimate represents about 274,500 students in Ontario.
- Males (36.2%) and females (31.2%) are equally likely to report not visiting a doctor in the past year.
- There are no significant grade differences.
- There is significant regional variation showing that students in the Greater Toronto area (26.1%) are least likely to report not visiting a doctor.

1999–2017 (Grades 7–12):

- The percentage of students reporting no physician visits in the past year significantly increased between 2015 (28.6%) and 2017 (33.7%), returning to a level seen between 1999 and 2011.

Figure 3.3.1
Percentage Reporting No Physician Health Care Visit in the Past Year by Sex, Grade, and Region, 2017 OSDUHS



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

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.

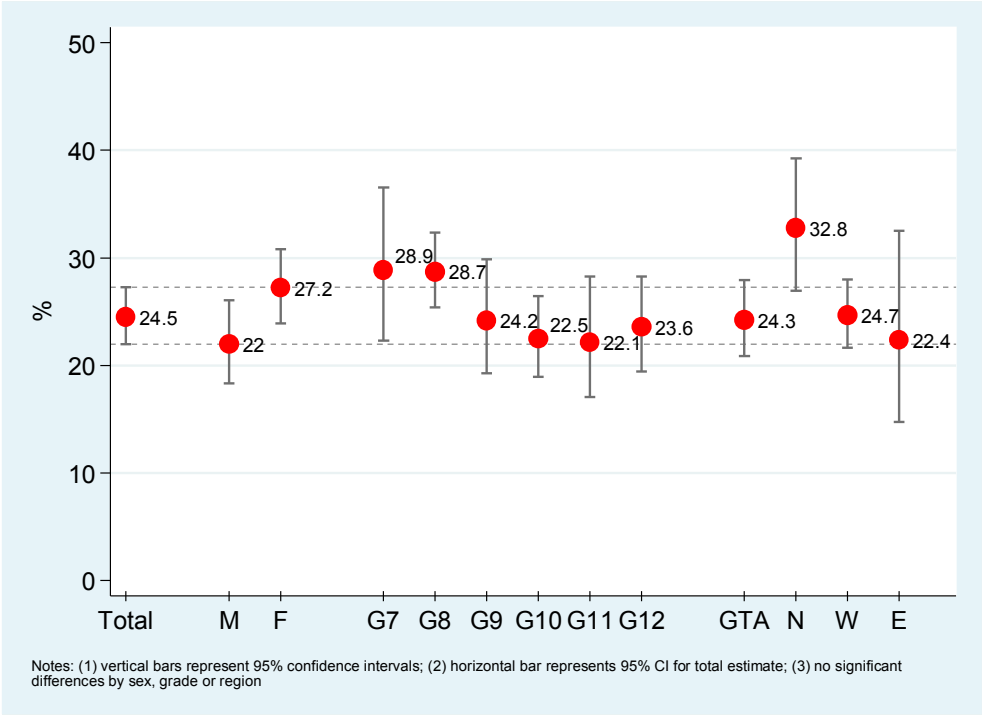
2017 (Grades 7–12):

- One-quarter (24.5%) of students report visiting a professional about a mental health issue at least once in the past year. This estimate represents about 235,100 students in Ontario.
- Despite some variation, males (22.0%) and females (27.2%) do not significantly differ in reports of visiting a professional about a mental health issue in the past year.
- There are no significant differences among the grades.
- Despite some variation, there are no significant differences among the regions.

1999–2017 (Grades 7–12):

- The percentage of students who report seeing a professional about a mental health issue has remained stable over the past decade at about 21%-24%. However, the current estimate is significantly higher than the estimates seen in 1999 and the early 2000s (about 11%-12%).
- Most subgroups show stability during the past decade, but significant increases since 1999 and the early 2000s.

Figure 3.3.2
Percentage Reporting at Least One Mental Health Care Visit in the Past Year by Sex, Grade, and Region, 2017 OSDUHS



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

3.3.3 Use of Drugs for Medical Reasons (Figures 3.3.3–3.3.6; 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: tranquillizers/sedatives (asked of students in grades 9–12 only), drugs to treat ADHD, and opioid pain relievers. The medical tranquillizer 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 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?*[75]
- *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, Dilaudid, OxyNeo, 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.)*

2017:

- Among all secondary students, 3.6% used tranquillizers/sedatives medically (by prescription) at least once in the past year (an estimated 23,700 students in grades 9–12 in Ontario).
- Among all students, 2.9% used an ADHD drug medically (an estimated 28,300 students in grades 7–12).
- Among all students, 17.6% used opioid pain relievers medically (an estimated 148,800 students in grades 7–12).
- Females are significantly more likely than males to report the medical use of tranquillizers/sedatives (4.7% vs. 2.6%, respectively), as well as opioid pain relievers (19.5% vs. 15.9%). Males are significantly more likely than females to report the medical use of a drug to treat ADHD (4.2% vs. 1.6%, respectively).
- Older students are significantly more likely than younger students to use opioid pain relievers medically. Despite some variation, medical tranquillizer use and ADHD drug use do not significantly differ by grade.
- There are no significant regional differences for any medical drug use.

1999–2017:

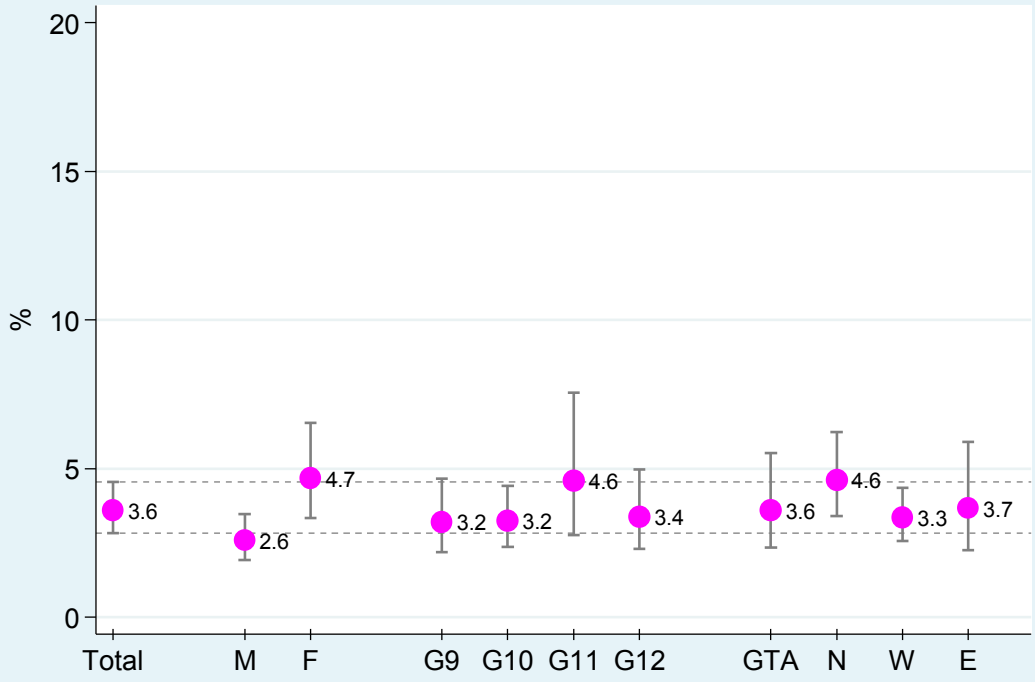
- The medical use of tranquillizers/sedatives has not significantly changed since 1999, remaining at about 3%-5%.
- The medical use of ADHD drugs has not significantly changed since 2007 (when monitoring first began), remaining at about 2%-3%.
- The medical use of opioid pain relievers has remained relatively stable in the past few years (since 2011) at about 18%-21%. However, the current estimate is significantly lower than the estimates seen about a decade ago (41% in 2007, and 32% in 2009).

1977–2017 (Grades 9 and 11 only):

- Looking back over the past four decades, the medical use of tranquillizers/sedatives peaked in the late 1970s, declined during the late 1980s, and has remained stable since then at around 3%-4%.

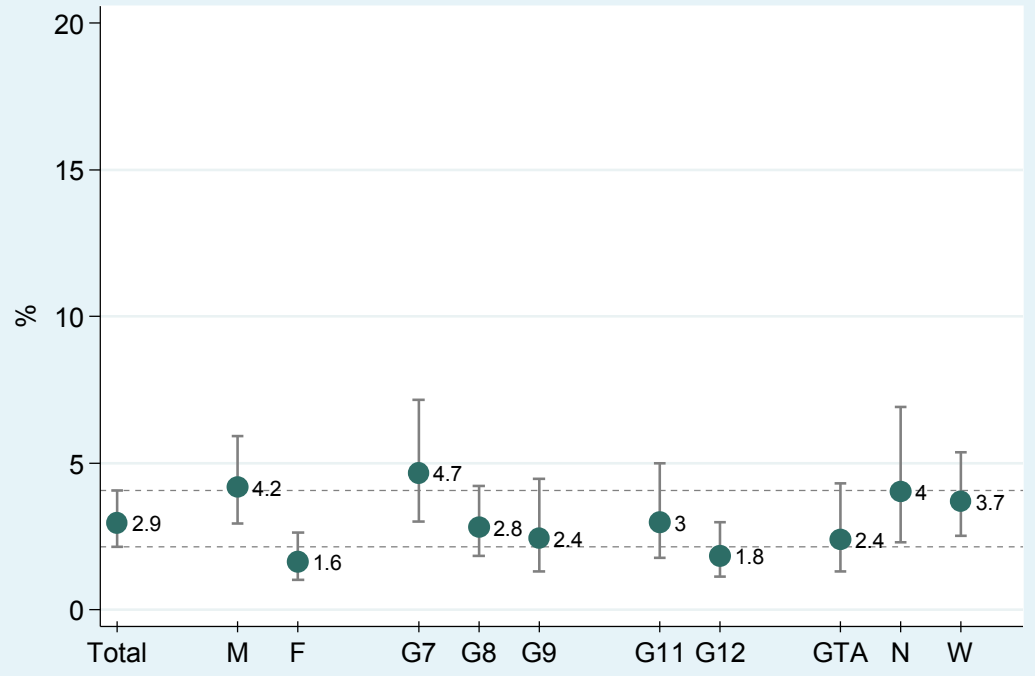
[75] This question was asked of students in grades 9–12 only, and was not asked of 7th and 8th graders.

Figure 3.3.3
Percentage Reporting Medical Use Tranquillizers/Sedatives in the Past Year by Sex, Grade, and Region, 2017 OSDUHS (Grades 9–12 only)



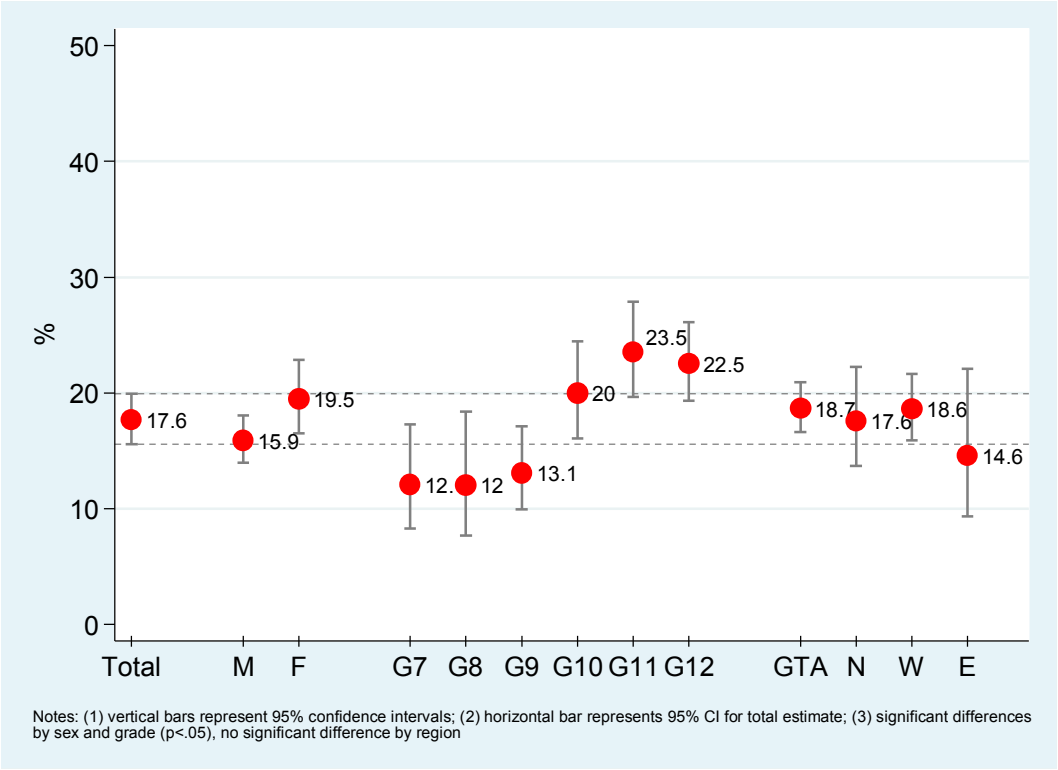
Notes: (1) vertical 'whiskers' represent 95% confidence intervals; (2) horizontal band represents 95% CI for total estimate; (3) significant difference by sex (p<.05), no significant differences by grade or region

Figure 3.3.4
Percentage Reporting Medical Use of ADHD Drugs in the Past Year by Sex, Grade, and Region, 2017 OSDUHS



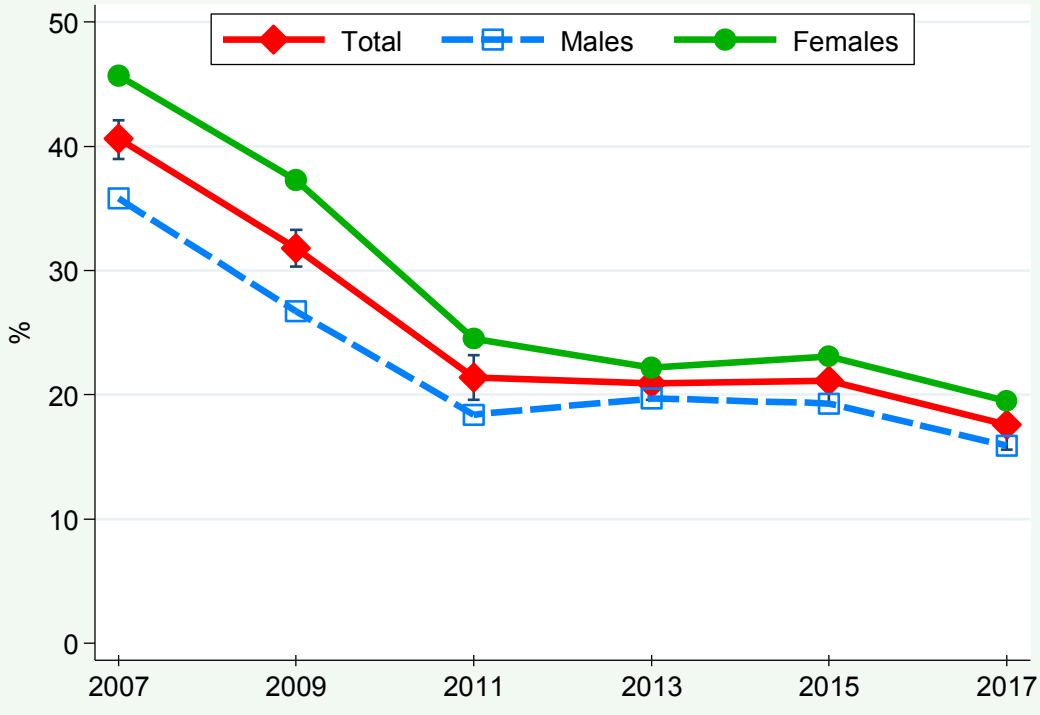
Notes: (1) vertical bars represent 95% confidence intervals; (2) horizontal bar represents 95% CI for total estimate; (3) estimates for Grade 10 and the East were suppressed; (4) significant difference by sex (p<.05), no significant differences by grade or region

Figure 3.3.5
Percentage Reporting Medical Use of Prescription Opioid Pain Relievers in the Past Year by Sex, Grade, and Region, 2017 OSDUHS



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

Figure 3.3.6
Percentage Reporting Medical Use of Prescription Opioid Pain Relievers in the Past Year by Sex, 2007–2017 OSDUHS (Grades 7–12)



Note: vertical bars represent 95% confidence intervals for the total estimates

3.3.4 Prescription Medication to Treat Anxiety or Depression

(Figure 3.3.7; 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*.

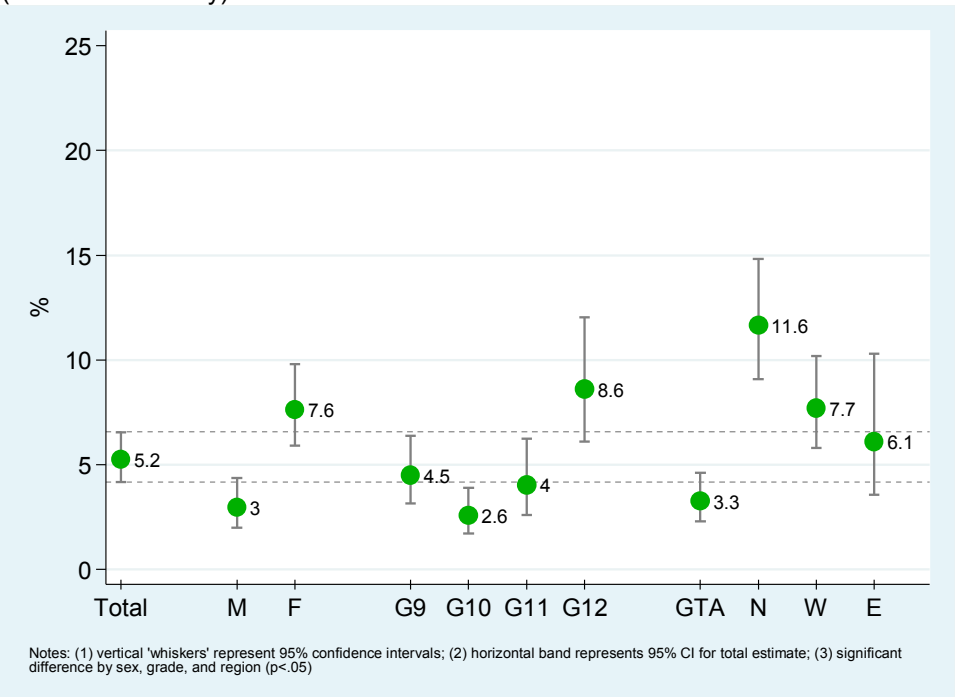
2017 (Grades 9–12):

- An estimated 1.8% of secondary students report they were prescribed medication to treat anxiety in the past year, 0.8% were prescribed medication to treat depression, and 2.7% were prescribed medication for *both* anxiety and depression.
- Combining the response options, an estimated 5.2% report being prescribed medication to treat anxiety, depression, or both conditions. This represents about 37,600 secondary students in Ontario.
- Females (7.6%) are significantly more likely than males (3.0%) to report being prescribed medication to treat anxiety, depression, or both conditions.
- Twelfth graders (8.6%) are most likely to report being prescribed medication to treat anxiety, depression, or both conditions.
- Students in the Greater Toronto Area (3.3%) are least likely to report being prescribed medication to treat these conditions, whereas students in the North region (11.6%) are most likely.

2001–2017 (Grades 9–12):

- The percentage of secondary students who report being prescribed medication to treat anxiety, depression, or both has remained relatively stable since 2001, the first year of monitoring, at about 3%-5%.

Figure 3.3.7
Percentage Reporting Having Been Prescribed Medication to Treat Anxiety, Depression or Both in the Past Year by Sex, Grade, and Region, 2017 OSDUHS (Grades 9–12 only)



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

3.3.5 Sought Counselling Over the Telephone or the Internet

(Figure 3.3.8; 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*.

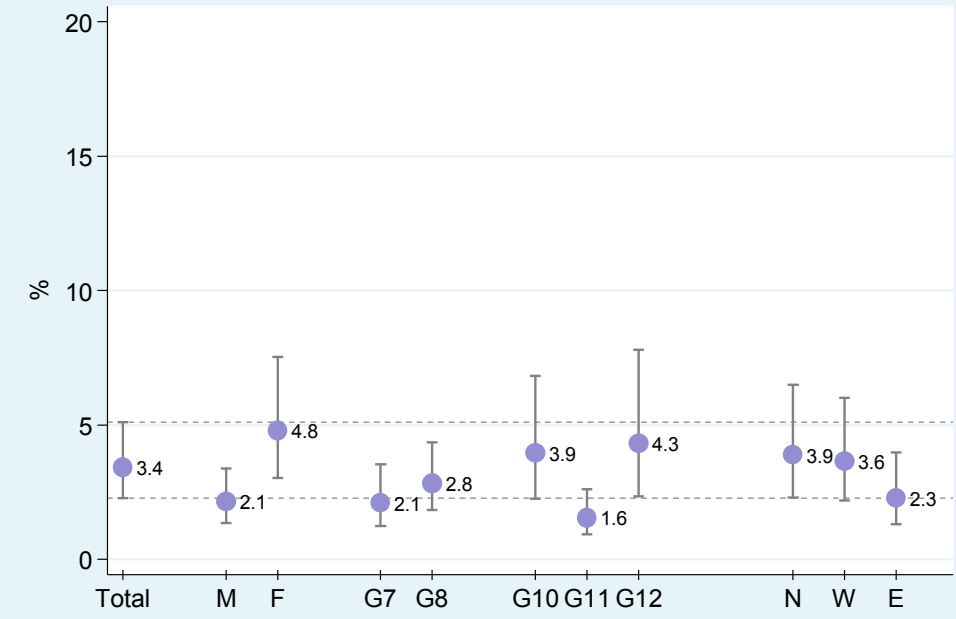
2017 (Grades 7–12):

- An estimated 2.3% report using a telephone counselling helpline in the past year. An estimated 1.8% report seeking help from a website. In combination, 3.4% report using a phone helpline, a website, or both to seek counselling (roughly 32,900 students).
- Females (4.8%) are more likely than males (2.1%) to seek counselling either over the phone, the Internet, or both.
- Despite some variation, there are no significant differences among the grades in seeking counselling over the phone, the Internet, or both.
- There are no significant regional differences.

2011–2017 (Grades 7–12):

- The percentage of students who report using a helpline, a website, or both has remained stable since 2011, the first year of monitoring, at about 2%-3%.

Figure 3.3.8
Percentage Reporting Seeking Counselling Over the Phone, Over the Internet, or Both in the Past Year by Sex, Grade, and Region, 2017 OSDUHS



Notes: (1) vertical bars represent 95% confidence intervals; (2) horizontal bar represents 95% CI for total estimate; (3) estimates for Grade 9 and the GTA were suppressed; (4) significant difference by sex (p<.05), no significant differences by grade or region

3.3.6 Unmet Need for Mental Health Support (Figure 3.3.9; 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.

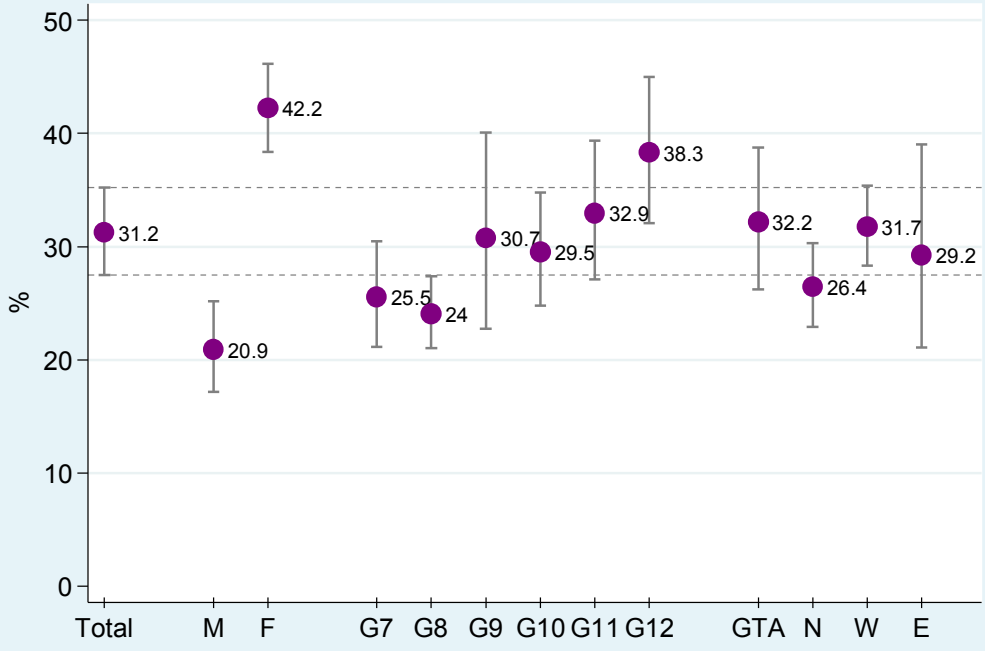
2017 (Grades 7–12):

- About one-third (31.2%) 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 299,800 students.
- Females (42.2%) are twice as likely as males (20.9%) to report an unmet need for mental health support.
- There are significant increases with grade, up to about 38.3% of 12th graders reporting an unmet need for mental health support.
- There are no significant regional differences.

2013–2017 (Grades 7–12):

- The percentage of students reporting an unmet need for mental health support has remained stable since 2013, the first year of monitoring, at about 28%-31%.
- No subgroup shows a significant change since 2013.

Figure 3.3.9
Percentage Reporting an Unmet Need for Mental Health Support in the Past Year by Sex, Grade, and Region, 2017 OSDUHS



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

3.4 Mental Health

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.

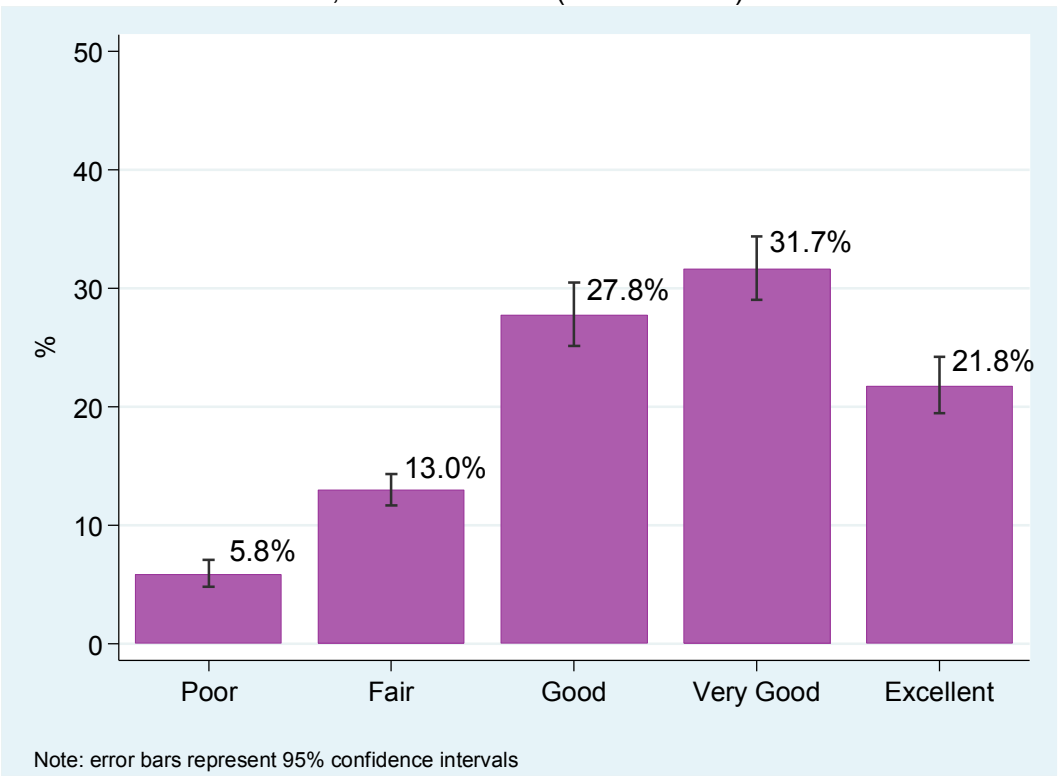
2017 (Grades 7–12):

- Most students rate their mental health as excellent (21.8%) or very good (31.7%). At the risk end, 18.8% report fair or poor mental health. This estimate represents about 180,900 students in Ontario.
- Females (26.2%) are significantly more likely than males (11.9%) to rate their mental health as fair or poor.
- Ratings of fair or poor mental health significantly increase with grade, increasing from 8.9% among 7th graders to 26.0% among 12th graders.
- There are significant regional differences showing that students in the Greater Toronto Area (16.9%) are least likely, whereas students in the West region (23.2%) are most likely, to rate their mental health as fair or poor.

2007–2017 (Grades 7–12):

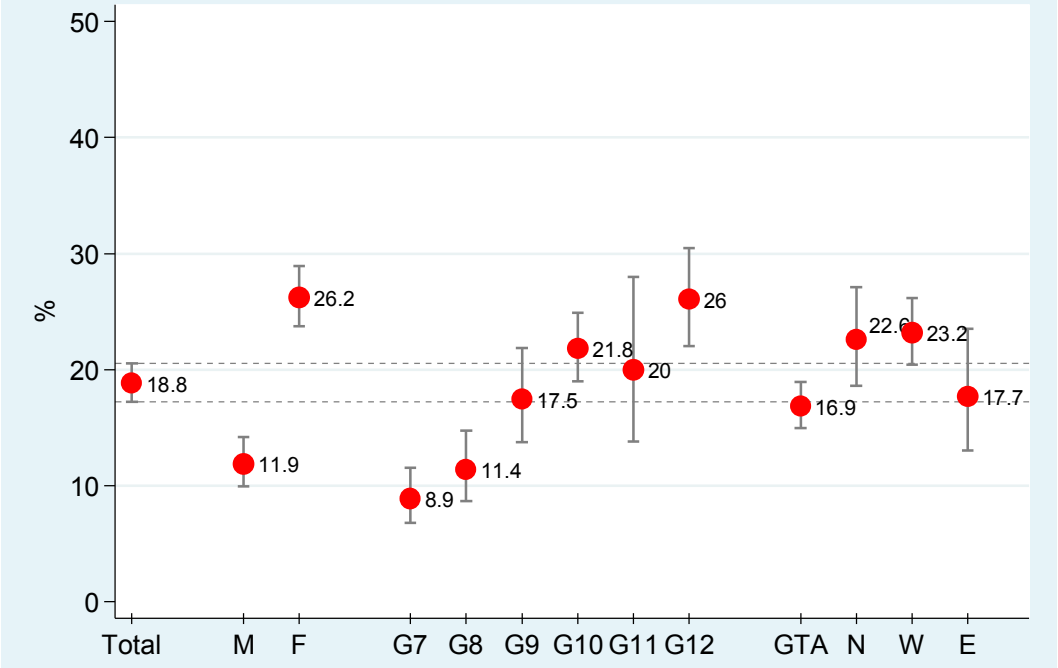
- The percentage of students who rate their mental health as fair or poor in 2017 (18.8%) is similar to that seen in 2015 (16.5%), but is significantly higher than estimates from 2007 to 2013 (11%-15%).
- Ratings of fair or poor mental health significantly increased over the past decade among males, females, students in grades 10 and 12, students in the Greater Toronto Area, the North and West regions.

Figure 3.4.1
Self-Rated Mental Health, 2017 OSDUHS (Grades 7–12)



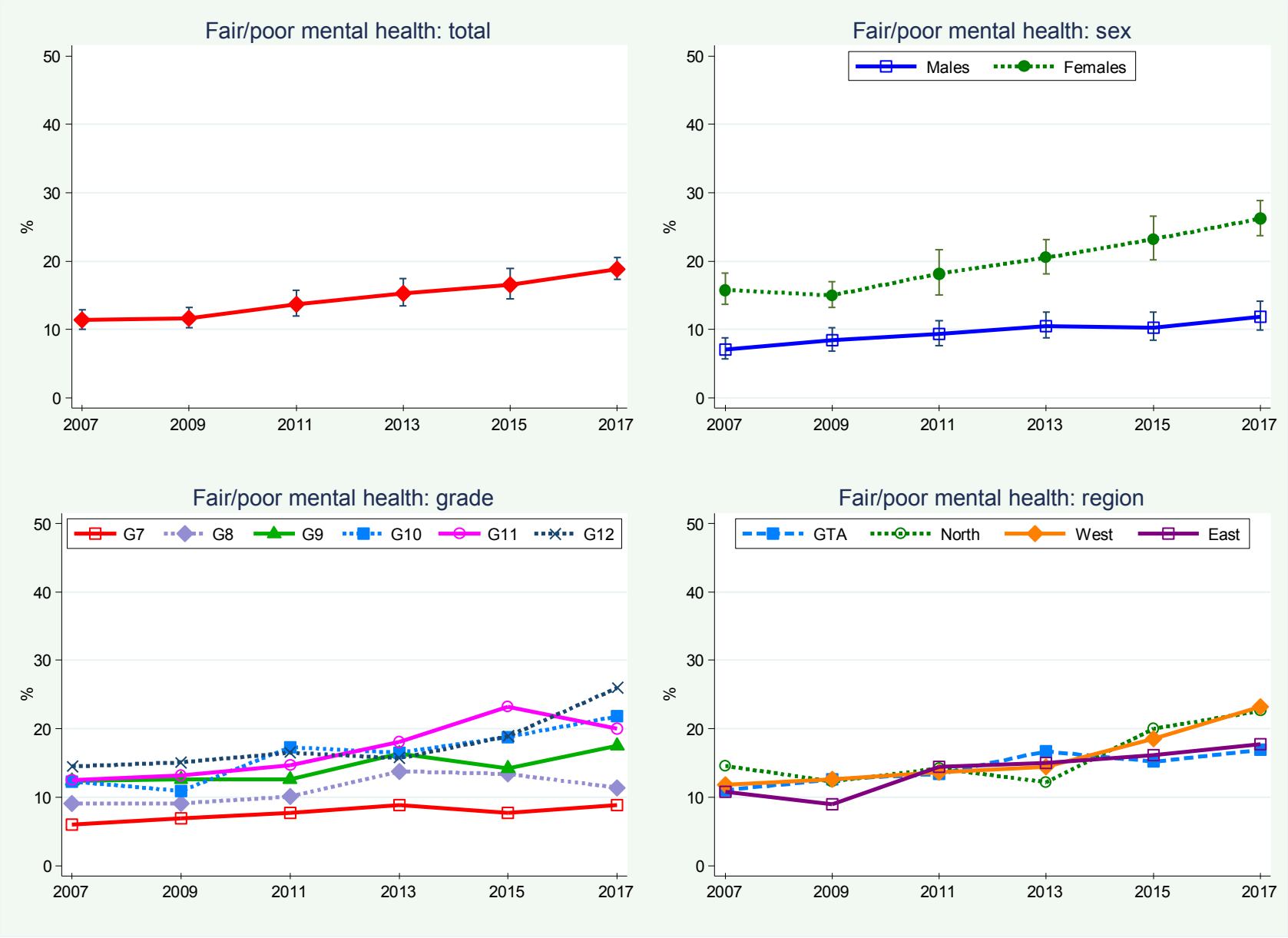
Note: error bars represent 95% confidence intervals

Figure 3.4.2
Percentage Reporting Fair or Poor Mental Health by Sex, Grade, and Region, 2017 OSDUHS



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

Figure 3.4.3
Percentage Reporting Fair or Poor Mental Health, 2007–2017 OSDUHS (Grades 7–12)



3.4.2 Low Self-Esteem

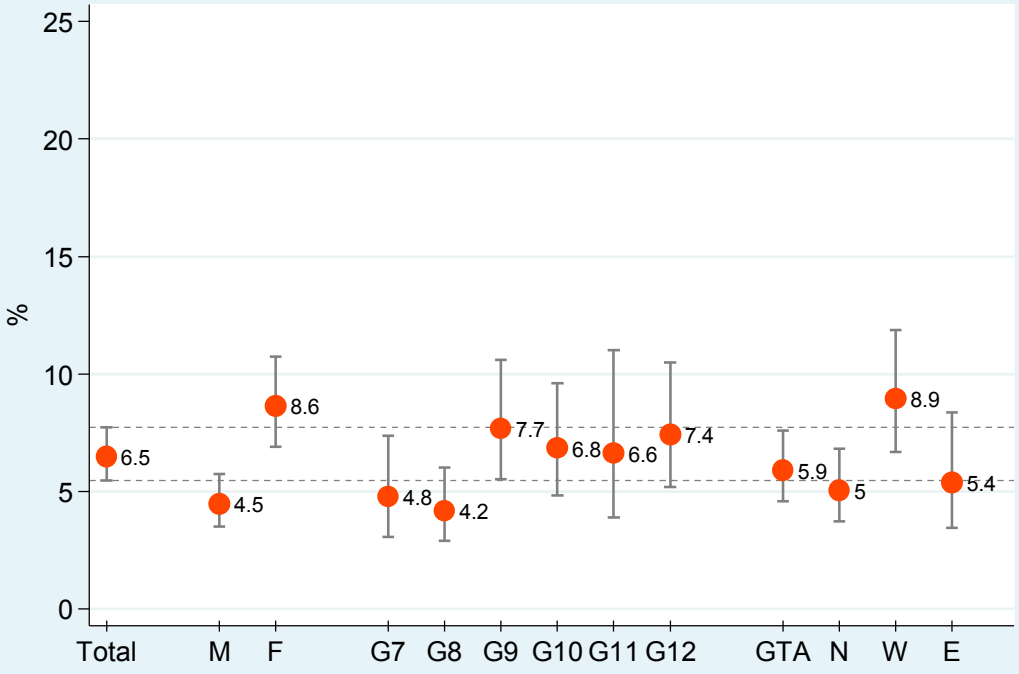
(Figure 3.4.4; Table A3.4.2)

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.

2017 (Grades 7–12):

- About 6.5% of students indicate low self-esteem. This estimate represents about 61,400 students.
- Females are twice as likely as males to indicate low self-esteem (8.6% vs. 4.5%, respectively).
- Despite some variation, there are no significant grade differences.
- Despite some variation, there are no significant regional differences.

Figure 3.4.4
Percentage Reporting Low Self-Esteem by Sex, Grade, and Region, 2017 OSDUHS



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

3.4.3 Elevated Stress

(Figures 3.4.5, 3.4.6; Table A3.4.3)

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" are considered to be experiencing an elevated level of stress.

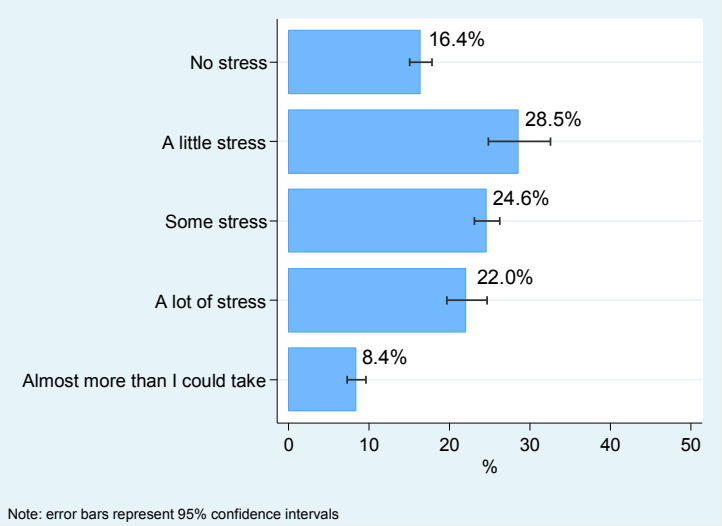
2017 (Grades 7–12):

- Only 16.4% of students report experiencing no stress in the past month. On the other hand, 30.4% report an elevated level of stress. This percentage represents about 289,900 students.
- Females (41.5%) are twice as likely as males (20.0%) to report elevated stress.
- There are significant grade differences, from a low of 14.9% of 7th graders to over one-third of students in grades 10-12 indicating elevated stress levels.
- There are no significant regional differences.

2017 vs. 2015 (Grades 7–12):

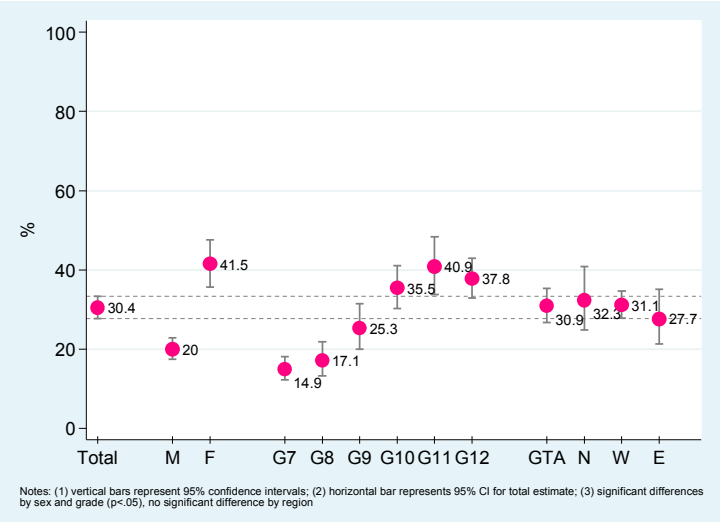
- The percentage of students who indicate elevated stress in 2017 (30.4%) does not significantly differ from the percentage seen in 2015 (28.7%).
- No subgroup shows a significant change since 2015.

Figure 3.4.5
Percentage Reporting the Level of Stress Experienced in the Past Month, 2017 OSDUHS (Grades 7–12)



Note: error bars represent 95% confidence intervals

Figure 3.4.6
Percentage Reporting an Elevated Level of Stress Experienced in the Past Month by Sex, Grade, and Region, 2017 OSDUHS



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

3.4.4 Psychological Distress

(Figures 3.4.7–3.4.11; Tables A3.4.4-A3.4.6)

Starting in 2013,[76] 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 (α=0.88).

2017 (Grades 7–12):

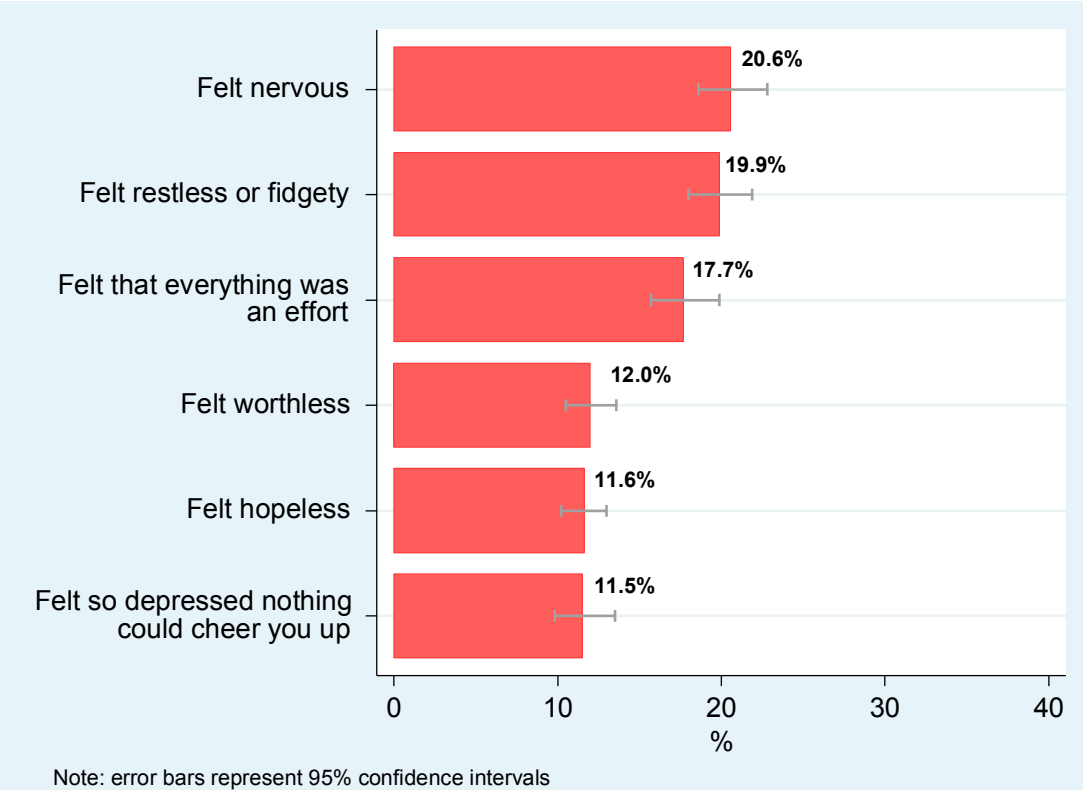
- The three most common symptoms experienced by students "most" or "all" of the time during the past month were: feeling nervous (20.6%), feeling restless or fidgety (19.9%), and feeling that everything was an effort (17.7%).
- Over one-third (38.7%) of students meet the criteria for moderate psychological distress during the past month (representing about 361,300 Ontario students). About one-in-six (17.1%) meet the criteria for serious psychological distress (representing about 159,400 Ontario students).
- Females are significantly more likely than males to indicate moderate psychological distress (51.3% vs. 26.8%, respectively), and serious psychological distress (25.5% vs. 9.1%, respectively).
- Psychological distress significantly increases with grade, peaking in grades 11 and 12.
- There is no significant regional variation.

2013–2017 (Grades 7–12):

- The percentage of students indicating moderate psychological distress in 2017 (38.7%) is statistically similar to the estimate from 2015 (34.0%), but significantly higher than 2013 (23.5%), the first year of monitoring. The increase since 2013 is evident for males and females, most grades, and all four regions.
- The percentage indicating serious psychological distress in 2017 (17.1%) is statistically similar to 2015 (14.2%), but is significantly higher than 2013 (10.7%), the first year of monitoring. The increase since 2013 is evident for most subgroups.

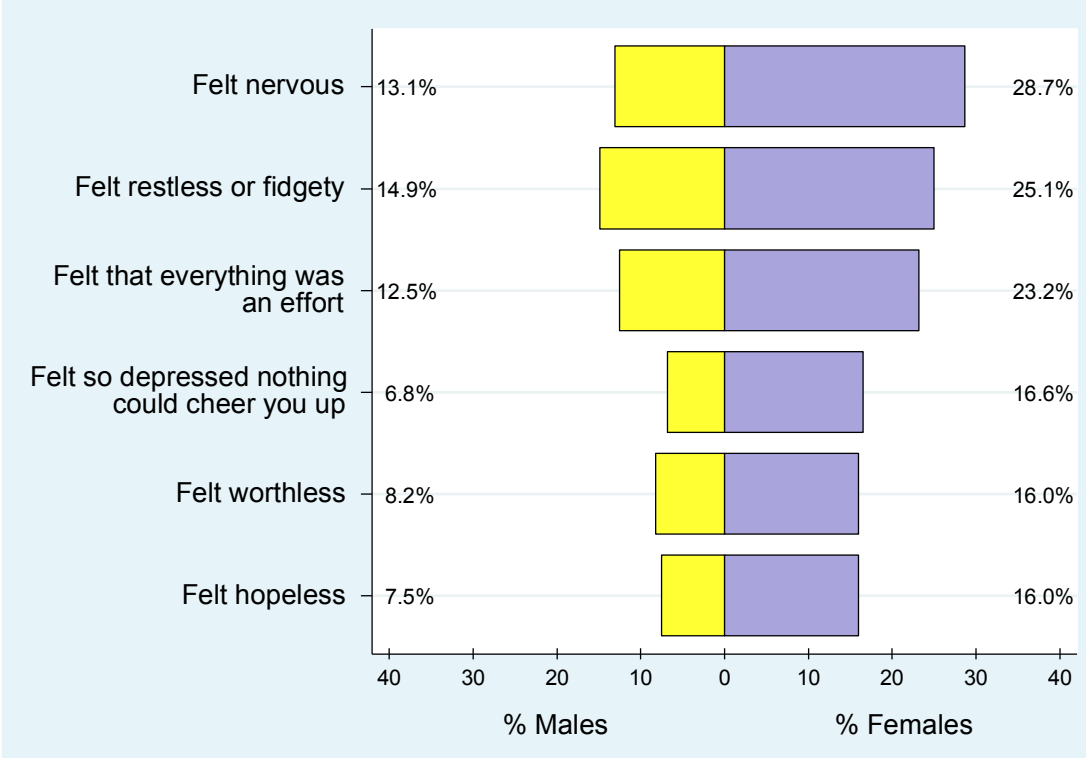
[76] During the years 1999 to 2011, the 12-item version of the General Health Questionnaire (GHQ12) was used to measure psychological distress. For various reasons (including a simpler response scale and one measuring absolute level rather than relative change), the OSDUHS transitioned to the Kessler 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, 2017 OSDUHS (Grades 7–12)



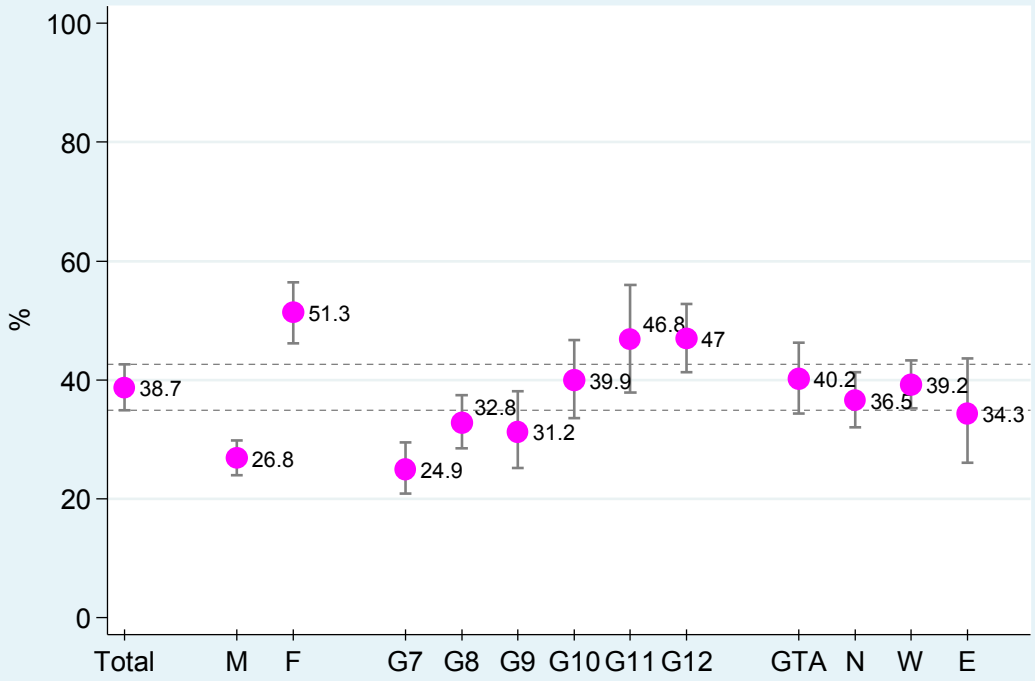
Note: error bars represent 95% confidence intervals

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, 2017 OSDUHS (Grades 7–12)



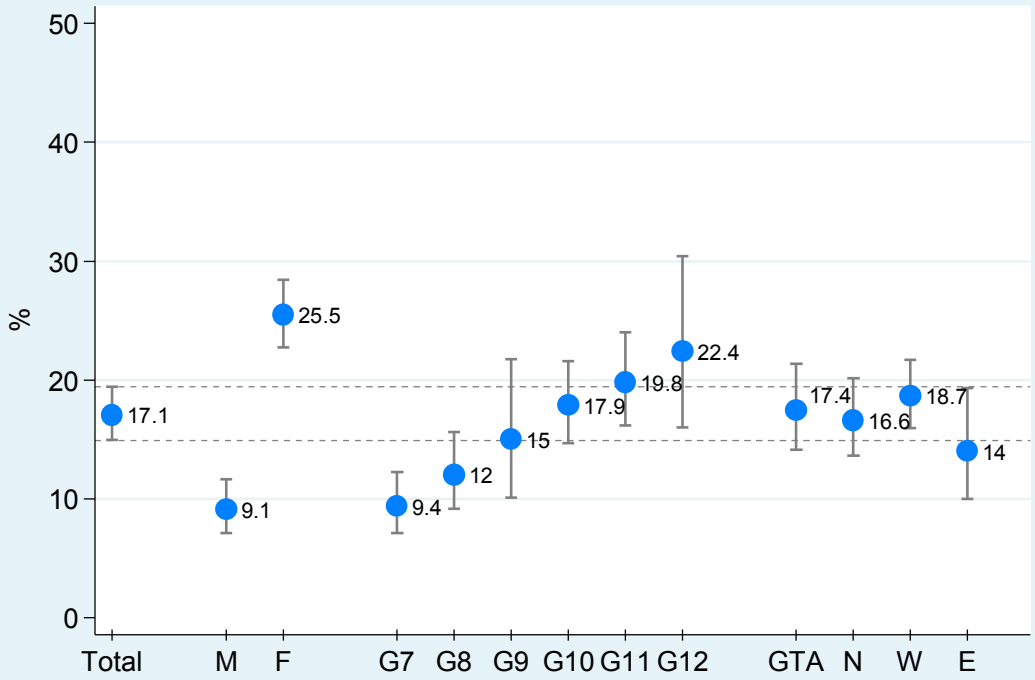
Note: significant sex difference on all 6 items (p<.05)

Figure 3.4.9
Percentage Indicating Moderate-to-Serious Psychological Distress (K6 Scale 8+) in the Past Month by Sex, Grade, and Region, 2017 OSDUHS



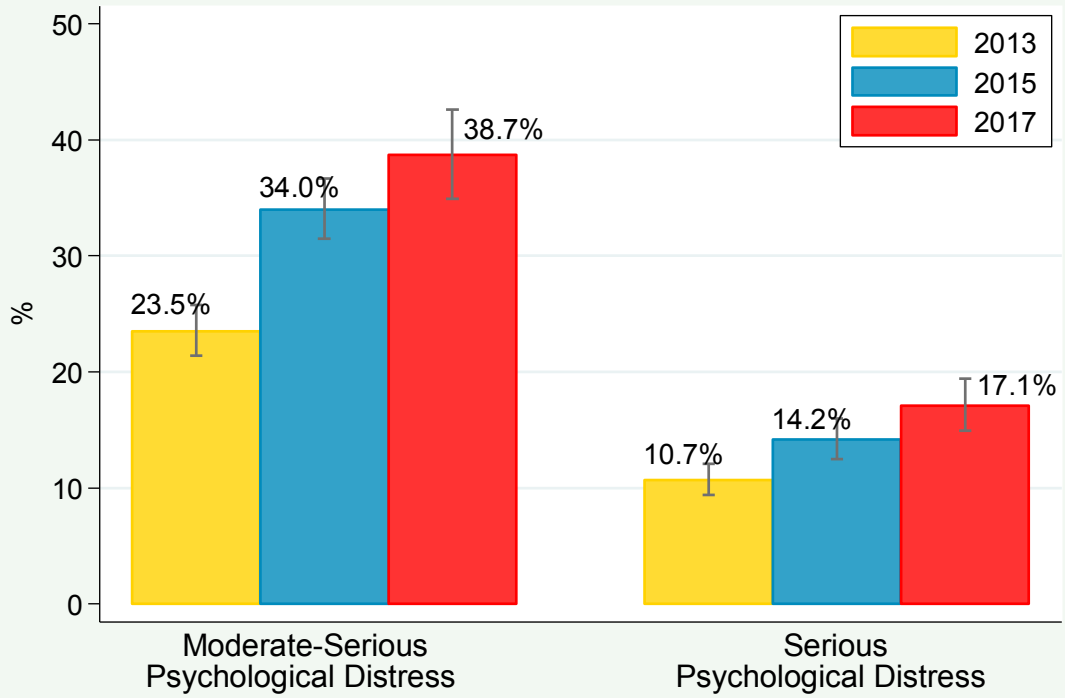
Notes: (1) vertical bars represent 95% confidence intervals; (2) horizontal bar represents 95% CI for total estimate; (3) significant differences by sex and grade (p<.05), no significant difference by region

Figure 3.4.10
Percentage Indicating Serious Psychological Distress (K6 Scale 13+) in the Past Month by Sex, Grade, and Region, 2017 OSDUHS



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

Figure 3.4.11
Percentage Indicating Moderate-to-Serious Psychological Distress and Serious Psychological Distress in the Past Month, 2013–2017 OSDUHS (Grades 7–12)



Notes: (1) error bars represent 95% confidence intervals; (2) both measures showed a significant increase between 2013 and 2017 (p<.01)

3.4.5 Traumatic Event

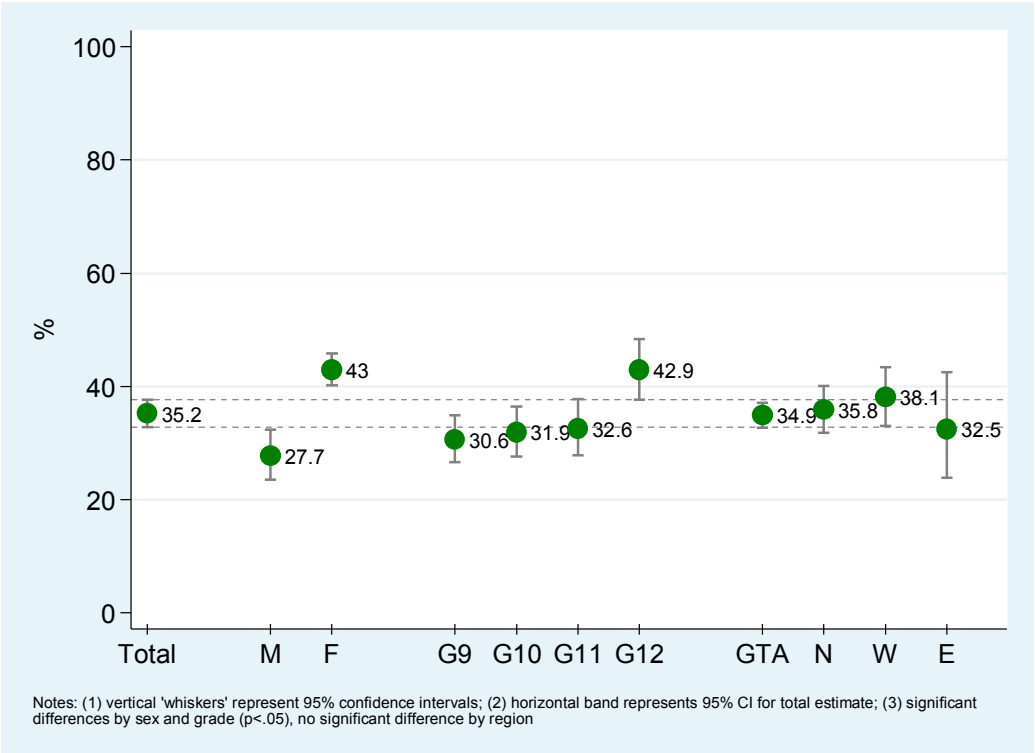
(Figure 3.4.12)

Starting in 2017, the OSDUHS included a question about experiencing a traumatic life event (nonspecific). A random half sample of secondary students was asked "*Have you ever experienced a serious traumatic or negative event in your life that affected you emotionally or physically?*" The response options were *Yes* or *No*.

2017 (Grades 9–12):

- About one-third (35.2%) of secondary students report that they have experienced a traumatic event in their lifetime. This percentage represents about 252,100 students in grades 9–12.
- Females (43.0%) are significantly more likely than males (27.7%) to report experiencing a traumatic event.
- There is significant grade variation showing that 12th graders (42.9%) are most likely to report experiencing a traumatic event.
- There are no significant differences among the regions

Figure 3.4.12
Percentage Reporting Ever Experiencing a Traumatic Event by Sex, Grade, and Region, 2017 OSDUHS



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

3.4.6 Suicidal Ideation and Suicide Attempt (Figures 3.4.13–3.4.15; Tables A3.4.7, A3.4.8)

Starting in 2001, the OSDUHS included a question about suicidal ideation. Specifically, a random half sample of students was asked "*In the last 12 months, did you ever seriously consider attempting suicide?"* Starting in 2007, students were also asked about attempts using the question "*In the last 12 months, did you actually attempt suicide?*" The response options to both questions were *Yes* or *No*.

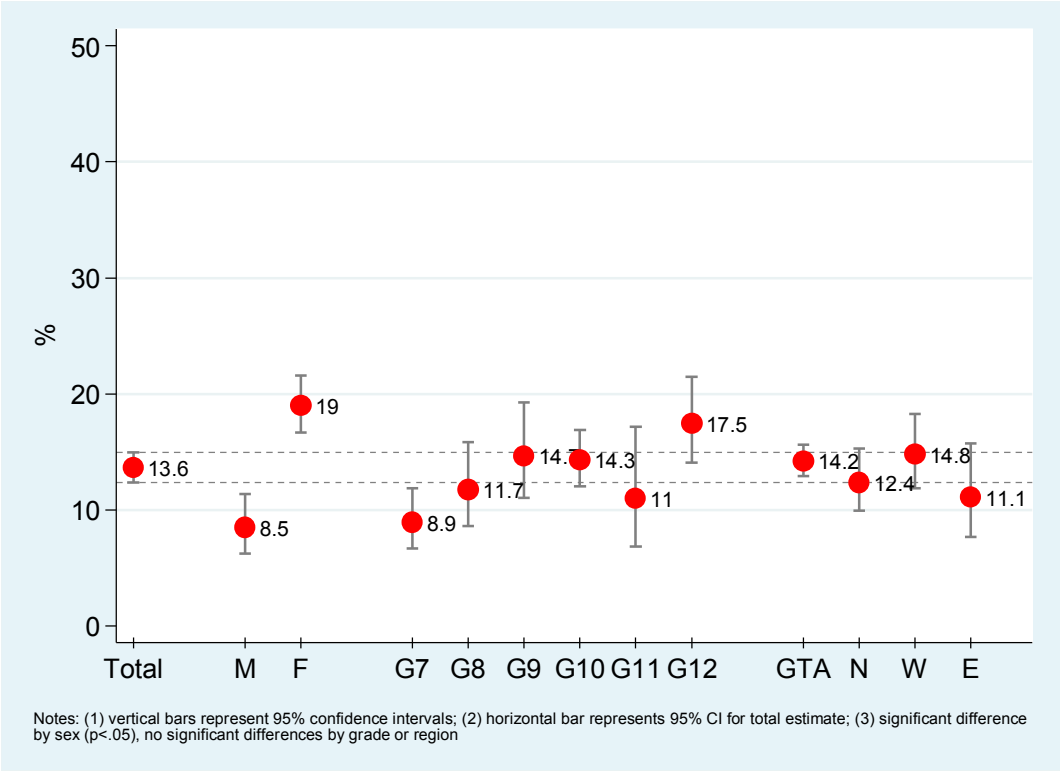
2017 (Grades 7–12):

- About one-in-seven (13.6%) students report that they had seriously contemplated suicide in the past year. This percentage represents an estimated 118,000 Ontario students. An estimated 3.9% of students report attempting suicide in the past year. This represents about 33,400 Ontario students.
- Females are twice as likely as males to report suicidal ideation (19.0% vs. 8.5%, respectively), as well as a suicide attempt (5.3% vs. 2.5%, respectively).
- Despite some variation, suicidal ideation does not significantly differ by grade. There is a slight, but significant, increase in reports of a suicide attempt as grade increases.
- Neither of the two indicators significantly differs by region.

2001–2017 (Grades 7–12):

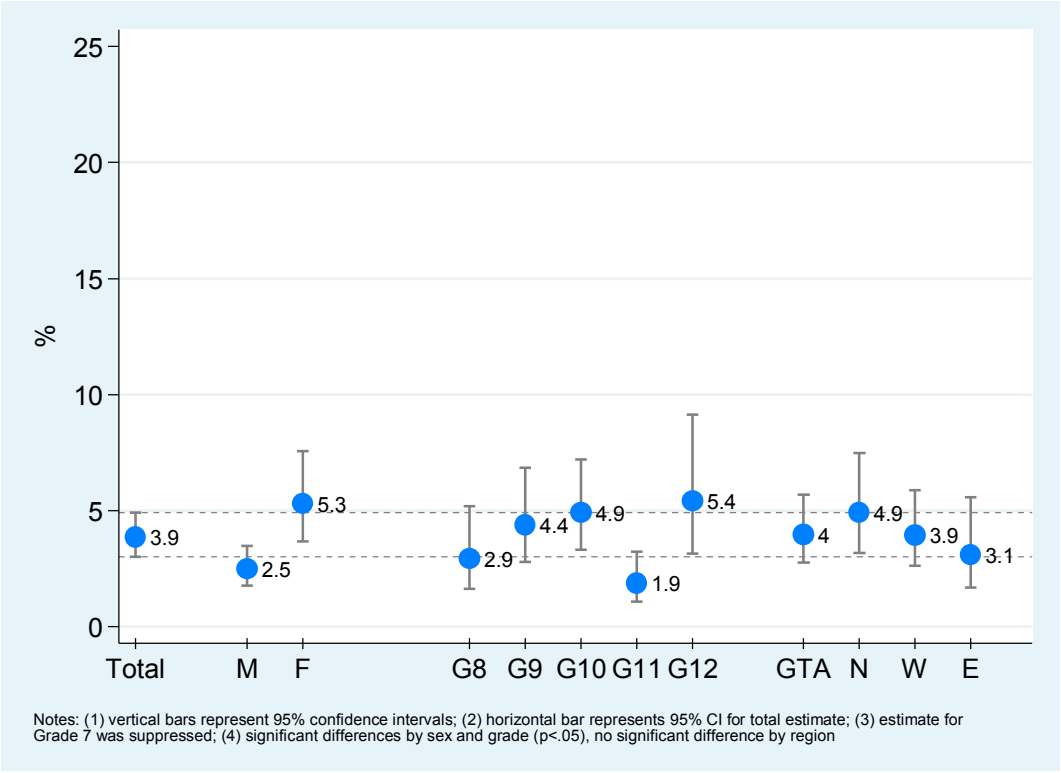
- The percentage of students who report contemplating suicide in the past year has been stable since 2013 at around 12%-13%. The current estimate is significantly higher than the estimates seen about a decade ago (2007-2011), when they were about 10%, but similar to the estimate seen in 2001, when monitoring first began.
- 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 2015 and 2017 in suicidal ideation or suicide attempt. Further, current estimates are similar to those seen when monitoring first began.

Figure 3.4.13
Percentage Reporting Suicidal Ideation in the Past Year by Sex, Grade, and Region, 2017 OSDUHS



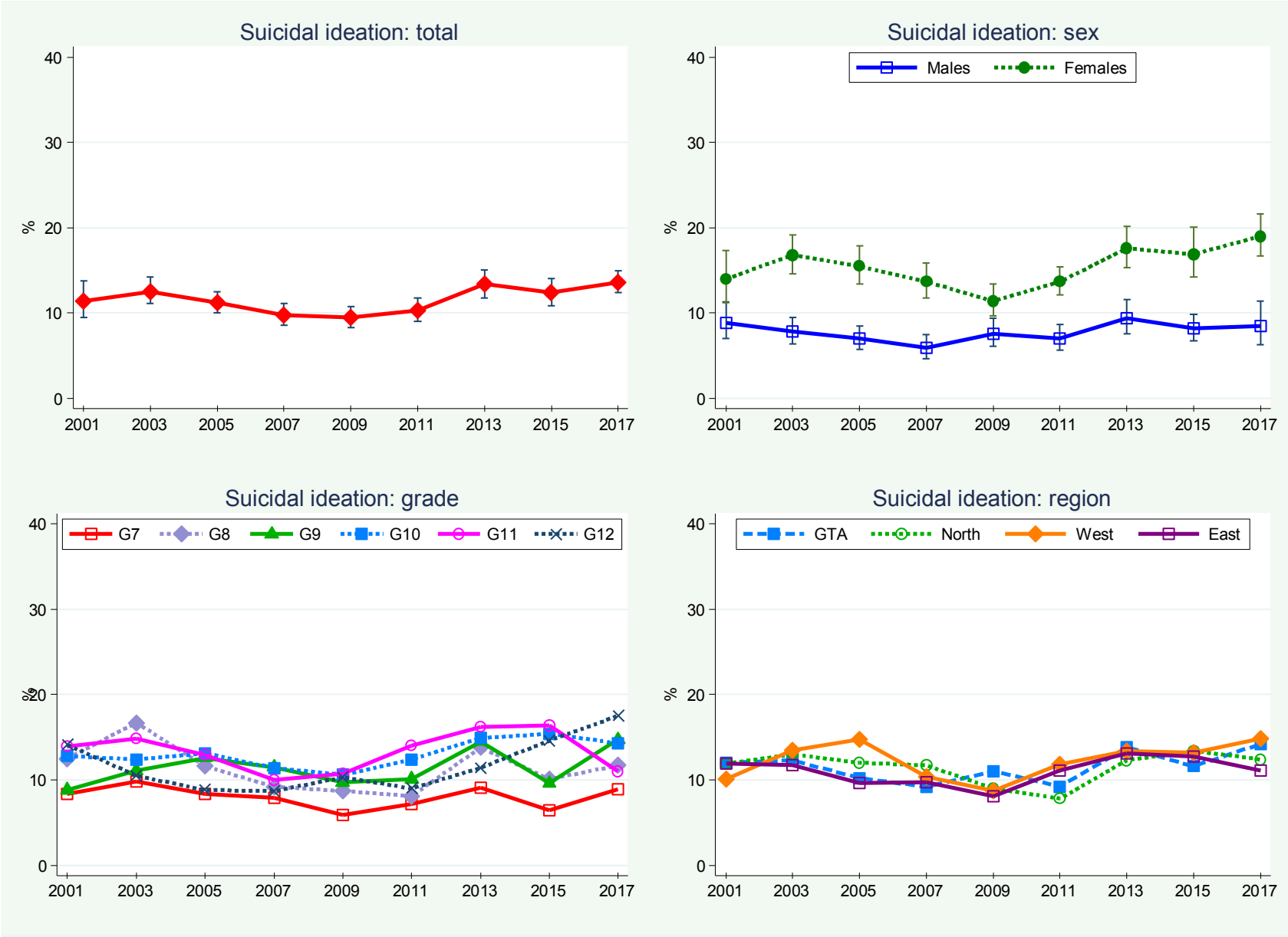
Notes: (1) vertical bars represent 95% confidence intervals; (2) horizontal bar represents 95% CI for total estimate; (3) significant difference by sex (p<.05), no significant differences by grade or region

Figure 3.4.14
Percentage Reporting a Suicide Attempt in the Past Year by Sex, Grade, and Region, 2017 OSDUHS



Notes: (1) vertical bars represent 95% confidence intervals; (2) horizontal bar represents 95% CI for total estimate; (3) estimate for Grade 7 was suppressed; (4) significant differences by sex and grade (p<.05), no significant difference by region

Figure 3.4.15
Percentage Reporting Suicidal Ideation in the Past Year, 2001–2017 OSDUHS (Grades 7–12)



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

(Figures 3.4.16-3.4.18; Tables A3.4.9, A3.4.10)

Starting 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 used to indicate ADHD symptoms. Assessment of the six scale items indicates very good internal consistency (α=0.79).

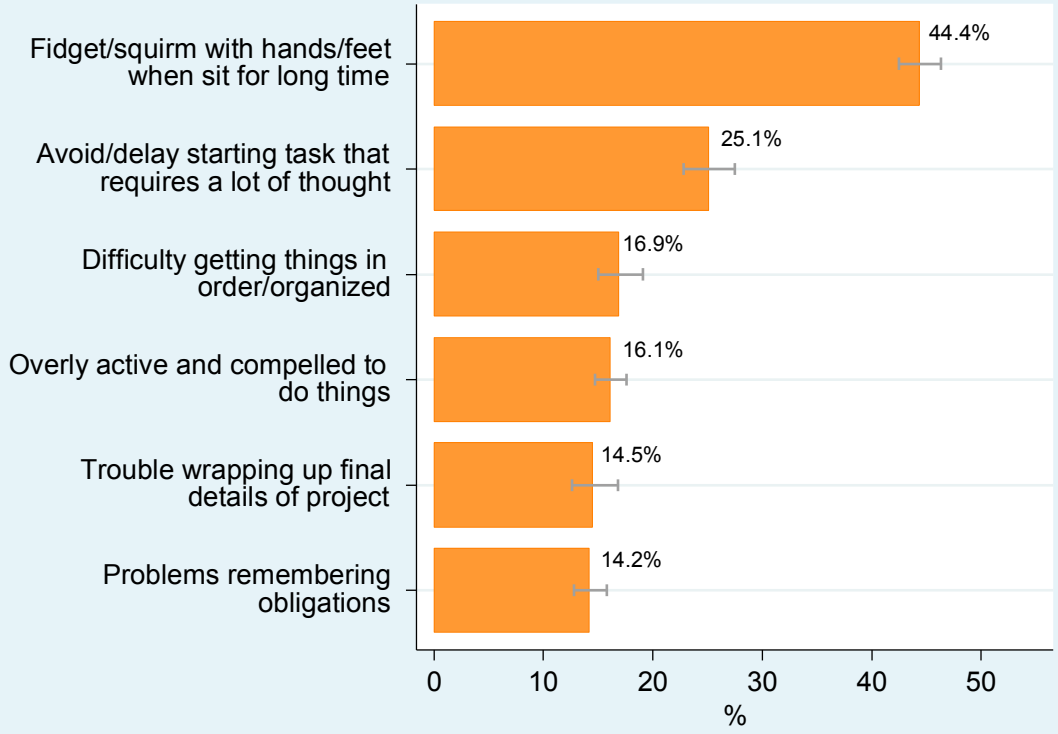
2017 (Grades 7–12):

- 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 (44.4%). The least commonly experienced symptom was problems remembering appointments or obligations (14.2%). Females are significantly more likely than males to report experiencing four of the six scale items.
- About one-in-five (20.1%) students report symptoms of ADHD. This percentage represents roughly 186,000 students in grades 7–12.
- Females (24.0%) are significantly more likely than males (16.5%) to report ADHD symptoms.
- The likelihood of experiencing symptoms of ADHD significantly increases with grade, peaking in grades 11 and 12 (about one-quarter).
- There are no significant regional differences.

2017 vs. 2015 (Grades 7–12):

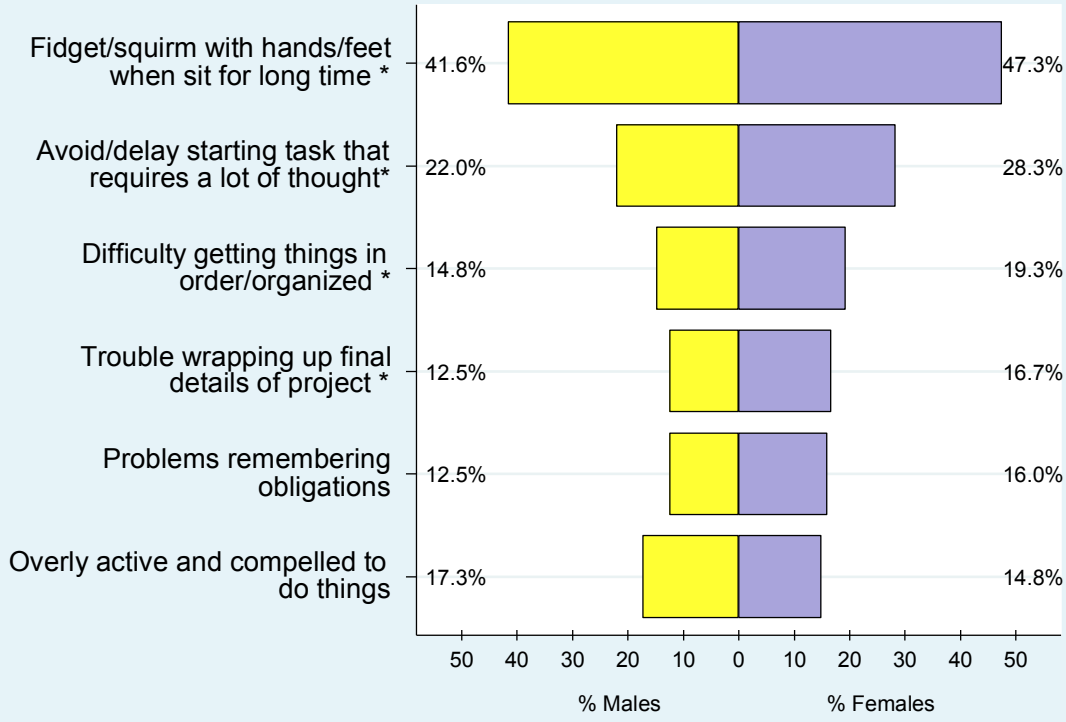
- The percentage of students reporting symptoms of ADHD significantly increased between 2015 and 2017, from 15.8% to 20.1%.
- Among the subgroups, only females show a significant increase since 2015.

Figure 3.4.16
Percentage Reporting Experiencing *ADHD Self-Report Scale* (ASRS) Items "Often" or "Very Often" in the Past Six Months, 2017 OSDUHS (Grades 7–12)



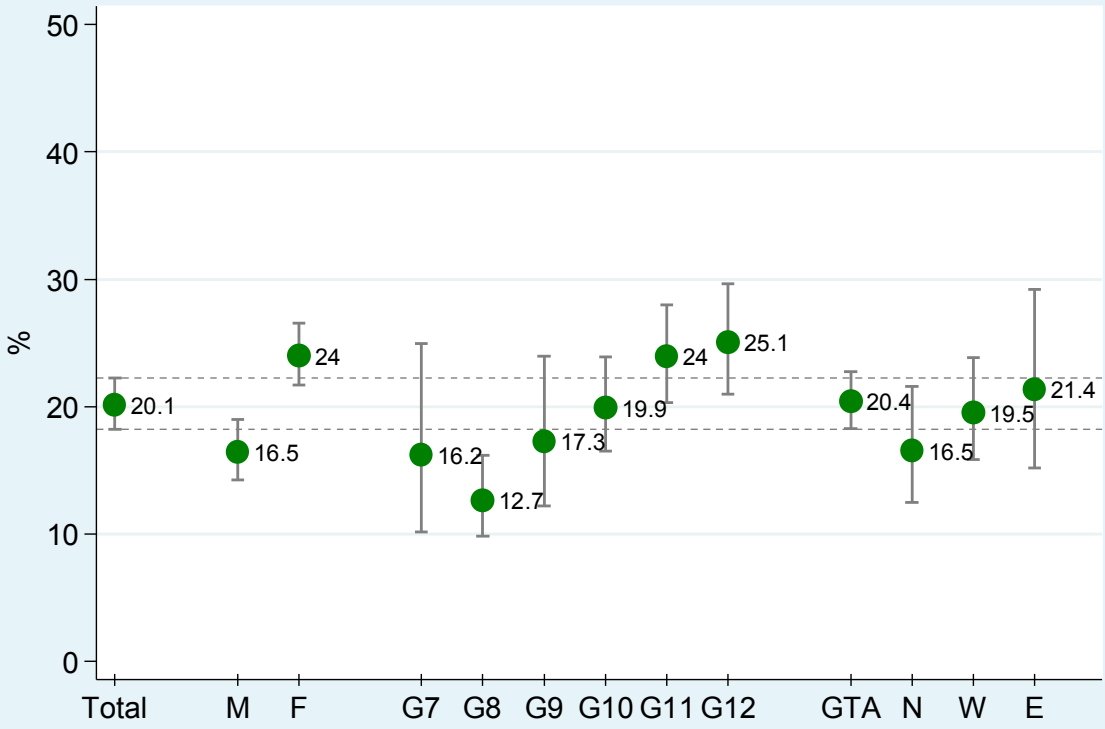
Note: error bars represent 95% confidence intervals

Figure 3.4.17
Percentage Reporting Experiencing *ADHD Self-Report Scale* (ASRS) Items "Often" or "Very Often" in the Past Six Months by Sex, 2017 OSDUHS (Grades 7–12)



Note: * indicates significant sex difference (p<.05)

Figure 3.4.18
Percentage Reporting ADHD Symptoms (ASRS 14+) in the Past Six Months by Sex, Grade, and Region, 2017 OSDUHS (Grades 7–12)



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

3.5 Antisocial Behaviour and Bullying

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.

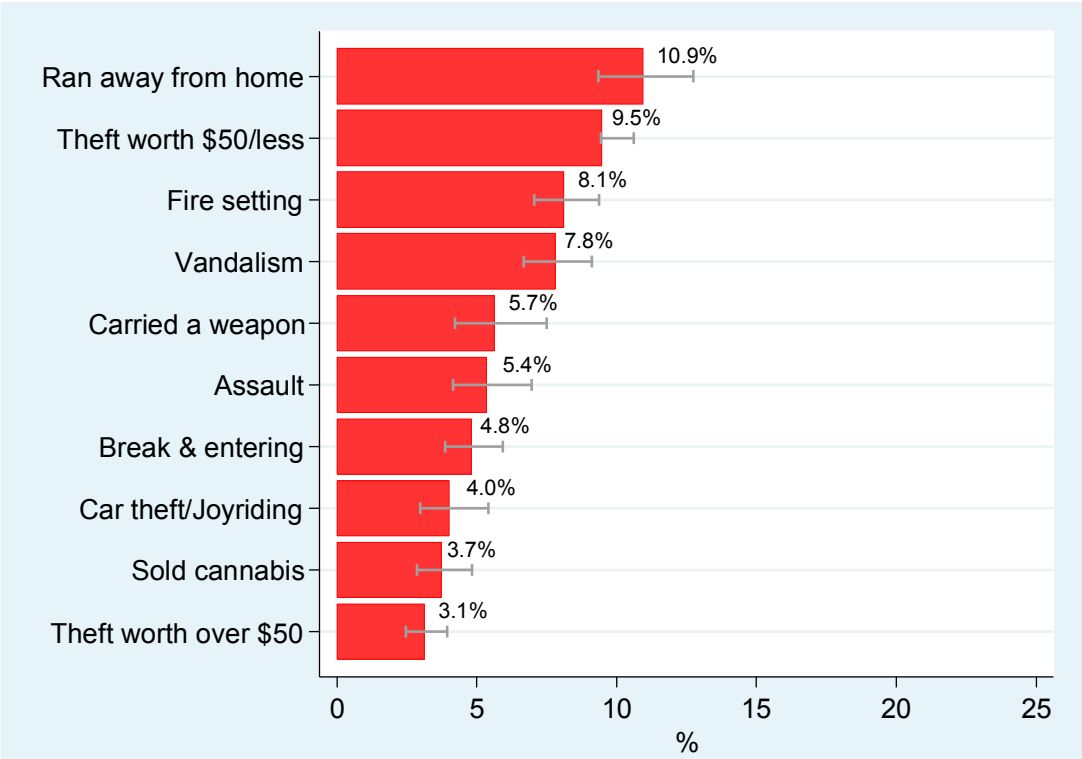
Overall Antisocial Behaviour

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

2017:

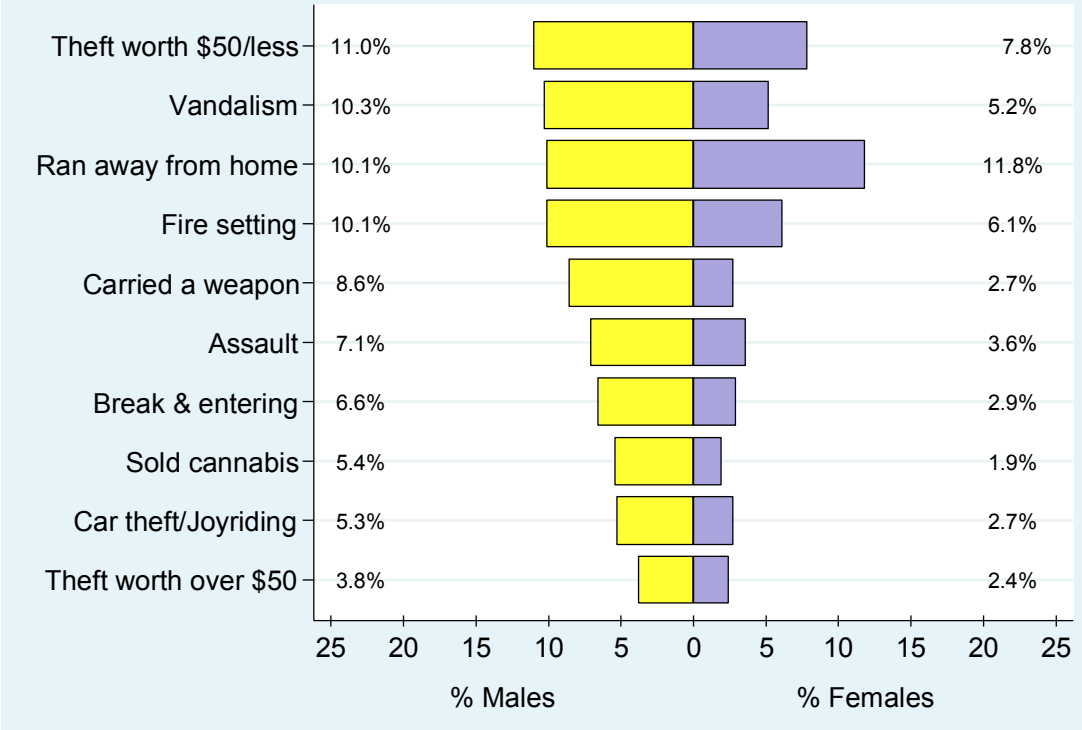
- Among the total sample of students, the most prevalent of the 10 behaviours is running away from home (10.9%) and the least prevalent is theft of goods worth more than $50 (3.1%).
- An estimated 6.9% of students engage in antisocial behaviour (defined as three or more of nine behaviours surveyed over time). This percentage represents about 62,300 students in Ontario.
- Males are significantly more likely than females to engage in antisocial behaviour (8.7% vs. 5.0%, respectively).
- Despite some variation, there are no significant differences among the grades.
- There are no significant differences among the four regions.

Figure 3.5.1
Percentage Reporting Engaging in Antisocial Behaviours at Least Once in the Past Year, 2017 OSDUHS (Grades 7–12)



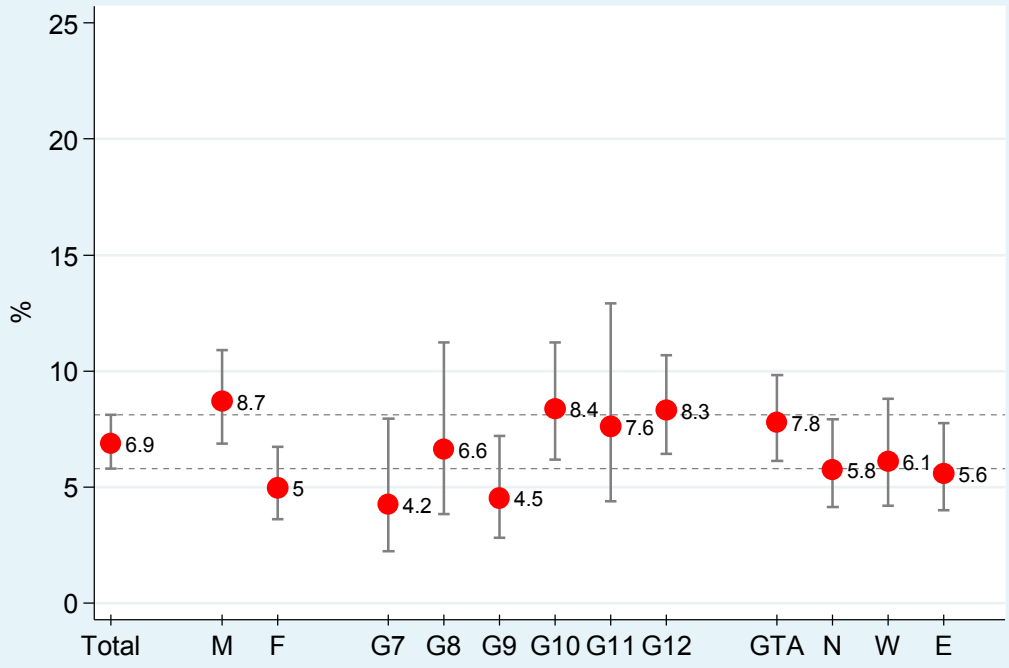
Note: error bars represent 95% confidence intervals

Figure 3.5.2
Percentage Reporting Engaging in Antisocial Behaviours at Least Once in the Past Year by Sex, 2017 OSDUHS (Grades 7–12)



Note: significant sex difference (p<.05) for each behaviour except theft worth >$50 and ran away from home

Figure 3.5.3
Percentage Reporting Antisocial Behaviour (3+ of 9 Behaviours) in the Past Year by Sex, Grade, and Region, 2017 OSDUHS



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

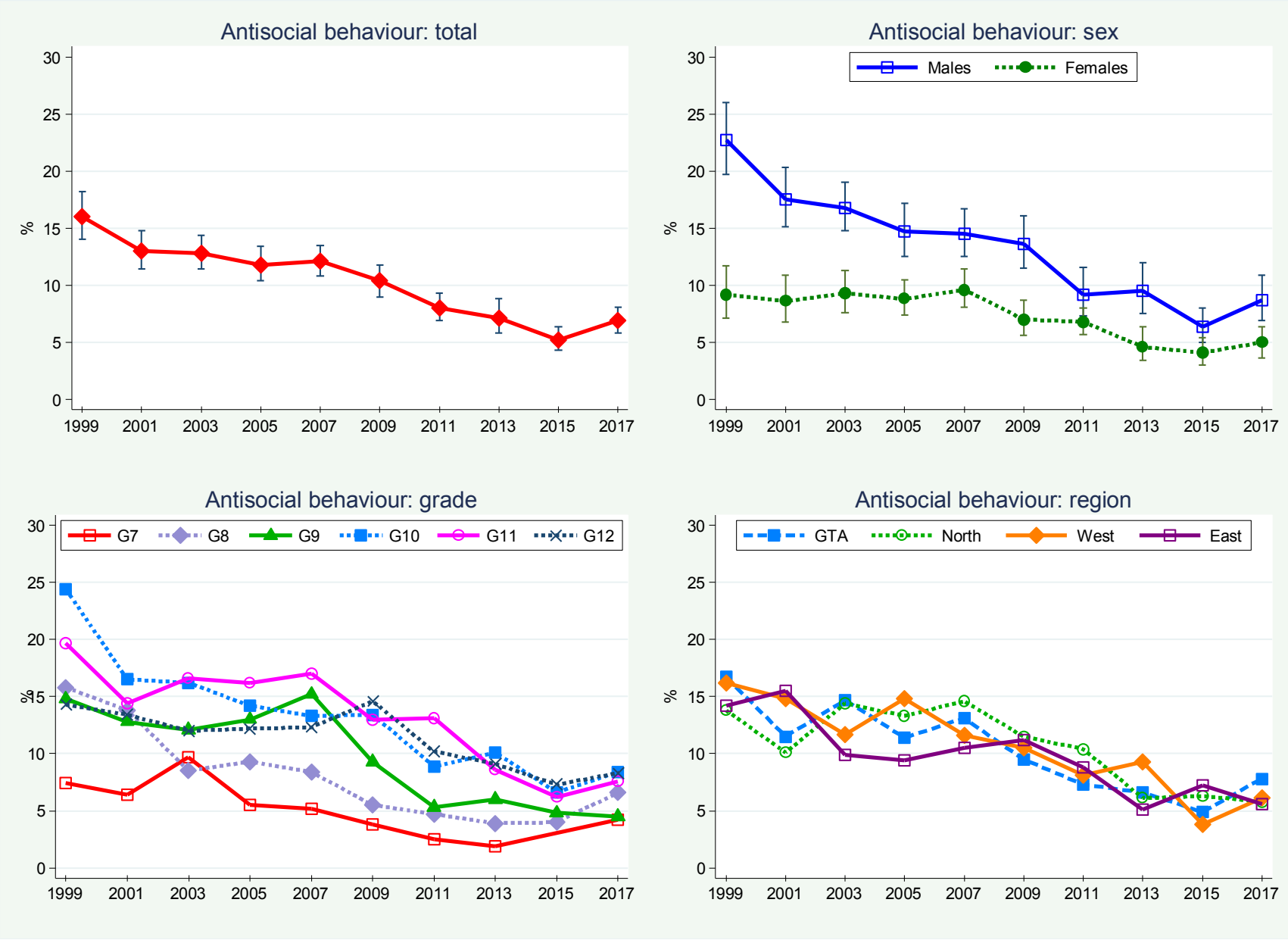
1999–2017 (Grades 7–12):

- Antisocial behaviour has been stable since 2011 at about 5%-8%, but there has been a significant decline since 1999, when the estimate was 16%.
- There has been a dramatic decline since 1999 among males (from 22.7% in 1999 to 8.7% in 2017) and, although weaker, among females (from 9.2% to 5.0%).
- Students in most grades (except for 7th grade and 12th grade) show a significant decline in antisocial behaviour since 1999.
- All regions show a significant decline in antisocial behaviour since 1999.

1993–2017 (Grades 7, 9, 11 only):
Note: 1991 is excluded due to the absence of the weapon carrying question.

- Over the long-term (among grades 7, 9, and 11 only) antisocial behaviour peaked in the early-to-mid 1990s, declined until 2011, and has been stable since then. The 2017 estimate is significantly lower than estimates seen decades ago.

Figure 3.5.4
Percentage Reporting Antisocial Behaviour (3+ of 9 Behaviours) in the Past Year, 1999–2017 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.

2017 (Grades 7–12):

Assault

- About 5.4% of students report assaulting someone at least once during the 12 months before the survey. This percentage represents about 47,000 students in Ontario.
- Males are significantly more likely than females to report assaulting someone (7.1% vs. 3.6%, respectively).
- Assault does not significantly vary by grade or by region.

Weapon Carrying

- An estimated 5.7% 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 50,500 students.
- Males (8.6%) are significantly more likely than females (2.7%) to report carrying a weapon.
- Despite some variation, there are no significant differences by grade or by region.

1999–2017 (Grades 7–12):

- The percentage of students reporting assaulting someone in the past year has been stable since 2013 at about 5%-6%, but is currently significantly lower than estimates seen between 1999 and 2011 (about 9%-20%).
- The percentage of students reporting carrying a weapon has been stable since 2009 at about 5%-7%, but is currently significantly lower than estimates seen between 1999 and 2007 (about 9%-14%).

1991–2017 (Grades 7, 9, 11 only):

- Assault peaked in the late 1990s, declined sharply thereafter, followed by a steady decline, and stability in recent years. The 2017 estimate is significantly lower than estimates seen in the early 1990s.
- Weapon carrying peaked in 1993, steadily declined until about 2009, and has since levelled off. The 2017 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, 2017 OSDUHS

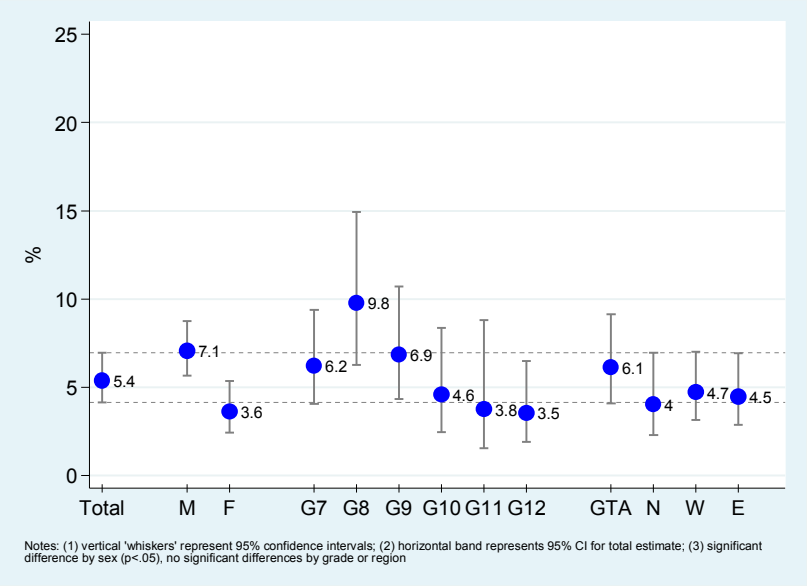
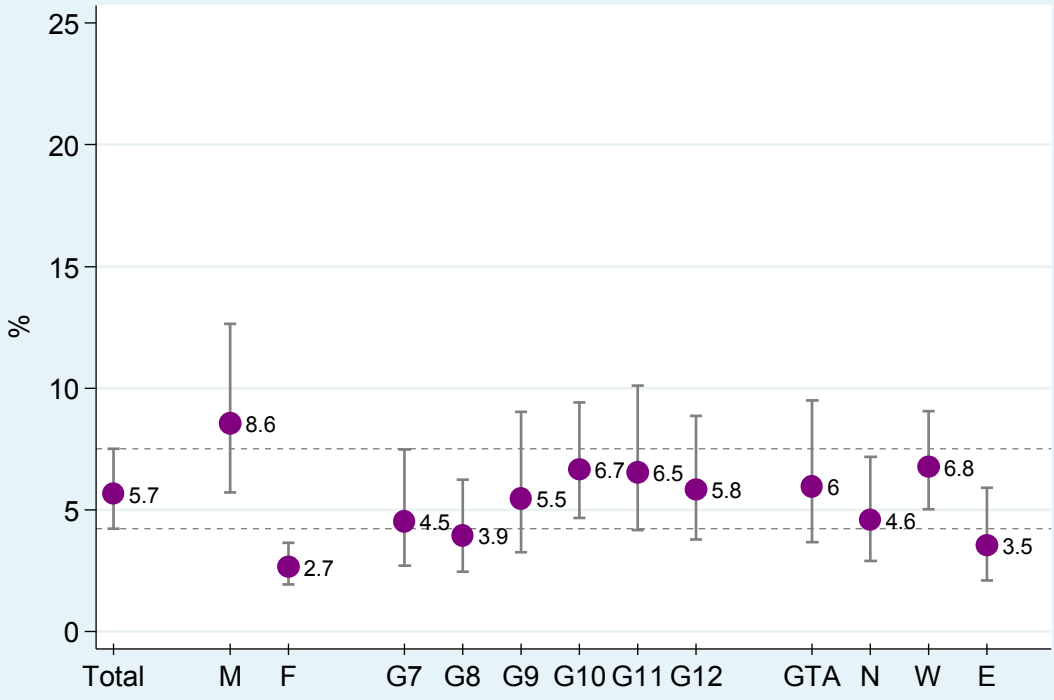
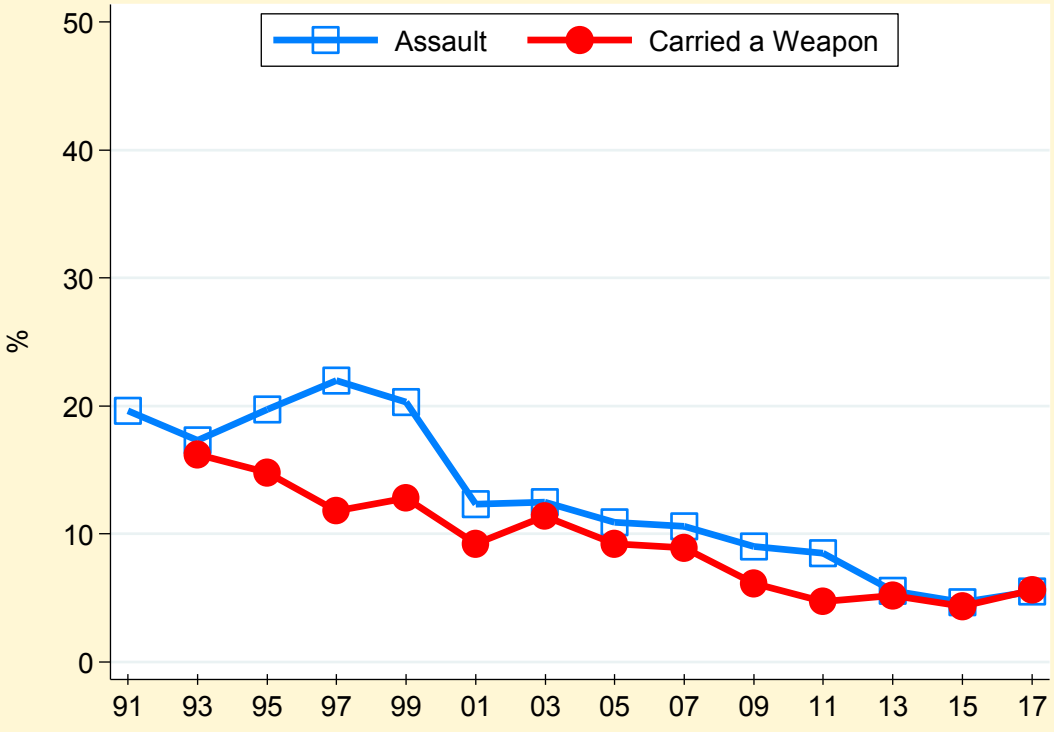


Figure 3.5.6
Percentage Reporting Carrying a Weapon (i.e., Knife or Gun) at Least Once in the Past Year by Sex, Grade, and Region, 2017 OSDUHS



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

Figure 3.5.7
Percentage Reporting Violent Behaviours, 1991–2017 OSDUHS (Grades 7, 9, 11 only)



Note: weapon carrying not asked about in 1991

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.

2017 (Grades 7–12):

Physical Fighting

- One-in-nine (11.4%) – an estimated 105,900 students – report fighting on school property at least once in the past 12 months (7.1% report a single time, while 4.3% report two or more times).
- There is a significant sex difference, with males significantly more likely than females to report fighting at school (16.8% vs. 5.6%, respectively).
- Fighting at school significantly decreases with grade, from about 20.5% of 7th-graders down to 5.3% of 12th graders.
- There are no significant differences among the regions.

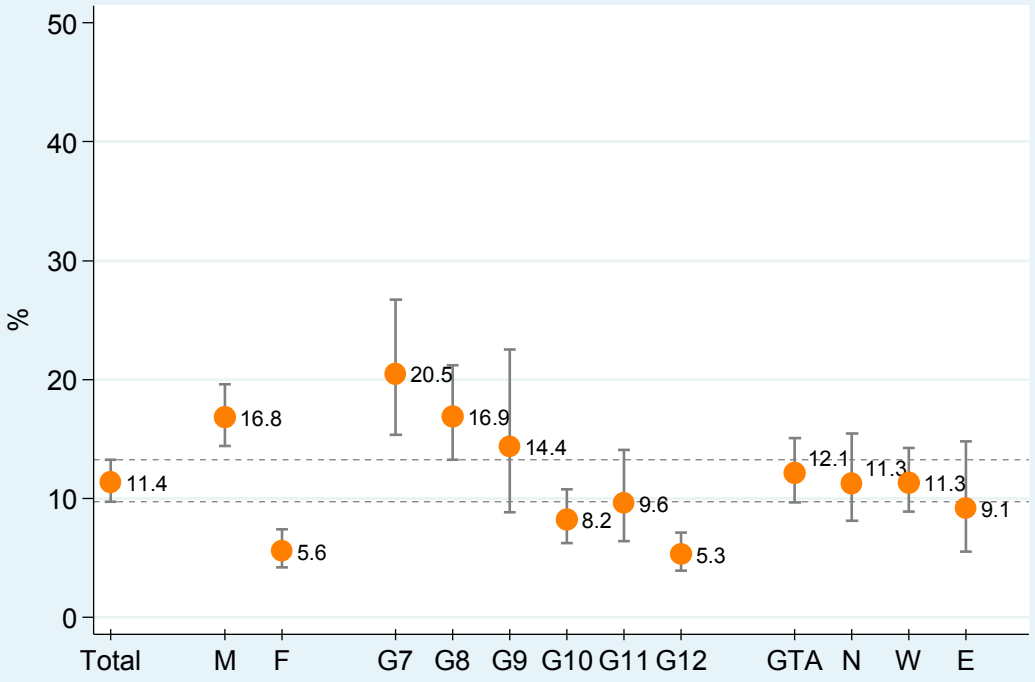
Threatened or Injured with a Weapon

- An estimated 5.5% – roughly 50,700 students in grades 7 through 12 – report being threatened or injured with a weapon on school property at least once in the past year (3.4% report a single event, while 2.1% report two or more times).
- Males are twice as likely as females to report being threatened or injured with a weapon at school (7.7% vs. 3.2 %, respectively).
- There are no significant differences among the grades.
- There are no significant differences among the regions.

2001–2017 (Grades 7–12):

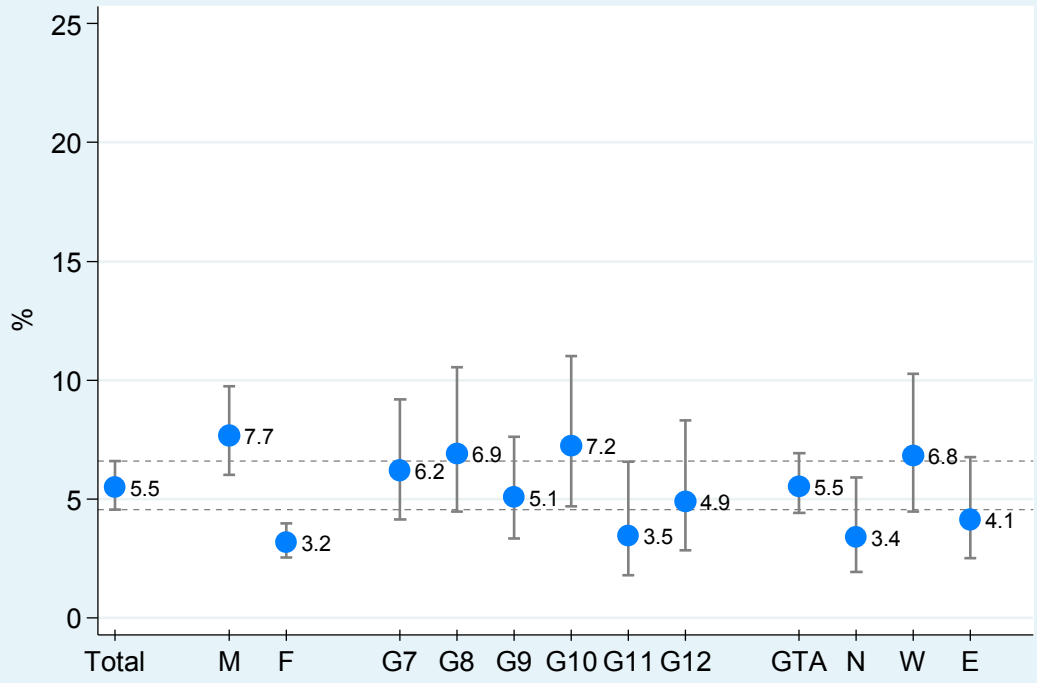
- The percentage of students reporting physical fighting at school has remained stable since 2011 at about 10%-12%. However, there has been a significant decline since 2001 (16.9%), the first year of monitoring. Among the subgroups, males, females, and students in the West show a significant decline since 2001.
- The percentage of students reporting being threatened or injured with a weapon at school has remained stable since 2009, at about 6%-7%. However, there has been a significant decline compared to a decade or so ago (2003-2007) when estimates were about 8%-9%. Among the subgroups, females and students in the North show significant declines since 2003.

Figure 3.5.8
Percentage Reporting Fighting at School at Least Once in the Past Year by Sex, Grade, and Region, 2017 OSDUHS



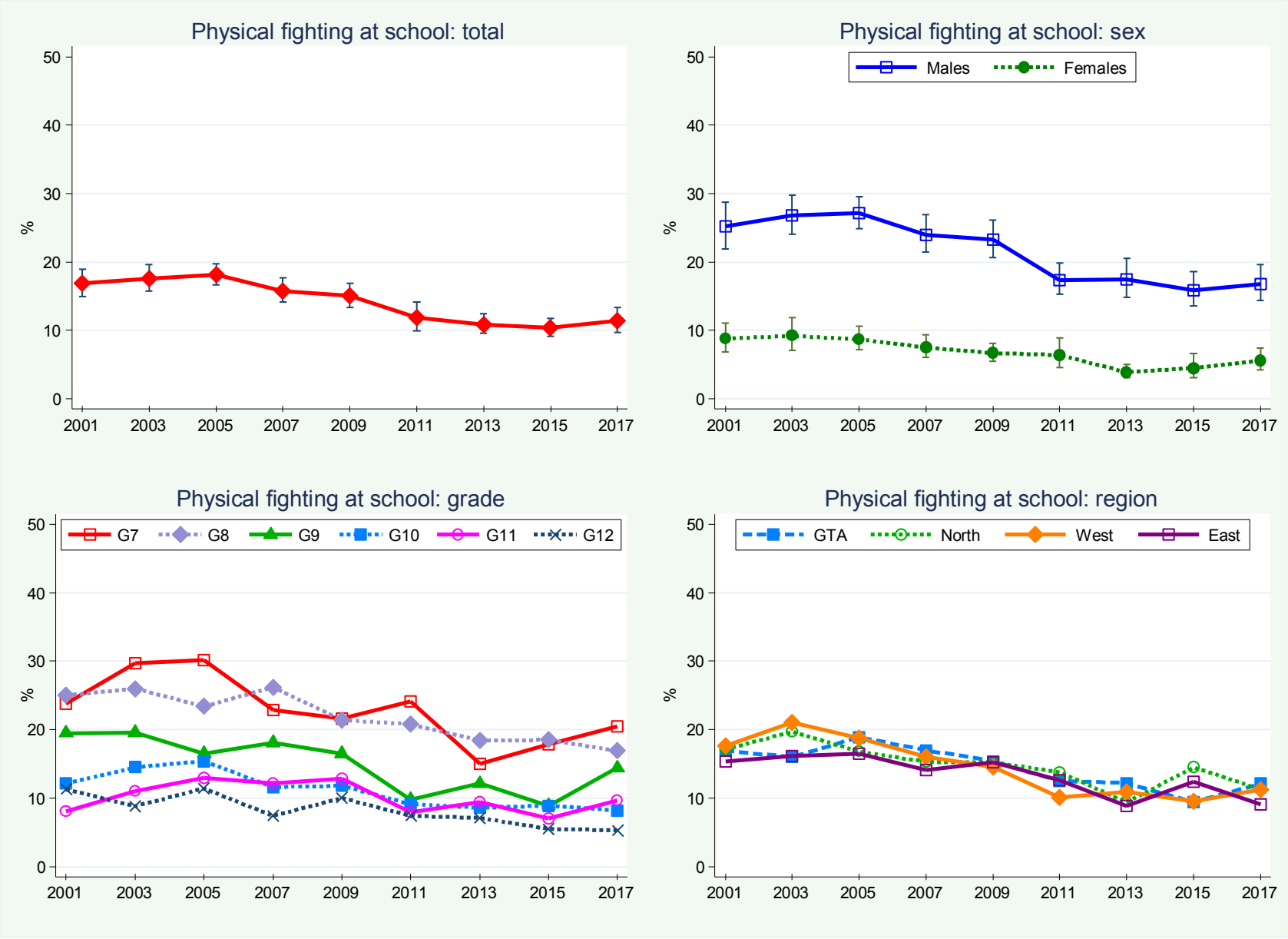
Notes: (1) vertical 'whiskers' represent 95% confidence intervals; (2) horizontal band represents 95% CI for total estimate; (3) significant differences by sex and grade (p<.05), no significant difference by region

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, 2017 OSDUHS



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

Figure 3.5.10
Percentage Reporting Fighting at School in the Past Year, 2001–2017 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*.

2017 (Grades 7–12):

Bullied at School

- One-in-five (21.0%) 7th to 12th graders report being bullied at school since September. This represents about 197,400 students in Ontario.
- The most prevalent mode of victimization is verbal (17.4%), while only 2.0% are typically bullied physically, and 1.7% are typically victims of theft or vandalism.
- An estimated 6.7% of students report being bullied on a daily or weekly basis.
- Females are significantly more likely than males to report being bullied in any way at school (24.5% vs. 17.7%, 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.
- Reports of being bullied at school significantly decrease with grade, from over one-quarter of 7th and 8th graders down to 15% of 12th graders.
- There are no significant regional differences in reports of being bullied at school.

2003–2017 (Grades 7–12):

- The percentage of 7th to 12th graders reporting being bullied at school did not significantly change between 2015 (23.6%) and 2017 (21.0%). However, the current estimate of 21.0% is significantly lower than estimates seen between 2003 (32.7%) and 2013 (25.0%).
- The decline in bullying victimization at school seen since 2003 is significant for all subgroups except 12th graders.
- There has been no significant change over time regarding the typical way students are bullied at school (mainly verbally).

Figure 3.5.11
Percentage Reporting the Typical Way They Were Bullied at School Since September by Sex, 2017 OSDUHS (Grades 7–12)

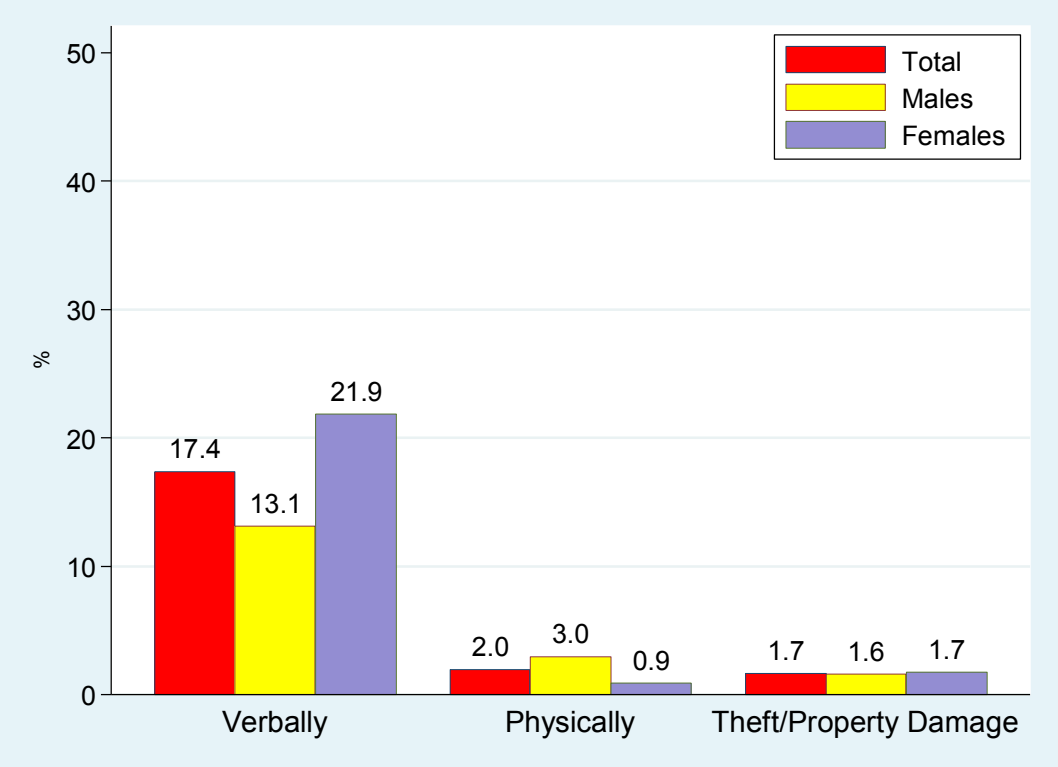
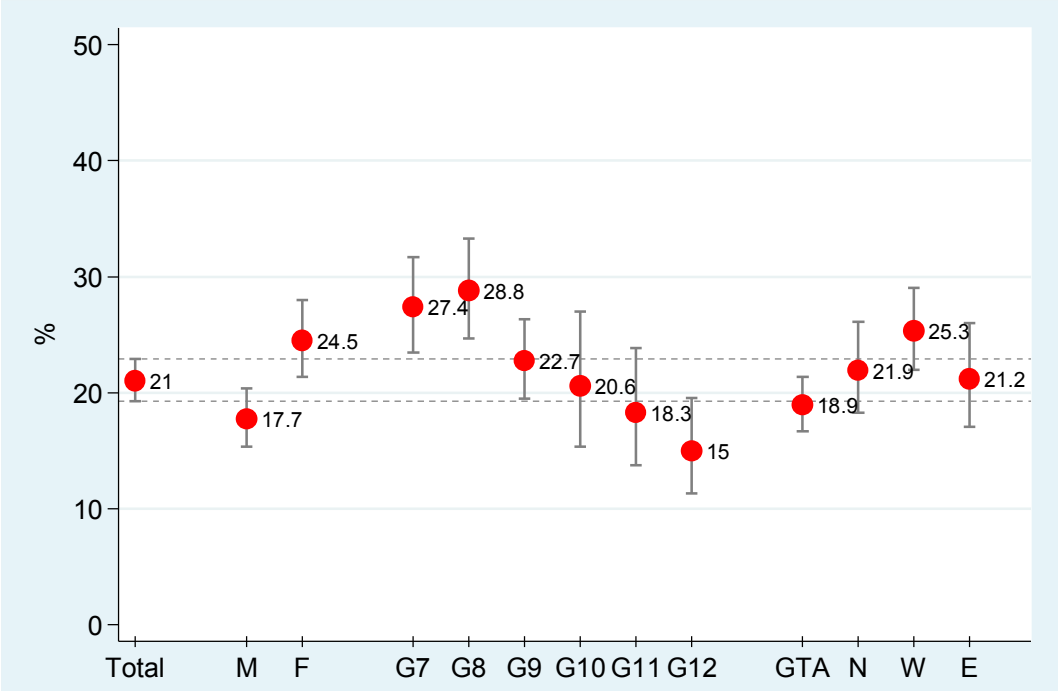
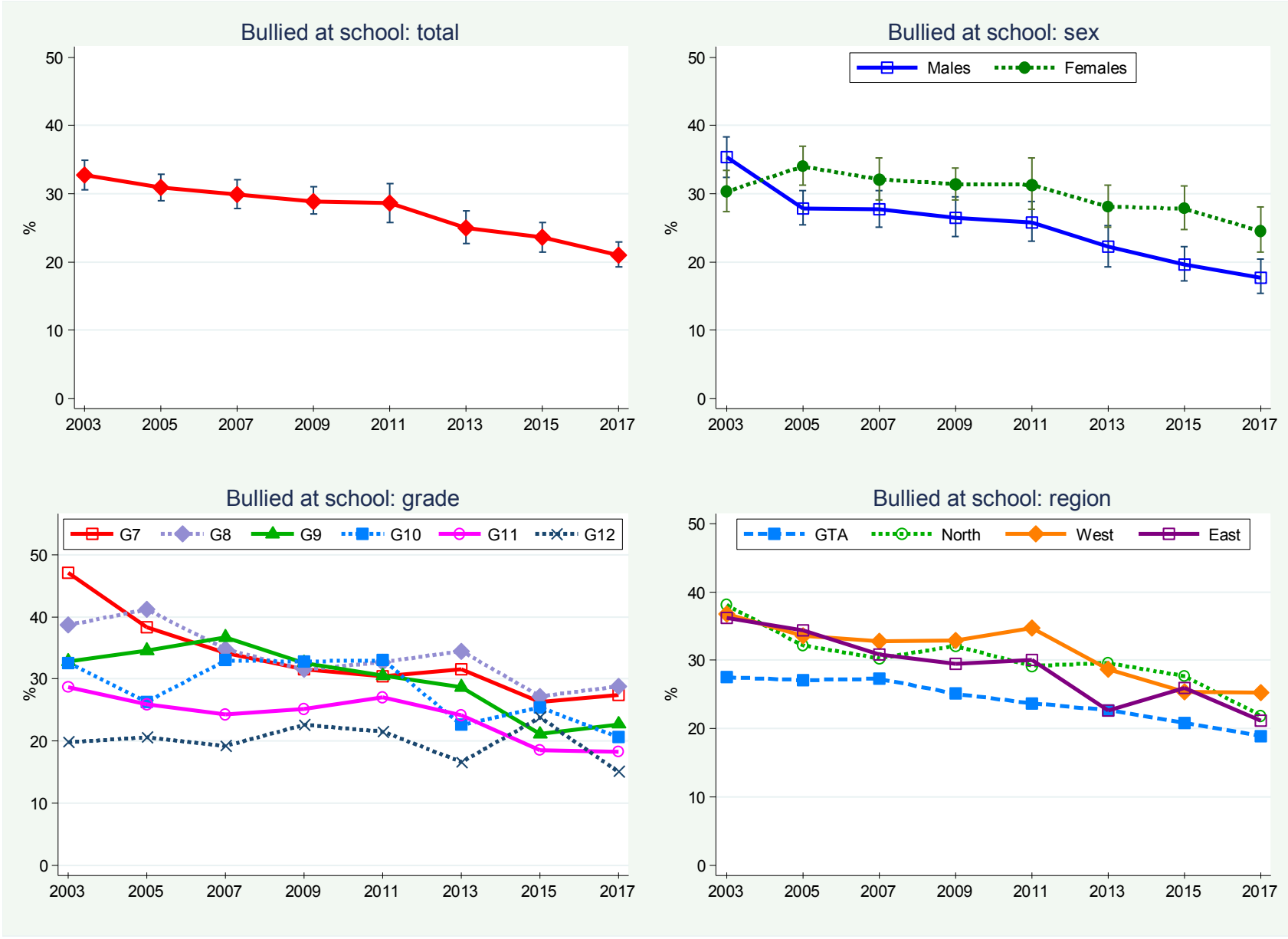


Figure 3.5.12
Percentage Reporting Being Bullied (in Any Way) at School Since September by Sex, Grade, and Region, 2017 OSDUHS



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

Figure 3.5.13
Percentage Reporting Being Bullied (in Any Way) at School Since September, 2003–2017 OSDUHS (Grades 7–12)



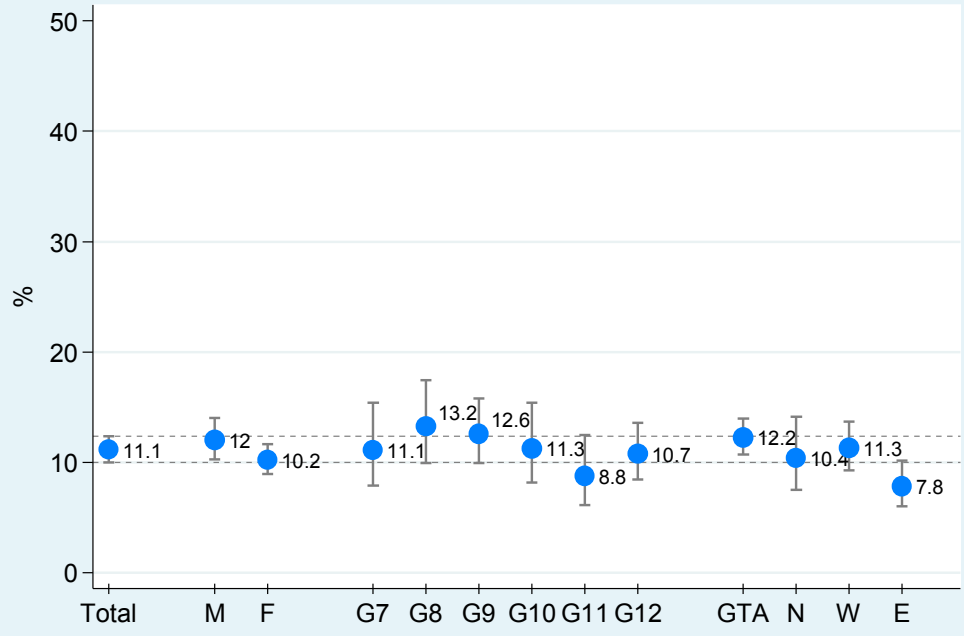
Bully Others at School

- One-in-nine (11.1%) 7th to 12th graders report bullying other students at school. This represents about 104,100 students in Ontario.
- The most prevalent mode of bullying others is through verbal attacks (9.5%), followed distantly by physical attacks (1.2%). Theft or damage to others' property is reported by less than 0.5% of students.
- About 2.7% of students report bullying others on a daily or weekly basis.
- Males (12.0%) and females (10.2%) are equally likely to report bullying others at school.
- There is no significant grade variation.
- There is significant regional variation showing that students in the East region (7.8%) are least likely to report bullying others at school.

2003–2017 (Grades 7–12):

- The percentage of students reporting bullying others at school did not significantly change between 2015 (13.1%) and 2017 (11.1%). However, the current estimate of 11.1% is significantly lower than all estimates seen between 2003 (29.7%) and 2013 (16.0%).
- All subgroups show a significant decline since 2003.
- There has been no significant change over time regarding the typical way students report bullying others at school (mainly verbally).

Figure 3.5.14
Percentage Reporting Bullying Others (in Any Way) at School Since September by Sex, Grade, and Region, 2017 OSDUHS



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

3.5.5 Cyberbullying

(Figures 3.5.15-3.5.17; 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 often did other people bully or pick on you electronically or through the Internet?*" Starting in 2017, another question about bullying others was added: "*In the last 12 months, how often did you bully or pick on other people electronically or through the Internet?*" The response options to both questions 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 (7% of the total sample) were assigned to the "not bullied" or "did not bully" group. Here we describe the percentage of students who report they were bullied over the Internet, and bullied others over the Internet, at least once in the past 12 months.

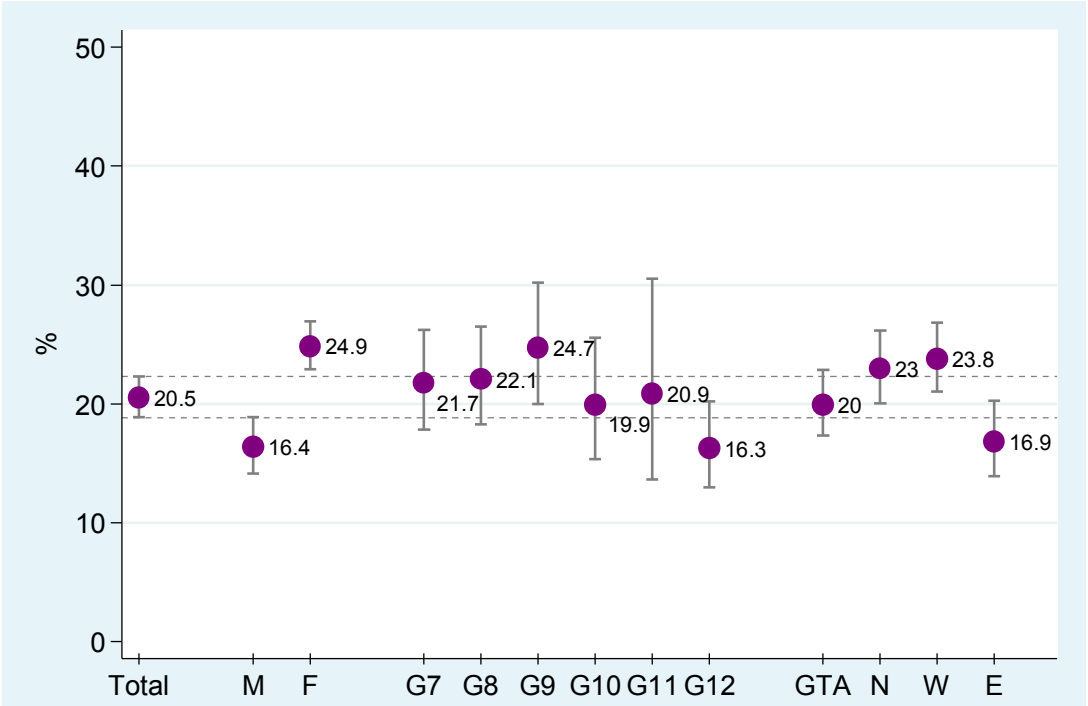
2017 (Grades 7–12):

- One-in-five (20.5%) students in grades 7 through 12 report being bullied over the Internet at least once in the past year. This represents about 191,600 students in Ontario. One-in-ten (9.7%) students report bullying others over the Internet at least once in the past year (representing about 100,100 students).
- Females are significantly more likely than males to report being cyberbullied (24.9% vs. 16.4%, respectively). There is no sex difference in reports of bullying others over the Internet.
- There are no significant differences among the grades for either estimate.
- Students in the West region (23.8%) are most likely, whereas students in the East region (16.9%) are least likely, to report being cyberbullied. There are no significant regional differences in reports of bullying others over the Internet.

2011–2017 (Grades 7–12):

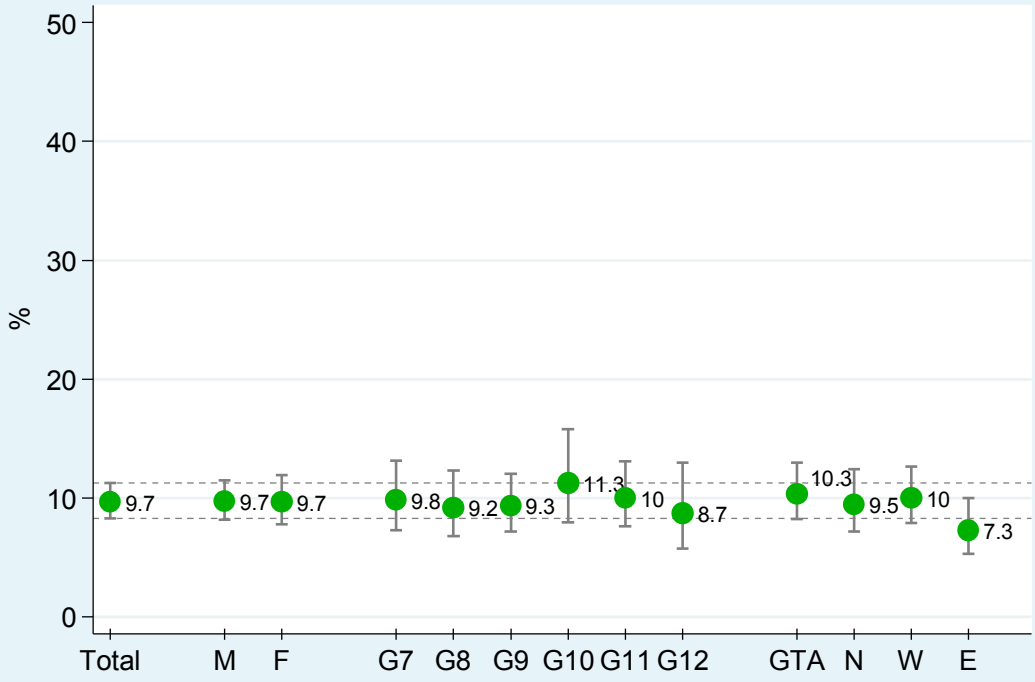
- The percentage of students reporting being cyberbullied has remained stable since 2011, when monitoring first began, at about 19%-22%.
- No subgroup shows a significant change since 2011.

Figure 3.5.15
Percentage Reporting Being Cyberbullied at Least Once in the Past Year by Sex, Grade, and Region, 2017 OSDUHS



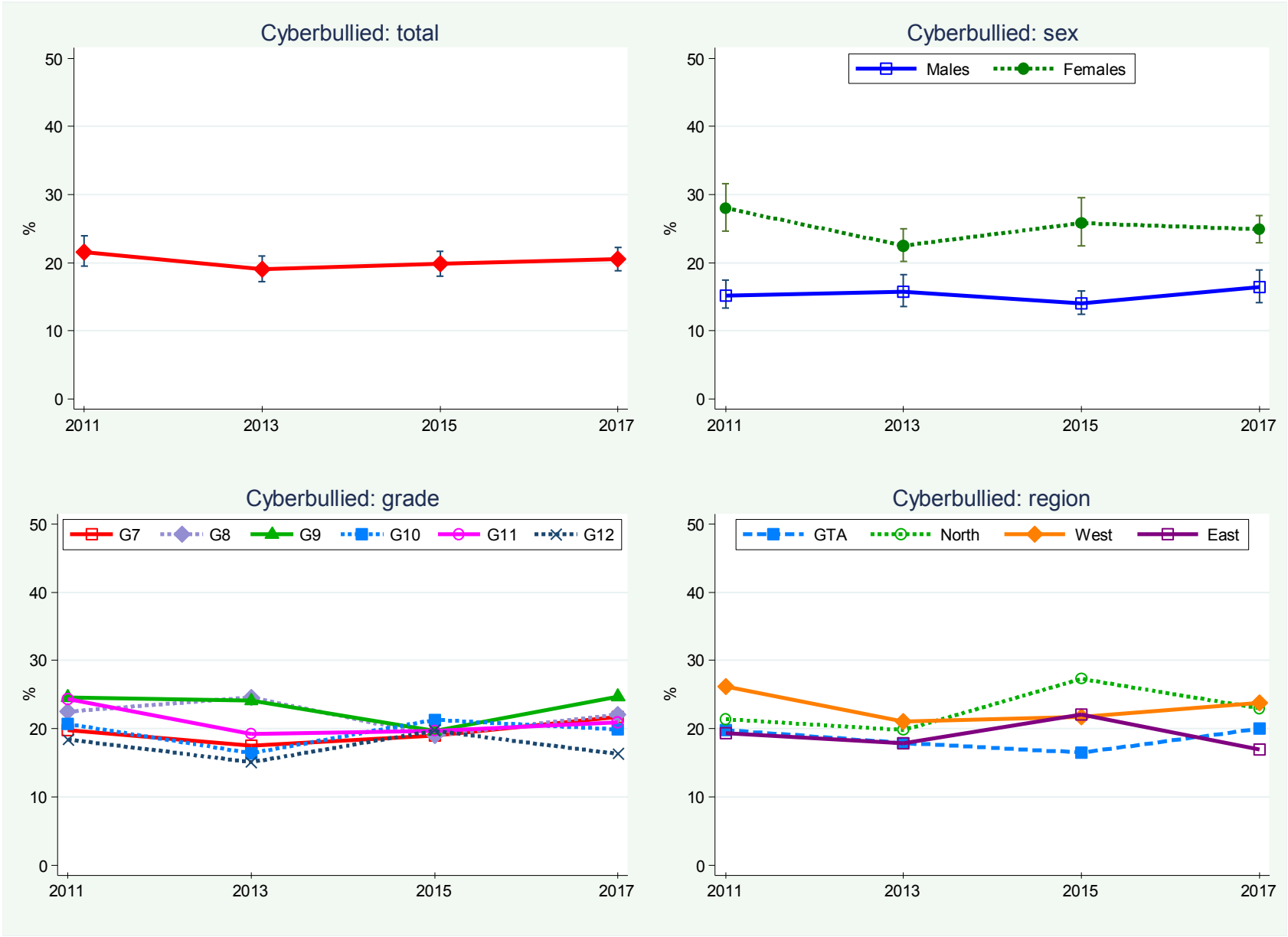
Notes: (1) vertical 'whiskers' represent 95% confidence intervals; (2) horizontal band represents 95% CI for total estimate; (3) significant differences by sex and region (p<.05), no significant difference by grade

Figure 3.5.16
Percentage Reporting Cyberbullying Others at Least Once in the Past Year by Sex, Grade, and Region, 2017 OSDUHS



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

Figure 3.5.17
Percentage Reporting Being Cyberbullied at Least Once in the Past Year, 2011–2017 OSDUHS (Grades 7–12)



3.6 Gambling, Video Gaming, and Technology Use

3.6.1 Gambling Activity

(Figures 3.6.1–3.6.7; 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 17 activities listed below were surveyed in 2017:

- *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 or fantasy sports*
- *bought sports lottery tickets (such as Sports Select or Proline)*
- *bought any other lottery tickets at a store, including instant lottery (such as 6/49, Poker Lotto, scratch cards)*
- *bet money on video gambling machines, slot machines, or other gambling machines*
- *bet money at a casino in Ontario*
- *bet money on results of a video game* (added in 2017)
- *bet money on a dare or private bet* (added in 2017)
- *bet money on poker online* (added in 2017)
- *bet money on bingo online* (added in 2017)
- *bet money on sports betting online* (added in 2017)
- *bet money on other online games* (added in 2017)
- *bought lottery tickets online* (added in 2017)
- *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. 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*.

In this section, we describe the percentage of students who report gambling money on each activity at least once in the past 12 months. The five individual online gambling activities were combined to derive one estimate for any online gambling. In addition, we present the percentage of students who report at least one of the activities (any gambling activity), and the percentage who report gambling at five or more activities (multi-gambling activity).

Individual Gambling Activities in 2017 (Grades 7–12):

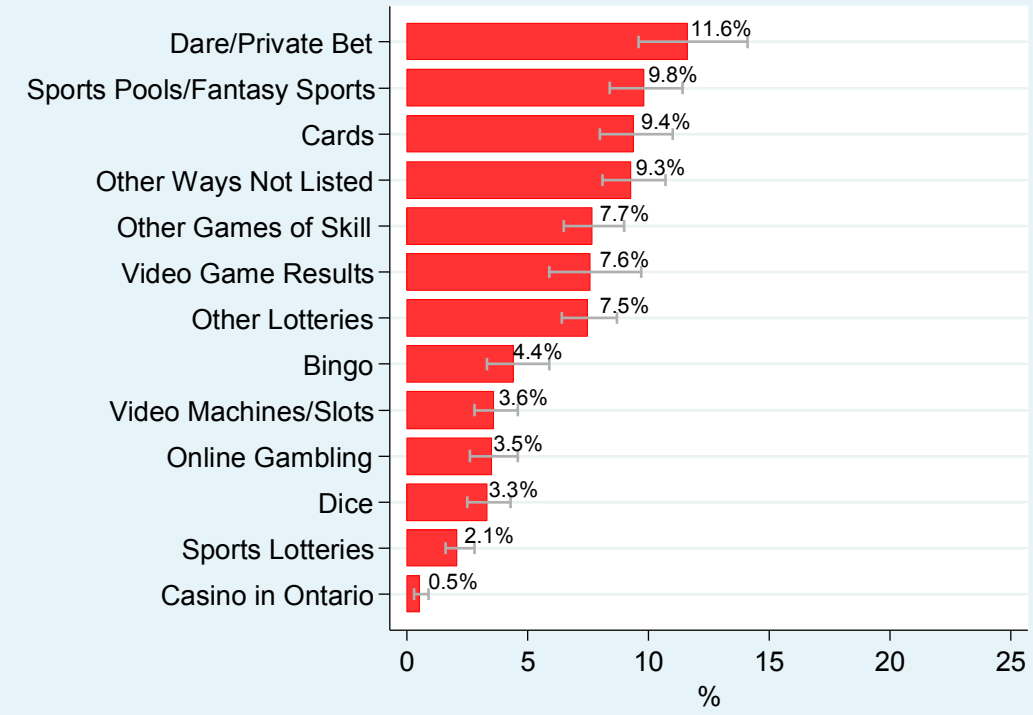
- Of the specific gambling activities surveyed, betting money on a dare or private bet (11.6%) is the most prevalent among 7th–12th graders. Casino gambling (prohibited to those under age 19) is the least prevalent activity (0.5%). About one-in-ten (9.3%) students gamble money at activities not included in our list.

- All gambling activities, except for three, significantly vary by sex. The activities that do not differ by sex are playing dice, bingo, and buying lottery tickets (excluding sports lottery tickets).

- Only three activities significantly increase with grade: card games, sports pools/fantasy sports, and other lottery tickets.

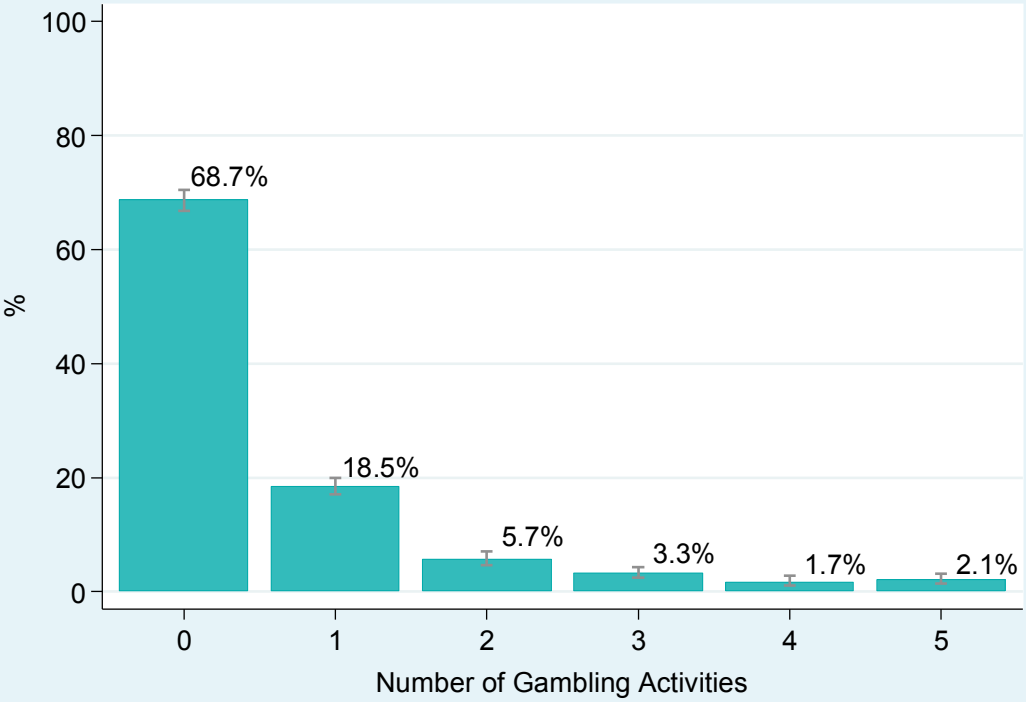
- Betting money on card games is least likely in the East region. Betting money on video gambling/slot machines is least likely in the West region. No other activity differs by region.

Figure 3.6.1
Percentage Reporting Gambling Activities in the Past Year, 2017 OSDUHS (Grades 7–12)



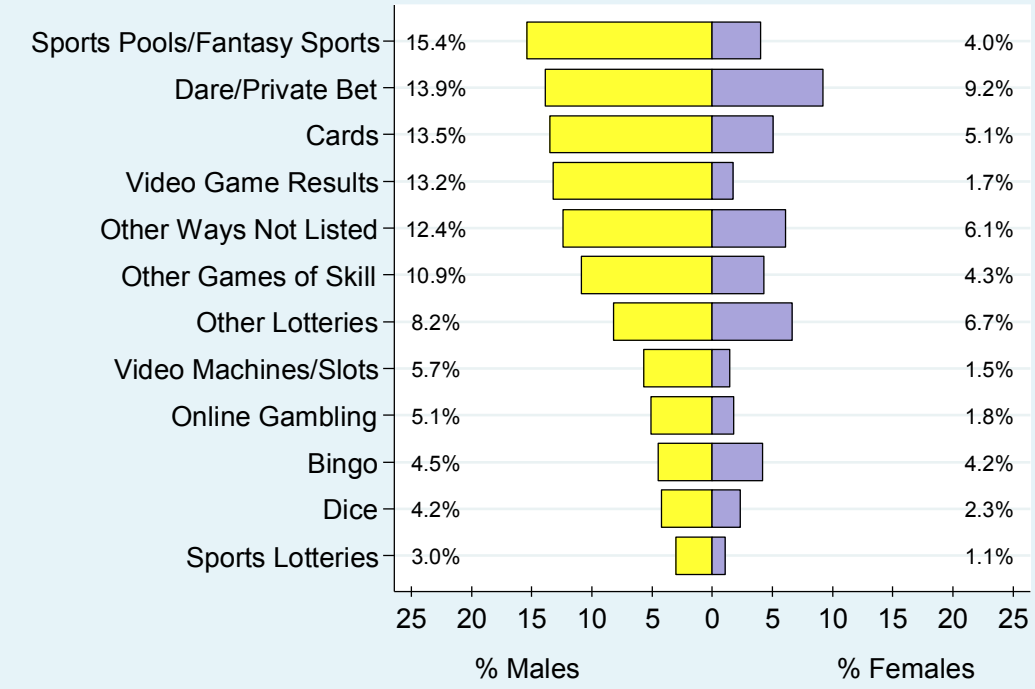
Notes: (1) error bars represent 95% confidence intervals; (2) 'Other Games of Skill' such as pool, darts chess, bowling

Figure 3.6.2
Number of Gambling Activities in the Past Year, 2017 OSDUHS (Grades 7–12)



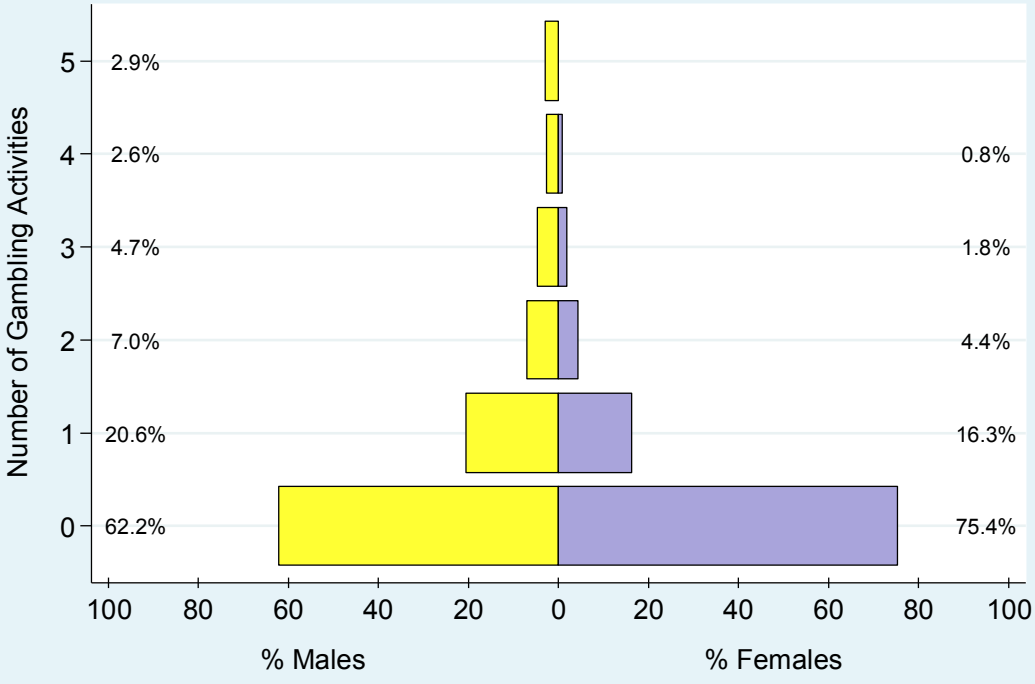
Notes: (1) error bars represent 95% confidence intervals; (2) the maximum value of 5 on the x-axis refers to 5 or more gambling activities in the past year

Figure 3.6.3
Percentage Reporting Gambling Activities in the Past Year by Sex, 2017 OSDUHS (Grades 7–12)



Notes: (1) significant sex difference (p<.05) for each activity except Other Lotteries, Bingo, and Dice; (2) 'Other Games of Skill' such as pool, darts, chess, bowling; (3) Casino gambling suppressed for both

Figure 3.6.4
Number of Gambling Activities in the Past Year by Sex, 2017 OSDUHS (Grades 7–12)



Notes: (1) the maximum value of 5 refers to 5 or more gambling activities in the past year; (2) females' estimate for 5+ activities was suppressed; (3) the sex differences are significant (p<.05)

Any Gambling Activity in 2017 (Grades 7–12)

- About one-third (31.3%) of students in grades 7–12 report at least one gambling activity during the past 12 months. This percentage represents about 285,300 students across Ontario.
- Males are significantly more likely than females to report any gambling (37.8% vs. 24.6%, respectively).
- Despite some variation, the differences among the grades are not statistically significant.
- There are no significant differences among the four regions.

Multi-Gambling Activity in 2017 (Grades 7–12):

- About 2.1% of students in grades 7–12 gambled at five or more activities during the past 12 months. This percentage represents about 19,200 students across Ontario.
- About 2.9% of males report multi-gambling activity. The estimate for females is suppressed.
- No grade differences could be assessed due to suppressed estimates for all grades.
- No regional differences could be assessed due to suppressed estimates.

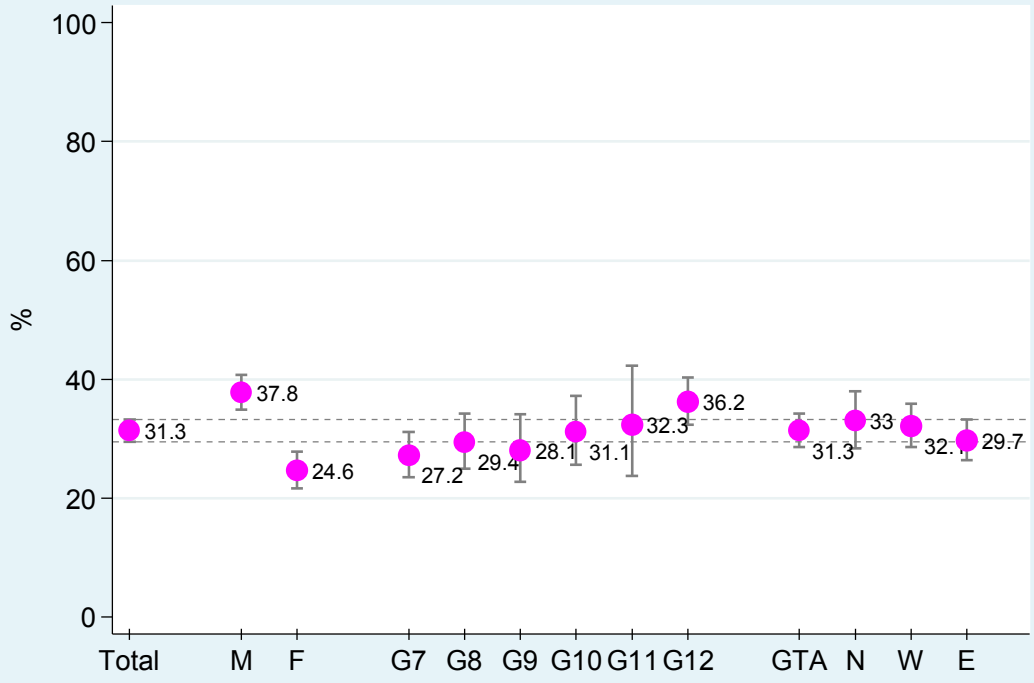
2001–2017 (Grades 7–12):

- No individual gambling activity increased between 2015 and 2017. 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 included in our list). The percentage of students reporting gambling money online has remained stable over time (since 2003) at about 2%-4%.
- The percentage of students who report any gambling activity in the past year has remained stable since 2013 at about 31%-35%. However, the current estimate is significantly lower than estimates seen between 2003 (57.3%) and 2011 (38.4%).
- The percentage reporting multi-gambling activity in the past year has remained stable since 2009 at about 2%-3%. However, there has been a significant decline compared to a decade or so ago when estimates were about 5%-6%.

Money Spent on Gambling in 2017 (Grades 7–12):

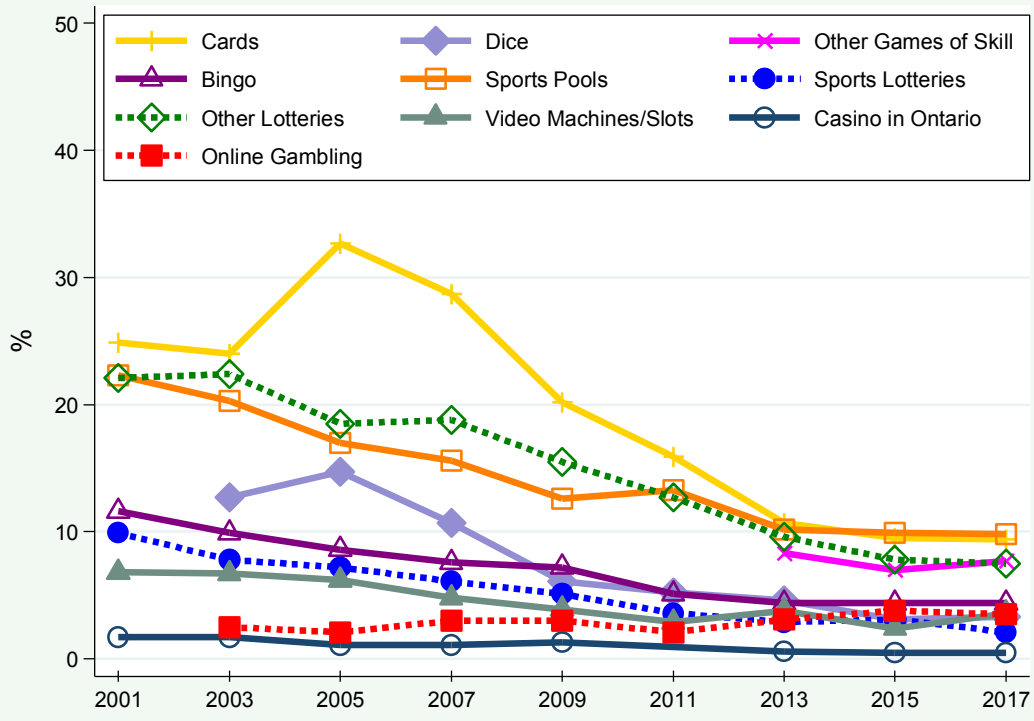
- Among only those students who report gambling in the past year, the vast majority (84%) report that the largest amount of money gambled was less than $50. Another 5% report gambling between $50 and $99; 5% report between $100 and $199; and 5% report spending $200 or more.

Figure 3.6.5
Percentage Reporting Any Gambling Activity in the Past Year by Sex, Grade, and Region, 2017 OSDUHS



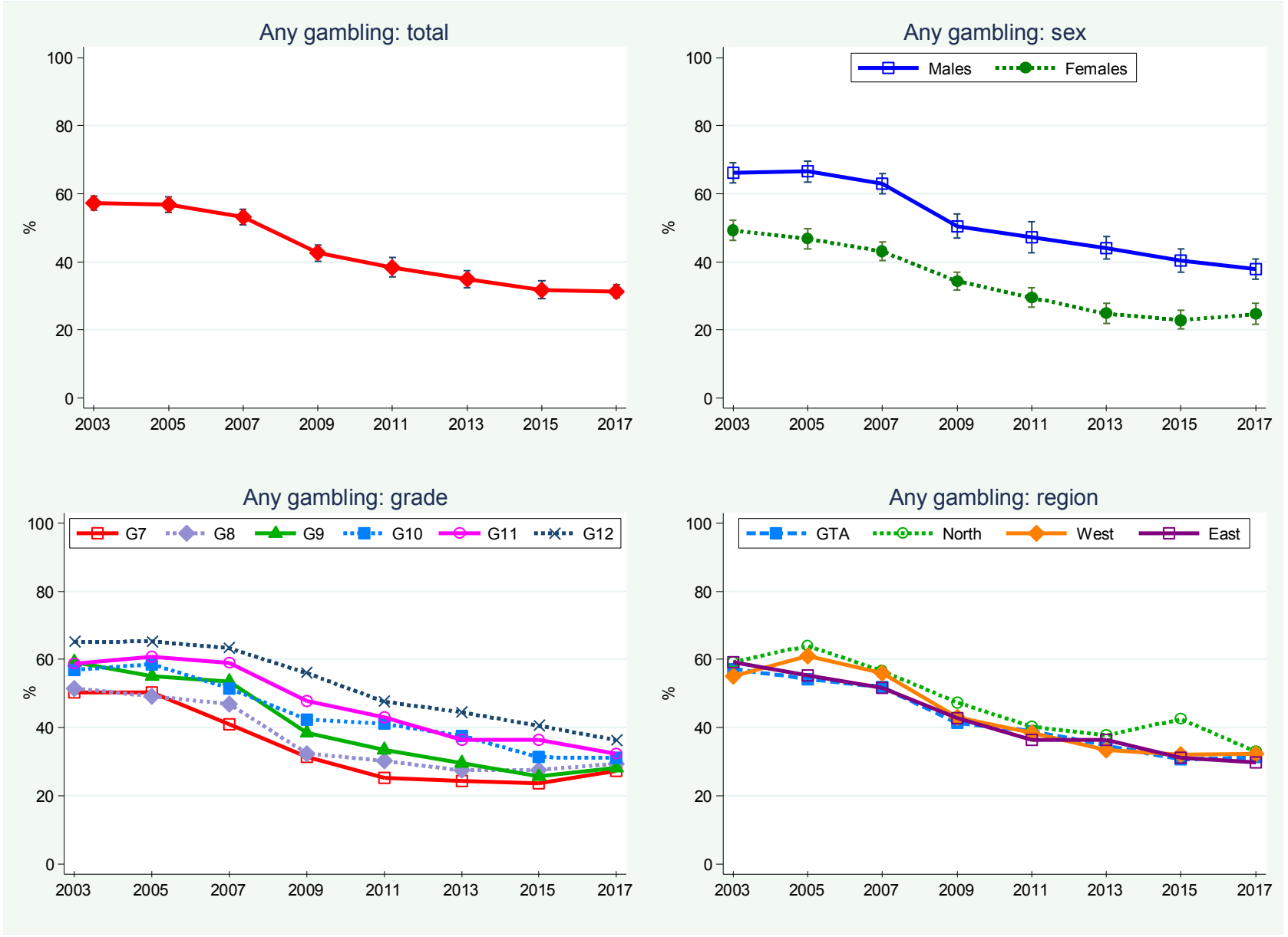
Notes: (1) vertical 'whiskers' represent 95% confidence intervals; (2) horizontal band represents 95% CI for total estimate; (3) significant difference by sex (p<.05), no significant differences by grade or region

Figure 3.6.6
Percentage Reporting Gambling Activities in the Past Year, 2001–2017 OSDUHS (Grades 7–12)



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

Figure 3.6.7
Percentage Reporting Any Gambling Activity in the Past Year, 2003–2017 OSDUHS (Grades 7–12)



3.6.2 Problem Gambling

(Figure 3.6.8, Table 3.6.1)

Starting 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). The following nine questions were asked of a random half sample 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 very good internal consistency (α=0.81).

2017 (Grades 9–12):

- Of the nine GPSS items displayed in Table 3.6.1, the most prevalent is planning one's gambling activities (7.7%). The least prevalent is stealing to gamble or pay off debts (1.3%).
- The vast majority (91.3%) of secondary students do not have a gambling problem. About 6.9% of students meet the criteria for low-to-moderate severity of a gambling problem. About 1.8% meet the criteria for a high-severity gambling problem (representing about 12,200 Ontario students in grades 9–12).
- Males are significantly more likely than females to meet the criteria for a low-to-moderate gambling problem (9.6% vs. 4.1%, respectively). There is no significant difference regarding a high-severity gambling problem (2.5% for males, suppressed estimate for females).
- There are no significant grade or regional differences.

2017 vs. 2015 (Grades 9–12):

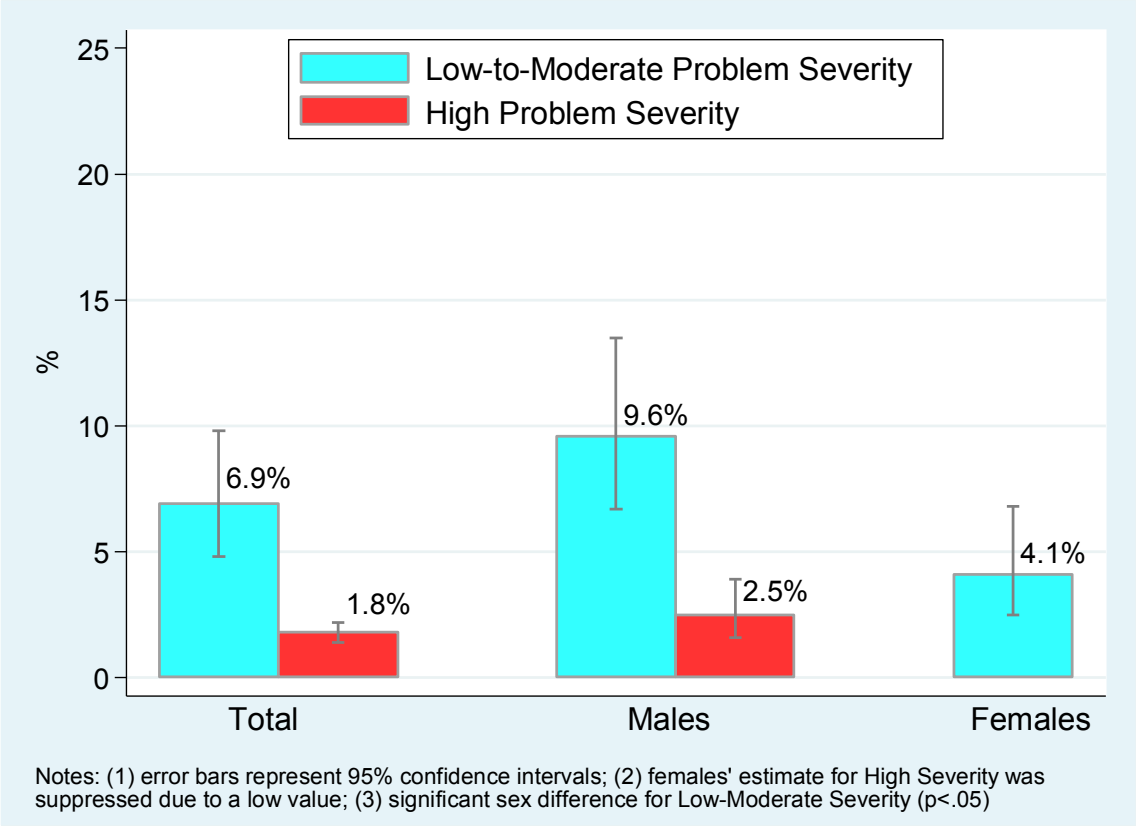
- The percentage of secondary students who meet the criteria for a low-to-moderate gambling problem in 2017 (6.9%) is significantly higher than the estimate seen in 2015 (3.6%).
- The percentage of secondary students who meet the criteria for a high-severity gambling problem in 2017 (1.8%) is similar to the estimate seen in 2015 (1.1%).

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), 2017 OSDUHS (Grades 9–12)

GPSS Item	Total Sample (*n*=4,298)
1. Skipped practice or dropped out of activities (such as team sports or band) due to your gambling	2.5%
2. Skipped hanging out with friends who do not gamble to hang out with friends who do	1.9%
3. Planned your gambling activities	7.7%
4. Felt bad about the way you gamble	2.5%
5. Gone back another day to try to win back the money you lost while gambling	3.2%
6. Hidden your gambling from your parents, other family members, or teachers	3.3%
7. Felt that you might have a problem with gambling	2.3%
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	3.8%
9. Stolen money or other things of value in order to gamble or to pay off your gambling debts	1.3%

Notes: (1) for items 1–7 entries show the percentage who responded at least "sometimes" in the past three months; (2) for items 8 and 9 entries show 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 3.6.8
Percentage Classified According to Severity of Gambling Problem in the Past Three Months as Measured by the *Gambling Problem Severity Subscale* (GPSS), 2017 OSDUHS (Grades 9–12)



Notes: (1) error bars represent 95% confidence intervals; (2) females' estimate for High Severity was suppressed due to a low value; (3) significant sex difference for Low-Moderate Severity (p<.05)

3.6.3 Video Gaming

(Figures 3.6.9–3.6.12; 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 0.78. 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 2017 (Grades 7–12):

- Among the total sample, about 17.0% report that they do not play video games; 26.0% report playing three times a month or less often; 7.4% play once a week; 15.6% play two to three times a week; 11.3% play four to five times a week; and 22.8% play daily or almost daily.
- Males are about four times more likely than females to play video games daily (35.3% vs. 9.9%, 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 2017 (Grades 7–12):

- One-quarter (23.4%) of students usually play video games for less than one hour a day; 17.6% play for about one hour; 17.4% play for two hours; 15.8% play for three to four hours; 5.6% play for five to six hours; and 2.7% 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, 13.0% of males report playing video games for five hours or more daily, compared with 3.5% of females.

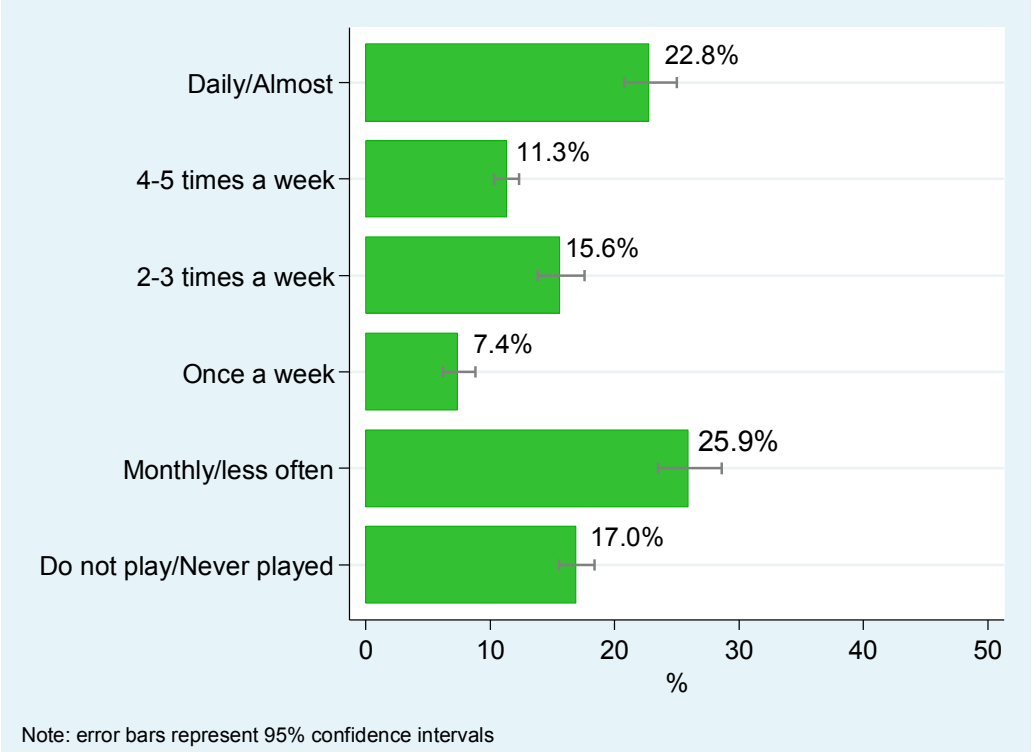
Video Gaming Problems in 2017 (Grades 7–12):

- 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.
- About one-in-eight (11.7%) students meet the criteria for a video gaming problem. This represents about 107,200 students in grades 7–12 in Ontario. When we look at only those students who played video games daily in the past year, almost one-third (30.0%) indicate a problem.
- Males are significantly more likely than females to indicate a video gaming problem (16.6% vs. 6.5%, respectively).
- Despite some variation, there are no significant differences among the grades.
- There are significant regional differences showing that students in the East (7.0%) are least likely, and GTA students (13.5%) are most likely, to indicate a video gaming problem.

2007–2017 (Grades 7–12):

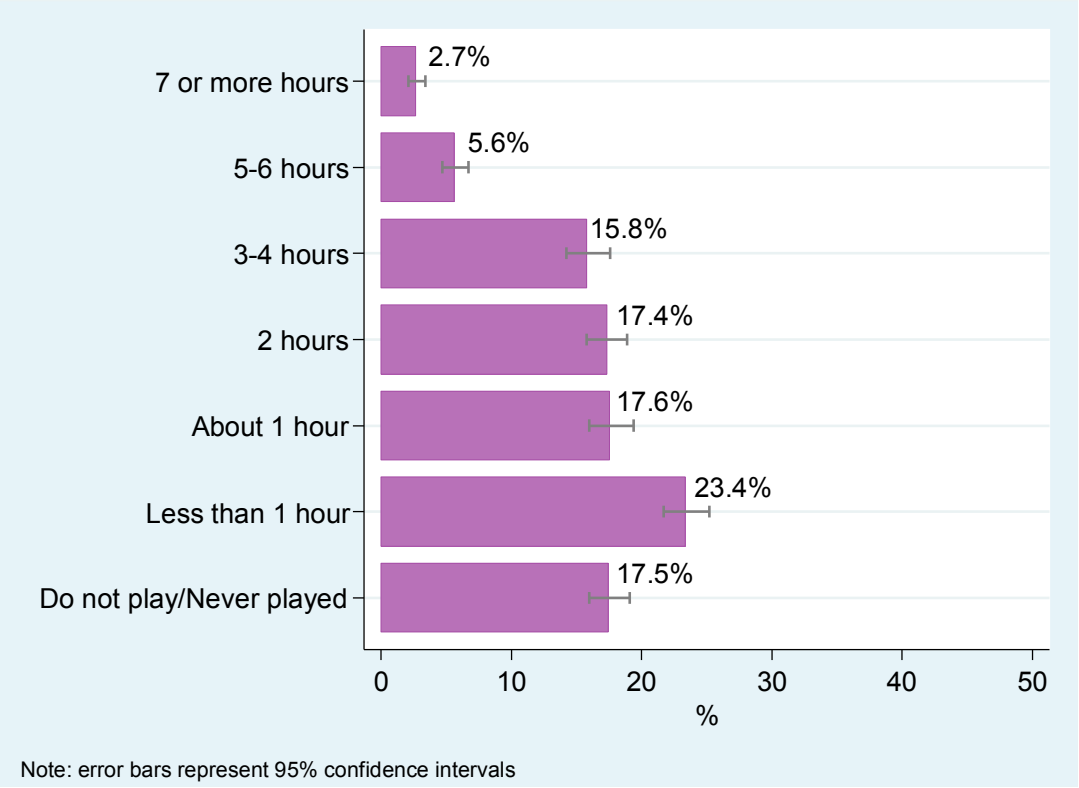
- The percentage of students classified as having a video gaming problem in 2017 (11.7%) is similar to the estimate seen in 2015 (12.5%), and to estimates seen since 2007 (9%-12%).
- No subgroup showed a significant change between 2015 and 2017.

Figure 3.6.9
Frequency of Playing Video Games in the Past Year, 2017 OSDUHS (Grades 7–12)



Note: error bars represent 95% confidence intervals

Figure 3.6.10
Usual Number of Hours per Day Spent Playing Video Games in the Past Year, 2017 OSDUHS (Grades 7–12)



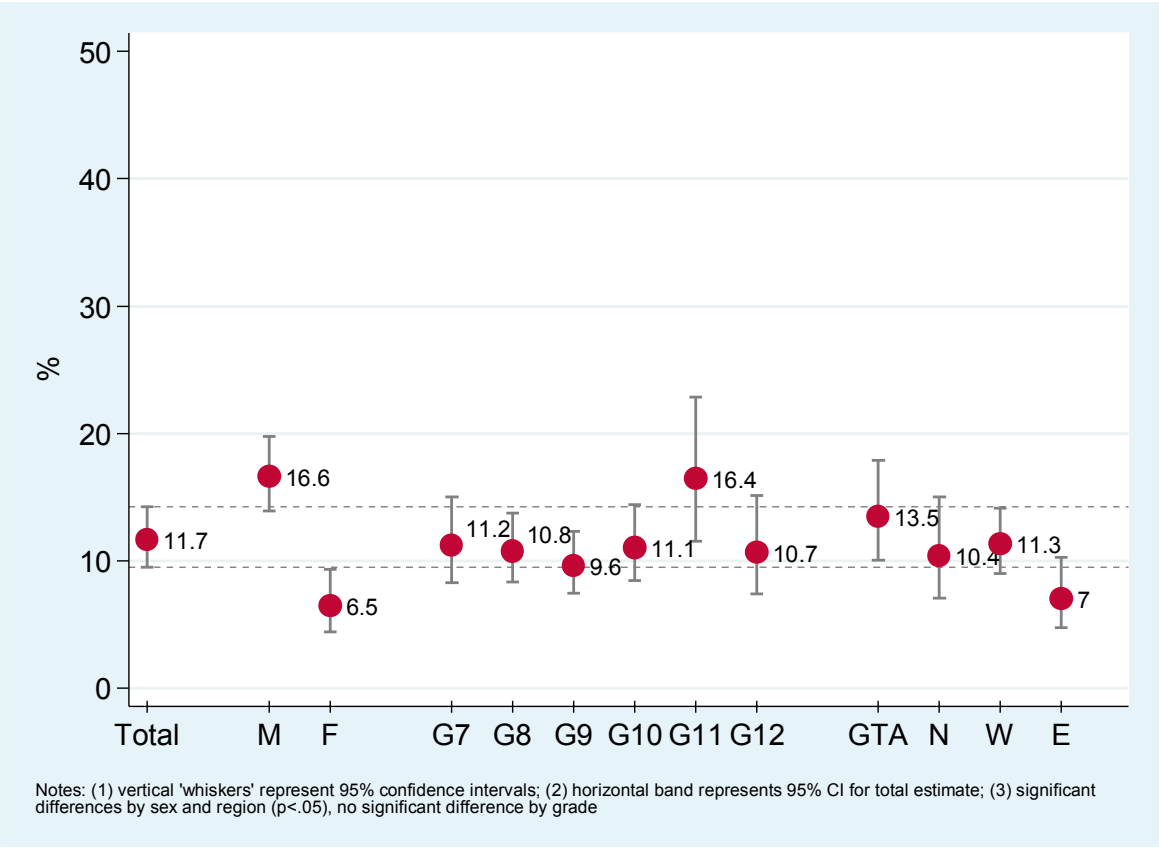
Note: error bars represent 95% confidence intervals

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*, 2017 OSDUHS (Grades 7–12)

PVP Scale Item	Total Sample (*n*=6364)	Males (*n*=2754)	Females (*n*=3610)
1. Kept thinking about playing video games, when not playing	22.2	33.8	10.3
2. Spent an increasing amount of time playing video games	16.8	25.9	7.4
3. Tried to control, cut back, stop playing video games, or played for longer than intended	25.7	36.1	14.8
4. Became restless or irritated when could not play video games	8.2	11.7	4.6
5. Played more often when felt bad (sad, angry or nervous) or had problems	20.7	27.3	13.8
6. When lost in a game or did not get the desired results, played again to achieve the target	45.1	59.8	29.7
7. Skipped school or work, or lied/stole/argued with someone in order to play	3.8	6.4	1.1
8. Ignored homework, went to bed late, or spent less time with family and friends because of video game playing	23.2	33.6	12.3
9. Hid video game playing from family or friends	6.3	8.6	3.8

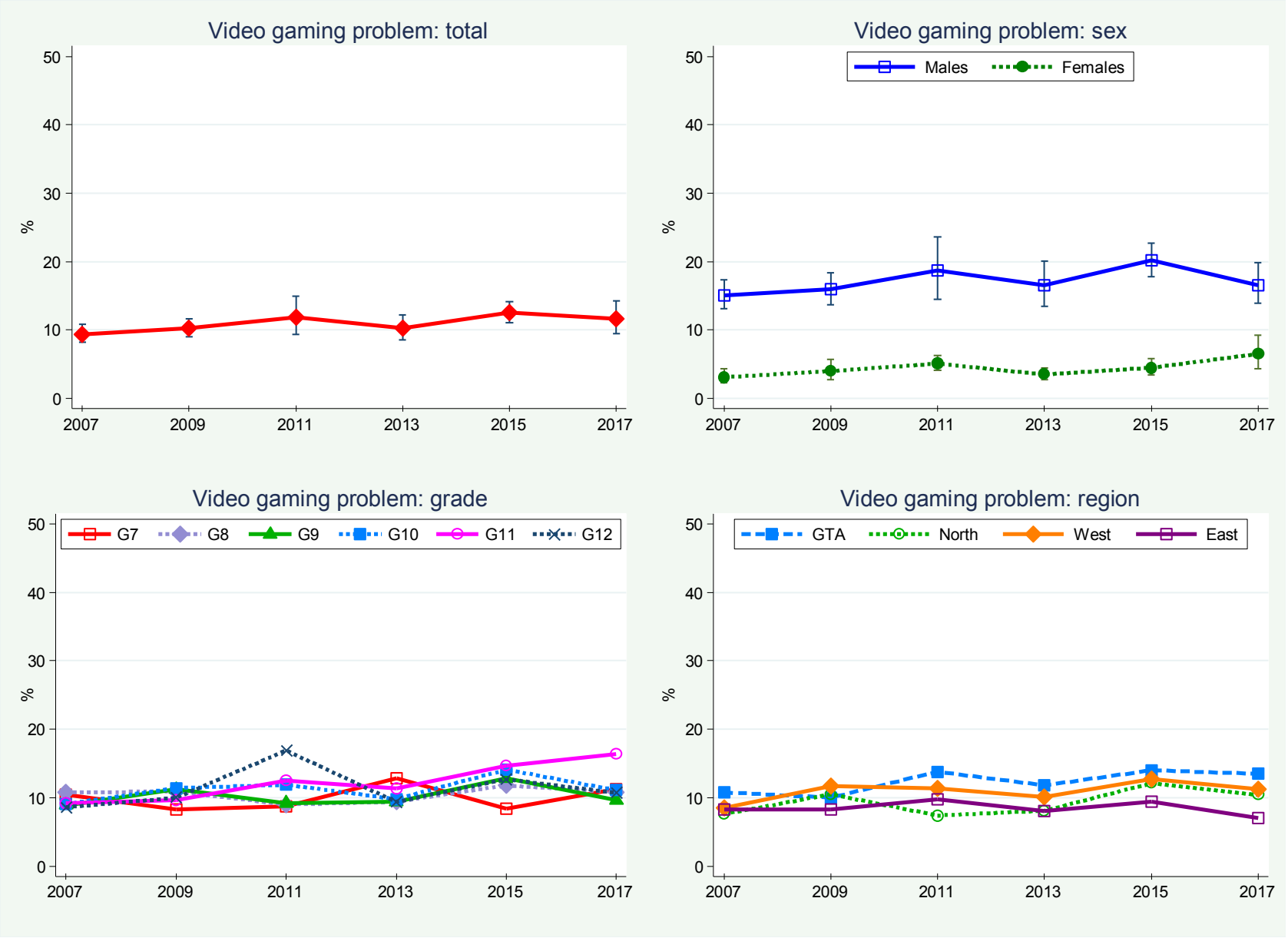
Notes: (1) entries are the percentages responding "Yes"; (2) n=number of students surveyed; (3) based on a random half sample; (4) significant sex difference for each item, p<.05.

Figure 3.6.11
Percentage Classified as Having a Video Gaming Problem (PVP Scale) by Sex, Grade, and Region, 2017 OSDUHS



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

Figure 3.6.12
Percentage Classified as Having a Video Gaming Problem (PVP Scale), 2007–2017 OSDUHS (Grades 7–12)



3.6.4 Social Media Use

(Figures 3.6.13–3.6.14; Table A3.6.3)

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 sites or apps, such as Instagram, Snapchat, Twitter, Facebook, Ask.fm, 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 hours or more daily on social media.

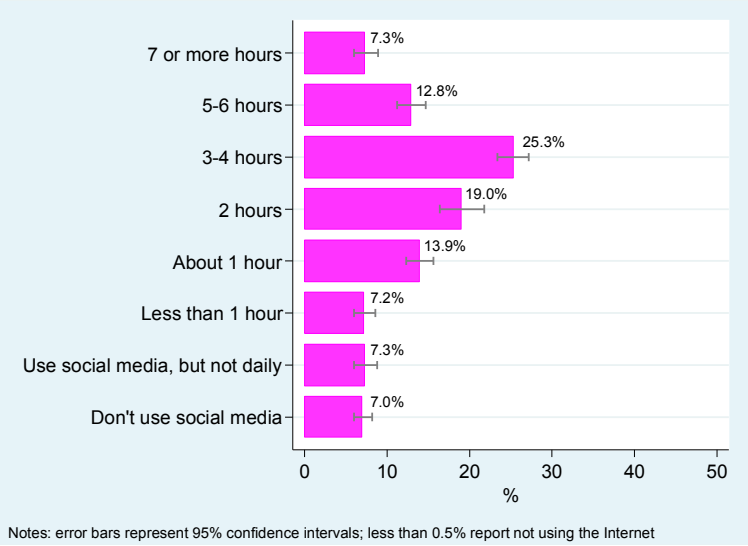
2017 (Grades 7–12):

- Most students visit social media websites on a daily basis. About 7.2% spend less than one hour a day on these sites, and a similar percentage (7.3%) spend seven or more hours a day.
- About 20.1% of students usually spend five or more hours a day on social media.
- Females (25.8%) are significantly more likely than males (14.9%) to spend five or more hours a day on social media.
- There is significant grade variation, with students in grades 9-12 (about 21%-24%) most likely to spend five or more hours daily on social media.
- Despite some variation, there are no significant differences among the regions.

2013–2017 (Grades 7–12):

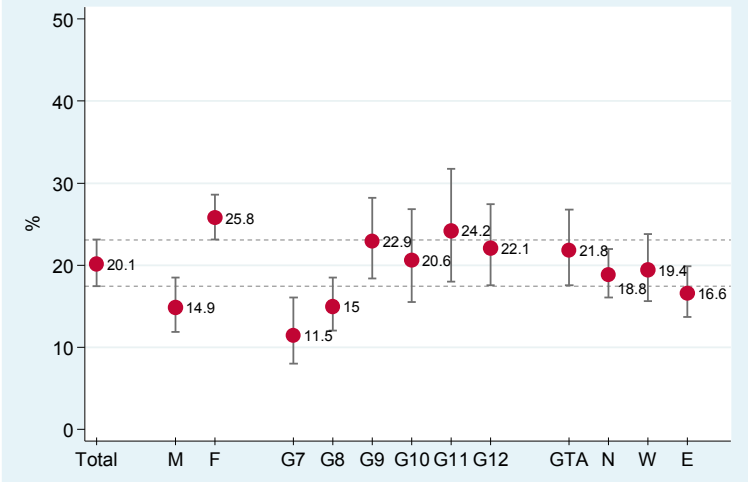
- The percentage of students who report spending five hours or more per day on social media in 2017 (20.1%) is significantly higher than the percentage in 2015 (16.0%) and in 2013 (10.7%), the first year of monitoring.
- The increase in excessive social media use seen since 2013 is evident among males, females, most grades, and most regions.

Figure 3.6.13
Hours per Day Spent on Social Media, 2017 OSDUHS (Grades 7–12)



Notes: error bars represent 95% confidence intervals; less than 0.5% report not using the Internet

Figure 3.6.14
Percentage Reporting Usually Spending Five or More Hours per Day on Social Media by Sex, Grade, and Region, 2017 OSDUHS



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

3.6.5 Technology Use

(Figures 3.6.15–3.6.20)

For the first time in 2017, the OSDUHS asked a random half sample of secondary students about their use of electronic devices (such as smartphones, tablets, laptops, computers, or gaming consoles) in their free time, and related problems using the 6-item *Short Problematic Internet Use Test* (SPIUT) (Siciliano et al., 2015).[77] This scale, which was adapted from the longer *Compulsive Internet Use Scale*, measures the dimensions of loss of control, preoccupation, conflict with family/friends, withdrawal and coping. The following six questions were asked:

- *How often do you find that you are staying on electronic devices longer than you intended?*
- *How often do you neglect homework because you are spending more time on electronic devices?*
- *How often are you criticized by your parents or your friends about how much time you spend on electronic devices?*
- *How often do you lose sleep because you use electronic devices late at night?*
- *How often do you feel nervous when you are not using electronic devices and feel relieved when you do go back to using them?*
- *How often do you choose to spend more time on electronic devices rather than go out with your friends?*

The response options for each item ranged from (1) *Never* to (5) *Very Often,* and were rescaled ranging from 0 to 4. Students also had the option of responding that they do not use electronic devices in their free time, and these responses were recoded to 0. A summated score ranging from 0 to 24 was computed for the total sample of secondary students who answered all six items. For the purpose of this report, two problem categories were derived from this summated score: a moderate-to-serious problem with technology use (scores of 14 or higher), and a serious problem with technology use (scores of 19 or higher). Assessment of the six scale items shows very good internal consistency (α=0.81).

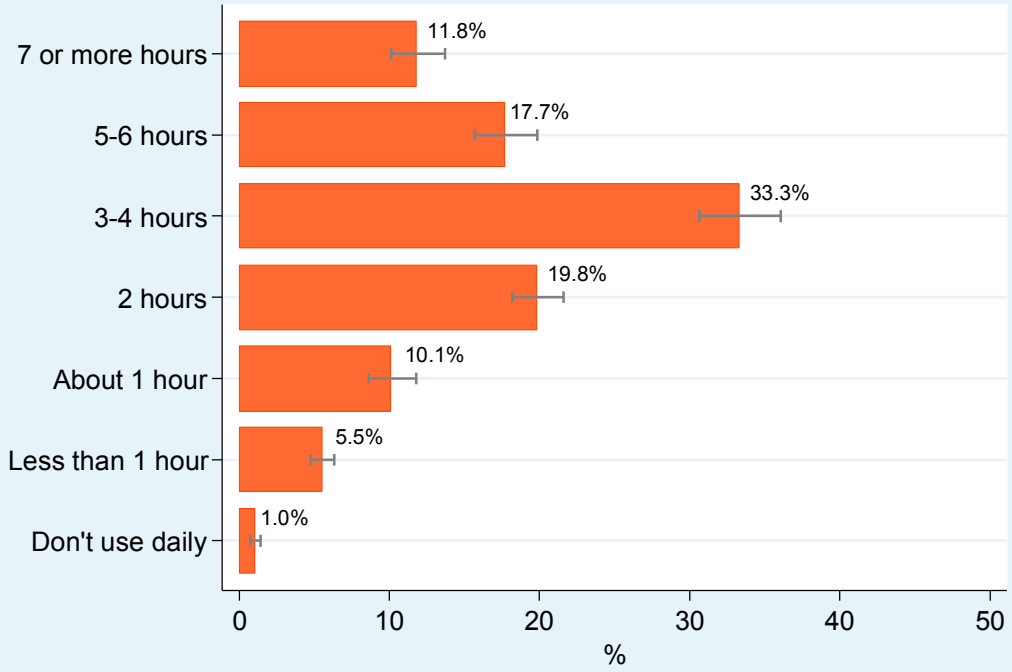
The question used to measure daily device use was "*About how many hours a day in your free time do you usually spend on electronic devices texting, messaging, emailing, chatting, watching videos, playing games, using social media (such as Instagram, Snapchat, Facebook), or surfing the Internet?*" Students also had the option to respond that they do not use electronic devices daily or at all. Here we focus on the percentage who report using devices for five hours or more daily.

Usual Number of Hours per Day Spent on Electronic Devices (Grades 9–12):

- The majority of secondary students use electronic devices for more than three hours a day in their free time. Specifically, one-third (33.3%) use for three to four hours, 17.7% use for five to six hours, and 11.8% use for seven hours or more per day. Only 1% report not using electronic devices each day in their free time.
- Over one-quarter (29.5%) of secondary students report using electronic devices for at least five hours a day.
- Females (36.3%) are significantly more likely than males (23.1%) to use electronic devices for at least five hours daily.
- There are no significant grade differences in reports of using electronic devices for at least five hours daily.
- There are no significant regional differences.

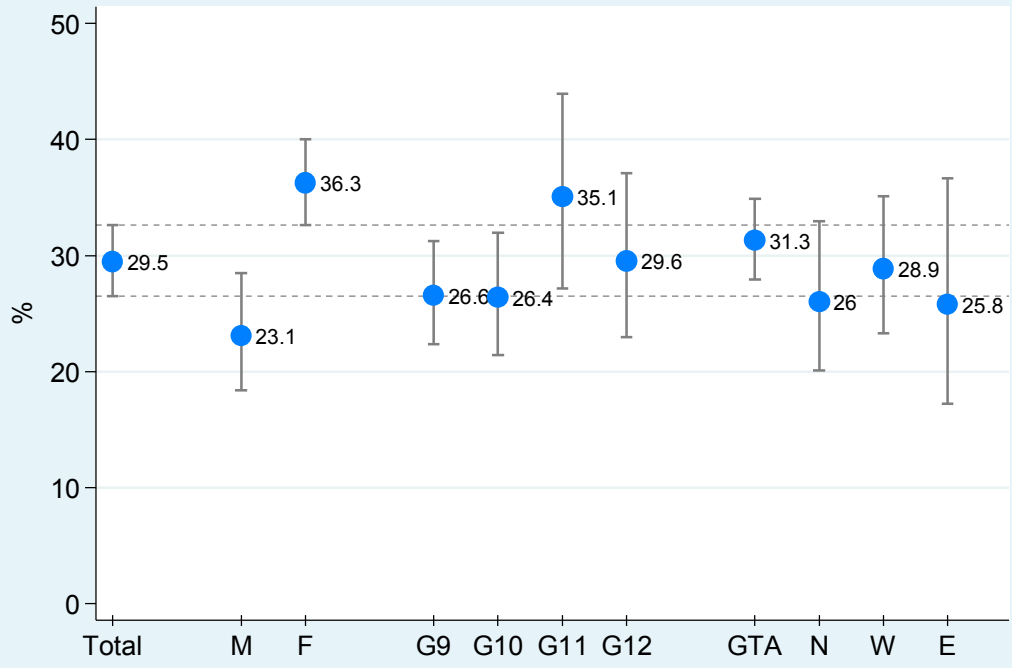
[77] We adapted the wording of the SPIUT items by replacing "internet" with "electronic devices" to be more precise and to capture any off-line/download use.

Figure 3.6.15
Hours per Day in Free Time Spent on Electronic Devices, 2017 OSDUHS (Grades 9–12)



Notes: error bars represent 95% confidence intervals; less than 1% report not using electronic devices in their free time

Figure 3.6.16
Percentage Reporting Usually Spending Five or More Hours per Day in Free Time on Electronic Devices by Sex, Grade, and Region, 2017 OSDUHS



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

Problematic Technology Use (Grades 9–12):

- Among the six SPIUT items measuring symptoms of problematic technology use, the most prevalent (that is, experienced "quite often" or "very often") is staying on electronic devices longer than intended (40.8%). The least prevalent problem is feeling nervous when not using electronic devices, and feeling relieved when return to use (7.2%).

- Females are significantly more likely than males to report each symptom except for one (spending time on devices instead of with friends).

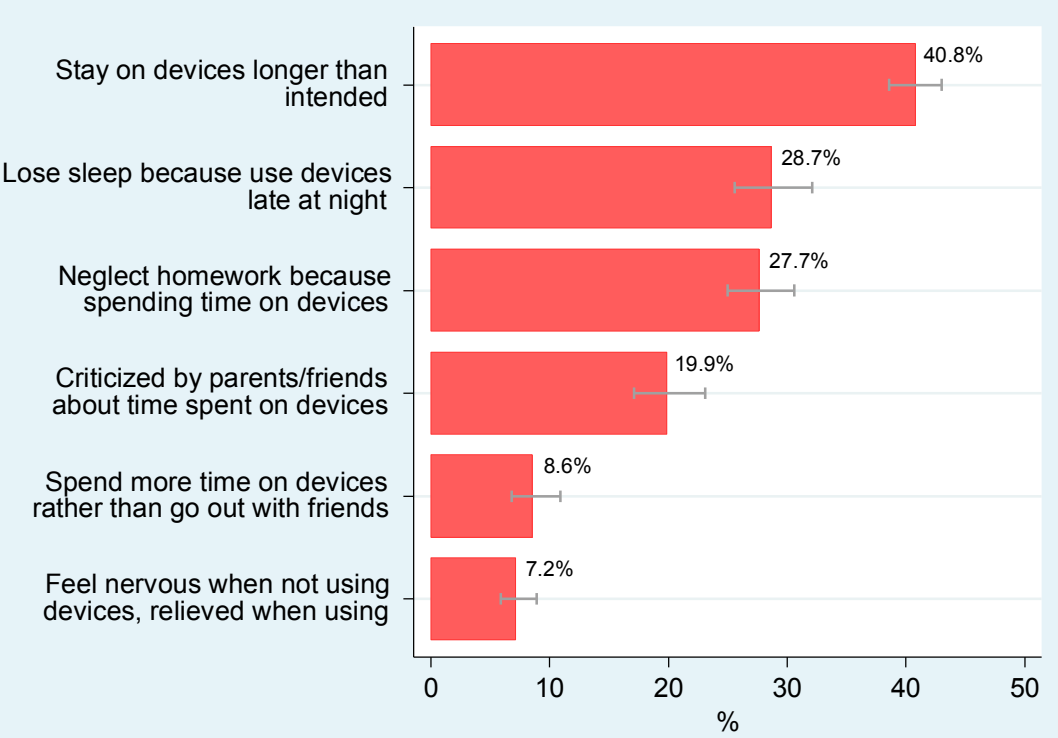
- About one-in-six (18.1%) secondary students report symptoms that may suggest a moderate-serious problem with technology use (representing about 123,500 students in grades 9-12). About 4.9% report symptoms that may suggest a serious problem with technology use (representing about 33,300 students in grades 9-12).

- Females are significantly more likely than males to indicate a moderate-serious problem (24.4% vs. 11.9%, respectively), as well as a serious problem (6.6% vs. 3.2%, respectively).

- There is no significant variation by grade.

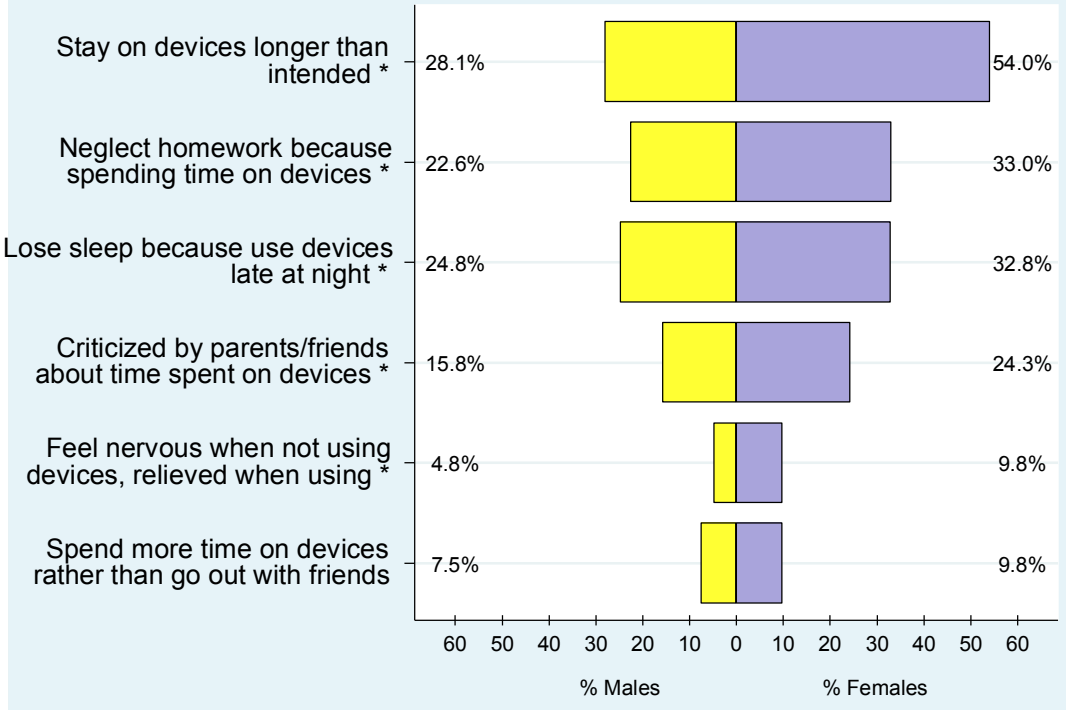
- Compared to students in the other three regions, students in the Greater Toronto Area are significantly more likely to indicate a moderate-serious problem (20.8%), as well as a serious (7.1%) problem with technology use.

Figure 3.6.17
Percentage Reporting Experiencing Symptoms of Problematic Technology Use (SPIUT Items) “Quite Often” or “Very Often,” 2017 OSDUHS (Grades 9–12)



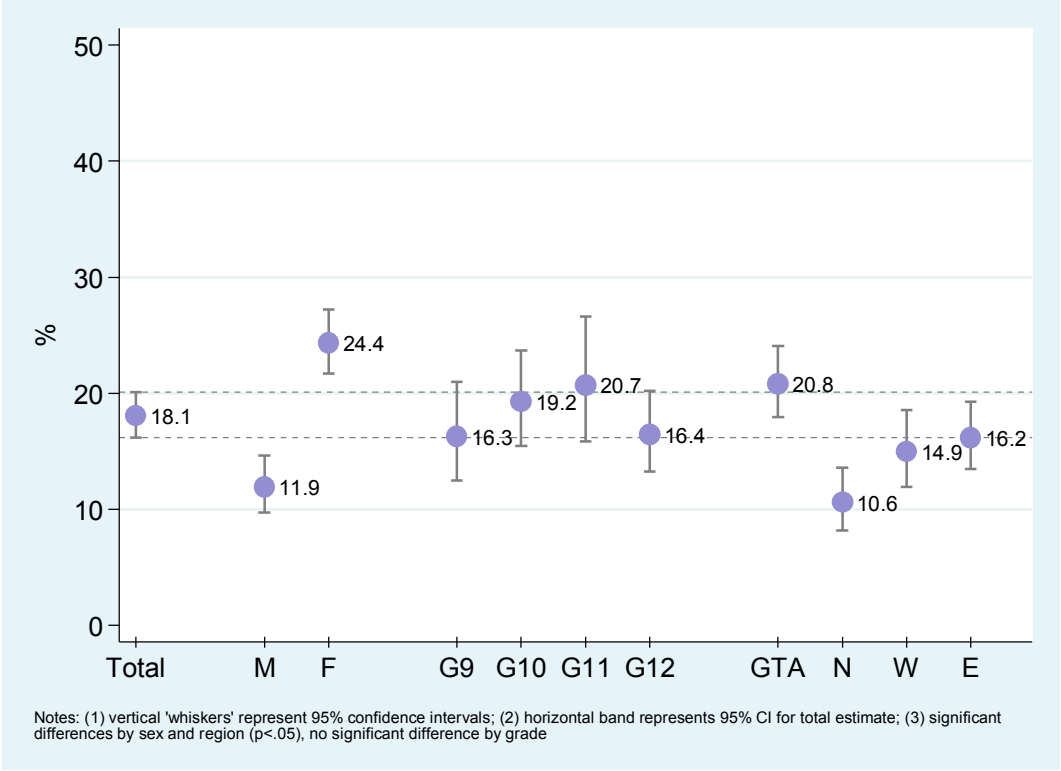
Note: error bars represent 95% confidence intervals

Figure 3.6.18
Percentage Reporting Experiencing Symptoms of Problematic Technology Use (SPIUT Items) “Quite Often” or “Very Often” by Sex, 2017 OSDUHS (Grades 9–12)



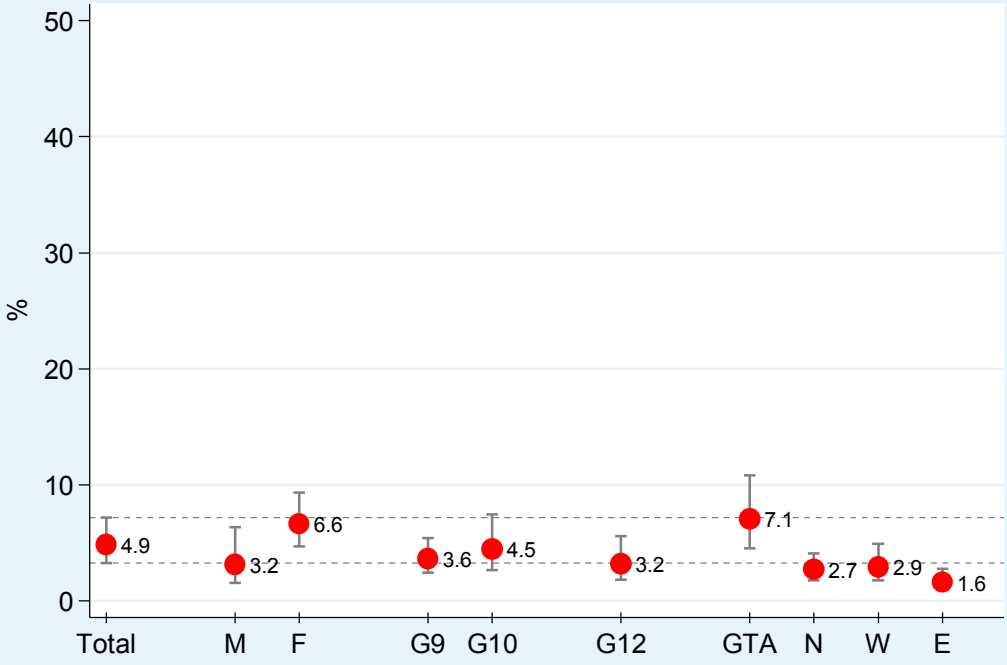
Note: * indicates significant sex difference (p<.05)

Figure 3.6.19
Percentage Reporting Symptoms of a Moderate-to-Serious Problem with Technology Use (SPIUT 14+) by Sex, Grade, and Region, 2017 OSDUHS



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

Figure 3.6.20
Percentage Reporting Symptoms of a Serious Problem with Technology Use (SPIUT 19+) by Sex, Grade, and Region, 2017 OSDUHS



Notes: (1) vertical 'whiskers' represent 95% confidence intervals; (2) horizontal band represents 95% CI for total estimate; (3) estimate for Grade 11 was suppressed; (4) significant differences by sex and region (p<.05), no significant difference by grade

3.7 Coexisting Problems

3.7.1 Coexisting Problems

(Figures 3.7.1–3.73)

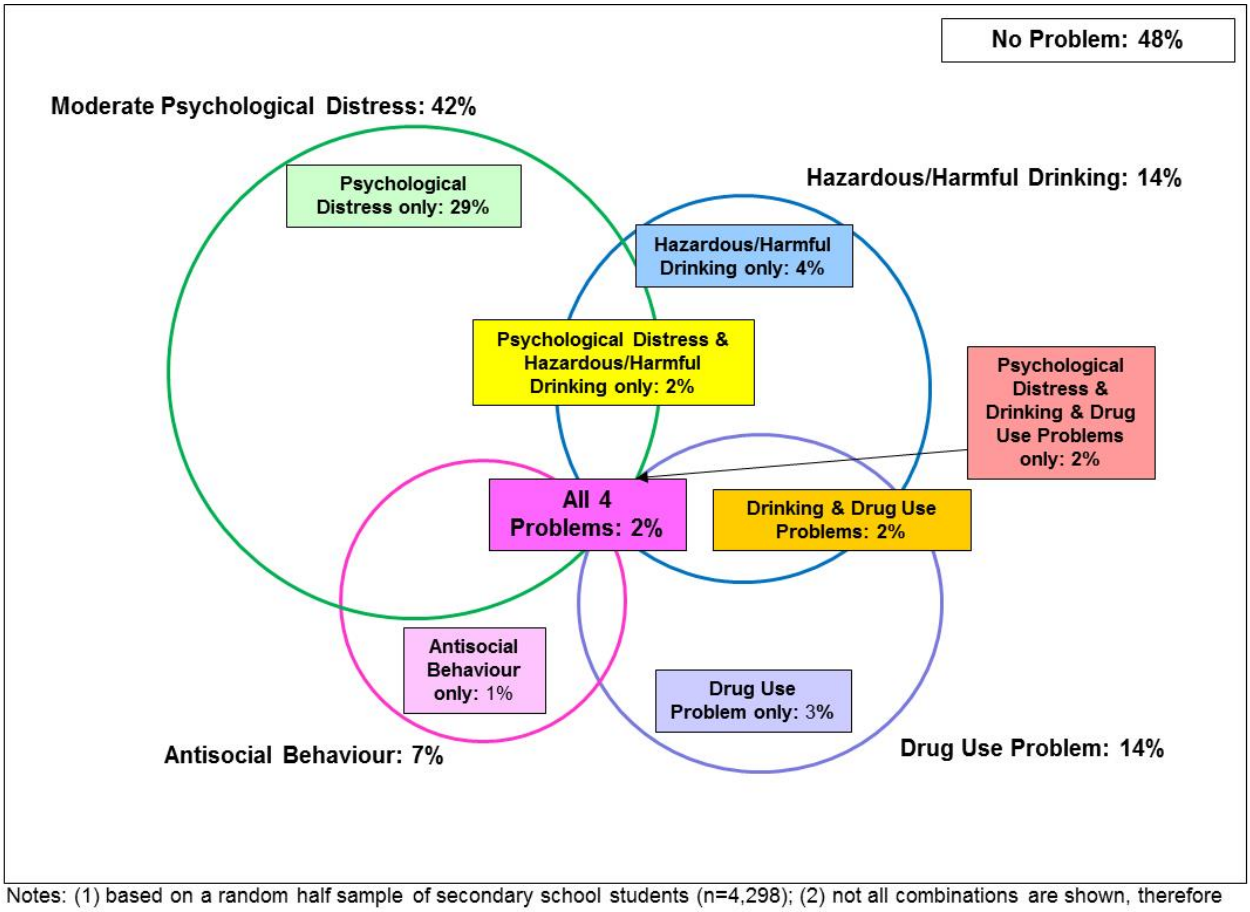
This section describes the overlap or co-occurrence among the following four problems: (1) moderate-to-serious **psychological distress** (as indicated by a score of eight or higher on the K6 screener – see Chapter 3.4); (2) **antisocial behaviour** (indicated by engaging in three or more of nine antisocial 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).[78] We describe the distribution of the co-occurring problems and the percentage of secondary school students who report three or all four problems. These findings are based on a random half sample of students.

2017 (Grades 9–12):

- Almost half (48.1%) of secondary students report none of the four problems. Over one-third (36.4%) report one problem, one-in-ten (9.8%) report two problems, 3.9% report three problems, and 1.8% report all four problems.
- By far, the most prevalent configuration is psychological distress only, reported by 29% of secondary students. The remaining configurations, such as hazardous/harmful drinking only or drug problem only, are reported by 4% or less.
- An estimated 5.7% (95% CI: 4.7%-6.9%) of 9th to 12th graders, representing about 41,500 students, report three or all four problems.
- Males (5.9%) and females (5.5%) are equally likely to experience three or all four of these problems.
- The likelihood of experiencing three or all four problems significantly increases with grade, rising from 1.3% of 9th graders to 9.1% of 12th graders.
- Despite some variation, the differences among the regions are not statistically significant.

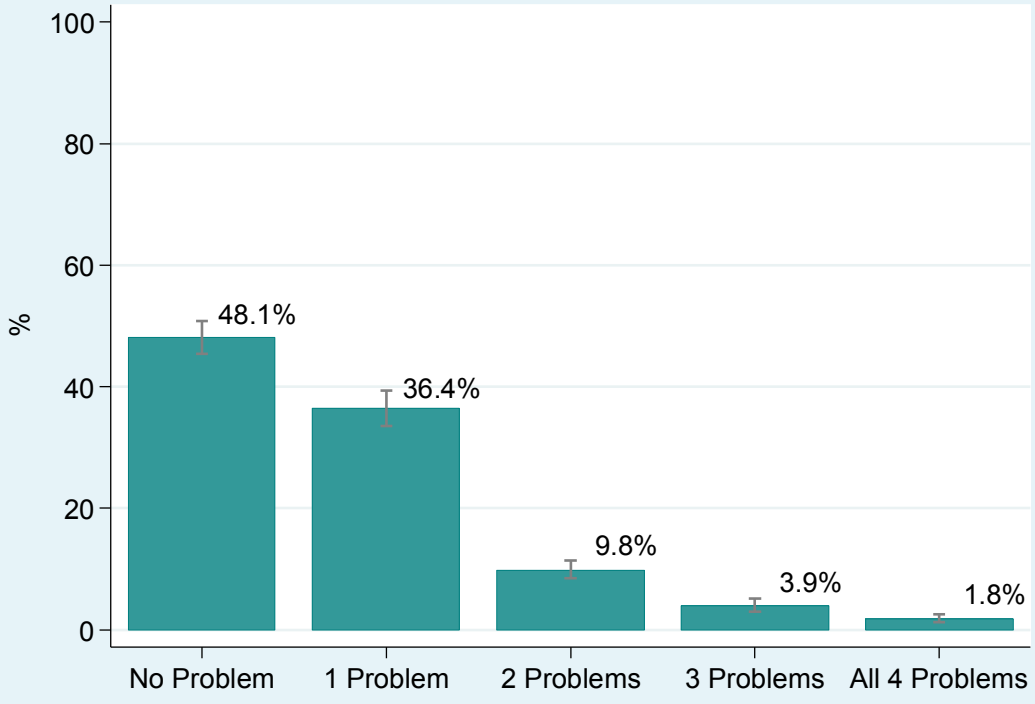
[78] Details about the AUDIT and CRAFFT screeners can be found in the companion OSDUHS drug use report "Drug Use Among Ontario Students, 1977-2017: Detailed Findings from the Ontario Student Drug Use and Health Survey (OSDUHS)" available on our webpage at http://www.camh.ca/osduhs.

Figure 3.7.1
Coexisting Problems: Psychological Distress, Antisocial Behaviour, Hazardous/Harmful Drinking, and Drug Use Problem, 2017 OSDUHS (Grades 9–12)



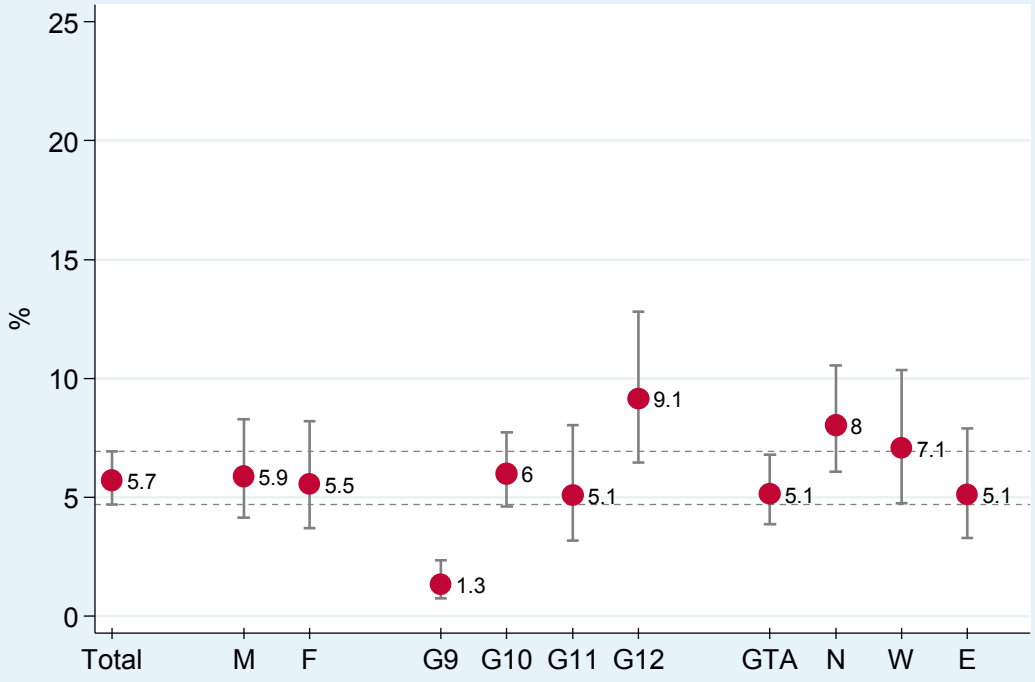
Notes: (1) based on a random half sample of secondary school students (n=4,298); (2) not all combinations are shown, therefore percentages do not total to 100%.

Figure 3.7.2
Count of Coexisting Problems (Psychological Distress, Antisocial Behaviour, Hazardous/Harmful Drinking, and Drug Use Problem), 2017 OSDUHS (Grades 9–12)



Note: error bars represent 95% confidence intervals

Figure 3.7.3
Percentage Classified as Having Three or All Four Problems by Sex, Grade, and Region, 2017 OSDUHS



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

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 2017 estimates for selected mental health and well-being measures **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. Some adjacent LHINs were merged due to small sample sizes. The nine LHIN areas presented here are:

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

Figure 3.8.1
Local Health Integration Networks of Ontario

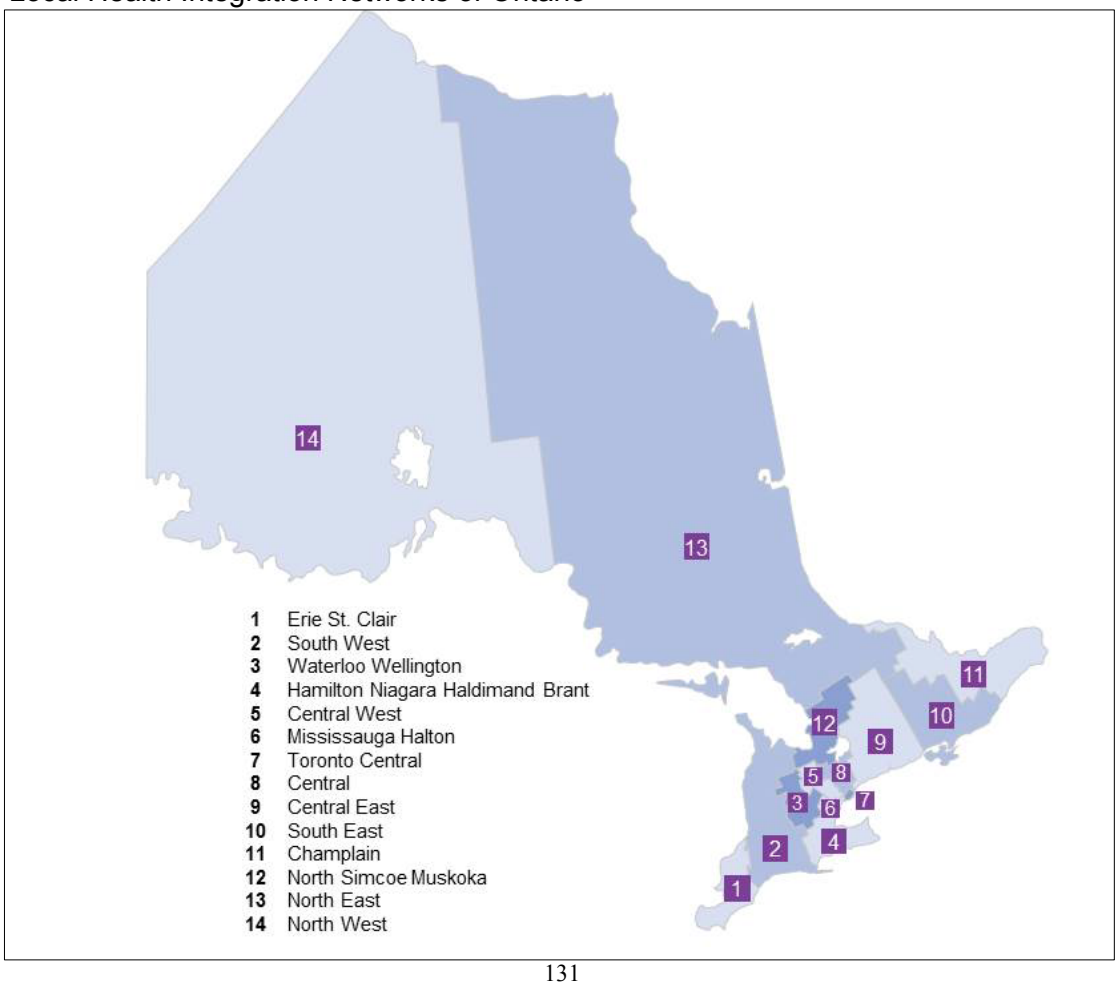


Table 3.8.1: Percentage of Secondary School Students **(Grades 9–12)** Reporting Mental Health and Well-Being Indicators, by Ontario Local Health Integration Network (LHIN) Areas, 2017 OSDUHS

	Erie St. Clair + South West	Waterloo Wellington + Hamilton Niagara Haldimand Brant	Central West	Mississauga Halton	Toronto Central + Central	Central East + North Simcoe Muskoka	South East	Champlain	North East + North West	Ontario
(Student n=) *(School n=)*	*(678)* *(12)*	*(722)* *(11)*	*(725)* *(12)*	*(795)* *(11)*	*(1,124)* *(17)*	*(1,386)* *(18)*	*(208)* *(5)*	*(938)* *(14)*	*(1,011)* *(20)*	*(7,587)* *(120)*
Fair or poor health (95% CI)	**12.3** (8.6-17.2)	**8.6** (7.0-10.5)	**12.8*** (10.3-16.0)	**8.4** (6.4-11.1)	**9.4** (6.9-12.5)	**9.8** (6.4-14.7)	**8.3** (4.3-15.5)	**10.4** (8.5-12.5)	**9.6** (7.4-12.3)	**10.0** (8.9-11.2)
Daily physical activity (past week)	**20.5** (16.1-25.6)	**20.3** (17.3-23.8)	**16.6*** (14.1-19.3)	**19.4** (17.2-21.7)	**17.3*** (15.5-19.3)	**24.0*** (20.9-27.4)	**16.8** (13.0-21.5)	**24.3** (16.3-34.6)	**19.4** (16.4-22.8)	**20.1** (18.6-21.7)
Physically inactive (past week)	**9.0** (6.7-11.9)	**7.7** (6.0-9.9)	**13.6*** (10.8-17.0)	**9.7** (8.1-11.6)	**14.6**** (11.7-18.2)	**7.5** (4.0-13.6)	†	**11.4** (7.1-17.7)	**10.0** (7.6-13.0)	**10.7** (9.2-12.3)
Screen time sedentary behaviour (3+ hrs/day)	**66.6** (60.9-71.8)	**67.2** (59.5-74.1)	**77.0**** (72.1-81.3)	**68.5** (62.2-74.1)	**64.5** (55.6-72.5)	**71.3** (63.3-78.2)	**67.9** (59.8-75.1)	**61.2*** (56.1-66.0)	**59.0**** (54.2-63.7)	**66.9** (63.7-69.9)
Overweight/obese	**34.3*** (29.9-38.9)	**29.3** (25.4-33.5)	**29.3** (24.5-34.6)	**22.1**** (18.0-26.8)	**31.6** (27.6-36.0)	**27.1** (24.6-29.8)	**29.6** (20.8-40.4)	**27.9** (21.9-34.8)	**31.7** (27.5-36.3)	**29.4** (27.1-31.7)
8+ hours of sleep on average school night	**31.2** (25.9-37.1)	**31.3** (25.8-37.4)	**22.3**** (18.3-26.9)	**31.6** (26.8-36.7)	**24.6**** (21.7-27.7)	**27.5** (23.4-31.9)	**34.6** (23.7-47.4)	**32.5** (28.8-36.4)	**36.8**** (33.4-40.3)	**29.1** (27.0-31.2)
Go to bed or school hungry (often/always)	**6.3** (3.7-10.7)	**6.6** (4.4-9.8)	**7.0** (4.2-11.5)	**6.4** (3.5-11.7)	**9.3*** (7.9-11.0)	**4.6**** (3.6-5.8)	**8.5** (4.5-15.2)	**7.8** (6.4-9.5)	**9.4** (6.1-14.2)	**7.2** (6.2-8.3)
Medically treated injury	**44.2** (38.3-50.2)	**45.3** (37.4-53.5)	**37.9** (33.0-43.1)	**44.5** (40.4-48.6)	**41.2** (34.6-48.1)	**37.6**** (34.2-41.1)	**41.1** (31.9-50.9)	**44.1** (39.5-48.7)	**50.2**** (45.0-55.4)	**42.7** (40.1-45.2)
Concussion	**15.0** (12.0-18.5)	**17.4*** (13.2-22.7)	**10.8** (8.3-14.0)	**11.9** (10.1-14.0)	**7.0**** (5.5-8.9)	**16.9*** (14.1-20.2)	**15.0** (11.2-20.0)	**17.2*** (13.7-21.2)	**12.5** (9.1-17.0)	**13.2** (11.9-14.7)
Not always wear seatbelt in vehicle	**30.6*** (25.1-36.6)	**28.0** (22.4-34.3)	**28.0** (21.7-35.3)	**23.3** (18.8-28.6)	**28.9** (22.6-36.1)	**22.7** (19.3-26.4)	†	**30.5**** (26.5-34.8)	**17.2**** (13.9-21.0)	**26.9** (24.8-29.1)
Texting while driving (Drivers in G10-G12)	**38.0*** (31.1-45.5)	**41.5*** (32.4-51.2)	**19.3**** (13.8-26.4)	**33.2** (30.1-36.5)	**29.7** (20.5-40.9)	**25.3** (17.4-35.2)	**25.9** (12.6-46.0)	**30.6** (23.6-38.7)	**30.7** (21.9-41.1)	**32.5** (29.0-36.2)
Medical use of prescr. opioid pain relievers	**18.9** (14.4-24.5)	**22.6** (18.5-27.2)	**21.2** (16.3-27.2)	**24.0** (19.8-28.7)	**19.8** (15.1-25.4)	**19.9** (17.9-22.0)	†	**16.1** (13.2-19.5)	**19.1** (14.2-25.2)	**20.2** (18.4-22.0)
Medical use of prescr. tranquillizers	**3.6** (2.6-5.0)	**3.1** (2.1-4.7)	**3.1** (1.7-5.3)	**4.9*** (3.7-6.6)	†	**4.1** (3.2-5.1)	†	**2.9** (1.6-5.1)	**4.6*** (3.4-6.2)	**3.6** (2.8-4.6)
Did not visit a doctor for physical health	**39.2** (32.1-46.8)	**37.8** (32.4-43.5)	**24.6**** (20.3-29.4)	**19.3**** (14.9-24.7)	**28.9** (24.9-33.3)	**35.9** (30.3-41.9)	**36.3** (27.5-46.1)	**39.0** (31.4-47.1)	**39.5*** (33.4-45.9)	**34.0** (31.2-36.9)
Mental health care visit	**24.8** (20.4-29.8)	**23.5** (17.3-31.1)	**19.6** (16.1-23.7)	**24.0** (20.9-27.4)	**20.3** (13.7-28.9)	**26.0** (17.2-37.2)	†	**20.8** (11.0-35.8)	**35.1**** (28.1-42.9)	**23.1** (20.0-26.6)
Prescribed medication for anxiety/depression	**8.1*** (5.8-11.2)	**7.3** (4.5-11.5)	**3.0*** (1.7-5.1)	**3.1*** (1.6-5.7)	**2.9*** (1.6-5.1)	**7.4** (5.6-9.6)	†	†	**11.6**** (9.1-14.8)	**5.2** (4.2-6.6)
Unmet need for mental health support	**29.5** (23.5-36.3)	**39.4**** (34.5-44.4)	**34.5** (29.3-40.1)	**28.7** (24.1-33.7)	**37.7** (27.9-48.6)	**30.9** (16.8-49.7)	**32.6** (22.0-45.2)	**28.4** (21.3-36.8)	**28.8** (24.4-33.6)	**33.3** (28.7-38.4)
Fair or poor self-rated mental health	**26.8** (22.6-31.6)	**26.5** (21.5-32.2)	**24.8** (19.0-31.6)	**21.4** (17.1-26.5)	**16.6**** (13.3-20.4)	**23.2** (14.7-34.7)	**23.9** (17.0-32.5)	**19.6** (17.2-22.3)	**27.0** (22.4-32.1)	**21.7** (19.7-23.8)

(continued…)

	Erie St. Clair + South West	Waterloo Wellington + Hamilton Niagara Haldimand Brant	Central West	Mississauga Halton	Toronto Central + Central	Central East + North Simcoe Muskoka	South East	Champlain	North East + North West	Ontario
(Student n=)	*(678)*	*(722)*	*(725)*	*(795)*	*(1,124)*	*(1,386)*	*(208)*	*(938)*	*(1,011)*	*(7,587)*
(School n=)	*(12)*	*(11)*	*(12)*	*(11)*	*(17)*	*(18)*	*(5)*	*(14)*	*(20)*	*(120)*
Elevated stress (past month)	**36.8** (31.2-42.9)	**35.5** (28.9-42.6)	**35.8** (30.2-41.9)	**33.4** (27.0-40.4)	**35.9** (28.8-43.7)	**35.6** (23.2-50.3)	**34.9** (20.3-53.1)	**31.0** (26.0-36.4)	**38.7** (30.3-47.8)	**35.2** (32.1-38.5)
Moderate-to-serious psychological distress	**45.8** (38.5-53.2)	**40.8** (34.0-48.0)	**41.7** (36.8-46.7)	**39.8** (35.3-44.5)	**46.4** (37.2-55.9)	**37.7** (21.0-57.9)	**37.4** (30.4-45.0)	**35.0*** (31.0-39.1)	**38.7** (33.5-44.2)	**41.9** (37.4-46.5)
Serious psychological distress	**20.1** (15.3-25.9)	**21.2** (16.7-26.5)	**17.8** (15.6-20.2)	**18.9** (16.6-21.5)	**20.6** (14.8-27.8)	**18.1** (10.4-29.4)	**13.9** (8.9-21.1)	**14.8** (12.1-18.0)	**18.8** (15.5-22.6)	**19.1** (16.6-21.9)
Traumatic event (lifetime)	**35.2** (28.0-43.2)	**41.0** (34.7-47.5)	**38.0** (35.4-40.7)	**35.0** (28.3-42.3)	**33.3** (30.7-35.9)	**39.1** (33.4-45.1)	**36.4** (27.1-46.9)	**28.6** (19.9-39.2)	**35.8** (31.8-40.1)	**35.2** (32.8-37.7)
Suicidal ideation	**11.9*** (10.3-13.8)	**16.4** (12.0-22.1)	**15.6** (13.1-18.5)	**13.9** (11.5-16.6)	**15.6** (14.3-17.1)	**15.3** (9.4-23.8)	**17.7** (10.7-27.8)	**10.4*** (7.2-14.6)	**14.3** (11.4-17.8)	**14.6** (13.2-16.1)
Suicide attempt	**3.4** (2.5-4.6)	**4.3** (2.3-8.0)	**5.0** (3.1-8.0)	**4.1** (2.6-6.3)	†	**5.1** (4.0-6.5)	†	†	**6.1** (4.2-9.0)	**4.2** (3.2-5.6)
ADHD symptoms (past 6 months)	**19.8** (15.3-25.1)	**24.1** (16.1-34.5)	**21.7** (16.5-28.0)	**21.8** (19.0-24.9)	**24.7**** (23.1-26.4)	**17.0** (9.0-29.9)	**16.9** (11.7-23.8)	**21.4** (18.6-24.5)	**18.9** (13.1-26.4)	**21.9** (19.8-24.2)
Antisocial behaviour	†	**8.2** (5.5-12.2)	**8.0** (5.4-11.7)	**9.3*** (7.0-12.3)	**7.9** (4.7-13.0)	**5.8** (3.6-9.1)	†	**6.6** (4.0-10.8)	**6.9** (5.0-9.6)	**7.3** (6.0-8.9)
Carried a weapon	**6.0** (3.6-10.1)	**8.0** (5.3-12.1)	**6.6** (4.3-9.9)	**3.3** (2.2-5.0)	**8.0** (4.1-15.0)	†	†	**3.9** (2.2-6.7)	**4.3** (2.5-7.2)	**6.1** (4.4-8.5)
School fight (physical)	**5.7** (3.4-9.6)	**7.5** (4.0-13.6)	**10.7** (6.9-16.2)	**7.1** (5.1-9.8)	**12.5** (8.3-18.4)	**4.3**** (2.2-8.0)	**15.0**** (11.6-19.1)	**10.5** (6.9-15.5)	**7.5** (4.8-11.4)	**9.0** (6.9-11.6)
Worried be harmed/ threatened at school	**10.7** (7.0-16.0)	**13.0** (8.4-19.6)	**17.1** (12.4-23.2)	**8.5** (5.2-13.6)	**12.4** (8.1-18.5)	**14.1** (8.2-23.2)	†	**13.7** (9.0-20.4)	**7.2**** (5.1-9.9)	**12.1** (10.0-14.6)
Been bullied at school (since September)	**22.8** (17.4-29.1)	**21.9** (15.5-29.9)	**14.2**** (11.1-17.8)	**22.5*** (19.6-25.7)	**15.5**** (13.5-17.8)	**17.0** (11.3-24.9)	**22.3** (16.4-29.6)	**20.6** (16.1-26.1)	**18.7** (15.4-22.5)	**18.8** (16.8-20.9)
Been cyberbullied	**22.7** (18.9-27.0)	**21.9** (17.0-27.8)	**19.6** (15.8-24.2)	**23.4*** (19.4-28.0)	**19.6** (14.2-26.3)	**16.7** (12.5-21.9)	†	**16.6** (14.0-19.6)	**21.5** (17.7-25.8)	**20.1** (18.1-22.2)
Any gambling activity	**33.0** (26.3-40.4)	**35.5** (29.7-41.8)	**34.8** (29.1-41.0)	**31.8** (27.2-36.9)	**31.5** (25.8-37.8)	**33.3** (28.7-38.4)	**29.1** (22.3-36.9)	**27.6*** (24.3-31.2)	**34.8** (29.7-40.2)	**32.3** (30.0-34.7)
Video gaming problem	**11.1** (7.0-17.1)	**10.1** (6.8-14.8)	**16.8*** (10.8-25.2)	**8.3*** (6.8-10.1)	**16.2** (10.3-24.5)	**9.0** (4.9-15.8)	**11.3** (7.1-17.7)	**8.8** (5.2-14.3)	**8.8** (5.2-14.3)	**11.9** (9.2-15.3)
Problematic technology use (serious)	**3.5** (1.9-6.3)	†	**5.0** (3.8-6.5)	**2.7** (1.5-5.1)	**9.9**** (7.6-12.9)	†	†	†	**2.7** (1.7-4.1)	**4.9** (3.3-7.2)
Coexisting problems	**5.7** (3.7-8.8)	**8.4** (4.8-14.5)	†	**7.1** (3.7-13.0)	**4.4** (3.2-6.0)	**4.8** (2.7-8.6)	†	**5.8** (3.5-9.6)	**8.0*** (6.1-10.5)	**5.7** (4.7-6.9)

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

Source: OSDUHS, Centre for Addiction & Mental Health

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 risk and protective factors, tracking changes over time, and identifying priority areas for further research. 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 on 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 an in-school probability sampling survey is the most feasible and valid method to monitor health and well-being indicators 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 stable across time, the trends reported here should remain valid. More compelling, our analysis comparing high-responding classes with low-responding classes found no differences in reports of mental health and well-being indicators (see the Methods chapter).

Fourth, our findings cannot be generalized to adolescents who are not attending school (e.g., dropouts, street youth, those in the military or in an institutionalized health or correctional setting). 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 9% 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 health surveys 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 groups are at risk of 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 mental health problems (e.g., psychological distress, low self-esteem, elevated stress; suicidal ideation);
- are not being bullied;
- do not engage in antisocial behaviours or bullying others;
- do not gamble or have a gambling problem;
- do not have a video gaming problem or a problem with technology use;
- do not experience coexisting problems (psychological distress, antisocial behaviour, hazardous drinking, and drug use problems).

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

- Students today are more likely to report liking school very much or quite a lot compared to decades ago, and perceptions of school safety have remained elevated and stable over time.
- 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 than

students did over 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.

- Medical use of prescription opioid pain relievers (such as Percocet, Tylenol #3, Dilaudid) has decreased over the past decade.

- Antisocial behaviour has decreased during the past two and a half 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.

- Bullying victimization, bullying perpetration, and fighting at school have declined during the past decade or so.

- Gambling has declined since monitoring first began in the early 2000s.

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…
- experiencing an injury that required treatment in the past year
- not getting at least eight hours of sleep on an average school night
- sedentary behaviour.

About **one-in-three** students report…
- elevated stress levels
- an unmet need for mental health support
- gambling in the past year
- texting while driving (among drivers)
- experiencing a traumatic event in their lifetime
- moderate-to-serious psychological distress.

About **one-in-four** students **…**
- do not always wear a seatbelt in a vehicle
- report visiting a mental health professional in the past year
- are classified as overweight or obese.

About **one-in-five** students report…
- using social media for at least five hours a day
- symptoms of ADHD
- being cyberbullied
- being bullied at school
- low subjective social status at school
- fair or poor mental health.

About **one-in-six** to **one-in-eight** students report…
- serious psychological distress
- experiencing a concussion in the past year
- suicidal ideation
- worry about being harmed or threatened at school
- a video gaming problem.

About **one-in-nine** to **one-in-ten** students report…
- fighting at school
- being inactive
- fair or poor physical health.

Some findings point to **concerning trends**:

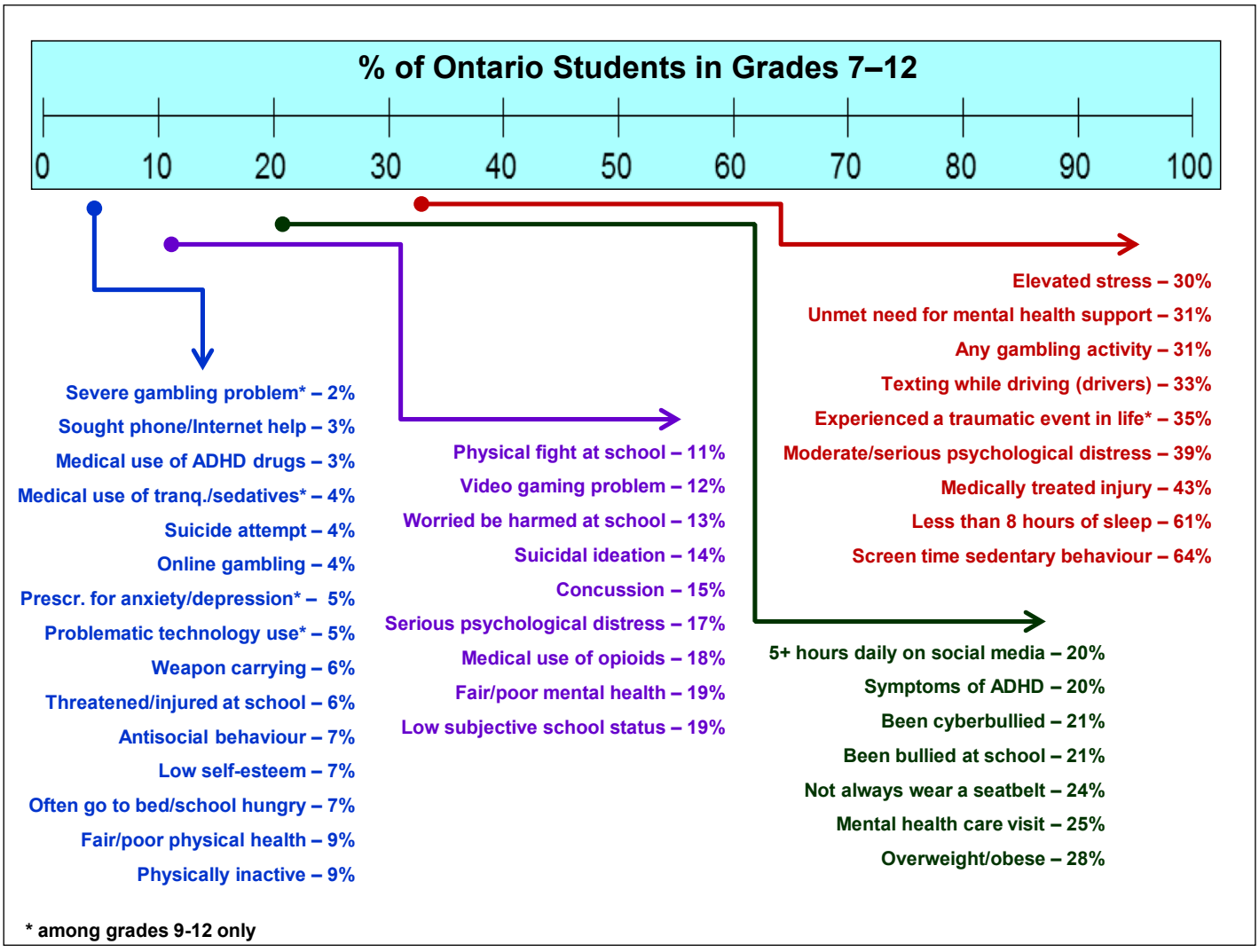
- Screen time sedentary behaviour and the percentage classified as overweight or obese have increased during the past decade.

- Reports of injuries that require medical attention have increased during the past decade.

- Texting and driving has not declined since 2013, when monitoring first began, despite tougher provincial legislation introduced in 2015.

- More students today rate their mental health as fair or poor than did students surveyed a decade ago. Similarly, psychological distress has also shown an increase in the past few years. The percentage of students reporting seeing a mental health professional about a problem is currently higher than decades ago. This may be a positive trend reflecting increased access to services. However, this finding may reflect increases in the population in need of mental health services.
- The percentage of students reporting symptoms of ADHD has increased since the previous survey in 2015.
- Excessive social media use (defined as five hours or more per day) has increased during the past few years.

Figure 4.1
Overview of Mental Health and Well-Being Indicators, 2017 OSDUHS

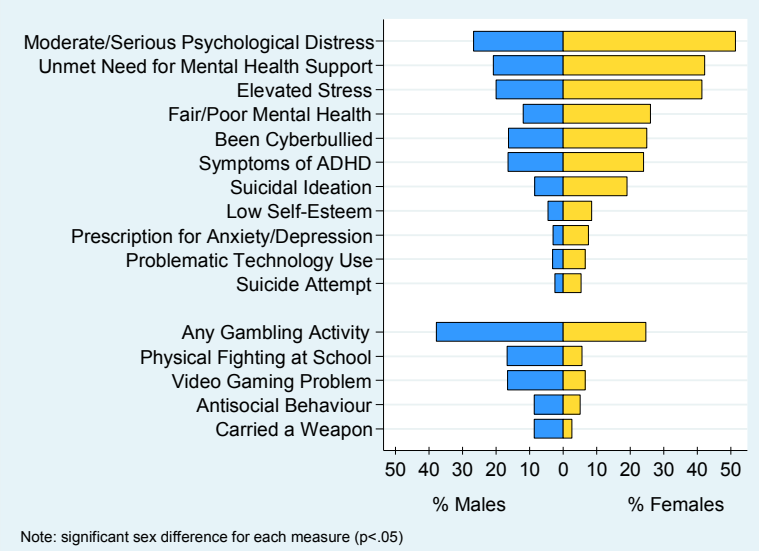


Demographic Correlates

Our report showed 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 behaviours, gambling, video gaming problem).

Age/grade is also significantly related to mental health and well-being. Generally, poor physical health indicators (e.g., sedentary behaviour), health risk behaviours (e.g., not wearing a seatbelt, texting while driving), mental health problems (e.g., fair or poor self-rated mental health, stress, psychological distress), excessive social media and technology use, and coexisting problems significantly increase with grade. Daily physical activity, experiencing a concussion, getting at least eight hours of sleep, bullying and physical fighting at school are more prevalent among younger students and decline in later adolescence.

Figure 4.2
Selected Mental Health and Well-Being Indicators by Sex, 2017 OSDUHS



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

Some regional differences were also found in this report:

- Compared with the provincial average, **Greater Toronto Area** students are significantly *more* likely to report likely to report being physically inactive, symptoms of a video gaming problem, and symptoms of a serious problem with technology use. Compared with the provincial average, they are significantly *less* likely to report meeting the daily physical activity guideline, getting at least eight hours of sleep on a school night, experiencing a concussion in the past year, being prescribed medication for anxiety or depression, and to rate their mental health as poor or fair.

- Compared with the provincial average, **Northern** Ontario students are *more* likely to report getting at least eight hours of sleep on a school night, and being prescribed medication for anxiety or depression.

- Compared with the provincial average, **Western** Ontario students are *more* likely to report experiencing a concussion in the past year, being cyberbullied, texting while driving, and to rate their mental health as fair or poor.

- Compared with the provincial average, **Eastern** Ontario students are *more* likely to report meeting the daily physical activity guideline, and experiencing a concussion in the past year. Compared with the average, they are significantly *less* likely to report bullying others at school, being cyberbullied, and symptoms of a video gaming problem.

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-seven Ontario students (an estimated 118,000) report suicidal ideation and one-in-twenty-five (an estimated 33,400) 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 show increases over time, especially among females. Increasing trends in poor mental health among youth have also been seen in other Western countries (Collishaw, 2015; Mojtabai et al., 2016; Twenge, Joiner, Rogers, & Martin, 2018).

While our results show that bullying victimization at school has decreased during the past decade or so – perhaps due to initiatives such as the safe school policies implemented in Ontario – the prevalence of cyberbullying victimization shows no change. Cyberbullying is a growing concern as electronic media become increasingly important 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; Geoffroy et al., 2018; 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 violence and other antisocial behaviour, bullying and fighting at school, and gambling. This decline in risk behaviours over time parallels the declines seen in drug using behaviours (Boak et al., 2017), suggesting a wider cultural shift to less externalizing or rebellious behaviours among young people today compared with previous generations. 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 elevated numbers of medically treated injuries – almost half of Ontario students report experiencing a serious injury in the past year and one-in-seven report experiencing a concussion in the past year. These numbers are 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, 2017). Related to this, one-in-four students do not always wear a seatbelt when riding in a vehicle and one-in-three drivers text while driving. Our report also showed increases over the past decade in sedentary screen time and a slight, but significant increase in the proportion of Ontario students who are overweight or obese, with the current level remaining elevated at about 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, and the data gathered are an important tool for planning and evaluating broad public health policies and programs 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 youth today.

Table 4.1: Significant Changes Over Time for Selected Indicators

	Screen Time Sedentary Behaviour	Overweight or Obese	Medically Treated Injury	Medical Use of Prescr. Opioids	Mental Health Care Visit	Fair/Poor Self-Rated Mental Health	Moderate-to-Serious Psych. Distress	Serious Psych. Distress	Antisocial Behaviour Index	Physical Fighting at School	Victim of Bullying at School	Any Gambling Activity	5+ Hours Daily on Social Media
Total	△	△	△	▽	△	△	△	△	▽	▽	▽	▽	↑△
Males			△	▽	△	△	△	△	▽	▽	▽	▽	↑△
Females	△	△	△	▽	△	△	△	△	▽	▽	▽	▽	△
Grade 7	↑△			▽	△		△				▽	▽	△
Grade 8	△	△		▽	△		△		▽		▽	▽	
Grade 9			△	▽	△				▽		▽	▽	↑△
Grade 10	△		△	▽	△	△	△	△	▽		▽	▽	△
Grade 11		△	△	▽	△		△	△	▽		▽	▽	△
Grade 12	△			▽	△	△	△	△			▽	▽	△
GTA			△	▽	△	△	△	△	▽		▽	▽	△
North		△		▽	△	△	△	△	▽		▽	▽	△
West	△	△	△	↓▽	△	△	△	△	▽	▽	▽	▽	△
East	△			▽	△		△		▽		▽	▽	

Notes: (1) for indicator definitions, please see Table 2.6 or individual chapters; (2) ↑↓ significant increase or decrease in 2017 vs. 2015, p<.01; (3)△▽ significant increase or decrease in 2017, vs. 1999, p<.01 for Mental Health Visit, and Antisocial Behaviour; vs. 2001 for Physical Fighting at School; vs. 2003 for Medically Treated Injury, Victim of Bullying at School, and Any Gambling Activity; vs. 2007 for Overweight or Obese, Fair/Poor Mental Health, and Medical Use of Prescription Opioids; vs. 2009 for Screen Time; vs. 2013 for Psychological Distress, and 5+ Hours Daily on Social Media; (4) the following major indicators show no change and, therefore, are not presented: daily physical activity; texting while driving; medical tranquillizer use; medical ADHD drug use; getting eight or more hours of sleep on average, sought mental health counselling over phone or Internet; been prescribed medication for anxiety/depression, suicidal ideation and attempt; low self-esteem; elevated stress; victim of cyberbullying; video gaming problem.

Source: OSDUHS, Centre for Addiction & Mental Health

Table 4.2: Subgroup Differences for Selected Indicators, 2017 OSDUHS

	Inactive	Concus-sion	Texting While Driving (Drivers, Grades 10-12)	Medical Use Prescr. Opioids	Fair/Poor Self-Rated Mental Health	Elevated Stress	Moderate-to-Serious Psych. Distress	Suicidal Ideation	Prescribed Medication for Anxiety or Depression	Antisocial Behaviour Index	Victim of Bullying at School	Victim of Cyber-bullying	Any Gambling Activity	Video Gaming Problem	5+ Hours Daily on Social Media	Serious Problem with Technology Use	Coexisting Problems (Grades 9-12)
Sex Difference	**	ns	ns	**	***	***	***	***	**	**	***	***	***	***	***	***	ns
	F ↑			F ↑	F ↑	F ↑	F ↑	F ↑	F ↑	M ↑	F ↑	F ↑	M ↑	M ↑	F ↑	F ↑	
Grade Difference	***	***	***	***	***	***	***	***	***	ns	**	ns	ns	**	**	*	***
(compared with previous grade)			--				8 ↑ 7		--							--	--
	9 ↑ 8	9 ↓ 8	--		9 ↑ 8	9 ↑ 8		9 ↑ 8	--		9 ↓ 8				9 ↑ 8	--	--
				10 ↑ 9		10 ↑ 9	10 ↑ 9	10 ↑ 9									10 ↑ 9
	11 ↑ 10													11 ↑ 10			
			12 ↑ 11						12 ↑ 11					12 ↓ 11			12 ↑ 11
Region Difference	*	***	*	ns	***	ns	ns	ns	**	ns	ns	**	ns	**	ns	***	ns
(region compared with Ontario)	GTA ↑	GTA ↓			GTA ↓				GTA ↓					GTA ↑		GTA ↑	
									N ↑								
		W ↑	W ↑		W ↑							W ↑					
		E ↑										E ↓		E ↓			

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=nonsignificant;
(3) subgroup comparisons are based on contrasts in *adjusted* logistic regression models; (4) GTA=Greater Toronto Area, 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.

Aldridge, J. M., & McChesney, K. (2018). The relationships between school climate and adolescent mental health and wellbeing: A systematic literature review. *International Journal of Educational Research, 88*, 121-145. doi:https://doi.org/10.1016/j.ijer.2018.01.012

Allison, K. R., Adlaf, E. M., Irving, H. M., Schoueri-Mychasiw, N., & Rehm, J. (2016). The search for healthy schools: A multilevel latent class analysis of schools and their students. *Preventive Medicine Reports, 4*, 331-337. doi:http://doi.org/10.1016/j.pmedr.2016.06.016

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., . . . 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, E. L., Steen, E., & Stavropoulos, V. (2017). Internet use and problematic Internet use: A systematic review of longitudinal research trends in adolescence and emergent adulthood. *International Journal of Adolescence and Youth, 22*(4), 430-454. doi:10.1080/02673843.2016.1227716

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. (2017). *Drug use among Ontario students, 1977-2017: Detailed findings from the Ontario Student Drug Use and Health Survey (OSDUHS)* (CAMH Research Document Series No. 46). 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

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

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

Carson, V., Hunter, S., Kuzik, N., Gray, C. E., Poitras, V. J., Chaput, J.-P., . . . Tremblay, M. S. (2016). Systematic review of sedentary behaviour and health indicators in school-aged children and youth: An update. *Applied Physiology, Nutrition, and Metabolism, 41*(6 (Suppl. 3)), S240-S265. doi:10.1139/apnm-2015-0630

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., . . . 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/S15374424jccp280302
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
Currie, C., Gabhainn, S. N., Godeau, E., Roberts, C., Smith, R., Currie, D., . . . Barnekow, V. (Eds.). (2008). *Inequalities in young people's health: HBSC international report from the 2005/2006 survey.* Copenhagen: WHO Regional Office for Europe.
Curtin, S. C., Hedegaard, H., Minino, A., Warner, M., & Simon, T. (2017). QuickStats: Suicide rates for teens aged 15–19 Years, by sex — United States, 1975–2015 *Morbidity and Mortality Weekly Report (MMWR), 66*(30), 816. doi:http://dx.doi.org/10.15585/mmwr.mm6630a6
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
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
Draugalis, J. R., Coons, S. J., & Plaza, C. M. (2008). Best practices for survey research reports: A synopsis for authors and reviewers. *American Journal of Pharmaceutical Education, 72*(1), 11. doi:10.5688/aj720111
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.

Ellis, M. J., Ritchie, L. J., Koltek, M., Hosain, S., Cordingley, D., Chu, S., . . . Russell, K. (2015). Psychiatric outcomes after pediatric sports-related concussion. *Journal of Neurosurgery: Pediatrics, 16*(6), 709-718. doi:10.3171/2015.5.peds15220

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

Gandhi, S., Chiu, M., Lam, K., Cairney, J. C., Guttmann, A., & Kurdyak, P. (2016). Mental health service use among children and youth in Ontario: Population-based trends over time. *Canadian Journal of Psychiatry, 61*(2), 119-124. doi:10.1177/0706743715621254

Gates, M. (2016). Advancing the adolescent health agenda. *The Lancet, 387*(10036), 2358-2359. doi:10.1016/S0140-6736(16)30298-7

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

Geoffroy, M.-C., Boivin, M., Arseneault, L., Renaud, J., Perret, L. C., Turecki, G., . . . Côté, S. M. (2018). Childhood trajectories of peer victimization and prediction of mental health outcomes in midadolescence: A longitudinal population-based study. *Canadian Medical Association Journal, 190*(2), E37-E43. doi:10.1503/cmaj.170219

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:http://dx.doi.org/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. (2013). Bullied children and pychosomatic problems: A meta-analysis. *Pediatrics*, 132(4), 720-729. doi:10.1542/peds.2013-0614

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

Goodman, E., Huang, B., Schafer-Kalkhoff, T., & Adler, N. E. (2007). Perceived socioeconomic status: A new type of identity that influences adolescents' self rated health. *Journal of Adolescent Health, 41*(5), 479-487. doi:10.1016/j.jadohealth.2007.05.020

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, C. S., & Bavelier, D. (2015). Action video game training for cognitive enhancement. *Current Opinion in Behavioral Sciences, 4*, 103-108. doi:10.1016/j.cobeha.2015.04.012

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
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., Ferrence, R., Boak, A., O'Connor, S., Mann, R. E., Schwartz, R., & Adlaf, E. M. (2015). Waterpipe use among high school students in Ontario: Demographic and substance use correlates. *Canadian Journal of Public Health, 106*(3), e121-e126. doi:10.17269/CJPH.106.4764
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.
Heeringa, S. G., West, B. T., & Berglund, P. A. (2010). *Applied survey data analysis*. Boca Raton: Taylor & Francis Group.
Henry, K. L., Knight, K. E., & Thornberry, T. P. (2012). School disengagement as a predictor of dropout, delinquency, and problem substance use during adolescence and early adulthood. *Journal of Youth and Adolescence, 41*(2), 156-166. doi:https://doi.org/10.1007/s10964-011-9665-3
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.
Hoare, E., Milton, K., Foster, C., & Allender, S. (2017). Depression, psychological distress and Internet use among community-based Australian adolescents: A cross-sectional study. *BMC Public Health, 17*(1), 365. doi:10.1186/s12889-017-4272-1
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., & LeBlanc, A. G. (2010). Systematic review of the health benefits of physical activity and fitness in school-aged children and youth. *International Journal of Behavioral Nutrition and Physical Activity, 7*(1), 40. doi:10.1186/1479-5868-7-40
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

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

Kraut, R., Patterson, M., Lundmark, V., Kiesler, S., Mukophadhyay, T., & Scherlis, W. (1998). Internet paradox: A social technology that reduces social involvement and psychological well-being? *American Psychologist, 53*(9), 1017-1031.

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

Marraccini, M. E., & Brier, Z. M. F. (2017). School connectedness and suicidal thoughts and behaviors: A systematic meta-analysis. *School Psychology Quarterly*, *32*(1), 5-21. doi:10.1037/spq0000192

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

McCambridge, J., & Strang, J. (2006). The reliability of drug use data collected in the classroom: What is the problem, why does it matter and how should it be approached? *Drug and Alcohol Review, 25*(5), 413-418. doi:10.1080/09595230600868496

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

McLaughlin, K. A., Green, J. G., Alegría, M., Jane Costello, E., Gruber, M. J., Sampson, N. A., & Kessler, R. C. (2012). Food insecurity and mental disorders in a national sample of U.S. adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry, 51*(12), 1293-1303. doi:10.1016/j.jaac.2012.09.009

McMullen, K., & Gilmore, 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.
Mercado, M. C., Holland, K., Leemis, R. W., Stone, D. M., & Wang, J. (2017). Trends in emergency department visits for nonfatal self-inflicted injuries among youth aged 10 to 24 years in the United States, 2001-2015. *JAMA, 318*(19), 1931-1933. doi:10.1001/jama.2017.13317
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
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. (2016). *Monitoring the Future national survey results on drug use, 1975–2015: 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
Mojtabai, R., Olfson, M., & Han, B. (2016). National trends in the prevalence and treatment of depression in adolescents and young adults. *Pediatrics, 138*(6), e20161878. doi:10.1542/peds.2016-1878
Northrup, D., McCague, H., Chi, T., Myles, R., Park, S., & Pollard, S. (2017). *The design and implementation of the Centre for Addiction and Mental Health's Ontario Student Drug Use and Health Survey (OSDUHS) 2017: Technical documentation*. Toronto, ON: Institute for Social Research, York University.
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
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. (2017, May). News Release - High School Graduation Rate Climbs to All-Time High [Press release]. Retrieved from https://news.ontario.ca/edu/en/2017/05/high-school-graduation-rate-climbs-to-all-time-high.html?_ga=2.70099856.1286944999.1494265173-833259478.1433882725
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
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., Sawyer, S. M., Santelli, J. S., Ross, D. A., Afifi, R., Allen, N. B., . . . Viner, R. M. (2016). Our future: A Lancet commission on adolescent health and wellbeing. *The Lancet, 387*(10036), 2423-2478. doi:10.1016/S0140-6736(16)00579-1
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.

Pontes, H. M., Kuss, D. J., & Griffiths, M. D. (2015). Clinical psychology of Internet addiction: A review of its conceptualization, prevalence, neuronal processes, and implications for treatment. *Neuroscience and Neuroeconomics, 4*, 11-23. doi:https://doi.org/10.2147/NAN.S60982

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.

Ransom, D. M., Vaughan, C. G., Pratson, L., Sady, M. D., McGill, C. A., & Gioia, G. A. (2015). Academic effects of concussion in children and adolescents. *Pediatrics*. doi:10.1542/peds.2014-3434

Rasberry, C. N., Tiu, G. F., Kann, L., McManus, T., Michael, S. L., Merlo, C. L., . . . Ethier, K. A. (2017). Health-related behaviors and academic achievement among high school students — United States, 2015. *Morbidity and Mortality Weekly Report (MMWR)*, *66*(35), 921-927. doi:10.15585/mmwr.mm6635a1

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

Renaud, J., Lesage, A., Gagné, M., MacNeil, S., Légaré, G., Geoffroy, M.-C., . . . McFaull, S. (2018). Regional variations in suicide and undetermined death rates among adolescents across Canada. *Journal of the Canadian Academy of Child and Adolescent Psychiatry, 27*(2), 112-121.

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., Crowe, L., & Anderson, V. (2012). Social function in children and adolescents after traumatic brain injury: A systematic review 1989–2011. *Journal of Neurotrauma, 29*(7), 1277-1291. doi:10.1089/neu.2011.2144

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

Rynard, V., Cumming, T., Burkhalter, R., & Manske, S. (2015). *2014/2015 Canadian Student, Tobacco, Alcohol and Drugs Survey Microdata User Guide*. Waterloo, Ontario: Propel Centre for Population Health Impact, University of Waterloo.

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., Afifi, R. A., Bearinger, L. H., Blakemore, S.-J., Dick, B., Ezeh, 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. (2015). Bias in student survey findings from active parental consent procedures. *British Educational Research Journal, 41*(2), 229-243. 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

Siciliano, V., Bastiani, L., Mezzasalma, L., Thanki, D., Curzio, O., & Molinaro, S. (2015). Validation of a new Short Problematic Internet Use Test in a nationally representative sample of adolescents. *Computers in Human Behavior, 45*, 177-184. doi:http://dx.doi.org/10.1016/j.chb.2014.11.097

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., & McFaull, 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. (2015). Table 051-0001 - Estimates of population, by age group and sex for July 1, Canada, provinces and territories, annual, CANSIM (database). Retrieved April 15, 2017 http://www5.statcan.gc.ca/cansim/a26?lang=eng&retrLang=eng&id=0510001&pattern=&csid=

Statistics Canada. (2017). The 10 leading causes of death, 2013. *Health Fact Sheets (Statistics Canada Catalogue no. 82-625-X)*. Retrieved from https://www150.statcan.gc.ca/n1/pub/82-625-x/2017001/article/14776-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.

Stone, D. M., Simon, T. R., Fowler, K. A., Kegler, S. R., Yuan, K., Holland, K. M., . . . Crosby, A. E. (2018). Vital Signs: Trends in state suicide rates — United States, 1999–2016 and circumstances contributing to suicide — 27 States, 2015. *Morbidity and Mortality Weekly Report (MMWR), 67*(22), 617-624. doi:http://dx.doi.org/10.15585/mmwr.mm6722a1

Strong, W. B., Malina, R. M., Blimkie, C. J. R., Daniels, S. R., Dishman, R. K., Gutin, B., . . . Trudeau, F. (2005). Evidence based physical activity for school-age youth. *Journal of Pediatrics, 146*(6), 732-737. doi:10.1016/j.jpeds.2005.01.055

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 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

The ESPAD Group. (2016). *ESPAD Report 2015: Results from the European School Survey Project on Alcohol and Other Drugs*. Luxembourg: European Monitoring Centre on Drugs and Drug Addiction.

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., Carson, V., Chaput, J.-P., Connor Gorber, S., Dinh, T., Duggan, M., . . . Zehr, L. (2016). Canadian 24-Hour Movement Guidelines for Children and Youth: An Integration of Physical Activity, Sedentary Behaviour, and Sleep. *Applied Physiology, Nutrition, and Metabolism, 41*(6 (Suppl. 3)), S311-S327. doi:10.1139/apnm-2016-0151

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

Ttofi, M. M., Farrington, D. P., & Lösel, F. (2012). School bullying as a predictor of violence later in life: A systematic review and meta-analysis of prospective longitudinal studies. *Aggression and Violent Behavior, 17*(5), 405-418. doi:http://dx.doi.org/10.1016/j.avb.2012.05.002

Twenge, J. M., Gentile, B., DeWall, C. N., Ma, D., Lacefield, 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

Twenge, J. M., Joiner, T. E., Rogers, M. L., & Martin, G. N. (2018). Increases in depressive symptoms, suicide-related outcomes, and suicide rates among U.S. adolescents after 2010 and links to increased new media screen time. *Clinical Psychological Science, 6*(1), 3-17. doi:10.1177/2167702617723376

Twenge, J. M., Martin, G. N., & Campbell, W. K. (2018). Decreases in psychological well-being among American adolescents after 2012 and links to screen time during the rise of smartphone technology. *Emotion*, Advance online publication. doi:10.1037/emo0000403

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

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, 1991–2017 OSDUHS

	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017
N for Grades 7-12					(4447)	(3898)	(6616)	(7726)	(6323)	(9112)	(9288)	(10272)	(10426)	(11435)
N for Grades 7, 9, 11 only	(2961)	(2617)	(2907)	(3072)	(2421)	(2013)	(3389)	(3969)	(3215)	(4424)	(4669)	(5211)	(5225)	(5686)
Usually Receive As (80%-100%)	—	—	—	—	**37.8**	**36.4**	**36.2**	**40.5**	**43.8**	**45.9**	**52.1**	**52.1**	**56.3**	**58.5**
	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	58.1
Hours of Homework/Week *														
0 or less than 1 hour	—	—	—	—	**22.2**	**16.3**	**19.3**	**20.7**	**21.1**	**23.4**	**24.9**	**23.0**	**24.4**	**21.7**
	—	16.9	15.3	17.6	21.2	15.0	19.7	21.4	21.9	22.3	26.1	23.1	25.5	23.7
1–2 hours	—	—	—	—	**28.4**	**27.5**	**27.0**	**25.7**	**28.1**	**26.9**	**26.7**	**26.9**	**26.9**	**27.4**
	—	24.3	27.2	24.6	28.7	28.3	28.6	26.4	29.2	28.4	27.8	28.2	26.5	27.9
3–4 hours	—	—	—	—	**24.8**	**28.6**	**25.8**	**26.1**	**25.5**	**24.2**	**24.0**	**21.7**	**20.9**	**22.7**
	—	27.6	29.4	28.8	26.1	28.6	26.1	26.7	25.8	23.1	24.1	22.6	21.9	22.6
5–6 hours	—	—	—	—	**15.0**	**16.6**	**15.9**	**16.1**	**15.3**	**15.0**	**13.8**	**14.2**	**14.2**	**14.6**
	—	19.5	18.2	18.4	14.9	16.6	14.9	15.7	13.9	16.2	12.4	13.1	13.3	14.4
7+ hours	—	—	—	—	**9.6**	**10.9**	**12.1**	**11.4**	**10.0**	**10.5**	**10.6**	**14.1**	**13.6**	**13.2**
	—	11.7	9.9	10.6	9.1	11.5	10.8	9.9	9.2	10.0	9.5	13.0	12.9	11.5
Feelings About School *														
like it a lot/very much	—	—	—	—	**29.6**	**26.8**	**28.3**	**30.6**	**33.3**	**35.5**	**44.1**	**44.1**	**32.3**	**46.6**
	—	36.0	34.7	35.6	32.2	28.7	28.6	29.8	33.7	37.5	47.0	44.3	34.9	48.1
like it to some degree	—	—	—	—	**51.8**	**52.8**	**49.9**	**48.8**	**48.9**	**46.6**	**42.1**	**41.3**	**49.5**	**34.1**
	—	51.1	49.7	47.4	50.7	51.6	49.4	49.9	46.7	45.4	39.8	42.0	49.5	34.3
do not like it very much/at all	—	—	—	—	**18.5**	**20.4**	**21.8**	**20.6**	**17.8**	**17.9**	**13.7**	**14.6**	**18.2**	**19.3**
	—	12.9	15.5	17.0	17.2	19.8	22.0	20.4	19.7	17.1	13.2	13.7	15.6	17.6

Notes: n=total number of students surveyed; numbers in cells are percentages; – data not available for that year; * question asked of a random half sample in each year; shaded rows show results based on the long-term sample of grades 7, 9, and 11 only.

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?"

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, 1999–2017 OSDUHS (Grades 7–12)

	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017
(n=)	(4447)	(3898)	(6616)	(7726)	(6323)	(9211)	(9288)	(10272)	(10426)	(6364)
Total	**14.2**	**13.1**	**12.4**	**12.8**	**11.7**	**12.3**	**18.2**	**15.4**	**12.1**	**13.0** [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)	(11.3-14.8)
Sex										
Males	**11.9**	**11.0**	**12.3**	**12.0**	**11.3**	**11.6**	**16.8**	**13.9**	**11.4**	**10.7**
	(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)	(9.1-12.6)
Females	**16.5**	**15.2**	**12.4**	**13.6**	**12.1**	**13.0**	**19.7**	**16.9**	**12.9**	**15.4**
	(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)	(13.0-18.0)
Grade										
7	**15.4**	**15.8**	**16.5**	**15.7**	**14.4**	**18.6**	**21.7**	**19.1**	**16.0**	**14.3**
	(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)	(11.9-17.2)
8	**18.6**	**15.7**	**15.2**	**17.4**	**13.7**	**12.2**	**18.9**	**16.3**	**15.6**	**16.6**
	(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)	(13.2-20.7)
9	**16.3**	**14.5**	**12.5**	**14.5**	**14.0**	**14.3**	**19.7**	**18.3**	**12.7**	**16.6**
	(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)	(13.3-20.5)
10	**15.6**	**12.0**	**12.7**	**11.5**	**11.4**	**12.9**	**19.7**	**16.3**	**12.0**	**11.7**
	(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)	(8.8-15.4)
11	**9.1**	**9.8**	**10.4**	**9.5**	**9.3**	**9.1**	**14.5**	**13.9**	**10.9**	**8.4**
	(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)	(4.0-17.0)
12	**9.6**	**9.6**	**7.6**	**8.6**	**8.2**	**8.8**	**16.4**	**11.5**	**8.3**	**12.1**
	(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)	(6.8-20.4)
Region										
GTA	**15.3**	**13.8**	**13.3**	**15.1**	**13.4**	**14.3**	**21.1**	**17.1**	**12.3**	**12.5**
	(13.2-17.6)	(11.5-16.6)	(11.3-15.6)	(13.5-16.8)	(11.2-16.0)	(12.6-16.3)	(18.0-24.5)	(14.7-19.9)	(9.9-15.1)	(10.1-15.4)
North	**12.1**	**10.7**	**13.1**	**9.8**	**10.0**	**11.1**	**14.4**	**13.6**	**10.7**	**9.8**
	(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)	(7.2-13.3)
West	**14.2**	**13.8**	**12.2**	**12.0**	**11.1**	**11.8**	**16.7**	**15.6**	**12.7**	**13.9**
	(11.3-17.8)	(11.3-16.7)	(9.6-15.3)	(9.7-14.6)	(9.2-13.4)	(10.1-13.8)	(13.9-19.9)	(12.6-19.2)	(10.2-15.8)	(11.2-17.3)
East	**11.5**	**11.6**	**10.3**	**10.1**	**9.7**	**9.7**	**15.2**	**11.1**	**11.6**	**14.0**
	(8.9-14.7)	(9.2-14.4)	(8.3-12.6)	(8.7-11.7)	(7.5-12.5)	(7.5-12.3)	(12.8-18.0)	(9.2-13.4)	(6.3-20.3)	(10.4-18.6)

Notes: (1) n=total number of students surveyed; (2) entries in brackets are 95% confidence intervals; (3) GTA=Greater Toronto Area; (4) no significant differences 2017 vs. 2015 or 2017 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, 1991–2017 OSDUHS (Grades 7–12)

	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017
(n[1])					(4447)	(3898)	(6616)	(7726)	(6323)	(9112)	(9288)	(10272)	(10426)	(11435)
(n[2])	(2961)	(2617)	(2907)	(3072)	(2421)	(2013)	(3389)	(3969)	(3215)	(4424)	(4669)	(5211)	(5225)	(5686)
Total[1]	—	—	—	—	**8.9**	**10.3**	**12.6**	**13.1**	**12.9**	**14.5**	**15.6**	**7.0**	**7.6**	**8.7** [cd]
(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)	(7.7-9.7)
Total[2]	**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**	**7.8** [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)	(6.6-9.3)
Sex														
Males[1]	—	—	—	—	**8.7**	**8.3**	**9.9**	**10.5**	**9.6**	**10.8**	**12.2**	**7.1**	**6.4**	**6.6**
					(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)	(5.6-7.7)
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**	**5.6**
	(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)	(4.5-7.0)
Females[1]	—	—	—	—	**9.2**	**12.3**	**15.2**	**15.9**	**16.6**	**18.5**	**19.2**	**6.9**	**8.9**	**10.9**
					(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)	(9.4-12.6)
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**	**10.2**
	(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)	(8.4-12.3)
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**	**4.7**
	(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)	(3.3-6.7)
8	—	—	—	—	**7.2**	**7.5**	**9.8**	**8.1**	**7.8**	**10.6**	**10.2**	**7.3**	**5.8**	**5.3**
					(5.5-9.4)	(5.6-99)	(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)	(3.9-7.2)
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**	**8.1**
	(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)	(6.6-9.9)
10	—	—	—	—	**10.0**	**13.0**	**14.8**	**15.3**	**14.1**	**14.5**	**18.3**	**6.2**	**7.4**	**9.4**
					(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)	(7.5-11.8)
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**	**10.0**
	(3.3-9.6)	(4.0-110)	(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)	(8.0-12.6)
12	—	—	—	—	**10.9**	**15.1**	**14.9**	**15.7**	**18.6**	**19.8**	**19.8**	**7.4**	**9.6**	**11.7**
					(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)	(10.0-13.7)
Region														
GTA	—	—	—	—	**9.3**	**10.4**	**13.2**	**13.8**	**13.9**	**15.8**	**16.3**	**7.2**	**7.6**	**9.0**
					(7.9-10.9)	(8.6-12.7)	(11.8-14.9)	(11.9-16.0)	(11.8-16.3)	(13.7-18.3)	(14.3-18.4)	(6.2-8.4)	(6.5-8.8)	(7.8-10.3)
North	—	—	—	—	**7.9**	**10.0**	**12.9**	**10.5**	**16.0**	**16.0**	**14.4**	**7.3**	**6.1**	**8.7**
					(6.3-9.9)	(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)	(6.9-10.8)
West	—	—	—	—	**9.9**	**10.6**	**13.4**	**14.8**	**12.0**	**14.3**	**17.7**	**6.9**	**7.9**	**8.9**
					(7.4-13.0)	(8.7-13.0)	(11.3-15.7)	(12.7-17.1)	(9.4-15.2)	(12.3-16.6)	(14.8-21.0)	(5.3-8.9)	(6.3-9.9)	(7.2-10.9)
East	—	—	—	—	**6.6**	**9.5**	**10.4**	**11.0**	**11.5**	**11.8**	**11.9**	**6.5**	**7.8**	**7.7**
					(5.1-8.5)	(6.1-14.5)	(8.5-12.8)	(8.8-13.6)	(10.0-13.2)	(9.8-14.2)	(9.6-14.7)	(4.8-8.8)	(5.7-10.6)	(5.2-11.1)

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) GTA=Greater Toronto Area; (6) long-term regional trends are not available; (7) no significant differences, 2017 vs. 2015 or 2017 vs. 1999; [c] significant linear trend, p<.01; [d] significant nonlinear trend, p<.01.

Q: "How would you rate your physical health?" (Fair or 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 Daily Physical Activity in the Past Seven Days, 2009–2017 OSDUHS (Grades 7–12)

	2009	2011	2013	2015	2017
(n=)	(9112)	(9288)	(10272)	(10426)	(11435)
Total	**20.8**	**21.3**	**21.8**	**22.3**	**23.0**
(95% CI)	(19.6-22.2)	(19.9-22.8)	(20.4-23.2)	(20.7-23.9)	(21.7-24.4)
Sex					
Males	**26.2** (24.3-28.2)	**27.0** (25.1-29.1)	**27.2** (24.9-29.7)	**27.0** (24.5-29.7)	**29.5** (27.5-31.5)
Females	**15.2** (13.8-16.6)	**15.2** (13.8-16.6)	**16.0** (14.4-17.6)	**17.2** (15.4-19.2)	**16.2** (14.9-17.5)
Grade					
7	**28.2** (24.5-32.3)	**27.0** (23.8-30.4)	**31.1** (26.7-35.8)	**28.3** (23.9-33.2)	**31.9** (29.1-34.8)
8	**26.7** (23.4-30.1)	**27.8** (24.4-31.4)	**27.4** (24.1-30.9)	**19.0** (16.3-22.1)	**29.9** [a] (26.1-34.0)
9	**23.1** (20.2-26.4)	**24.3** (21.3-27.7)	**25.0** (21.9-28.4)	**28.0** (24.4-31.9)	**28.8** (25.3-32.7)
10	**19.9** (17.1-22.9)	**22.5** (19.4-26.0)	**20.0** (16.8-23.7)	**21.5** (17.8-25.6)	**21.6** (18.7-24.8)
11	**17.5** (14.5-21.0)	**15.7** (13.2-18.6)	**19.2** (16.0-22.9)	**19.7** (17.2-22.5)	**18.3** (15.5-21.4)
12	**14.1** (12.4-16.0)	**15.6** (12.8-18.9)	**15.2** (12.8-18.0)	**19.4** (16.0-23.3)	**14.4** (11.5-17.9)
Region					
Greater Toronto Area	**18.2** (16.3-20.4)	**20.8** (18.9-22.9)	**21.2** (19.2-23.3)	**20.7** (18.5-23.1)	**20.6** (19.0-22.2)
North	**21.8** (18.3-25.6)	**24.6** (22.4-27.0)	**24.8** (21.4-28.5)	**24.4** (21.4-27.6)	**24.6** (21.6-27.9)
West	**22.4** (20.1-25.0)	**19.5** (17.1-22.1)	**22.3** (19.4-25.5)	**22.1** (19.2-25.2)	**24.4** (21.9-27.0)
East	**23.1** (20.7-25.8)	**23.7** (20.7-26.9)	**21.5** (18.8-24.4)	**25.6** (22.0-29.7)	**26.4** (23.2-29.9)

Notes: (1) n=total number of students surveyed; (2) entries in brackets are 95% confidence intervals; (3) [a] 2017 vs. 2015 significant difference, p<.01; no significant changes since 2009 (except for 8th graders).

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 A3.2.3 Percentage Reporting No Days of Physical Activity in the Past Seven Days, 2009–2017 OSDUHS (Grades 7–12)

	2009	2011	2013	2015	2017
(n=)	(9112)	(9288)	(10272)	(10426)	(11435)
Total	**8.5**	**8.4**	**7.3**	**6.4**	**8.9** [ad]
(95% CI)	(7.6-9.5)	(7.4-9.6)	(6.4-8.3)	(5.5-7.5)	(7.8-10.2)
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)	**6.7** (5.5-8.0)
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)	**11.4** [a] (9.3-13.8)
Grade					
7	**6.9** (5.4-8.8)	**7.9** (6.1-10.3)	**4.4** (3.0-6.3)	**2.1** (1.3-3.4)	**5.0** [a] (3.3-7.7)
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)	**3.5** [b] (2.4-5.0)
9	**6.8** (5.1-9.0)	**6.2** (4.4-8.6)	**4.3** (2.8-6.6)	**4.0** (3.0-5.3)	**6.3** (4.7-8.3)
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)	**7.1** (5.7-8.8)
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)	**12.3** (9.1-16.6)
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)	**15.0** [a] (12.5-18.0)
Region					
Greater Toronto Area	**9.9** (8.4-11.6)	**9.8** (8.2-11.7)	**9.0** (7.8-10.3)	**7.3** (6.1-8.6)	**10.4** [a] (8.5-12.7)
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)	**8.2** (6.4-10.5)
West	**7.1** (5.6-9.0)	**8.3** (6.1-11.2)	**5.4** (3.6-8.0)	**5.6** (4.3-7.5)	**7.0** (5.8-8.5)
East	**8.1** (6.6-10.0)	**6.0** (4.7-7.7)	**6.3** (5.0-7.9)	**5.3** (2.8-9.7)	**8.4** (6.1-11.6)

Notes: (1) n=total number of students surveyed; (2) entries in brackets are 95% confidence intervals; (3) [a] 2017 vs. 2015 significant difference, p<.01; [b] 2017 vs. 2009 significant difference, p<.01; [d] significant non-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 A3.2.4 Percentage Reporting No Days of Physical Activity at School in Physical Education Class in the Past Five School Days, 1999–2017 OSDUHS (Grades 7–12)

	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017
(n=)	(2229)	(2061)	(6616)	(7726)	(6323)	(9211)	(9288)	(10272)	(10426)	(11435)
Total	**43.8**	**44.2**	**46.4**	**49.5**	**44.5**	**45.5**	**48.1**	**51.0**	**41.9**	**44.8** [d]
(95% CI)	(40.3-47.4)	(40.3-48.2)	(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)	(42.5-47.2)
Sex										
Males	**41.2**	**39.0**	**43.5**	**45.9**	**40.6**	**42.2**	**43.1**	**47.8**	**40.4**	**40.3**
	(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)	(36.7-44.1)
Females	**46.5**	**49.4**	**49.0**	**53.4**	**48.6**	**49.0**	**53.5**	**54.3**	**43.4**	**49.6** [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)	(46.9-52.3)
Grade										
7	**30.0**	**20.0**	**27.9**	**26.4**	**21.6**	**15.4**	**14.2**	**13.5**	**10.9**	**9.7** [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)	(7.2-12.8)
8	**23.9**	**21.8**	**22.3**	**29.9**	**16.5**	**12.8**	**9.8**	**10.0**	**13.0**	**11.6** [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)	(7.6-17.3)
9	**35.6**	**44.9**	**43.5**	**45.1**	**43.1**	**40.9**	**44.4**	**47.5**	**33.8**	**39.6**
	(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)	(34.3-45.2)
10	**55.7**	**57.6**	**55.9**	**63.3**	**57.4**	**58.9**	**61.2**	**60.9**	**53.1**	**55.2**
	(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)	(50.2-60.2)
11	**57.2**	**61.3**	**59.8**	**60.8**	**58.3**	**61.8**	**64.9**	**68.4**	**55.2**	**56.5**
	(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)	(49.8-63.1)
12	**64.7**	**62.2**	**60.8**	**67.7**	**61.6**	**66.3**	**69.2**	**73.0**	**62.9**	**71.4**
	(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)	(66.3-75.9)
Region										
GTA	**45.5**	**41.6**	**46.4**	**53.4**	**46.8**	**44.3**	**45.4**	**48.5**	**43.2**	**46.4**
	(39.2-51.9)	(34.0-49.7)	(42.2-50.6)	(48.4-58.4)	(41.6-52.0)	(39.4-49.3)	(39.5-51.4)	(43.9-53.2)	(38.0-48.7)	(43.6-49.3)
North	**49.1**	**46.9**	**45.6**	**42.3**	**47.6**	**49.5**	**51.4**	**52.3**	**42.1**	**43.5**
	(43.1-55.2)	(39.1-54.9)	(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)	(38.5-48.7)
West	**44.3**	**43.8**	**47.6**	**49.2**	**42.1**	**45.4**	**52.7**	**53.4**	**42.9**	**42.0**
	(37.3-51.6)	(36.8-51.0)	(41.9-53.4)	(42.9-55.4)	(34.9-49.6)	(40.2-50.6)	(42.5-62.7)	(45.4-61.2)	(36.3-49.7)	(38.5-45.6)
East	**35.4**	**49.9**	**45.1**	**44.9**	**42.1**	**46.7**	**47.5**	**52.5**	**37.3**	**45.5**
	(27.1-44.6)	(40.2-59.6)	(39.5-50.8)	(39.8-50.1)	(35.7-48.9)	(43.4-50.0)	(40.7-54.4)	(45.8-59.0)	(26.6-49.3)	(37.4-53.8)

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) GTA=Greater Toronto Area; (5) [a] 2017 vs. 2015 significant difference, p<.01; [b] 2017 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 A3.2.5 Percentage Reporting Three or More Hours a Day of Recreational Screen Time (Sedentary Behaviour) in the Past Seven Days, 2009–2017 OSDUHS (Grades 7–12)

	2009	2011	2013	2015	2017
(n=)	(8583)	(8827)	(9660)	(9815)	(10565)
Total	**57.4**	**60.0**	**58.3**	**62.6**	**64.2** [bc]
(95% CI)	(55.7-59.0)	(57.4-62.6)	(56.2-60.4)	(60.7-64.4)	(61.8-66.5)
Sex					
Males	**61.0** (58.7-63.2)	**63.7** (61.3-66.0)	**60.7** (58.2-63.2)	**61.6** (59.6-63.6)	**63.4** (60.3-66.3)
Females	**53.5** (51.5-55.4)	**56.1** (52.4-59.7)	**55.7** (53.3-58.0)	**63.6** (61.0-66.1)	**65.1** [b] (62.5-67.6)
Grade					
7	**43.0** (39.3-46.8)	**46.4** (42.0-50.8)	**43.5** (39.9-47.1)	**45.7** (42.1-49.4)	**53.2** [ab] (48.7-57.7)
8	**51.9** (47.8-56.1)	**54.0** (50.3-57.8)	**56.0** (50.7-61.3)	**56.3** (50.2-62.3)	**59.8** [b] (55.5-63.9)
9	**58.6** (54.6-62.5)	**60.7** (55.5-65.6)	**56.8** (52.6-60.9)	**66.0** (62.2-69.6)	**61.2** (56.4-65.8)
10	**60.7** (56.4-64.8)	**61.3** (54.8-67.4)	**62.3** (58.5-65.9)	**66.4** (62.5-70.0)	**69.0** [b] (65.8-72.1)
11	**63.0** (58.3-67.5)	**65.9** (61.4-70.2)	**62.4** (58.2-66.4)	**65.8** (61.8-69.5)	**66.4** (60.0-72.2)
12	**61.6** (57.9-65.2)	**64.7** (58.8-70.2)	**61.4** (58.2-64.6)	**67.7** (64.4-70.8)	**69.5** [b] (65.0-73.7)
Region					
Greater Toronto Area	**62.7** (59.9-65.3)	**65.1** (61.2-68.8)	**62.4** (60.2-64.6)	**64.0** (61.0-66.9)	**66.0** (62.2-69.7)
North	**57.2** (53.6-60.7)	**50.1** (46.2-54.0)	**54.5** (48.0-60.8)	**58.9** (54.4-63.2)	**58.0** (54.1-61.7)
West	**55.4** (52.0-58.6)	**57.6** (52.1-62.9)	**55.4** (50.7-60.0)	**61.4** (58.0-64.6)	**63.7** [b] (60.1-67.11)
East	**50.8** (47.5-54.0)	**55.0** (51.8-58.1)	**54.1** (48.4-59.7)	**61.7** (56.5-66.7)	**62.3** [b] (55.9-68.4)

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 (6.1% in 2017) and excluded from the analysis; (2) entries in brackets are 95% confidence intervals; (3) [a] 2017 vs. 2015 significant difference, p<.01; [b] 2017 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/videos, playing video/computer games, texting, emailing, or surfing the Internet in your free time?" (Note: *The Canadian 24-Hour Movement Guidelines for Children and Youth: An Integration of Physical Activity, Sedentary Behaviour, and Sleep* recommend a daily maximum of two hours of recreational screen time for adolescents.)

Source: OSDUHS, Centre for Addiction and Mental Health

Table A3.2.6 Percentage Classified as Overweight or Obese, 2007–2017 OSDUHS (Grades 7–12)

	2007	2009	2011	2013	2015	2017
(n=)	(2935)	(8575)	(8861)	(9637)	(9797)	(10624)
Total	**23.2**	**25.2**	**25.5**	**25.1**	**26.4**	**28.0** [bc]
(95% CI)	(21.5-25.1)	(23.8-26.7)	(23.2-28.0)	(23.5-26.7)	(24.9-28.0)	(26.1-29.9)
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)	**29.8** (27.3-32.5)
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)	**26.0** [b] (22.9-29.5)
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)	**21.9** (17.5-27.0)
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)	**25.7** [b] (23.2-28.3)
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)	**26.1** (22.2-30.4)
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)	**29.7** (25.3-34.4)
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)	**33.7** [b] (29.0-38.8)
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)	**28.1** (24.4-32.1)
Region						
Greater Toronto Area	**22.7** (19.8-25.8)	**23.6** (21.4-26.0)	**23.4** (20.7-26.3)	**22.6** (20.3-25.2)	**24.9** (22.8-27.0)	**27.6** (24.5-31.0)
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)	**31.3** [b] (27.8-35.1)
West	**23.3** (20.3-26.6)	**27.2** (24.5-30.1)	**29.0** (23.7-35.0)	**25.7** (22.8-28.8)	**26.9** (23.1-31.0)	**29.7** [b] (27.2-32.3)
East	**24.1** (20.3-28.4)	**23.8** (21.5-26.3)	**25.2** (22.8-27.8)	**27.9** (24.3-31.9)	**28.8** (25.6-32.3)	**25.2** (21.0-29.9)

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) no significant differences 2017 vs. 2015, [b] 2017 vs. 2007 significant difference, p<.01; [c] significant linear trend, 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 A3.2.7 Body Image and Weight Control, 2001–2017 OSDUHS (Grades 7–12)

		2001	2003	2005	2007	2009	2011	2013	2015	2017
TOTAL SAMPLE	(n=)	(1837)	(3152)	(3648)	(2935)	(4261)	(4472)	(4794)	(5023)	(5071)
Belief:	**too thin**	**10.3**	**11.1**	**10.8**	**10.3**	**10.0**	**10.9**	**11.8**	**10.3**	**12.2**
	about right weight	**70.9**	**69.0**	**69.9**	**70.0**	**67.3**	**64.8**	**64.7**	**67.4**	**64.1**
	too fat	**18.7**	**19.9**	**19.4**	**19.6**	**22.7**	**24.3**	**23.6**	**22.3**	**23.7** [bc]
Trying to:	**lose weight**	**31.3**	**29.1**	**28.8**	**28.0**	**29.0**	**30.1**	**29.7**	**28.0**	**29.0**
	gain weight	**12.2**	**11.6**	**12.0**	**13.4**	**12.9**	**13.8**	**13.8**	**12.8**	**13.6**
	keep from gaining weight	**18.3**	**20.8**	**22.1**	**22.7**	**22.8**	**22.5**	**22.7**	**25.0**	**22.2**
	not trying to do anything	**38.2**	**38.5**	**37.1**	**35.9**	**35.3**	**33.6**	**33.8**	**34.2**	**35.2**
MALES		(899)	(1509)	(1786)	(1450)	(2055)	(2116)	(2182)	(2286)	(2272)
Belief:	too thin	12.9	15.8	14.8	13.4	14.0	14.1	15.9	14.6	17.8
	about right weight	73.4	70.7	70.8	72.0	68.6	67.3	68.9	70.6	65.8
	too fat	13.7	13.4	14.5	14.6	17.4	18.6	15.2	14.8	16.4
Trying to:	lose weight	21.2	18.4	20.8	20.3	20.7	21.1	21.1	21.1	19.2
	gain weight	18.5	18.4	18.2	20.0	19.8	22.0	21.7	21.4	22.1
	keep from gaining weight	16.9	14.8	18.6	19.1	19.6	19.0	19.0	21.0	20.2
	not trying to do anything	43.4	48.4	42.4	40.6	39.8	38.0	38.2	36.6	38.5
FEMALES		(938)	(1643)	(1862)	(1485)	(2206)	(2356)	(2612)	(2907)	(2799)
Belief:	too thin	7.9	6.7	6.4	6.9	5.4	7.4	7.5	5.8	6.3
	about right weight	68.6	67.3	68.9	67.9	65.8	62.1	60.2	64.1	62.4
	too fat	23.6	26.0	24.7	25.2	28.7	30.6	32.3	30.1	31.3 [b]
Trying to:	lose weight	40.9	39.2	37.5	36.7	38.3	40.2	38.8	35.3	39.1
	gain weight	6.2	5.4	5.2	6.0	5.1	4.7	5.5	3.7	4.8
	keep from gaining weight	19.6	26.3	26.0	26.7	26.4	26.3	26.6	29.5	24.4
	not trying to do anything	33.3	29.1	31.3	30.6	30.2	28.7	29.1	31.5	31.7
GRADE 7		(346)	(450)	(453)	(338)	(749)	(718)	(974)	(910)	(824)
Belief:	too thin	12.1	9.9	6.2	7.2	9.3	9.5	9.9	5.9	7.3
	about right weight	76.1	74.3	76.5	79.1	72.2	70.6	68.9	79.2	78.6
	too fat	11.8	15.8	17.2	13.6	18.5	19.9	21.2	14.9	14.1
Trying to:	lose weight	25.7	22.8	25.4	26.1	25.1	25.5	27.7	25.7	23.0
	gain weight	10.5	8.1	5.5	8.5	9.4	8.6	7.6	7.4	8.7
	keep from gaining weight	19.2	18.1	22.1	28.0	21.3	21.7	23.8	26.9	27.0
	not trying to do anything	44.6	51.1	47.0	33.4	44.2	44.1	41.0	39.9	41.3
GRADE 8		(312)	(464)	(470)	(350)	(784)	(729)	(925)	(942)	(958)
Belief:	too thin	10.5	9.9	9.4	9.4	5.8	7.0	10.1	8.5	10.2
	about right weight	68.1	74.3	75.3	72.7	73.9	72.6	69.9	69.9	65.8
	too fat	21.5	15.8	15.3	17.8	20.3	20.3	20.1	21.7	24.1
Trying to:	lose weight	32.3	25.2	26.7	25.7	29.8	26.2	25.5	25.2	31.8
	gain weight	9.7	8.6	9.4	8.2	7.4	9.1	12.1	7.9	7.9
	keep from gaining weight	22.2	25.1	24.8	23.8	23.8	28.2	20.6	24.7	19.9
	not trying to do anything	35.8	41.1	39.1	42.3	39.0	36.5	41.8	42.2	40.4
GRADE 9		(334)	(600)	(691)	(561)	(661)	(805)	(722)	(890)	(939)
Belief:	too thin	7.3	11.6	12.7	11.3	9.9	10.9	11.1	9.8	13.2
	about right weight	73.8	70.5	66.8	67.9	65.6	66.1	65.2	67.6	66.5
	too fat	18.9	17.9	20.5	20.8	24.6	23.0	23.7	22.6	20.4
Trying to:	lose weight	34.3	29.4	28.3	27.4	29.6	34.2	28.5	27.0	27.6
	gain weight	9.2	12.3	12.7	13.2	10.5	14.9	8.9	10.9	12.1
	keep from gaining weight	18.1	19.6	22.5	19.8	22.8	18.8	24.4	26.1	24.8
	not trying to do anything	38.4	38.7	36.5	39.5	37.2	32.0	38.2	36.0	35.5

		2001	2003	2005	2007	2009	2011	2013	2015	2017
GRADE 10		(384)	(559)	(685)	(528)	(720)	(722)	(728)	(782)	(834)
Belief:	too thin	7.7	11.7	9.9	9.8	8.4	11.3	12.0	11.9	12.0
	about right weight	73.8	64.2	68.8	68.7	66.5	60.7	66.5	65.3	64.0
	too fat	18.4	24.1	21.2	21.5	25.1	28.0	21.5	22.8	24.0
Trying to:	lose weight	34.3	32.2	29.7	28.3	33.6	35.6	33.5	27.7	29.3
	gain weight	11.0	11.9	11.3	12.4	11.3	14.4	12.5	13.8	14.4
	keep from gaining weight	16.8	21.6	23.6	20.6	21.1	17.2	20.9	23.8	21.2
	not trying to do anything	37.8	34.3	35.4	38.7	34.0	32.8	33.1	34.7	35.1
GRADE 11		(273)	(568)	(718)	(589)	(659)	(731)	(737)	(766)	(751)
Belief:	too thin	12.2	11.6	13.5	12.0	10.6	10.2	11.9	9.2	14.6
	about right weight	66.1	65.5	66.1	67.2	64.4	60.2	62.2	64.7	59.0
	too fat	21.7	23.0	20.3	20.8	24.9	29.6	25.8	26.2	26.4
Trying to:	lose weight	31.1	31.8	30.1	28.2	28.5	30.6	30.9	33.6	30.9
	gain weight	17.1	13.9	15.0	18.9	15.8	13.8	16.4	14.1	20.2
	keep from gaining weight	16.5	20.1	21.5	20.1	26.3	22.7	25.4	22.5	19.2
	not trying to do anything	35.3	34.2	33.4	32.8	29.4	33.0	27.4	29.7	29.7
GRADE 12		(188)	(511)	(631)	(569)	(688)	(767)	(708)	(733)	(765)
Belief:	too thin	15.4	11.8	12.1	11.4	13.6	14.1	13.6	13.5	14.2
	about right weight	63.0	67.0	67.1	66.7	64.5	62.6	60.3	63.9	56.3
	too fat	21.6	21.2	20.8	21.9	21.9	23.3	26.1	22.6	29.6
Trying to:	lose weight	27.4	31.5	31.7	31.2	27.5	27.8	30.2	27.4	29.9
	gain weight	18.5	13.9	16.7	17.0	18.8	18.2	20.1	17.6	16.2
	keep from gaining weight	17.6	20.6	18.9	24.2	21.7	25.6	21.3	26.3	22.0
	not trying to do anything	36.4	34.0	32.7	27.6	32.1	28.4	28.4	28.8	31.9
GREATER TORONTO AREA		(642)	(1359)	(1558)	(1103)	(1544)	(1867)	(2386)	(2157)	(2069)
Belief:	too thin	12.3	12.2	12.6	10.8	11.1	13.3	13.6	10.9	14.5
	about right weight	71.4	68.8	67.4	69.5	68.4	64.4	64.1	67.1	62.7
	too fat	16.4	19.0	20.0	19.7	20.5	22.3	22.2	22.0	22.9 [b]
Trying to:	lose weight	32.2	29.0	30.6	28.3	30.4	30.5	30.0	28.1	28.8
	gain weight	12.5	11.5	13.6	15.0	14.4	15.0	14.0	13.4	14.6
	keep from gaining weight	19.0	20.7	20.5	21.1	22.0	18.9	22.7	23.2	22.3
	not trying to do anything	36.3	38.8	35.2	35.6	33.2	35.5	33.3	35.4	34.4
NORTH REGION		(415)	(539)	(517)	(376)	(290)	(771)	(495)	(557)	(568)
Belief:	too thin	8.3	9.7	10.8	9.7	6.7	8.0	5.9	7.3	9.0
	about right weight	67.5	70.4	70.8	68.8	68.9	68.8	68.5	71.1	66.9
	too fat	24.3	19.8	18.4	21.5	24.4	23.2	25.6	21.6	24.1
Trying to:	lose weight	31.2	26.8	27.3	28.1	31.3	29.0	29.1	29.3	29.2
	gain weight	11.9	10.6	10.9	9.4	17.1	12.0	11.9	10.2	12.4
	keep from gaining weight	19.5	19.9	21.9	22.2	19.6	24.2	29.4	25.3	20.2
	not trying to do anything	37.4	42.7	39.9	40.3	32.0	34.7	29.6	35.2	38.2
WEST REGION		(479)	(722)	(816)	(876)	(1033)	(839)	(500)	(1499)	(1056)
Belief:	too thin	9.1	11.4	8.6	11.0	10.0	8.2	10.1	11.1	12.0
	about right weight	71.7	67.5	71.3	69.4	65.0	60.0	65.4	66.3	64.7
	too fat	19.2	21.1	20.1	19.6	25.0	31.8	24.6	22.6	23.3
Trying to:	lose weight	28.7	29.0	29.9	27.4	29.7	32.7	28.5	28.3	28.7
	gain weight	12.7	12.2	11.2	12.6	11.5	13.6	14.1	12.6	13.8
	keep from gaining weight	20.9	21.0	21.6	24.3	24.1	25.3	22.8	25.8	22.7
	not trying to do anything	37.7	37.8	37.3	35.8	34.6	28.3	34.6	33.3	34.8

		2001	2003	2005	2007	2009	2011	2013	2015	2017
EAST REGION		(301)	(532)	(757)	(580)	(1394)	(995)	(1413)	(810)	(1378)
Belief:	too thin	8.4	8.8	9.2	8.6	8.5	9.8	11.1	8.3	9.2
	about right weight	70.2	70.7	73.4	72.5	68.3	70.3	63.8	69.1	65.0
	too fat	21.4	20.5	17.4	18.9	23.2	19.9	25.1	22.6	25.8
Trying to:	lose weight	33.6	30.4	24.2	28.3	24.4	26.7	31.5	27.0	29.6
	gain weight	10.6	11.5	9.7	12.3	10.5	11.9	13.3	12.4	12.0
	keep from gaining weight	11.5	21.0	26.2	24.0	23.5	25.9	20.1	28.5	21.7
	not trying to do anything	44.3	37.2	39.9	35.4	41.7	35.5	35.1	32.1	36.6

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 2017 vs. 2015; [b] 2017 vs. 2001 significant difference, p<.01; [c] significant linear trend, 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 A3.2.8 Percentage Reporting Eight or More Hours of Sleep on an Average School Night, 2015–2017 OSDUHS (Grades 7–12)

	2015 (n=10426)	2017 (n=11435)
Total	**41.0**	**39.2**
(95% CI)	(38.9-43.2)	(37.1-41.3)
Sex		
Males	**44.9** (41.9-47.9)	**42.2** (40.1-44.4)
Females	**36.9** (34.6-39.3)	**35.9** (32.9-39.1)
Grade		
7	**72.3** (67.1-77.0)	**72.3** (69.4-75.0)
8	**65.6** (60.8-70.1)	**60.8** (54.0-67.2)
9	**46.4** (43.2-49.6)	**41.8** (37.7-46.0)
10	**33.7** (30.5-37.0)	**30.4** (26.2-35.0)
11	**23.7** (20.5-27.4)	**26.5** (21.6-32.1)
12	**23.7** (20.3-27.4)	**21.1** (16.6-26.5)
Region		
Greater Toronto Area	**39.6** (36.2-43.2)	**36.5** (33.2-40.0)
North	**48.2** (44.8-51.6)	**45.5** (41.7-49.4)
West	**40.8** (35.5-46.3)	**42.7** (39.5-45.9)
East	**42.6** (36.2-49.2)	**38.5** (34.1-43.0)

Notes: (1) n=total number of students surveyed; (2) entries in brackets are 95% confidence intervals; (3) no significant changes between 2015 and 2017.
Q: "On an average school night, how many hours of sleep do you get?"
Source: OSDUHS, Centre for Addiction and Mental Health

Table A3.2.9 Percentage Reporting Often or Always Going to School or Bed Hungry, 2015–2017 OSDUHS (Grades 7–12)

	2015 (n=10426)	2017 (n=11435)
Total	**4.6**	**6.7** [a]
(95% CI)	(3.9-5.5)	(5.9-7.7)
Sex		
Males	**5.0** (4.0-6.3)	**7.1** (6.1-8.4)
Females	**4.2** (3.3-5.3)	**6.3** (4.9-7.9)
Grade		
7	**3.8** (2.3-6.2)	**5.5** (3.3-9.0)
8	**3.9** (2.4-6.4)	**5.3** (3.6-7.7)
9	**4.2** (3.1-5.5)	**6.7** (4.6-9.7)
10	**5.9** (4.4-8.0)	**8.9** (6.4-12.2)
11	**4.2** (3.1-5.6)	**5.5** (4.0-7.6)
12	**5.2** (3.6-7.5)	**7.6** (5.8-9.9)
Region		
Greater Toronto Area	**4.5** (3.5-5.8)	**7.8** [a] (6.5-9.5)
North	**4.3** (2.9-6.3)	**7.9** (5.5-11.4)
West	**4.9** (3.7-6.4)	**5.5** (4.1-7.3)
East	**4.6** (2.7-7.8)	**5.6** (4.2-7.4)

Notes: (1) n=total number of students surveyed; (2) entries in brackets are 95% confidence intervals; (3) [a] 2017 vs. 2015 significant difference, p<.01.
Q: "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?"
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, 2003–2017 OSDUHS (Grades 7–12)

	2003	2005	2007	2009	2011	2013	2015	2017
(n=)	(6616)	(7726)	(2935)	(4261)	(4472)	(4794)	(5023)	(5071)
Total	**35.4**	**33.8**	**37.4**	**40.5**	**41.9**	**41.0**	**43.7**	**42.5** [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)	(39.9-45.2)
Sex								
Males	**38.0**	**37.9**	**39.4**	**43.0**	**44.2**	**43.6**	**45.4**	**43.2** [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)	(39.8-46.7)
Females	**33.0**	**29.5**	**35.2**	**37.6**	**39.3**	**38.4**	**41.8**	**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)	(38.2-45.4)
Grade								
7	**32.5**	**29.6**	**31.3**	**39.1**	**34.9**	**39.5**	**40.1**	**41.8**
	(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)	(34.3-49.7)
8	**36.3**	**35.3**	**31.4**	**40.8**	**41.0**	**47.1**	**48.0**	**42.5**
	(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)	(35.4-49.8)
9	**38.3**	**35.1**	**39.9**	**42.9**	**43.2**	**41.5**	**41.5**	**46.4** [b]
	(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)	(40.8-52.1)
10	**35.1**	**33.3**	**37.7**	**42.0**	**45.7**	**39.4**	**44.9**	**43.2** [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)	(38.5-47.9)
11	**36.0**	**33.1**	**38.9**	**40.8**	**38.5**	**39.7**	**43.5**	**46.9** [b]
	(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)	(40.9-53.0)
12	**33.6**	**36.0**	**42.7**	**37.8**	**44.8**	**40.4**	**43.8**	**36.7**
	(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)	(32.5-41.2)
Region								
Greater Toronto Area	**32.4**	**29.0**	**34.9**	**39.4**	**38.4**	**37.2**	**39.2**	**41.0** [b]
	(29.4-35.5)	(26.6-31.4)	(31.6-38.3)	(36.0-42.8)	(35.7-41.1)	(33.0-41.5)	(36.0-42.6)	(38.1-44.0)
North	**41.8**	**39.1**	**40.7**	**34.6**	**49.3**	**47.8**	**50.8**	**47.1**
	(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)	(42.8-51.5)
West	**36.5**	**37.0**	**39.7**	**42.0**	**45.8**	**44.4**	**47.0**	**46.0** [b]
	(33.5-39.7)	(34.6-39.5)	(35.8-43.8)	(38.5-45.6)	(40.0-51.8)	(38.4-50.6)	(42.9-51.1)	(42.0-50.1)
East	**38.1**	**38.1**	**38.5**	**42.2**	**42.9**	**44.4**	**48.4**	**38.2**
	(34.5-41.8)	(35.3-40.9)	(33.9-43.4)	(38.8-45.6)	(39.0-46.8)	(40.3-48.5)	(39.0-58.0)	(30.7-46.3)

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 2017 vs. 2015; [b] 2017 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 Reporting Not Always Wearing a Seatbelt When in a Vehicle, 2011–2017 OSDUHS (Grades 7–12)

	2011	2013	2015	2017
(n=)	(4472)	(4794)	(5023)	(5071)
Total	**28.4**	**23.7**	**23.9**	**23.7** [b]
(95% CI)	(25.9-31.0)	(21.5-26.0)	(21.8-26.3)	(21.4-26.1)
Sex				
Males	**28.8** (25.0-33.0)	**26.7** (23.3-30.3)	**22.5** (19.7-25.6)	**22.8** (19.5-26.5)
Females	**27.8** (25.6-30.2)	**20.5** (17.7-23.7)	**25.5** (22.7-28.5)	**24.6** (21.2-28.4)
Grade				
7	**19.8** (15.8-24.6)	**16.0** (12.2-20.8)	**17.3** (12.7-23.1)	**18.8** (15.2-23.1)
8	**27.8** (23.2-32.9)	**20.4** (14.8-27.3)	**18.9** (13.9-25.2)	**14.6** [b] (9.8-21.1)
9	**35.3** (28.1-43.3)	**23.7** (19.4-28.6)	**25.3** (21.5-29.5)	**25.1** [b] (21.5-29.2)
10	**30.8** (26.1-36.0)	**29.2** (24.4-34.5)	**25.3** (20.8-30.4)	**28.3** (24.8-32.2)
11	**29.0** (25.1-33.2)	**26.1** (21.8-30.8)	**24.2** (20.0-29.0)	**31.2** (26.3-36.5)
12	**26.3** (19.3-34.8)	**23.7** (18.5-29.8)	**27.9** (22.6-34.0)	**23.9** (20.0-28.2)
Region				
Greater Toronto Area	**30.1** (25.7-34.8)	**24.9** (22.0-28.0)	**23.7** (21.2-26.4)	**24.5** (22.1-27.2)
North	**26.4** (21.4-32.1)	**22.9** (17.2-29.7)	**20.7** (14.8-28.1)	**17.5** (12.8-23.4)
West	**28.1** (24.7-31.8)	**22.0** (17.3-27.7)	**24.4** (19.7-29.7)	**25.1** (22.0-28.5)
East	**25.6** (22.2-29.4)	**23.4** (19.6-27.7)	**24.8** (18.9-32.0)	**21.4** (15.0-29.4)

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 2017 vs. 2015; [b] 2017 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 A3.2.12 Percentage of Drivers in Grades 10–12 Reporting Texting While Driving at Least Once in the Past Year, 2013–2017 OSDUHS

	(n=)	2013 (1139)	2015 (1171)	2017 (1190)
Total		**35.9**	**35.3**	**32.5**
(95% CI)		(32.2-39.7)	(31.0-39.9)	(29.0-36.2)
Sex				
Males		**34.9** (28.9-41.4)	**35.5** (29.6-42.0)	**32.8** (28.1-37.8)
Females		**37.1** (32.4-42.1)	**35.1** (30.7-39.8)	**32.2** (26.6-38.3)
Grade				
10		†	†	†
11		**25.0** (19.2-32.0)	**24.7** (19.4-30.9)	**18.1** (13.0-24.8)
12		**45.9** (40.9-51.1)	**44.4** (37.6-51.5)	**42.6** (36.8-48.5)
Region				
Greater Toronto Area		**29.5** (25.0-34.5)	**30.7** (26.1-35.8)	**28.7** (24.5-33.3)
North		**40.1** (34.3-46.2)	**40.8** (30.2-52.2)	**30.7** (21.9-41.1)
West		**42.0** (34.9-49.4)	**37.9** (29.0-47.7)	**39.8** (33.8-46.1)
East		**37.8** (29.2-47.2)	**39.3** (28.9-50.7)	**26.3** (17.5-37.6)

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 school students since 2013; (5) no significant changes over time.

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, 1999–2017 OSDUHS (Grades 7–12)

	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017
(n=)	(4447)	(3898)	(6616)	(7726)	(2935)	(4261)	(4207)	(4794)	(5023)	(5071)
Total	**30.0**	**34.0**	**39.8**	**38.9**	**39.0**	**33.6**	**32.7**	**27.4**	**28.6**	**33.7** [acd]
(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)	(31.0-36.6)
Sex										
Males	**34.0**	**38.9**	**46.2**	**43.4**	**44.6**	**39.3**	**36.1**	**30.8**	**31.9**	**36.2**
	(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)	(33.5-39.0)
Females	**25.9**	**29.2**	**33.8**	**34.0**	**32.8**	**27.2**	**28.9**	**23.7**	**25.1**	**31.2**
	(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)	(26.4-36.4)
Grade										
7	**33.6**	**33.8**	**42.6**	**44.8**	**40.9**	**33.6**	**33.4**	**29.0**	**29.8**	**31.2**
	(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)	(27.1-35.6)
8	**31.5**	**33.0**	**43.2**	**44.0**	**45.5**	**33.4**	**34.7**	**26.3**	**28.1**	**34.7**
	(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)	(24.6-46.5)
9	**31.4**	**35.3**	**39.4**	**37.1**	**42.4**	**31.1**	**31.2**	**30.5**	**25.5**	**38.8** [ab]
	(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)	(34.2-43.7)
10	**26.9**	**36.0**	**38.4**	**36.7**	**35.4**	**30.3**	**30.8**	**26.7**	**28.9**	**33.3**
	(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)	(30.1-36.8)
11	**26.9**	**29.3**	**37.8**	**35.8**	**31.1**	**35.0**	**34.9**	**28.1**	**29.6**	**32.4**
	(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)	(27.3-38.0)
12	**29.6**	**35.0**	**38.6**	**35.9**	**39.7**	**36.9**	**31.9**	**25.0**	**29.6**	**32.5**
	(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)	(26.8-38.6)
Region										
GTA	**26.8**	**30.7**	**38.6**	**37.0**	**37.5**	**32.3**	**29.2**	**25.4**	**23.6**	**26.1**
	(24.1-29.6)	(27.5-34.2)	(36.4-40.8)	(34.2-39.9)	(34.0-41.2)	(29.4-35.3)	(25.7-32.9)	(22.4-28.6)	(21.2-26.1)	(23.4-28.9)
North	**39.5**	**39.7**	**45.9**	**49.3**	**47.5**	**39.1**	**40.7**	**34.5**	**31.3**	**37.6**
	(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)	(33.1-42.4)
West	**32.9**	**39.7**	**43.0**	**42.8**	**41.4**	**33.5**	**37.0**	**31.0**	**33.6**	**36.9**
	(29.2-36.8)	(36.1-43.5)	(40.1-45.9)	(39.6-46.0)	(37.1-45.8)	(28.6-38.9)	(32.-41.5)	(26.9-35.4)	(29.8-37.7)	(33.4-40.5)
East	**29.0**	**29.7**	**36.3**	**35.8**	**36.3**	**34.6**	**33.0**	**24.2**	**33.8**	**40.4** [b]
	(25.0-33.3)	(24.4-35.7)	(32.0-40.9)	(31.4-40.6)	(30.0-43.1)	(29.4-40.3)	(28.8-37.4)	(18.5-31.0)	(27.7-40.4)	(33.0-48.2)

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) GTA=Greater Toronto Area; (5) [a] 2017 vs. 2015 significant difference, p<.01; [b] 2017 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 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, 1999–2017 OSDUHS (Grades 7–12)

	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017
(n=)	(4447)	(3898)	(6616)	(7726)	(3388)	(4851)	(4816)	(5478)	(5403)	(6364)
Total	**12.4**	**10.9**	**11.0**	**11.7**	**21.2**	**23.8**	**15.1**	**21.9**	**20.9**	**24.5** [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)	(22.0-27.3)
Sex										
Males	**9.5**	**8.1**	**8.1**	**8.7**	**19.5**	**22.3**	**11.1**	**17.9**	**17.1**	**22.0** [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)	(18.4-26.1)
Females	**15.5**	**13.6**	**13.7**	**14.8**	**23.0**	**25.4**	**19.1**	**26.3**	**24.9**	**27.2** [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)	(23.9-30.8)
Grade										
7	**8.9**	**7.4**	**10.0**	**9.8**	**23.3**	**28.9**	**15.0**	**20.9**	**26.5**	**28.9** [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)	(22.3-36.5)
8	**11.3**	**9.3**	**10.3**	**11.4**	**18.5**	**23.2**	**13.9**	**26.0**	**21.9**	**28.7** [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)	(25.4-32.3)
9	**14.4**	**11.0**	**9.0**	**11.2**	**22.4**	**26.1**	**12.1**	**21.7**	**16.8**	**24.2** [b]
	(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)	(19.3-29.9)
10	**14.8**	**12.4**	**11.1**	**14.2**	**19.0**	**24.6**	**16.6**	**20.6**	**20.0**	**22.5** [b]
	(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)	(18.9-26.4)
11	**14.6**	**12.4**	**14.4**	**12.7**	**21.3**	**23.3**	**17.6**	**24.4**	**19.5**	**22.1** [b]
	(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)	(17.0-28.2)
12	**9.3**	**13.0**	**11.0**	**10.7**	**22.5**	**19.0**	**14.9**	**19.6**	**21.3**	**23.6** [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)	(19.4-28.3)
Region										
GTA	**11.4**	**10.3**	**9.6**	**11.1**	**22.3**	**25.0**	**14.2**	**21.0**	**20.1**	**24.3** [b]
	(9.8-13.1)	(8.8-12.0)	(8.2-11.1)	(9.3-13.2)	(19.8-25.1)	(22.3-27.9)	(12.4-16.3)	(17.2-25.4)	(17.9-22.6)	(20.9-28.0)
North	**11.7**	**11.0**	**12.0**	**14.6**	**21.2**	**19.8**	**16.5**	**22.8**	**23.9**	**32.8** [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)	(26.9-39.3)
West	**15.0**	**11.0**	**11.4**	**12.8**	**19.2**	**22.2**	**16.9**	**20.8**	**20.4**	**24.7** [b]
	(12.4-17.9)	(8.5-14.1)	(9.1-14.1)	(10.5-15.4)	(15.5-23.4)	(18.9-26.0)	(11.2-24.8)	(17.2-24.8)	(16.8-24.6)	(21.6-28.0)
East	**11.3**	**12.3**	**13.3**	**10.8**	**21.3**	**25.1**	**14.0**	**25.5**	**22.2**	**22.4** [b]
	(9.5-13.4)	(10.5-14.4)	(10.9-16.1)	(9.0-12.9)	(17.6-25.6)	(21.4-29.0)	(11.2-17.4)	(22.0-29.5)	(16.9-28.6)	(14.7-32.5)

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) GTA=Greater Toronto Area; (5) no significant differences 2017 vs. 2015; [b] 2017 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 Tranquillizers/Sedatives at Least Once in the Past Year, 1977–2017 OSDUHS (Grades 9–12)

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017
(n[1])												(2883)	(2457)	(4693)	(5794)	(4834)	(5783)	(6383)	(6159)	(6597)	(7587)
(n[2])	(2640)	(2653)	(1894)	(2075)	(2092)	(2137)	(1919)	(2020)	(1723)	(1980)	(2221)	(1655)	(1263)	(2442)	(3008)	(2494)	(2792)	(3223)	(3111)	(3351)	(3886)
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)	**3.6** (2.8-4.6)
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** (2.2-3.7)	**3.9** [cd] (2.8-5.4)
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)	**2.6** (1.9-3.5)
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)	**2.4** (1.6-3.6)
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)	**4.7** (3.3-6.5)
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)	**5.5** (3.6-8.4)
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)	**3.2** (2.2-4.6)
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)	**3.2** (2.4-4.4)
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)	**4.6** (2.8-7.6)
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)	**3.4** (2.3-5.0)

(cont'd)

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017
(n[1])												(2883)	(2457)	(4693)	(5794)	(4834)	(5783)	(6383)	(6159)	(6597)	(7587)
(n[2])	(2640)	(2653)	(1894)	(2075)	(2092)	(2137)	(1919)	(2020)	(1723)	(1980)	(2221)	(1655)	(1263)	(2442)	(3008)	(2494)	(2792)	(3223)	(3111)	(3351)	(3886)
Region																					
GTA	—	—	—	—	—	—	—	—	—	—	—	**4.4** (3.4-5.6)	**3.0** (2.1-4.3)	**2.7** (1.8-4.1)	**2.1** (1.3-3.4)	**4.3** (2.9-6.3)	**3.3** (2.3-4.7)	**3.8** (2.9-5.0)	**2.2** (1.5-3.10	**2.0** (1.6-2.4)	**3.6** (2.3-5.5)
North	—	—	—	—	—	—	—	—	—	—	—	**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)	**4.6** (3.4-6.2)
West	—	—	—	—	—	—	—	—	—	—	—	**2.0** (1.1-3.5)	**4.1** (2.9-5.9)	**3.1** (2.0-5.0)	†	**4.7** (3.0-7.4)	**5.1** (2.7-9.3)	**4.6** (2.6-8.1)	**3.3** (2.1-5.3)	**4.7** (3.6-6.0)	**3.3** (2.6-4.4)
East	—	—	—	—	—	—	—	—	—	—	—	**4.2** (2.2-8.0)	**4.4** (3.2-6.0)	**3.8** (2.4-5.8)	**3.3** (1.9-5.7)	**7.1** (5.4-9.1)	**5.2** (3.8-7.0)	**4.4** (3.1-6.2)	**4.1** (2.6-6.6)	**3.9** (3.1-4.9)	**3.7** (2.2-5.9)

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) †=estimate suppressed due to unreliability; (7) GTA=Greater Toronto Area; (8) long-term region trends are not available; (9) no significant changes between 1999 and 2017 (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 ADHD Drugs at Least Once in the Past Year, 2007–2017 OSDUHS (Grades 7–12)

	2007	2009	2011	2013	2015	2017
(n=)	(6323)	(4851)	(9288)	(10272)	(5403)	(6364)
Total	**2.3**	**2.7**	**2.5**	**3.2**	**2.6**	**2.9**
(95% CI)	(1.9-2.9)	(2.1-3.5)	(2.1-3.1)	(2.5-4.2)	(2.1-3.3)	(2.1-4.1)
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)	**4.2** (2.9-5.9)
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)	**1.6** (1.0-2.6)
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)	†	**4.7** (3.0-7.1)
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)	**2.8** (1.8-4.2)
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)	†	**2.4** (1.3-4.4)
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)	**3.0** (1.8-5.0)
12	**2.1** (1.2-3.6)	**1.4** (0.6-2.9)	**1.4** (0.8-2.5)	†	†	**1.8** (1.1-3.0)
Region						
Greater Toronto Area	**1.3** (0.9-1.9)	**1.6** (1.0-2.5)	**1.7** (1.2-2.4)	**2.2** (1.6-3.1)	**2.1** (1.6-2.8)	**2.4** (1.3-4.3)
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)	**4.0** (2.3-6.9)
West	**3.1** (2.2-4.2)	**3.1** (2.0-4.9)	**3.4** (2.7-4.2)	**4.3** (2.6-7.2)	**2.3** (1.5-3.4)	**3.7** (2.5-5.4)
East	**3.1** (2.1-4.8)	**4.0** (2.5-6.4)	**3.1** (2.1-4.5)	**3.8** (2.5-5.6)	**3.8** (2.1-6.6)	†

Notes: (1) ADHD=attention-deficit/hyperactivity disorder; (2) n=total number of students surveyed; (3) asked of a random half sample in 2009, 2015, and 2017; (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 Prescription Opioid Pain Relievers at Least Once in the Past Year, 2007–2017 OSDUHS (Grades 7–12)

	2007	2009	2011	2013	2015	2017
(n=)	(6323)	(9112)	(9288)	(10272)	(5023)	(5071)
Total	**40.6**	**31.8**	**21.4**	**20.9**	**21.1**	**17.6** [bcd]
(95% CI)	(39.0-42.1)	(30.3-33.3)	(19.6-23.2)	(19.6-22.3)	(19.2-23.2)	(15.6-19.9)
Sex						
Males	**35.8** (33.8-37.9)	**26.7** (24.7-28.8)	**18.4** (16.9-20.1)	**19.7** (17.7-21.9)	**19.3** (16.9-21.8)	**15.9** [b] (14.0-18.0)
Females	**45.7** (43.3-48.1)	**37.3** (35.2-39.3)	**24.5** (21.8-27.4)	**22.2** (20.6-24.0)	**23.1** (20.3-26.2)	**19.5** [b] (16.5-22.8)
Grade						
7	**33.4** (29.5-37.4)	**23.9** (20.7-27.3)	**12.5** (10.3-15.0)	**14.2** (11.5-17.3)	**13.6** (9.7-18.7)	**12.1** [b] (8.3-17.3)
8	**39.5** (35.7-43.4)	**28.7** (25.2-32.3)	**16.8** (14.4-19.7)	**16.5** (13.7-19.8)	**14.1** (10.6-18.6)	**12.0** [b] (7.7-18.4)
9	**44.6** (41.2-48.0)	**33.9** (30.1-38.0)	**19.5** (17.9-21.2)	**18.9** (16.0-22.2)	**17.9** (14.6-21.8)	**13.1** [b] (9.9-17.1)
10	**44.0** (40.7-47.4)	**33.6** (30.4-37.1)	**22.8** (19.4-26.6)	**23.7** (20.4-27.4)	**19.3** (16.1-23.0)	**20.0** [b] (16.1-24.5)
11	**41.0** (37.7-44.4)	**33.9** (30.1-38.0)	**24.1** (19.1-30.0)	**22.0** (18.8-25.5)	**28.2** (23.9-32.9)	**23.5** [b] (19.6-27.9)
12	**40.3** (36.9-43.8)	**34.1** (30.6-37.9)	**27.2** (24.2-30.3)	**25.1** (21.6-28.8)	**27.0** (22.4-32.2)	**22.5** [b] (19.3-26.1)
Region						
Greater Toronto Area	**39.2** (36.7-41.7)	**30.1** (27.8-32.5)	**19.0** (17.0-21.0)	**22.4** (20.2-24.7)	**18.1** (16.1-20.4)	**18.7** [b] (16.6-20.9)
North	**39.7** (35.7-43.9)	**31.1** (26.7-35.9)	**21.5** (19.0-24.3)	**17.7** (14.4-21.5)	**17.3** (14.0-21.1)	**17.6** [b] (13.7-22.2)
West	**42.1** (39.4-44.7)	**32.8** (29.8-36.0)	**24.7** (20.6-29.3)	**18.7** (16.3-21.3)	**24.9** (21.2-29.1)	**18.6** [ab] (15.9-21.6)
East	**41.7** (38.1-45.4)	**33.5** (31.0-36.1)	**22.0** (19.1-25.4)	**22.1** (20.3-24.1)	**24.5** (18.4-31.9)	**14.6** [b] (9.4-22.1)

Notes: (1) n=total number of students surveyed; (2) asked of a random half sample in 2015 and 2017; (3) entries in brackets are 95% confidence intervals; (4) [a] 2017 vs. 2015 significant difference, p<.01; [b] 2017 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, Dilaudid, OxyNeo, 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, 2001–2017 OSDUHS (Grades 9–12)

	2001	2003	2005	2007	2009	2011	2013	2015	2017
(n=)	(1278)	(2455)	(3069)	(2587)	(3055)	(3358)	(3264)	(3426)	(4298)
Total	**3.0**	**4.7**	**4.3**	**4.6**	**3.8**	**3.9**	**5.5**	**5.6**	**5.2**
(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)	(4.2-6.6)
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)	**3.0** (2.0-4.4)
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** (6.4-10.9)	**7.6** (5.9-9.8)
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)	**4.5** (3.2-6.4)
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)	**2.6** (1.7-3.9)
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)	**4.4** (3.0-6.6)	†	**6.6** (4.6-9.5)	**5.8** (3.6-9.4)	**4.0** (2.6-6.2)
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)	**7.4** (4.9-11.0)	**8.6** (6.1-12.0)
Region									
GTA	**3.0** (1.5-5.7)	**4.2** (2.8-6.1)	**4.2** (3.0-5.7)	**4.2** (2.9-6.1)	**3.5** (2.6-4.7)	**2.5** (1.6-3.8)	**5.4** (3.7-7.8)	**4.3** (3.3-5.4)	**3.3** (2.3-4.6)
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)	†	**6.5** (3.8-11.0)	**11.6** [b] (9.1-14.8)
West	†	**4.6** (2.6-8.2)	**4.7** (2.8-7.9)	**5.3** (3.2-8.7)	**3.7** (2.5-5.4)	**5.5** (3.8-7.8)	**4.5** (2.6-7.7)	**6.1** (4.4-8.5)	**7.7** (5.8-10.2)
East	†	**6.3** (4.4-8.9)	**4.5** (2.9-6.9)	**4.8** (3.0-7.7)	**4.3** (2.4-7.6)	**4.3** (1.9-9.5)	**6.6** (4.3-9.9)	**7.4** (3.8-14.1)	**6.1** (3.6-10.3)

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) GTA=Greater Toronto Area; (6) no significant differences 2017 vs. 2015; [b] 2017 vs. 2001 significant difference, 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, 2011–2017 OSDUHS (Grades 7–12)

	2011	2013	2015	2017
(n=)	(4816)	(5478)	(5403)	(6364)
Total	**2.1**	**3.0**	**3.0**	**3.4**
(95% CI)	(1.6-2.9)	(2.4-3.7)	(2.3-3.7)	(2.3-5.1)
Sex				
Males	**1.7** (1.1-2.7)	**1.8** (1.2-2.7)	**1.8** (1.2-2.6)	**2.1** (1.3-3.4)
Females	**2.5** (1.8-3.7)	**4.2** (3.3-5.5)	**4.2** (3.2-5.6)	**4.8** (3.0-7.5)
Grade				
7	†	**2.3** (1.2-4.4)	**1.1** (0.6-2.1)	**2.1** (1.2-3.5)
8	**1.8** (1.0-3.3)	**3.1** (1.9-5.0)	**3.2** (1.7-6.1)	**2.8** (1.8-4.4)
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)	**3.9** (2.2-6.8)
11	†	**4.5** (2.8-7.0)	**4.5** (3.2-6.2)	**1.6** (0.9-2.6)
12	**1.3** (0.8-2.4)	**3.1** (1.9-5.2)	**2.1** (1.2-3.6)	**4.3** (2.3-7.8)
Region				
Greater Toronto Area	**2.3** (1.6-3.4)	**3.8** (2.8-5.1)	**3.7** (2.7-5.0)	†
North	**2.8** (1.6-5.0)	†	**3.4** (2.1-5.4)	**3.9** (2.3-6.5)
West	†	**1.9** (1.0-3.4)	**2.4** (1.3-4.5)	**3.6** (2.2-6.0)
East	**3.1** (1.9-5.0)	**3.2** (2.4-4.4)	**2.0** (1.5-2.7)	**2.3** (1.3-4.0)

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, 2013–2017 OSDUHS (Grades 7–12)

	2013	2015	2017
(n=)	(5478)	(5403)	(6364)
Total	**27.9**	**28.4**	**31.2**
(95% CI)	(25.8-30.1)	(26.1-30.9)	(27.5-35.2)
Sex			
Males	**19.0**	**18.6**	**20.9**
	(16.4-21.8)	(16.2-21.3)	(17.2-25.2)
Females	**37.5**	**39.0**	**42.2**
	(34.9-40.2)	(35.8-42.3)	(38.4-46.1)
Grade			
7	**25.5**	**17.6**	**25.5**
	(21.7-29.8)	(11.5-26.0)	(21.1-30.5)
8	**26.4**	**28.7**	**24.0**
	(21.2-32.4)	(23.4-34.5)	(21.0-27.4)
9	**29.0**	**24.6**	**30.7**
	(24.7-33.6)	(20.6-29.1)	(22.8-40.1)
10	**27.8**	**33.5**	**29.5**
	(23.2-32.8)	(28.4-38.9)	(24.8-34.8)
11	**29.4**	**32.6**	**32.9**
	(24.8-34.4)	(27.5-38.2)	(27.1-39.4)
12	**28.1**	**30.9**	**38.3**
	(23.7-33.1)	(27.2-34.9)	(32.1-45.0)
Region			
Greater Toronto Area	**29.3**	**28.4**	**32.2**
	(26.2-32.5)	(25.8-31.1)	(26.2-38.8)
North	**25.7**	**27.5**	**26.4**
	(21.1-30.9)	(24.3-30.9)	(22.9-30.3)
West	**26.9**	**28.1**	**31.7**
	(22.1-32.4)	(24.7-31.8)	(28.3-35.4)
East	**27.3**	**29.1**	**29.2**
	(25.2-29.5)	(21.1-38.7)	(21.1-39.0)

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 changes over time.
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, 2007–2017 OSDUHS (Grades 7–12)

	2007	2009	2011	2013	2015	2017
(n=)	(3388)	(4851)	(4816)	(5478)	(5403)	(6364)
Total	**11.4**	**11.7**	**13.7**	**15.3**	**16.5**	**18.8** [bc]
(95% CI)	(10.0-12.9)	(10.3-13.2)	(12.0-15.7)	(13.5-17.4)	(14.5-18.9)	(17.2-20.5)
Sex						
Males	**7.1** (5.7-8.8)	**8.4** (6.9-10.3)	**9.4** (7.7-11.3)	**10.5** (8.8-12.6)	**10.3** (8.4-12.6)	**11.9** [b] (9.9-14.2)
Females	**15.8** (13.7-18.2)	**15.0** (13.2-17.0)	**18.2** (15.1-21.7)	**20.5** (18.1-23.2)	**23.2** (20.2-26.6)	**26.2** [b] (23.7-28.9)
Grade						
7	**6.1** (4.0-9.2)	**6.9** (4.5-10.4)	**7.7** (4.9-11.7)	**8.8** (6.5-11.9)	**7.7** (4.7-12.4)	**8.9** (6.8-11.5)
8	**9.1** (6.5-12.5)	**9.1** (6.4-12.7)	**10.1** (7.3-13.8)	**13.8** (11.0-17.2)	**13.4** (8.3-21.0)	**11.4** (8.7-14.8)
9	**12.4** (9.6-15.9)	**12.6** (9.6-16.1)	**12.6** (9.7-16.3)	**16.4** (12.9-20.6)	**14.2** (11.4-17.7)	**17.5** (13.8-21.9)
10	**12.3** (9.2-16.3)	**10.9** (8.3-14.3)	**17.3** (13.5-21.8)	**16.5** (12.1-22.2)	**18.8** (16.0-22.0)	**21.8** [b] (19.0-24.9)
11	**12.5** (9.7-16.0)	**13.2** (10.5-16.4)	**14.7** (11.8-18.2)	**18.1** (14.4-22.6)	**23.2** (19.2-27.8)	**20.0** (13.8-28.0)
12	**14.5** (11.3-18.4)	**15.1** (12.0-18.8)	**16.5** (13.2-20.3)	**15.7** (12.2-20.0)	**18.9** (15.3-23.2)	**26.0** [b] (22.1-30.5)
Region						
Greater Toronto Area	**11.0** (9.0-13.4)	**12.6** (10.5-15.0)	**13.4** (11.8-15.2)	**16.7** (14.0-19.7)	**15.2** (13.0-17.8)	**16.9** [b] (15.0-19.0)
North	**14.6** (10.7-19.7)	**12.4** (9.4-16.0)	**14.2** (10.6-18.9)	**12.2** (8.9-16.4)	**20.0** (16.6-23.9)	**22.6** [b] (18.6-27.1)
West	**11.8** (9.3-15.0)	**12.6** (10.1-15.6)	**13.6** (8.9-20.3)	**14.4** (11.1-18.4)	**18.5** (14.6-23.0)	**23.2** [b] (20.4-26.1)
East	**10.8** (7.8-14.6)	**9.0** (6.5-12.3)	**14.4** (12.3-16.7)	**15.0** (11.0-20.3)	**16.1** (10.3-24.4)	**17.7** (13.0-23.5)

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, 2017 vs. 2015; [b] 2017 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 Reporting Low Self-Esteem, 2015–2017 OSDUHS (Grades 7–12)

	2015 (n=5403)	2017 (n=6364)
Total	**7.0**	**6.5**
(95% CI)	(5.7-8.5)	(5.5-7.7)
Sex		
Males	**4.7** (3.4-6.4)	**4.5** (3.5-5.7)
Females	**9.5** (7.8-11.4)	**8.6** (6.9-10.8)
Grade		
7	**2.1** (1.3-3.5)	**4.8** (3.0-7.4)
8	**†**	**4.2** (2.9-6.0)
9	**6.8** (4.7-9.7)	**7.7** (5.5-10.6)
10	**6.6** (4.6-9.3)	**6.8** (4.8-9.6)
11	**10.0** (7.9-12.6)	**6.6** (3.9-11.0)
12	**5.9** (4.3-8.2)	**7.4** (5.2-10.5)
Region		
Greater Toronto Area	**6.2** (4.9-7.8)	**5.9** (4.6-7.6)
North	**7.5** (5.4-10.4)	**5.0** (3.7-6.8)
West	**9.0** (6.5-12.3)	**8.9** (6.7-11.9)
East	**†**	**5.4** (3.4-8.4)

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 differences, 2017 vs. 2015.
Q: "How much do you agree or disagree with the following statement: On the whole, I am satisfied with myself." Low self-esteem is defined here as responding "strongly disagree."
Source: OSDUHS, Centre for Addiction and Mental Health

Table A3.4.3 Percentage Reporting Elevated Stress Experienced in the Past Month, 2015–2017 OSDUHS (Grades 7–12)

	2015 (n=5403)	2017 (n=6364)
Total	**28.7**	**30.4**
(95% CI)	(26.1-31.4)	(27.7-33.3)
Sex		
Males	**19.8** (17.1-22.8)	**20.0** (17.4-22.9)
Females	**38.2** (34.8-41.6)	**41.5** (35.7-47.6)
Grade		
7	**10.9** (5.9-19.1)	**14.9** (12.2-18.1)
8	**16.2** (12.6-20.7)	**17.1** (13.2-21.8)
9	**20.0** (16.7-23.7)	**25.3** (20.0-31.5)
10	**32.8** (28.7-37.1)	**35.5** (30.3-41.1)
11	**39.5** (34.9-44.4)	**40.9** (33.7-48.4)
12	**42.2** (37.0-47.6)	**37.8** (32.9-42.9)
Region		
Greater Toronto Area	**30.2** (26.8-33.9)	**30.9** (26.7-35.4)
North	**29.3** (24.8-34.2)	**32.3** (24.8-40.8)
West	**27.3** (22.6-32.6)	**31.1** (27.8-34.7)
East	**26.9** (19.5-35.8)	**27.7** (21.3-35.1)

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, 2017 vs. 2015.
Q: "In the last 4 weeks, did you feel that you were under any stress, strain, or pressure?" Elevated stress is defined here as responding "Yes, a lot" or "Yes, almost more than I could take."
Source: OSDUHS, Centre for Addiction and Mental Health

Table A3.4.4 Percentage Reporting Symptoms on the *Kessler Psychological Distress Scale* (K6), 2013–2017 OSDUHS (Grades 7–12)

K6 Symptom	**2013** (n=5478)	**2015** (n=5403)	**2017** (n=6364)
1. Felt nervous	10.5	15.0	20.6 [ab]
2. Felt hopeless	8.0	8.3	11.6 [b]
3. Felt restless or fidgety	11.6	16.6	19.9 [b]
4. Felt so depressed (sad) nothing could cheer you up	6.2	8.6	11.5 [ab]
5. Felt that everything was an effort	12.9	17.2	17.7 [b]
6. Felt worthless	9.2	10.1	12.0

Notes: (1) entries show the percentage who experienced the symptom "most of the time" or "all of the time" in the past 4 weeks; (3) n=total number of students surveyed; (4) asked of a random half sample in each year; (5) [a] 2017 vs. 2015 significant difference, p<.01; [b] 2017 vs. 2013 significant difference, p<.01.
Source: OSDUHS, Centre for Addiction and Mental Health

Table A3.4.5 Percentage Indicating Moderate-to-Serious Psychological Distress (8+ on the K6 Scale), 2013–2017 OSDUHS (Grades 7–12)

	(n=)	2013 (5478)	2015 (5403)	2017 (6364)
Total		**23.5**	**34.0**	**38.7** [bc]
(95% CI)		(21.4-25.8)	(31.5-36.7)	(34.9-42.6)
Sex				
Males		**15.5** (13.3-18.0)	**22.7** (19.9-25.8)	**26.8** [b] (24.0-29.8)
Females		**32.1** (29.2-35.2)	**45.9** (42.9-49.0)	**51.3** [b] (46.1-56.4)
Grade				
7		**12.6** (9.3-16.8)	**18.7** (14.0-24.5)	**24.9** [b] (20.8-29.5)
8		**22.4** (17.8-27.8)	**30.7** (24.6-37.5)	**32.8** [b] (28.5-37.4)
9		**24.0** (20.3-28.2)	**27.6** (23.4-32.2)	**31.2** (25.1-38.0)
10		**25.8** (21.2-30.9)	**37.2** (33.1-41.4)	**39.9** [b] (33.5-46.7)
11		**27.5** (22.5-33.1)	**42.4** (37.4-47.5)	**46.8** [b] (37.9-56.0)
12		**24.4** (19.6-30.0)	**40.8** (36.5-45.3)	**47.0** [b] (41.2-52.7)
Region				
Greater Toronto Area		**26.0** (22.9-29.4)	**34.7** (30.9-38.8)	**40.2** [b] (34.4-46.3)
North		**18.9** (14.6-24.2)	**35.9** (31.8-40.2)	**36.5** [b] (32.0-41.3)
West		**21.2** (16.8-26.5)	**33.0** (28.7-37.7)	**39.2** [b] (35.3-43.2)
East		**23.4** (20.0-27.3)	**33.2** (27.1-39.9)	**34.3** [b] (26.1-43.6)

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); (2) the reference period is the past 4 weeks; (3) n=total number of students surveyed; (4) asked of a random half sample in each year; (5) entries in brackets are 95% confidence intervals; (6) no significant differences, 2017 vs. 2015; [b] 2017 vs. 2013 significant difference, p<.01; [c] significant linear trend, p<.01.

Source: OSDUHS, Centre for Addiction and Mental Health

Table A3.4.6 Percentage Indicating Serious Psychological Distress (13+ on the K6 Scale), 2013–2017 OSDUHS (Grades 7–12)

	(n=)	2013 (5478)	2015 (5403)	2017 (6364)
Total		**10.7**	**14.2**	**17.1** [bc]
(95% CI)		(9.4-12.1)	(12.5-16.0)	(14.9-19.4)
Sex				
Males		**5.8**	**7.0**	**9.1** [b]
		(4.5-7.4)	(5.7-8.7)	(7.1-11.6)
Females		**15.9**	**21.7**	**25.5** [b]
		(14.0-18.0)	(19.0-24.6)	(22.8-28.4)
Grade				
7		**5.0**	**6.4**	**9.4**
		(3.0-8.2)	(4.0-10.1)	(7.1-12.3)
8		**9.8**	**11.7**	**12.0**
		(6.8-14.0)	(7.4-18.2)	(9.2-15.6)
9		**13.4**	**11.1**	**15.0**
		(10.7-16.7)	(8.4-14.5)	(10.1-21.7)
10		**11.5**	**14.6**	**17.9** [b]
		(8.6-15.1)	(12.1-17.4)	(14.7-21.6)
11		**11.0**	**19.1**	**19.8** [b]
		(8.1-14.9)	(15.9-22.6)	(16.2-24.0)
12		**11.0**	**18.3**	**22.4** [b]
		(8.3-14.5)	(14.8-22.5)	(16.0-30.4)
Region				
Greater Toronto Area		**12.5**	**14.0**	**17.4** [b]
		(10.3-15.0)	(12.0-16.3)	(14.1-21.4)
North		**8.8**	**15.2**	**16.6** [b]
		(6.3-12.0)	(12.7-18.0)	(13.6-20.1)
West		**9.3**	**14.0**	**18.7** [b]
		(7.1-12.1)	(11.5-17.0)	(16.0-21.7)
East		**9.6**	**14.4**	**14.0**
		(8.1-11.4)	(9.5-21.3)	(10.0-19.3)

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); (2) the reference period is the past 4 weeks; (3) n=total number of students surveyed; (4) asked of a random half sample since in each year; (5) entries in brackets are 95% confidence intervals; (6) no significant differences, 2017 vs. 2015; [b] 2017 vs. 2013 significant difference, p<.01; [c] significant linear trend, p<.01.

Source: OSDUHS, Centre for Addiction and Mental Health

Table A3.4.7 Percentage Reporting Suicidal Ideation in the Past Year, 2001–2017 OSDUHS (Grades 7–12)

(n=)	2001 (2061)	2003 (3464)	2005 (4078)	2007 (3388)	2009 (4851)	2011 (4816)	2013 (5478)	2015 (5403)	2017 (6364)
Total	**11.4**	**12.5**	**11.2**	**9.8**	**9.5**	**10.3**	**13.4**	**12.4**	**13.6** [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)	(12.4-15.0)
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)	**8.5** (6.3-11.4)
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)	**19.0** (16.7-21.6)
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)	**8.9** (6.7-11.8)
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)	**11.7** (8.6-15.8)
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)	**14.7** (11.0-19.2)
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)	**14.3** (12.0-16.9)
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)	**11.0** (6.8-17.2)
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)	**17.5** (14.1-21.5)
Region									
GTA	**12.0** (8.7-16.2)	**12.3** (9.8-15.3)	**10.2** (8.2-12.7)	**9.2** (7.6-11.1)	**11.0** (8.8-13.7)	**9.2** (7.7-11.1)	**13.8** (11.1-16.9)	**11.6** (9.9-13.6)	**14.2** (12.9-15.6)
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)	**12.4** (9.9-15.3)
West	**10.1** (7.1-14.2)	**13.5** (10.5-17.2)	**14.7** (12.6-17.0)	**10.4** (8.1-13.3)	**8.7** (6.6-11.4)	**11.8** (9.1-15.3)	**13.4** (10.8-16.4)	**13.2** (11.2-15.6)	**14.8** (11.9-18.3)
East	**11.9** (7.9-17.6)	**11.7** (9.7-14.1)	**9.6** (7.6-12.1)	**9.7** (7.2-13.0)	**8.1** (6.4-10.0)	**11.1** (8.9-13.7)	**13.1** (10.4-16.4)	**12.7** (8.3-18.9)	**11.1** (7.7-15.8)

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) GTA=Greater Toronto Area; (5) no significant differences 2017 vs. 2015; [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 A3.4.8 Percentage Reporting a Suicide Attempt in the Past Year, 2007–2017 OSDUHS (Grades 7–12)

	2007	2009	2011	2013	2015	2017
(n=)	(3388)	(4851)	(4816)	(5478)	(5403)	(6364)
Total	**3.3**	**2.8**	**2.8**	**3.5**	**3.0**	**3.9**
(95% CI)	(2.6-4.2)	(2.2-3.4)	(2.1-3.6)	(2.8-4.3)	(2.2-3.9)	(3.0-4.9)
Sex						
Males	**1.8** (1.2-2.6)	**2.5** (1.7-3.6)	**1.6** (1.0-2.6)	**2.0** (1.4-3.0)	**1.5** (1.0-2.4)	**2.5** (1.8-3.5)
Females	**4.9** (3.8-6.4)	**3.1** (2.3-4.1)	**4.0** (2.9-5.3)	**5.0** (3.8-6.5)	**4.5** (3.1-6.4)	**5.3** (3.7-7.6)
Grade						
7	**2.7** (1.4-5.1)	†	†	†	†	†
8	**3.0** (1.8-5.1)	**2.5** (1.4-4.6)	†	**2.6** (1.6-4.2)	†	**2.9** (1.6-5.2)
9	**3.2** (2.0-5.0)	**3.4** (2.0-5.8)	**2.5** (1.3-4.7)	**4.2** (2.5-6.9)	**1.9** (1.1-3.3)	**4.4** (2.8-6.8)
10	**5.5** (3.7-8.2)	**2.6** (1.6-4.0)	**3.7** (2.2-6.3)	**4.0** (2.3-6.9)	**3.0** (1.9-4.7)	**4.9** (3.3-7.2)
11	**3.1** (2.0-4.7)	**3.1** (2.0-4.8)	**2.3** (1.2-4.4)	**4.3** (2.7-6.6)	**5.3** (3.3-8.5)	**1.9** (1.1-3.2)
12	**2.5** (1.4-4.6)	**3.4** (1.7-6.4)	**3.8** (2.1-6.5)	**2.8** (1.6-4.9)	**2.5** (1.3-4.8)	**5.4** (3.1-9.1)
Region						
Greater Toronto Area	**3.3** (2.1-5.2)	**2.4** (1.6-3.7)	**1.9** (1.2-2.9)	**3.1** (2.3-4.1)	**2.4** (1.6-3.5)	**4.0** (2.8-5.7)
North	**3.8** (2.2-6.3)	†	†	**4.7** (2.6-8.4)	**3.5** (2.5-4.7)	**4.9** (3.2-7.5)
West	**3.0** (1.9-4.6)	**2.1** (1.3-3.4)	**3.8** (2.8-5.2)	**3.5** (2.1-5.9)	**4.1** (2.5-6.6)	**3.9** (2.6-5.9)
East	**3.6** (2.5-5.2)	**4.6** (3.2-6.5)	**3.5** (2.2-5.7)	**3.6** (2.7-4.9)	†	**3.1** (1.7-5.6)

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 A3.4.9 Percentage Reporting Symptoms on the *ADHD Self-Report Scale* (ASRS), 2015–2017 OSDUHS (Grades 7–12)

ASRS Symptom	**2015** (n=5403)	**2017** (n=6364)
1. Had trouble wrapping up the final details of a project, once the challenging parts were done	12.6	14.5
2. Had difficulty getting things in order when had to do a task that required organization	11.8	16.9 [a]
3. Had problems remembering appointments or obligations	12.2	14.2
4. Avoided or delayed starting a task that required a lot of thought	25.6	25.1
5. Fidgeted or squirmed with hands or feet when had to sit down for a long time	38.3	44.4 [a]
6. Felt overly active and compelled to do things, like driven by a motor	15.5	16.1

Notes: (1) Attention Deficit/Hyperactivity Disorder (ADHD) symptoms were measured with the six-item *ADHD Self-Report Scale* (ASRS); (2) entries show the percentage who experienced the symptom "often" or "very often" in the past 6 months; (3) n=total number of students surveyed; (4) asked of a random half sample in each year; (5) [a] 2017 vs. 2015 significant difference, p<.01.
Source: OSDUHS, Centre for Addiction and Mental Health

Table A3.4.10 Percentage Reporting ADHD Symptoms (ASRS 14+) in the Past Six Months, 2015–2017 OSDUHS (Grades 7–12)

	2015 (n=5403)	2017 (n=6364)
Total	**15.8**	**20.1** [a]
(95% CI)	(14.0-17.6)	(18.2-22.2)
Sex		
Males	**13.6** (11.6-15.8)	**16.5** (14.2-19.0)
Females	**18.1** (15.8-20.6)	**24.0** [a] (21.7-26.5)
Grade		
7	**8.2** (5.9-11.3)	**16.2** (10.2-24.9)
8	**10.9** (6.6-17.6)	**12.7** (9.8-16.2)
9	**14.8** (12.2-17.9)	**17.3** (12.2-24.0)
10	**16.7** (13.1-21.0)	**19.9** (16.5-23.9)
11	**22.0** (18.3-26.2)	**24.0** (20.3-28.0)
12	**18.6** (14.8-23.1)	**25.1** (21.0-30.0)
Region		
Greater Toronto Area	**16.5** (14.1-19.1)	**20.4** (18.3-22.8)
North	**13.9** (11.2-17.1)	**16.5** (12.5-21.6)
West	**15.6** (12.3-19.6)	**19.5** (15.8-23.8)
East	**14.9** (11.2-19.6)	**21.4** (15.2-29.2)

Notes: (1) Attention Deficit/Hyperactivity Disorder (ADHD) symptoms were measured with the six-item *ADHD Self-Report Scale* (ASRS) and a score of 14 or higher out of 24 was the threshold used; (2) n=total number of students surveyed; (3) asked of a random half sample in each year; (4) entries in brackets are 95% confidence intervals; (5) [a] 2017 vs. 2015 significant difference, p<.01.

Source: OSDUHS, Centre for Addiction and Mental Health

Table A3.5.1a Percentage Reporting Antisocial Behaviours at Least Once in the Past Year, 1999–2017 OSDUHS (Grades 7–12)

	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017
TOTAL SAMPLE (n=)	(2148)	(2061)	(3464)	(4078)	(3388)	(4851)	(4816)	(5478)	(5403)	(6364)
fire setting	—	—	—	—	15.9	14.5	10.8	10.4	8.9	8.1 [bc]
ran away from home	8.4	7.4	10.2	9.2	9.7	9.6	10.5	9.7	7.8	10.9
theft of goods worth $50/less	17.3	14.1	14.7	14.7	14.0	14.1	9.7	8.9	7.7	9.5 [bc]
vandalism	24.1	16.3	15.1	15.3	15.8	13.5	9.8	8.3	7.9	7.8 [bc]
assault	19.9	12.8	11.5	11.7	10.6	9.8	8.7	6.4	5.4	5.4 [bcd]
carried a weapon	13.5	10.6	9.6	9.6	8.7	7.3	4.6	6.0	5.1	5.7 [bc]
sold marijuana or hashish	7.8	10.1	8.3	7.6	6.8	6.4	5.2	5.6	4.2	3.7 [bc]
car theft/joyriding	10.2	9.1	9.3	7.8	7.2	6.9	6.0	4.8	4.1	4.0 [bc]
theft of goods worth > $50	6.6	5.8	5.3	5.5	5.1	5.2	3.8	4.1	2.3	3.1 [bc]
break and entering	6.4	5.0	4.4	4.7	4.6	4.4	4.4	3.3	3.3	5.0 [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	**16.0**	**13.0**	**12.8**	**11.8**	**12.1**	**10.4**	**8.0**	**7.1**	**5.2**	**6.9** [bc]
(95% CI)	(14.0-18.2)	(11.4-14.8)	(11.4-14.4)	(10.4-13.4)	(10.8-13.5)	(9.0-11.8)	(6.9-9.3)	(5.8-8.8)	(4.2-6.4)	(5.8-8.1)
MALES	(1101)	(1018)	(1654)	(1934)	(1618)	(2286)	(2218)	(2469)	(2496)	(2754)
fire setting	—	—	—	—	19.6	19.5	14.4	13.4	11.1	10.1 [b]
ran away from home	5.6	7.4	7.9	7.4	6.6	8.0	7.4	8.2	6.5	10.1
theft of goods worth $50/less	20.9	17.5	17.9	16.5	16.2	17.1	10.8	10.8	7.6	11.0 [b]
vandalism	29.3	21.2	18.2	18.0	19.1	16.4	10.4	9.6	9.6	10.3 [b]
assault	29.4	17.1	14.4	15.9	14.3	12.9	11.0	8.7	6.7	7.1 [b]
carried a weapon	21.5	17.0	14.9	14.9	13.2	11.4	7.6	9.1	7.8	8.6 [b]
sold marijuana or hashish	11.1	13.8	11.9	9.8	9.0	8.6	7.4	8.4	5.3	5.4 [b]
car theft/joyriding	12.5	12.5	12.7	8.8	8.3	9.1	7.2	5.6	5.4	5.3 [b]
theft of goods worth > $50	9.1	8.2	8.0	6.7	6.2	6.6	4.4	5.4	2.7	3.8 [b]
break and entering	9.6	6.5	6.7	6.0	5.5	5.8	5.4	4.4	4.2	6.6 [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	**22.7**	**17.5**	**16.8**	**14.7**	**14.5**	**13.6**	**9.2**	**9.5**	**6.4**	**8.7** [b]
(95% CI)	(19.7-26.0)	(15.1-20.3)	(14.8-19.0)	(12.5-17.2)	(12.5-16.7)	(11.5-16.1)	(7.3-11.6)	(7.5-12.0)	(5.0-8.0)	(6.9-10.9)

(cont'd)

	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017
FEMALES	(1047)	(1043)	(1810)	(2144)	(1770)	(2565)	(2598)	(3009)	(2907)	(3610)
fire setting	—	—	—	—	12.2	9.4	7.2	7.2	6.7	6.1 [b]
ran away from home	11.2	7.4	12.3	11.0	13.0	11.4	13.7	11.3	9.1	11.8
theft of goods worth $50/less	13.7	10.9	11.8	12.9	11.8	11.1	8.7	6.8	7.7	7.8 [b]
vandalism	18.9	11.6	12.3	12.4	12.6	10.5	9.2	6.9	6.1	5.2 [b]
assault	10.4	8.6	8.9	7.2	6.8	6.7	6.3	3.8	4.1	3.6 [b]
carried a weapon	5.5	4.5	4.9	4.0	4.2	3.2	1.6	2.7	2.3	2.7 [b]
sold marijuana or hashish	4.4	6.5	5.1	5.3	4.5	4.2	3.0	2.6	3.1	1.9
car theft/joyriding	7.8	5.9	6.3	6.7	6.0	4.7	4.9	4.0	2.6	2.7 [b]
theft of goods worth > $50	4.0	3.4	2.9	4.3	4.0	3.8	3.2	5.4	2.0	2.4
break and entering	3.2	3.5	2.4	3.3	3.7	3.0	3.4	2.0	2.3	2.9
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)	**5.0** [b] (3.6-6.7)
GRADE 7	(369)	(404)	(497)	(508)	(383)	(883)	(728)	(1126)	(964)	(976)
fire setting	—	—	—	—	6.1	8.0	5.6	10.2	4.7	6.9
ran away from home	7.4	7.2	9.7	7.4	5.0	6.3	7.3	4.7	†	10.1
theft of goods worth $50/less	9.3	8.1	9.9	7.7	6.0	6.1	3.8	3.3	2.7	6.0
vandalism	18.9	10.3	14.7	9.6	6.7	7.5	5.0	5.0	†	6.3 [b]
assault	17.1	13.5	11.1	8.6	8.1	7.6	7.2	5.2	4.6	6.2 [b]
carried a weapon	7.8	5.4	9.9	4.4	4.8	4.5	3.1	2.6	3.8	4.5
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)	**†**	**4.2** (2.2-7.9)
GRADE 8	(391)	(379)	(512)	(501)	(418)	(913)	(730)	(1088)	(1013)	(1090)
fire setting	—	—	—	—	15.3	11.0	7.9	10.7	9.2	7.3 [b]
ran away from home	9.2	9.7	9.5	9.8	9.2	9.2	7.5	6.6	8.7	8.6
theft of goods worth $50/less	15.6	14.3	13.3	11.1	10.5	7.6	5.3	5.0	5.4	10.5
vandalism	26.0	19.5	12.6	15.6	16.6	11.1	5.6	9.1	8.2	9.2 [b]
assault	24.8	15.5	12.3	13.6	12.1	7.4	8.8	6.9	5.9	9.8 [b]
carried a weapon	15.2	9.6	6.6	8.6	10.2	6.4	6.0	8.2	4.3	3.9 [b]
sold marijuana or hashish	4.0	4.4	3.8	3.6	†	1.9	†	†	†	†

	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017
car theft/ joyriding	4.3	4.4	2.2	3.1	†	2.7	†	†	†	†
theft of goods worth > $50	4.8	5.5	2.3	3.8	2.2	2.8	†	†	†	2.2
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)	**6.6** [b] (3.8-11.2)
GRADE 9	(442)	(368)	(654)	(780)	(660)	(753)	(879)	(815)	(904)	(1236)
fire setting	—	—	—	—	23.8	15.7	13.1	11.1	9.6	9.5 [b]
ran away from home	7.8	6.9	9.6	10.8	11.9	13.1	8.4	9.4	7.1	10.1
theft of goods worth $50/less	16.9	15.4	13.7	16.4	17.8	13.7	7.2	6.6	7.9	7.7 [b]
vandalism	26.8	17.4	16.1	16.6	21.8	13.7	8.8	7.6	7.2	8.4 [b]
assault	22.6	13.4	11.0	12.9	11.7	9.6	7.7	5.3	4.0	6.8 [b]
carried a weapon	13.4	12.6	12.2	11.5	11.3	7.7	3.7	6.4	4.5	5.5 [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	3.1
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)	**4.5** [b] (2.8-7.2)
GRADE 10	(296)	(422)	(622)	(742)	(577)	(814)	(825)	(816)	(920)	(1119)
fire setting	—	—	—	—	18.8	19.1	9.8	13.0	10.6	10.8 [b]
ran away from home	10.6	7.7	11.6	10.8	11.1	9.8	12.2	10.8	7.8	13.3
theft of goods worth $50/less	24.8	16.6	17.5	17.1	15.6	17.8	11.3	10.9	10.5	10.5 [b]
vandalism	34.2	20.0	16.3	17.3	17.0	17.6	14.4	11.7	8.4	8.7 [b]
assault	23.5	13.5	10.1	14.4	10.4	11.6	7.3	5.7	6.3	4.6 [b]
carried a weapon	18.3	15.9	8.6	12.6	8.6	10.0	4.6	8.6	5.6	6.7 [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	3.8
break and entering	8.1	6.7	4.8	7.5	6.1	5.2	4.2	5.0	3.5	6.4
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	**24.4**	**16.5**	**16.2**	**14.2**	**13.3**	**13.4**	**8.9**	**10.1**	**6.6**	**8.4** [b]

	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017
(95% CI)	(18.6-31.4)	(12.9-20.9)	(12.6-20.5)	(11.0-18.3)	(10.7-16.5)	(10.8-16.4)	(5.8-13.3)	(6.5-15.3)	(4.8-8.9)	(6.2-11.2)
GRADE 11	(357)	(288)	(620)	(819)	(684)	(719)	(808)	(837)	(791)	(960)
fire setting	—	—	—	—	18.8	17.9	12.5	10.0	8.3	6.6 [b]
ran away from home	9.8	7.1	12.6	9.9	11.3	10.0	17.0	12.7	9.8	11.0
theft of goods worth $50/less	20.1	14.0	18.2	19.5	18.0	18.1	18.0	11.6	8.7	9.0 [b]
vandalism	21.4	16.0	16.6	19.3	18.1	15.2	10.7	7.7	7.9	7.7 [b]
assault	20.1	9.5	15.1	11.0	11.9	9.7	10.1	6.0	5.2	3.8 [b]
carried a weapon	16.2	8.5	11.8	11.3	10.1	5.9	6.8	5.7	4.6	6.5 [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	5.3 [b]
theft of goods worth > $50	9.2	5.1	9.1	7.5	7.7	7.5	8.0	7.3	2.7	3.6
break and entering	10.4	7.2	6.4	4.6	6.6	4.4	6.1	4.1	4.3	5.6 [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	**19.7**	**14.4**	**16.6**	**16.2**	**17.0**	**13.0**	**13.1**	**8.6**	**6.2**	**7.6** [b]
(95% CI)	(15.0-25.4)	(10.2-20.0)	(13.1-20.9)	(13.4-19.4)	(13.4-21.2)	(9.2-18.2)	(10.2-16.7)	(6.2-11.7)	(4.6-8.5)	(4.5-12.9)
GRADE 12	(293)	(200)	(559)	(728)	(666)	(769)	(846)	(796)	(811)	(983)
fire setting	—	—	—	—	12.2	14.4	12.8	8.4	10.0	7.4
ran away from home	5.6	5.6	7.5	6.5	9.4	9.1	9.3	10.9	7.7	11.4
theft of goods worth $50/less	18.0	15.9	14.0	16.2	14.9	18.4	9.7	11.7	9.1	11.5 [b]
vandalism	16.7	11.9	13.3	13.2	14.0	14.4	11.4	7.9	8.8	7.0 [b]
assault	9.0	9.6	9.0	9.5	9.5	11.8	10.0	6.1	6.1	3.5 [b]
carried a weapon	9.6	8.3	8.0	8.7	7.1	8.7	3.5	4.6	6.9	5.8
sold marijuana or hashish	10.0	15.5	11.6	10.3	10.0	9.2	9.9	8.6	8.1	8.2
car theft/joyriding	12.9	14.4	11.4	12.6	12.0	12.8	14.1	9.1	7.8	7.6
theft of goods worth > $50	7.5	7.1	5.4	6.8	6.1	7.9	4.1	6.3	3.7	3.9
break and entering	5.5	4.0	4.3	2.8	5.1	7.0	6.7	4.8	4.3	6.5
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	**14.3**	**13.4**	**12.0**	**12.2**	**12.3**	**14.6**	**10.2**	**9.1**	**7.3**	**8.3**
(95% CI)	(9.5-21.0)	(7.9-21.8)	(9.2-15.7)	(9.6-15.3)	(9.5-15.8)	(11.1-18.8)	(7.1-14.4)	(5.4-14.9)	(4.3-12.1)	(6.4-10.7)

	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017
GREATER TORONTO AREA	(980)	(667)	(1360)	(1630)	(1174)	(1570)	(1859)	(2420)	(2131)	(2656)
fire setting	—	—	—	—	16.4	13.6	10.5	10.8	8.4	8.6 [b]
ran away from home	8.4	6.0	9.5	7.7	9.4	9.1	9.1	7.8	6.4	12.5
theft of goods worth $50/less	17.8	14.9	16.0	15.1	16.4	14.3	10.5	10.5	7.8	10.7 [b]
vandalism	23.7	17.0	17.9	14.4	17.4	12.7	10.0	8.2	8.4	10.0 [b]
assault	20.5	12.2	11.5	11.1	11.8	10.1	7.6	5.7	5.4	6.1 [b]
carried a weapon	13.7	9.1	10.8	9.3	10.0	5.4	4.0	4.2	4.5	5.9 [b]
sold marijuana or hashish	8.3	8.2	9.2	7.0	6.3	5.6	5.4	4.2	4.0	2.7 [b]
car theft/joyriding	11.2	6.6	9.5	7.9	7.3	6.7	4.0	3.6	4.0	4.8 [b]
theft of goods worth > $50	7.4	5.4	6.5	6.0	6.4	5.2	4.2	4.8	2.5	4.4
break and entering	6.9	3.8	4.2	3.4	4.1	3.6	3.8	2.7	2.8	5.1
street racing (car/truck)*	—	—	—	—	—	3.4	2.2	3.3	—	—
gang fighting*	9.4	4.7	6.8	6.7	5.1	3.2	—	—	—	—
sold other drugs*	4.1	2.1	2.6	2.4	2.6	1.9	—	—	—	—
carried a handgun*	—	—	—	2.0	1.9	1.4	—	—	—	—
% 3+ behaviours /9	**16.7**	**11.5**	**14.7**	**11.4**	**13.1**	**9.5**	**7.3**	**6.6**	**4.9**	**7.8** [b]
(95% CI)	(13.9-19.9)	(9.3-14.1)	(12.8-16.9)	(9.5-13.7)	(11.0-15.5)	(7.7-11.8)	(5.9-8.9)	(5.1-8.5)	(3.9-6.3)	(6.1-9.8)
NORTH REGION	(424)	(599)	(746)	(728)	(421)	(359)	(1022)	(769)	(798)	(918)
fire setting	—	—	—	—	19.1	10.3	10.5	7.8	10.2	5.7 [b]
ran away from home	8.2	6.2	14.8	12.9	11.2	11.4	12.8	11.3	11.7	12.6
theft of goods worth $50/less	16.7	9.6	15.6	15.3	13.4	14.9	12.6	3.8	5.9	6.3 [b]
vandalism	23.0	15.7	16.6	15.5	19.2	14.8	10.8	8.3	8.8	6.4 [b]
assault	16.7	13.1	15.1	12.2	10.7	11.1	8.3	4.8	5.1	4.0 [b]
carried a weapon	12.1	11.3	9.5	9.6	12.0	7.6	7.0	6.3	7.4	4.6 [b]
sold marijuana or hashish	7.9	5.8	9.8	8.0	9.2	6.9	7.6	3.3	7.0	4.7
car theft/joyriding	11.9	8.4	9.4	10.5	8.5	6.2	7.8	6.4	6.1	5.4 [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	2.3
street racing (car/truck)*	—	—	—	—	—	5.7	4.1	4.3	—	—
gang fighting*	4.5	3.8	5.4	6.4	4.7	†	—	—	—	—
sold other drugs*	3.0	2.7	3.6	2.5	†	†	—	—	—	—
carried a handgun*	—	—	—	1.9	†	†	—	—	—	—
% 3+ behaviours /9	**13.8**	**10.1**	**14.4**	**13.3**	**14.6**	**11.5**	**10.4**	**6.1**	**6.3**	**5.8** [b]
(95% CI)	(10.5-18.1)	(7.1-14.0)	(11.1-18.4)	(10.5-16.8)	(10.6-19.8)	(8.0-16.3)	(6.9-15.5)	(4.1-8.9)	(4.6-8.5)	(4.2-7.9)

	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017
WEST REGION	(525)	(486)	(717)	(813)	(887)	(1022)	(941)	(561)	(1549)	(1012)
fire setting	—	—	—	—	16.7	16.8	10.8	11.3	8.1	8.0 [b]
ran away from home	8.6	10.2	10.8	11.4	9.4	10.3	13.3	10.1	6.0	8.3
theft of goods worth $50/less	18.5	14.5	12.7	15.6	14.0	13.6	8.1	9.0	8.3	9.1 [b]
vandalism	24.8	14.4	11.2	17.2	14.9	13.6	9.2	7.7	5.3	5.5 [b]
assault	22.1	11.8	11.9	14.4	10.8	9.6	9.5	8.1	4.7	4.7 [b]
carried a weapon	13.8	10.3	8.3	11.5	7.7	9.4	4.3	9.1	4.6	6.8 [b]
sold marijuana or hashish	8.5	14.5	7.7	9.1	6.8	7.1	4.5	9.0	3.4	5.0
car theft/joyriding	8.1	12.4	10.6	9.0	7.9	7.2	7.6	6.2	2.2	3.3 [b]
theft of goods worth > $50	6.2	6.2	5.0	5.9	3.7	5.0	2.6	4.6	1.7	2.4 [b]
break and entering	5.7	6.2	3.7	6.3	4.6	4.2	3.2	3.2	2.5	5.1 [b]
street racing (car/truck)*	—	—	—	—	—	4.0	3.3	3.0	—	—
gang fighting*	6.8	4.8	6.4	5.6	4.2	1.9	—	—	—	—
sold other drugs*	2.4	6.1	3.3	4.2	3.1	†	—	—	—	—
carried a handgun*	—	—	—	2.3	†	1.5	—	—	—	—
% 3+ behaviours /9	**16.2**	**14.8**	**11.7**	**14.8**	**11.6**	**10.5**	**8.1**	**9.3**	**3.8**	**6.1** [b]
(95% CI)	(12.3-21.0)	(11.4-18.9)	(8.9-15.2)	(12.5-17.5)	(9.0-14.7)	(8.6-12.7)	(5.7-11.4)	(6.1-13.9)	(2.5-5.8)	(4.2-8.8)
EAST REGION	(370)	(309)	(641)	(907)	(906)	(1900)	(994)	(1728)	(925)	(1778)
fire setting	—	—	—	—	13.8	14.4	11.3	9.1	10.6	7.9
ran away from home	8.1	7.2	9.3	8.6	10.2	9.3	9.3	12.3	11.4	9.6
theft of goods worth $50/less	13.2	14.0	14.2	13.4	10.6	14.3	9.7	6.7	7.2	7.2 [b]
vandalism	24.7	17.8	13.2	15.0	13.6	14.4	10.0	9.4	9.6	5.0 [b]
assault	15.0	15.6	9.7	10.2	8.5	9.5	9.8	5.5	6.5	4.5 [b]
carried a weapon	13.0	14.3	8.9	8.3	6.8	7.9	5.3	4.7	6.4	3.5 [b]
sold marijuana or hashish	4.1	10.1	6.9	7.3	6.9	6.8	5.1	3.6	5.0	4.7
car theft/joyriding	10.0	10.8	7.6	5.7	6.0	7.2	7.7	4.6	†	2.2 [b]
theft of goods worth > $50	6.0	7.1	3.4	4.7	3.9	5.0	4.3	2.8	†	† [b]
break and entering	5.7	5.7	4.6	5.0	4.9	6.0	6.8	4.9	4.3	4.2
street racing (car/truck)*	—	—	—	—	—	5.4	3.9	6.3	—	—
gang fighting*	5.9	7.4	6.2	4.4	5.0	3.2	—	—	—	—
sold other drugs*	†	†	2.6	2.9	3.4	3.8	—	—	—	—
carried a handgun*	—	—	—	†	†	†	—	—	—	—
% 3+ behaviours /9	**14.2**	**15.5**	**9.9**	**9.4**	**10.5**	**11.2**	**8.8**	**5.1**	**7.2**	**5.6** [b]
(95% CI)	(10.0-19.9)	(11.6-20.4)	(7.2-13.4)	(6.2-14.0)	(8.4-13.0)	(7.8-15.8)	(6.6-11.6)	(3.5-7.5)	(4.2-12.2)	(4.0-7.7)

Notes: (1) percentages show engagement 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] 2017 vs. 2015 significant difference, p<.01; [b] 2017 vs. 1999 (vs. 2007 for fire-setting) significant difference, p<.01; [c] significant linear trend, p<.01; [d] significant nonlinear trend, p<.01.

Table A3.5.1b Percentage Reporting Antisocial Behaviours at Least Once in the Past Year, 1991–2017 OSDUHS (based on Grades 7, 9, and 11 only)

	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017
TOTAL SAMPLE (n=)	(2961)	(2617)	(2907)	(1527)	(1168)	(1060)	(1771)	(2107)	(1727)	(2355)	(2415)	(2778)	(2659)	(5686)
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	10.4
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	7.8 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	7.6 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	5.5 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	5.6 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	2.6 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	2.9 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	2.7 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	3.7 c
% 3+ behaviours /9	**—**	**15.9**	**16.8**	**14.2**	**14.5**	**11.3**	**13.1**	**11.6**	**12.8**	**8.9**	**7.5**	**5.9**	**4.1**	**5.6** cd
(95% CI)		(15.0-16.9)	(15.4-18.3)	(12.7-15.7)	(12.3-17.0)	(9.5-13.4)	(11.3-15.1)	(9.8-13.8)	(10.8-15.0)	(7.1-11.0)	(6.3-9.0)	(4.6-7.6)	(3.0-5.6)	(4.2-7.5)
MALES	(1554)	(1270)	(1412)	(723)	(582)	(529)	(888)	(1024)	(842)	(1107)	(1129)	(1229)	(1260)	(2426)
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	10.1
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	8.7
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	7.8
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	6.6
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	7.8
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	3.9
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	3.1
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	2.4
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	4.1
% 3+ behaviours /9	**—**	**21.0**	**22.8**	**18.2**	**20.8**	**15.5**	**16.0**	**14.1**	**14.8**	**11.2**	**8.4**	**6.8**	**3.9**	**5.7**
(95% CI)		(18.3-23.9)	(20.7-25.1)	(15.6-21.0)	(17.4-24.8)	(12.4-19.1)	(13.2-19.1)	(11.2-17.5)	(12.1-17.9)	(8.8-14.3)	(6.3-11.1)	(4.8-9.4)	(2.7-5.6)	(4.0-8.0)

(cont'd)

	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011	2013	2015	2017
FEMALES	(1407)	(1347)	(1495)	(804)	(586)	(531)	(883)	(1083)	(885)	(1248)	(1286)	(1549)	(1399)	(3260)
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	10.8
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	6.8
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	7.3
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	4.4
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	3.4
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	1.2
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	2.7
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	3.0
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	3.3
% 3+ behaviours /9	**—**	**11.2**	**11.2**	**10.6**	**8.1**	**7.1**	**10.2**	**9.1**	**10.7**	**6.5**	**6.6**	**5.1**	**4.3**	**5.6**
(95% CI)		(9.4-13.2)	(8.9-13.9)	(8.9-12.4)	(5.9-11.0)	(4.9-10.3)	(7.9-13.1)	(7.0-11.8)	(8.2-13.8)	(4.8-8.8)	(4.5-9.5)	(3.6-7.1)	(2.8-6.6)	(3.4-8.8)

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, 2001–2017 OSDUHS (Grades 7–12)

	2001	2003	2005	2007	2009	2011	2013	2015	2017
(n=)	(2061)	(3464)	(4078)	(3388)	(4851)	(4816)	(5478)	(5403)	(6364)
Total	**16.9**	**17.6**	**18.1**	**15.8**	**15.1**	**11.9**	**10.9**	**10.4**	**11.4** [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)	(9.7-13.3)
Sex									
Males	**25.2** (21.9-28.7)	**26.8** (24.1-29.8)	**27.1** (24.9-29.5)	**24.0** (21.4-26.9)	**23.3** (20.6-26.1)	**17.4** (15.3-19.8)	**17.5** (14.8-20.5)	**15.9** (13.6-18.6)	**16.8** [b] (14.4-19.6)
Females	**8.8** (6.9-11.1)	**9.2** (7.1-11.9)	**8.7** (7.2-10.6)	**7.5** (6.0-9.4)	**6.7** (5.5-8.1)	**6.4** (4.6-8.9)	**3.9** (3.1-5.0)	**4.5** (3.1-6.6)	**5.6** [b] (4.2-7.4)
Grade									
7	**23.8** (19.4-28.9)	**29.7** (23.5-36.8)	**30.2** (25.4-35.4)	**22.9** (17.5-29.3)	**21.6** (17.9-25.8)	**24.1** (19.2-29.7)	**15.0** (11.2-19.8)	**17.9** (14.4-22.0)	**20.5** (15.4-26.7)
8	**25.0** (20.0-30.7)	**26.0** (19.7-33.6)	**23.4** (17.7-30.3)	**26.2** (21.2-32.0)	**21.4** (17.7-25.7)	**20.8** (17.3-24.7)	**18.4** (14.5-23.0)	**18.5** (13.0-25.7)	**16.9** (13.2-21.2)
9	**19.5** (15.3-24.7)	**19.6** (16.5-23.2)	**16.5** (13.5-20.0)	**18.1** (14.1-22.8)	**16.5** (13.5-20.0)	**9.8** (6.9-13.8)	**12.1** (8.9-16.3)	**8.9** (6.5-12.2)	**14.4** (8.8-22.5)
10	**12.2** (8.5-17.2)	**14.5** (11.2-18.7)	**15.4** (12.7-18.7)	**11.6** (8.8-15.3)	**11.8** (9.1-15.3)	**9.1** (6.1-13.5)	**8.6** (5.8-12.6)	**8.9** (6.5-12.0)	**8.2** (6.3-10.8)
11	**8.0** (5.7-11.3)	**11.0** (8.3-14.6)	**13.0** (10.4-16.1)	**12.1** (9.4-15.4)	**12.8** (9.4-17.2)	**7.9** (5.0-12.3)	**9.4** (6.8-12.7)	**7.0** (4.8-10.1)	**9.6** (6.4-14.1)
12	**11.3** (5.8-20.7)	**8.8** (6.4-12.0)	**11.4** (8.7-14.9)	**7.4** (4.6-11.7)	**10.0** (6.8-14.5)	**7.4** (4.2-12.5)	**7.1** (4.7-10.6)	**5.5** (3.7-8.1)	**5.3** (3.9-7.1)
Region									
GTA	**16.9** (14.0-20.4)	**16.0** (12.9-19.6)	**18.9** (16.4-21.7)	**17.0** (14.3-19.9)	**15.4** (12.8-18.5)	**12.5** (11.0-14.1)	**12.2** (10.4-14.2)	**9.4** (7.7-11.4)	**12.1** (9.7-15.1)
North	**17.1** (13.2-21.8)	**19.7** (15.2-25.1)	**16.8** (14.8-19.0)	**15.3** (11.7-19.7)	**15.2** (11.7-19.5)	**13.8** (10.6-17.7)	**9.4** (7.1-12.4)	**14.5** (11.8-17.6)	**11.3** (8.1-15.5)
West	**17.6** (13.8-22.2)	**21.0** (16.6-26.2)	**18.8** (15.1-23.0)	**16.0** (12.5-20.3)	**14.5** (11.2-18.5)	**10.1** (5.4-18.0)	**10.9** (8.0-14.7)	**9.5** (6.9-12.9)	**11.3** [b] (8.9-14.3)
East	**15.3** (11.6-19.9)	**16.1** (13.2-19.5)	**16.5** (13.9-19.5)	**14.1** (10.8-18.2)	**15.2** (12.1-18.8)	**12.6** (9.8-16.1)	**8.8** (7.3-10.5)	**12.4** (9.5-16.0)	**9.1** (5.5-14.8)

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) GTA=Greater Toronto Area; (5) no significant differences, 2017 vs. 2015; [b] 2017 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, 2003–2017 OSDUHS (Grades 7–12)

	2003	2005	2007	2009	2011	2013	2015	2017
(n=)	(3464)	(4078)	(3388)	(4851)	(4816)	(5478)	(5403)	(6364)
Total	**7.7**	**8.2**	**8.6**	**6.8**	**6.5**	**5.8**	**5.8**	**5.5** [bc]
(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)	(4.5-6.6)
Sex								
Males	**10.1** (8.3-12.2)	**11.6** (9.6-13.9)	**11.0** (9.3-13.1)	**8.5** (6.7-10.6)	**7.4** (5.6-9.9)	**7.7** (6.1-9.8)	**7.9** (6.3-9.9)	**7.7** (6.0-9.7)
Females	**5.5** (4.0-7.4)	**4.8** (3.7-6.2)	**6.0** (4.7-7.7)	**5.1** (4.0-6.5)	**5.5** (4.4-7.0)	**3.7** (2.7-5.0)	**3.6** (2.5-5.0)	**3.2** [b] (2.5-4.0)
Grade								
7	**7.3** (5.2-10.3)	**7.0** (3.6-13.0)	**9.3** (6.9-12.4)	**3.9** (2.6-5.8)	**6.5** (3.8-11.0)	**4.9** (2.7-8.5)	**4.2** (2.7-6.4)	**6.2** (4.1-9.2)
8	**9.8** (6.2-15.1)	**8.5** (6.5-11.2)	**10.1** (7.0-14.2)	**6.7** (4.9-9.3)	**4.4** (2.8-6.8)	**6.2** (3.9-9.8)	**9.4** (5.4-15.8)	**6.9** (4.5-10.5)
9	**7.7** (5.8-10.0)	**9.2** (6.3-13.3)	**10.8** (8.2-14.2)	**8.7** (6.2-12.1)	**8.1** (6.0-10.9)	**5.9** (3.9-9.0)	**4.6** (3.1-6.9)	**5.1** (3.3-7.6)
10	**10.0** (7.2-13.6)	**9.2** (6.9-12.2)	**8.2** (5.5-12.2)	**5.5** (3.8-7.8)	**8.0** (5.7-11.1)	**8.2** (4.7-13.7)	**4.8** (2.9-7.6)	**7.2** (4.7-11.0)
11	**6.8** (4.8-9.6)	**9.6** (7.1-13.0)	**8.6** (6.4-11.5)	**6.6** (4.6-9.5)	**5.0** (3.1-8.1)	**4.7** (3.0-7.3)	**6.3** (4.3-9.0)	**3.5** (1.8-6.6)
12	**4.6** (2.8-7.4)	**6.1** (4.4-8.4)	**5.2** (3.6-7.4)	**8.4** (5.7-12.1)	**6.5** (3.8-10.9)	**5.0** (2.8-8.7)	**5.8** (3.5-9.3)	**4.9** (2.8-8.3)
Region								
Greater Toronto Area	**8.2** (6.5-10.2)	**8.1** (6.6-10.0)	**9.7** (8.0-11.7)	**6.8** (5.2-8.9)	**7.4** (5.8-9.3)	**6.4** (5.0-8.3)	**4.5** (3.5-5.8)	**5.5** (4.4-6.9)
North	**7.4** (5.6-9.7)	**6.4** (4.0-10.0)	**9.0** (5.8-13.7)	**7.7** (5.0-11.6)	**8.0** (5.1-12.3)	**4.5** (2.8-7.4)	**6.6** (4.6-9.4)	**3.4** [b] (1.9-5.9)
West	**7.6** (5.3-11.0)	**8.6** (6.5-11.2)	**8.5** (6.9-10.4)	**6.0** (4.2-8.4)	**6.5** (3.6-11.2)	**5.4** (3.4-8.3)	**6.1** (3.9-9.4)	**6.8** (4.5-10.3)
East	**6.8** (4.6-10.0)	**8.8** (5.4-13.8)	**6.8** (5.0-9.2)	**7.5** (4.9-11.2)	**4.5** (3.2-6.2)	**5.4** (3.1-9.3)	**8.0** (5.7-11.2)	**4.1** (2.5-6.8)

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 differences, 2017 vs. 2015; [b] 2017 vs. 2003 significant difference, p<.01; [c] significant linear trend, p<.01.

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, 2003–2017 OSDUHS (Grades 7–12)

	(n=)	2003 (3464)	2005 (4078)	2007 (3388)	2009 (4851)	2011 (4816)	2013 (5478)	2015 (5403)	2017 (6364)	
Total		**32.7**	**30.9**	**29.9**	**28.9**	**28.6**	**25.0**	**23.6**	**21.0**	[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)	(19.3-22.9)	
Sex										
Males		**35.3** (32.4-38.3)	**27.8** (25.4-30.4)	**27.7** (25.1-30.4)	**26.5** (23.7-29.5)	**25.8** (23.0-28.8)	**22.2** (19.3-25.3)	**19.6** (17.2-22.2)	**17.7** (15.4-20.4)	[b]
Females		**30.3** (27.4-33.4)	**34.0** (31.3-36.9)	**32.1** (29.1-35.2)	**31.4** (29.1-33.8)	**31.3** (27.7-35.2)	**28.1** (25.1-31.3)	**27.8** (24.7-31.1)	**24.5** (21.4-28.0)	[b]
Grade										
7		**47.1** (39.2-55.0)	**38.3** (33.0-43.8)	**34.2** (28.4-40.5)	**31.6** (26.8-36.9)	**30.4** (24.0-37.7)	**31.6** (25.2-38.8)	**26.3** (20.6-32.8)	**27.4** (23.5-31.7)	[b]
8		**38.7** (33.2-44.6)	**41.2** (37.0-45.6)	**34.8** (29.4-40.5)	**31.5** (27.4-36.0)	**32.7** (28.3-37.5)	**34.5** (29.4-40.0)	**27.2** (21.2-34.2)	**28.8** (24.7-33.3)	[b]
9		**32.8** (28.6-37.2)	**34.6** (30.7-38.7)	**36.7** (31.7-42.0)	**32.6** (27.6-38.1)	**30.5** (27.1-34.2)	**28.7** (24.2-33.6)	**21.1** (17.6-25.1)	**22.7** (19.5-26.4)	[b]
10		**32.6** (27.9-37.5)	**26.3** (22.5-30.4)	**33.0** (28.8-37.4)	**32.8** (28.4-37.6)	**33.0** (26.7-40.1)	**22.6** (18.3-27.7)	**25.3** (21.4-29.8)	**20.6** (15.3-27.0)	[b]
11		**28.7** (24.2-33.7)	**25.9** (22.7-29.4)	**24.3** (20.9-28.0)	**25.2** (21.4-29.5)	**27.1** (21.7-33.3)	**24.2** (19.3-29.8)	**18.5** (14.9-22.7)	**18.3** (13.7-23.9)	[b]
12		**19.8** (16.4-23.7)	**20.6** (16.6-25.2)	**19.2** (15.6-23.4)	**22.6** (18.6-27.3)	**21.5** (17.9-25.6)	**16.6** (13.3-20.5)	**23.8** (19.9-28.2)	**15.0** (11.3-19.6)	[a]
Region										
Greater Toronto Area		**27.5** (24.8-30.3)	**27.1** (24.5-29.8)	**27.3** (23.8-31.2)	**25.1** (22.6-27.8)	**23.7** (21.2-26.4)	**22.7** (20.5-25.0)	**20.8** (18.4-23.4)	**18.9** (16.7-21.4)	[b]
North		**38.1** (33.7-42.7)	**32.2** (27.6-37.2)	**30.3** (24.8-36.5)	**32.1** (26.8-37.8)	**29.2** (24.0-34.9)	**29.6** (24.1-35.8)	**27.7** (24.5-31.2)	**21.9** (18.2-26.1)	[b]
West		**36.8** (31.8-42.2)	**33.6** (29.7-37.8)	**32.8** (28.7-37.2)	**32.9** (29.1-37.0)	**34.7** (29.0-40.8)	**28.7** (23.3-34.8)	**25.4** (20.7-30.8)	**25.3** (22.0-29.0)	[b]
East		**36.2** (31.4-41.3)	**34.4** (30.4-38.7)	**30.9** (27.3-34.7)	**29.5** (25.2-34.2)	**30.1** (25.9-34.7)	**22.6** (17.2-29.1)	**26.0** (20.9-31.9)	**21.2** (17.0-26.0)	[b]

Notes: (1) n=number of students surveyed; (2) based on a random half sample in each year; (3) CI=confidence interval; (4) †=estimate suppressed due to unreliability; (5) [a] 2017 vs. 2015 significant difference, p<.01; [b] 2017 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 here 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, 2003–2017 OSDUHS (Grades 7–12)

	2003	2005	2007	2009	2011	2013	2015	2017	
(n=)	(3464)	(4078)	(3388)	(4851)	(4816)	(5478)	(5403)	(6364)	
Total	**29.7**	**27.3**	**24.7**	**25.1**	**20.7**	**16.0**	**13.1**	**11.1**	bcd
(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)	(10.0-12.4)	
Sex									
Males	**34.9**	**29.4**	**26.0**	**28.1**	**18.6**	**17.5**	**14.6**	**12.0**	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)	(10.2-14.0)	
Females	**25.1**	**25.2**	**23.4**	**22.1**	**22.8**	**14.3**	**11.5**	**10.2**	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)	(8.9-11.6)	
Grade									
7	**31.7**	**26.1**	**17.2**	**21.3**	**13.9**	**12.7**	**7.6**	**11.1**	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)	(7.9-15.4)	
8	**32.2**	**30.4**	**30.4**	**25.2**	**22.1**	**20.2**	**16.9**	**13.2**	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)	(9.9-17.4)	
9	**32.7**	**29.3**	**25.9**	**23.9**	**21.4**	**17.6**	**11.4**	**12.6**	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)	(9.9-15.8)	
10	**30.5**	**26.4**	**27.8**	**26.8**	**24.9**	**18.7**	**14.6**	**11.3**	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)	(8.1-15.4)	
11	**29.4**	**30.1**	**24.7**	**27.0**	**22.3**	**15.5**	**10.8**	**8.8**	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)	(6.1-12.4)	
12	**22.1**	**22.2**	**22.2**	**25.7**	**18.7**	**12.7**	**15.7**	**10.8**	b
	(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)	(8.4-13.6)	
Region									
Greater Toronto Area	**25.9**	**25.6**	**25.0**	**24.2**	**16.5**	**15.5**	**12.7**	**12.2**	b
	(23.2-28.8)	(23.2-28.1)	(22.1-28.1)	(21.2-27.5)	(14.1-19.2)	(13.1-18.1)	(10.6-15.0)	(10.7-14.0)	
North	**36.0**	**26.6**	**25.4**	**27.8**	**19.6**	**16.2**	**14.1**	**10.4**	b
	(31.2-41.2)	(22.7-31.0)	(20.5-31.0)	(21.6-35.0)	(14.7-25.6)	(11.8-21.8)	(11.2-17.6)	(7.5-14.1)	
West	**32.7**	**31.0**	**26.8**	**29.0**	**28.2**	**18.4**	**13.1**	**11.3**	b
	(28.5-37.3)	(27.1-35.2)	(22.6-31.5)	(25.0-33.5)	(19.3-39.1)	(15.0-22.3)	(9.9-17.2)	(9.3-13.7)	
East	**31.6**	**27.3**	**22.2**	**21.3**	**19.9**	**13.2**	**13.7**	**7.8**	ab
	(26.1-37.6)	(21.9-33.4)	(19.0-25.8)	(17.9-25.1)	(16.8-23.4)	(11.1-15.5)	(10.3-17.9)	(6.0-10.2)	

Notes: (1) n=number of students surveyed; (2) based on a random half sample in each year; (3) CI=confidence interval; (4) †=estimate suppressed due to unreliability; (5) [a] 2017 vs. 2015 significant difference, p<.01; [b] 2017 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 here 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 Cyberbullied in the Past Year, 2011–2017 OSDUHS (Grades 7–12)

	2011	2013	2015	2017
(n=)	(4816)	(5478)	(5403)	(6364)
Total	**21.6**	**19.0**	**19.8**	**20.5**
(95% CI)	(19.5-24.0)	(17.2-21.0)	(18.0-21.7)	(18.8-22.3)
Sex				
Males	**15.2** (13.3-17.4)	**15.8** (13.6-18.2)	**14.0** (12.4-15.9)	**16.4** (14.1-18.9)
Females	**28.0** (24.6-31.6)	**22.5** (20.2-25.0)	**25.8** (22.5-29.5)	**24.9** (22.9-26.9)
Grade				
7	**19.8** (15.9-24.3)	**17.5** (13.8-22.0)	**19.0** (13.4-26.2)	**21.7** (17.8-26.2)
8	**22.5** (17.7-28.1)	**24.6** (18.5-32.0)	**19.0** (15.0-23.8)	**22.1** (18.2-26.5)
9	**24.6** (19.8-30.2)	**24.1** (20.0-28.6)	**19.7** (16.4-23.4)	**24.7** (20.0-30.2)
10	**20.7** (17.9-23.8)	**16.4** (12.5-21.4)	**21.3** (17.8-25.4)	**19.9** (15.3-25.6)
11	**24.4** (20.2-29.2)	**19.2** (15.5-23.5)	**19.7** (16.0-24.0)	**20.9** (13.7-30.6)
12	**18.4** (15.2-22.0)	**15.1** (12.3-18.4)	**19.7** (15.5-24.7)	**16.3** (13.0-20.2)
Region				
Greater Toronto Area	**19.8** (17.3-22.7)	**17.9** (15.7-20.4)	**16.5** (14.5-18.7)	**20.0** (17.4-22.8)
North	**21.4** (17.7-25.5)	**19.8** (15.2-25.4)	**27.3** (23.2-31.8)	**23.0** (20.1-26.2)
West	**26.2** (21.9-31.0)	**21.0** (16.9-25.8)	**21.7** (18.2-25.7)	**23.8** (21.0-26.8)
East	**19.3** (15.7-23.5)	**17.9** (15.7-20.3)	**22.1** (17.0-28.1)	**16.9** (13.9-20.3)

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, 2001–2017 OSDUHS (Grades 7–12)

	2001	2003	2005	2007	2009	2011	2013	2015	2017
TOTAL (n=)	(2061)	(3464)	(4078)	(3388)	(4851)	(4816)	(5478)	(5403)	(6364)
Cards	24.9	24.0	32.7	28.7	20.2	15.9	10.7	9.5	9.4 [bcd]
Dice	—	12.7	14.7	10.7	6.1	5.2	4.6	3.1	3.3 [bcd]
Other Games of Skill (e.g., pool, darts)	—	—	—	—	—	—	8.3	7.0	7.7
Bingo	11.6	9.9	8.6	7.6	7.2	5.1	4.4	4.4	4.4 [bc]
Sports Pools/Fantasy Sports	22.3	20.3	17.0	15.6	12.6	13.3	10.2	9.9	9.8 [bc]
Sports Lottery Tickets	9.9	7.8	7.2	6.1	5.1	3.6	2.9	3.1	2.1 [bc]
Other Lottery Tickets (Store)	22.1	22.4	18.5	18.8	15.5	12.7	9.6	7.8	7.5 [bcd]
Video Gambling or Slot Machines	6.8	6.7	6.2	4.8	3.9	2.9	3.8	2.4	3.6 [bc]
Casino in Ontario	1.7	1.7	1.1	1.1	1.3	†	0.6	0.5	0.5 [bc]
Video Game Results	—	—	—	—	—	—	—	—	7.6
Dare/Private Bet	—	—	—	—	—	—	—	—	11.6
Online Gambling (Any)*	—	2.5	2.1	3.0	3.0	2.1	3.1	3.8	3.5
Other ways not listed above	—	27.1	23.6	24.1	18.8	17.6	13.4	10.5	9.3 [bcd]
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)	31.3 (29.5-33.2) [bcd]
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)	2.1 (1.4-3.2) [bc]
MALES	(1018)	(1654)	(1934)	(1618)	(2286)	(2218)	(2469)	(2496)	(2754)
Cards	35.4	32.1	44.2	41.0	28.1	21.6	15.1	13.7	13.5 [b]
Dice	—	19.1	22.0	16.5	9.6	7.8	6.5	4.8	4.2 [b]
Other Games of Skill (e.g., pool, darts)	—	—	—	—	—	—	12.4	10.4	10.9
Bingo	12.5	9.5	7.4	6.7	7.4	4.5	3.9	4.2	4.5 [b]
Sports Pools/Fantasy Sports	38.1	32.7	26.1	25.4	20.6	21.3	16.4	16.3	15.4 [b]
Sports Lottery Tickets	16.3	13.7	11.2	10.0	8.3	6.0	4.7	5.0	3.0 [b]
Other Lottery Tickets (Store)	23.2	20.4	18.5	18.0	15.3	12.7	10.4	8.5	8.2 [b]
Video Gambling or Slot Machines	8.1	8.9	7.4	5.9	5.0	3.8	4.4	3.2	5.7
Casino in Ontario	2.6	2.5	1.6	1.4	1.9	†	0.9	0.7	† [b]
Video Game Results	—	—	—	—	—	—	—	—	13.2
Dare/Private Bet	—	—	—	—	—	—	—	—	13.9
Online Gambling (Any)	—	3.4	3.0	4.1	4.8	3.1	5.0	6.4	5.1
Other ways not listed above	—	32.9	28.8	30.3	24.1	23.2	18.7	14.2	12.4 [b]
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)	37.8 (34.9-40.8) [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)	2.9 (1.8-4.6) [b]

(cont'd)

	2001	2003	2005	2007	2009	2011	2013	2015	2017
FEMALES	(1043)	(1810)	(2144)	(1770)	(2565)	(2598)	(3009)	(2907)	(3610)
Cards	14.8	16.7	20.8	16.2	12.1	10.2	5.8	5.0	5.1 [b]
Dice	—	7.0	7.1	4.9	2.5	2.7	2.4	1.3	2.3 [b]
Other Games of Skill (e.g., pool, darts)	—	—	—	—	—	—	4.0	3.4	4.3
Bingo	10.6	10.2	9.9	8.4	6.8	5.7	4.9	4.6	4.2 [b]
Sports Pools/Fantasy Sports	7.3	9.1	7.7	5.6	4.4	5.3	3.4	3.3	4.0 [b]
Sports Lottery Tickets	3.8	2.4	3.1	2.2	1.9	†	1.0	1.1	1.1 [b]
Other Lottery Tickets (Store)	21.0	24.2	18.4	19.5	15.7	12.7	8.6	7.0	6.7 [b]
Video Gambling or Slot Machines	5.7	4.7	4.9	3.8	2.8	2.0	3.2	†	1.5 [b]
Casino in Ontario	0.8	1.0	0.6	0.7	†	†	†	†	†
Video Game Results	—	—	—	—	—	—	—	—	1.7
Dare/Private Bet	—	—	—	—	—	—	—	—	9.2
Online Gambling (Any)	—	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	6.1 [b]
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)	24.6 (21.6-27.9) [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)	†	†
GRADE 7	(404)	(497)	(508)	(383)	(883)	(728)	(1126)	(964)	(976)
Cards	17.1	19.1	19.4	15.0	10.9	7.3	6.7	4.4	6.9 [b]
Dice	—	9.7	†	6.1	2.9	†	3.0	1.3	1.6 [b]
Other Games of Skill (e.g., pool, darts)	—	—	—	—	—	—	7.0	2.0	4.5
Bingo	8.9	10.3	7.6	8.1	7.3	6.3	4.3	†	3.8
Sports Pools/Fantasy Sports	10.1	15.8	10.4	9.3	6.5	6.0	†	†	5.6
Sports Lottery Tickets	3.8	4.8	2.7	3.0	3.2	†	†	†	2.3
Other Lottery Tickets (Store)	13.8	13.6	10.7	12.4	8.9	5.3	5.2	5.4	5.7 [b]
Video Gambling or Slot Machines	3.1	7.2	†	†	3.1	†	†	†	†
Casino in Ontario	†	†	†	†	†	†	†	†	†
Video Game Results	—	—	—	—	—	—	—	—	7.1
Dare/Private Bet	—	—	—	—	—	—	—	—	9.3
Online Gambling (Any)	—	†	†	†	†	†	†	†	2.6
Other ways not listed above	—	27.7	20.9	16.6	15.7	14.9	13.0	11.2	9.5 [b]
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)	27.2 (23.5-31.2) [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]

	2001	2003	2005	2007	2009	2011	2013	2015	2017
GRADE 8	(379)	(512)	(501)	(418)	(913)	(730)	(1088)	(1013)	(1090)
Cards	24.3	20.0	24.7	24.2	14.7	12.1	9.1	8.6	5.4 [b]
Dice	—	8.3	9.2	7.9	5.4	†	2.3	2.2	2.5 [b]
Other Games of Skill (e.g., pool, darts)	—	—	—	—	—	—	5.6	4.1	5.0
Bingo	11.6	10.0	11.1	6.0	5.7	3.4	4.9	†	3.4
Sports Pools/Fantasy Sports	15.5	14.2	15.2	11.4	7.0	9.8	6.5	9.8	6.5 [b]
Sports Lottery Tickets	7.9	3.8	4.6	2.5	†	†	†	1.9	2.4 [b]
Other Lottery Tickets (Store)	16.2	14.9	13.1	11.5	7.2	6.7	4.4	4.8	6.3 [b]
Video Gambling or Slot Machines	4.8	6.8	6.0	3.3	2.4	†	†	†	2.3
Casino in Ontario	†	†	†	†	†	†	†	†	†
Video Game Results	—	—	—	—	—	—	—	—	7.0
Dare/Private Bet	—	—	—	—	—	—	—	—	15.2
Online Gambling (Any)	—	†	†	†	†	†	†	†	3.1
Other ways not listed above	—	28.9	23.7	25.9	14.8	18.3	10.3	8.1	8.9 [b]
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)	29.4 (25.0-34.2) [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)	(1236)
Cards	24.2	24.1	33.9	27.4	18.2	13.6	8.3	6.8	7.6 [b]
Dice	—	16.7	16.4	12.9	5.3	1.5	4.1	3.2	2.3 [b]
Other Games of Skill (e.g., pool, darts)	—	—	—	—	—	—	7.4	5.2	6.3
Bingo	13.7	9.6	8.9	8.7	8.0	6.4	3.7	3.7	† [b]
Sports Pools/Fantasy Sports	27.0	23.6	19.3	16.4	10.6	9.7	10.7	8.7	8.5 [b]
Sports Lottery Tickets	9.4	7.0	6.0	4.7	3.4	2.1	†	†	† [b]
Other Lottery Tickets (Store)	18.7	15.9	15.4	17.0	10.3	8.6	3.7	4.7	4.0 [b]
Video Gambling or Slot Machines	5.1	5.3	7.5	7.2	†	†	†	†	2.3 [b]
Casino in Ontario	†	†	†	†	†	†	†	†	†
Video Game Results	—	—	—	—	—	—	—	—	6.7
Dare/Private Bet	—	—	—	—	—	—	—	—	9.8
Online Gambling (Any)	—	3.5	†	2.6	3.1	†	†	3.8	3.1
Other ways not listed above	—	31.2	24.9	28.2	21.7	17.1	9.7	7.5	10.1 [b]
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)	28.1 (22.7-34.1) [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]

	2001	2003	2005	2007	2009	2011	2013	2015	2017
GRADE 10	(422)	(622)	(742)	(577)	(814)	(825)	(816)	(920)	(1119)
Cards	29.6	25.3	36.6	29.8	20.2	14.9	15.5	7.5	7.7 [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	7.9
Bingo	11.3	9.8	7.6	5.6	5.6	3.4	4.9	4.8	4.5 [b]
Sports Pools/Fantasy Sports	28.7	24.1	17.4	15.4	15.2	16.9	12.7	12.4	10.2 [b]
Sports Lottery Tickets	10.0	6.9	7.0	4.4	3.5	†	†	3.5	2.4 [b]
Other Lottery Tickets (Store)	23.4	18.2	16.0	14.9	11.5	7.9	6.3	6.1	5.1 [b]
Video Gambling or Slot Machines	10.4	6.6	6.2	4.9	3.7	†	3.8	†	3.1 [b]
Casino in Ontario	†	†	†	†	†	†	†	†	†
Video Game Results	—	—	—	—	—	—	—	—	9.0
Dare/Private Bet	—	—	—	—	—	—	—	—	14.5
Online Gambling (Any)	—	3.3	2.8	3.0	2.8	†	†	3.8	4.0
Other ways not listed above	—	26.9	26.2	23.4	20.9	19.8	15.5	12.0	8.2 [b]
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)	31.1 (25.6-37.2) [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)	(960)
Cards	28.4	27.0	39.0	36.5	25.2	22.5	8.2	10.2	13.6 [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	12.4
Bingo	9.7	9.5	7.4	7.6	7.7	6.5	3.2	5.7	†
Sports Pools/Fantasy Sports	23.1	20.5	17.1	19.0	7.3	15.8	10.0	12.9	11.4 [b]
Sports Lottery Tickets	12.8	9.6	9.4	8.9	18.8	5.3	1.7	3.1	1.6 [b]
Other Lottery Tickets (Store)	27.8	28.9	21.4	20.3	18.8	18.2	10.4	7.5	9.0 [b]
Video Gambling or Slot Machines	7.8	5.2	4.9	5.3	5.7	†	†	1.8	† [b]
Casino in Ontario	†	†	†	1.6	†	†	†	†	†
Video Game Results	—	—	—	—	—	—	—	—	7.4
Dare/Private Bet	—	—	—	—	—	—	—	—	10.2
Online Gambling (Any)	—	†	†	†	†	†	†	4.8	†
Other ways not listed above	—	26.8	22.2	25.6	21.0	20.2	14.6	11.3	10.7 [b]
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)	32.3 (23.8-42.3) [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)	†

	2001	2003	2005	2007	2009	2011	2013	2015	2017
GRADE 12	(200)	(559)	(728)	(666)	(769)	(846)	(796)	(811)	(983)
Cards	25.0	26.6	40.6	36.0	27.9	19.8	13.4	15.6	12.1 [b]
Dice	—	12.8	14.7	13.4	6.1	7.3	5.8	4.9	2.9 [b]
Other Games of Skill (e.g., pool, darts)	—	—	—	—	—	—	9.3	12.1	7.8
Bingo	14.7	10.3	8.9	9.0	8.1	4.6	5.2	4.2	3.0 [b]
Sports Pools/Fantasy Sports	28.7	21.3	21.8	20.2	17.9	17.0	11.4	11.1	13.1 [b]
Sports Lottery Tickets	19.3	13.8	12.5	11.7	9.3	6.2	6.5	4.8	3.0 [b]
Other Lottery Tickets (Store)	40.3	40.5	32.1	32.6	30.1	22.0	20.2	14.3	12.0 [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]
Video Game Results	—	—	—	—	—	—	—	—	7.9
Dare/Private Bet	—	—	—	—	—	—	—	—	11.3
Online Gambling (Any)	—	†	1.8	2.6	3.9	†	2.8	4.7	2.8
Other ways not listed above	—	21.2	23.4	24.0	18.4	15.2	15.5	12.0	8.6
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)	36.2 (32.3-40.3) [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]
GREATER TORONTO AREA	(667)	(1360)	(1630)	(1174)	(1570)	(1859)	(2420)	(2131)	(2656)
Cards	22.3	24.1	32.3	27.1	20.4	17.1	10.4	9.7	10.6 [b]
Dice	—	18.6	17.3	15.2	7.8	6.9	7.2	4.5	3.2 [b]
Other Games of Skill (e.g., pool, darts)	—	—	—	—	—	—	9.9	7.7	8.0
Bingo	9.9	9.5	7.5	6.1	5.7	4.8	4.3	4.0	4.2 [b]
Sports Pools/Fantasy Sports	20.8	20.0	14.7	15.1	10.4	12.0	9.1	8.8	10.6 [b]
Sports Lottery Tickets	11.0	8.8	7.6	7.1	5.7	4.0	2.8	3.2	1.6 [b]
Other Lottery Tickets (Store)	19.7	21.9	17.8	18.3	13.9	13.7	9.4	7.5	6.3 [b]
Video Gambling or Slot Machines	6.6	6.7	4.9	4.4	3.1	3.1	2.2	1.5	4.8
Casino in Ontario	†	2.0	†	†	†	†	†	†	†
Video Game Results	—	—	—	—	—	—	—	—	8.4
Dare/Private Bet	—	—	—	—	—	—	—	—	11.0
Online Gambling (Any)	—	2.1	2.0	3.7	2.8	2.6	3.4	3.7	3.8
Other ways not listed above	—	27.7	22.4	24.4	17.9	17.8	13.6	11.7	11.2 [b]
Any Gambling Activity (95% CI)	—	57.2 (54.0-60.4)	54.3 (50.8-57.7)	51.9 (47.8-56.0)	41.3 (37.6-45.1)	39.0 (35.9-42.3)	34.8 (30.9-38.8)	30.6 (27.7-33.5)	31.3 (28.6-34.2) [b]
5+ Gambling Activities (95% CI)	—	6.9 (5.2-9.1)	5.8 (4.4-7.6)	5.8 (4.2-7.8)	2.5 (1.5-4.0)	2.7 (1.6-4.6)	2.7 (1.8-4.1)	2.1 (1.4-3.1)	2.2 (1.1-4.1) [b]

	2001	2003	2005	2007	2009	2011	2013	2015	2017
NORTH REGION	(599)	(746)	(728)	(421)	(359)	(1022)	(769)	(798)	(918)
Cards	30.1	24.2	38.8	38.0	22.0	20.8	12.0	12.1	14.4 [b]
Dice	—	9.0	16.8	9.6	6.5	5.7	2.6	4.4	5.3
Other Games of Skill (e.g., pool, darts)	—	—	—	—	—	—	6.4	10.8	7.0
Bingo	17.8	12.2	14.7	12.5	11.3	6.6	7.3	12.7	6.1 [b]
Sports Pools/Fantasy Sports	19.8	17.0	19.0	19.6	11.3	14.3	9.8	11.7	11.8 [b]
Sports Lottery Tickets	9.4	8.0	8.6	8.7	7.0	3.6	†	2.6	2.2 [b]
Other Lottery Tickets (Store)	25.5	27.8	25.9	23.7	20.2	16.0	13.6	12.5	10.0 [b]
Video Gambling or Slot Machines	10.5	8.1	13.5	5.6	†	†	†	†	5.9
Casino in Ontario	3.1	†	†	†	†	†	†	†	†
Video Game Results	—	—	—	—	—	—	—	—	7.2
Dare/Private Bet	—	—	—	—	—	—	—	—	8.5
Online Gambling (Any)	—	2.7	2.5	4.7	†	2.7	2.8	4.2	5.2
Other ways not listed above	—	27.1	24.6	22.9	17.5	17.6	12.4	9.7	6.3 [b]
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)	33.0 (28.4-38.0) [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)	3.1 (1.9-5.2)
WEST REGION	(486)	(717)	(813)	(887)	(1022)	(941)	(561)	(1549)	(1012)
Cards	27.0	21.7	36.9	32.9	20.6	15.0	9.8	9.2	8.5 [b]
Dice	—	6.8	11.6	7.9	4.9	3.0	2.5	1.5	2.6 [b]
Other Games of Skill (e.g., pool, darts)	—	—	—	—	—	—	7.1	7.1	8.7
Bingo	12.0	9.8	11.2	7.9	8.2	5.6	4.1	3.2	4.3 [b]
Sports Pools/Fantasy Sports	23.8	19.9	18.6	17.7	15.7	14.6	11.6	12.6	9.8 [b]
Sports Lottery Tickets	8.4	6.7	8.8	5.9	4.8	3.2	2.9	2.7	4.0 [b]
Other Lottery Tickets (Store)	24.6	23.1	23.5	21.1	17.5	10.5	8.5	7.5	8.8 [b]
Video Gambling or Slot Machines	6.8	5.4	4.9	3.9	2.2	†	†	1.9	1.6 [b]
Casino in Ontario	†	†	†	†	†	†	†	†	†
Video Game Results	—	—	—	—	—	—	—	—	7.4
Dare/Private Bet	—	—	—	—	—	—	—	—	12.7
Online Gambling (Any)	—	3.4	2.4	2.8	3.1	†	1.6	3.7	3.5
Other ways not listed above	—	25.3	25.8	23.1	20.2	16.7	13.5	8.7	8.2 [b]
Any Gambling Activity (95% CI)	—	55.0 (50.7-59.3)	61.0 (57.4-64.4)	56.0 (51.9-60.0)	43.0 (38.6-47.5)	38.4 (30.9-46.5)	33.4 (28.9-38.2)	32.0 (28.2-36.0)	32.1 (28.6-35.9) [b]
5+ Gambling Activities (95% CI)	—	5.6 (3.9-7.9)	7.4 (5.5-10.0)	3.7 (2.4-5.5)	3.6 (2.4-5.2)	1.8 (1.1-3.0)	2.3 (1.4-3.8)	1.3 (0.7-2.4)	†

	2001	2003	2005	2007	2009	2011	2013	2015	2017
EAST REGION	(309)	(641)	(907)	(906)	(1900)	(994)	(1728)	(925)	(1778)
Cards	24.8	26.2	28.0	25.2	19.0	13.4	12.0	8.7	5.6 [b]
Dice	—	9.2	12.2	6.9	4.7	4.7	3.1	†	3.7 [b]
Other Games of Skill (e.g., pool, darts)	—	—	—	—	—	—	7.7	4.5	5.5
Bingo	11.5	9.9	6.4	8.3	7.2	4.6	4.0	4.3	4.6 [b]
Sports Pools/Fantasy Sports	25.2	22.5	19.0	13.6	12.8	13.9	10.3	8.8	6.9 [b]
Sports Lottery Tickets	9.6	7.0	4.8	4.4	4.0	3.5	†	3.5	† [b]
Other Lottery Tickets (Store)	22.2	20.5	13.3	16.2	14.6	12.6	10.3	7.3	8.1 [b]
Video Gambling or Slot Machines	5.4	7.4	7.2	6.1	6.8	3.2	†	†	†
Casino in Ontario	†	†	†	†	2.9	†	†	†	†
Video Game Results	—	—	—	—	—	—	—	—	5.5
Dare/Private Bet	—	—	—	—	—	—	—	—	13.1
Online Gambling (Any)	—	2.2	†	1.8	3.5	†	†	†	1.7
Other ways not listed above	—	28.0	23.4	24.7	19.2	18.2	13.2	10.4	6.2 [b]
Any Gambling Activity (95% CI)	—	59.2 (54.0-64.2)	55.3 (50.0-60.5)	51.7 (46.7-56.6)	42.7 (37.3-48.4)	36.5 (32.4-40.8)	36.5 (32.7-40.6)	31.2 (22.7-41.2)	29.7 (26.4-33.2) [b]
5+ Gambling Activities (95% CI)	—	5.2 (3.3-8.1)	3.7 (1.7-7.6)	3.5 (2.1-5.8)	3.0 (1.3-6.7)	3.3 (1.7-6.5)	†	†	†

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 2017 vs. 2015; [b] 2017 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 or fantasy sports?; Bought sports lottery tickets (such as Sports Select or Proline)?; Bought any other lottery tickets at a store including instant lottery (such as 6-49, Poker Lotto, scratch cards)?; Bet money on video gambling machines, slot machines, or any other gambling machines?; Bet money at a casino in Ontario?; Bet money on results of a video game?; Bet money on a dare or private bet?".

* The Online Gambling Index is based on the following five questions in 2017: Bet money on poker online?, Bet money on bingo online?, Bet money on sports betting online?, Bet money on other online games?, and Bought lottery tickets online? However, in prior years one general question about "bet money over the Internet on any game" was asked.

Source: OSDUHS, Centre for Addiction and Mental Health

Table A3.6.2 Percentage Classified as Having a Video Gaming Problem (PVP Scale), 2007–2017 OSDUHS (Grades 7–12)

	2007	2009	2011	2013	2015	2017
(n=)	(2935)	(4261)	(4816)	(5478)	(5403)	(6364)
Total	**9.4**	**10.3**	**11.9**	**10.3**	**12.5**	**11.7**
(95% CI)	(8.2-10.8)	(9.0-11.7)	(9.4-14.9)	(8.6-12.2)	(11.1-14.1)	(9.5-14.2)
Sex						
Males	**15.1** (13.1-17.3)	**16.0** (13.7-18.4)	**18.7** (14.5-23.6)	**16.5** (13.5-20.1)	**20.2** (17.8-22.7)	**16.6** (13.9-19.8)
Females	**3.1** (2.3-4.3)	**4.0** (2.7-5.7)	**5.1** (4.1-6.3)	**3.5** (2.7-4.5)	**4.5** (3.4-5.8)	**6.5** [b] (4.4-9.3)
Grade						
7	**10.4** (6.9-15.3)	**8.3** (5.0-13.4)	**8.7** (6.3-11.8)	**12.8** (9.9-16.4)	**8.4** (6.1-11.5)	**11.2** (8.3-15.0)
8	**10.8** (7.9-14.8)	**10.9** (7.5-15.4)	**9.0** (6.4-12.5)	**9.4** (6.9-12.8)	**11.8** (9.2-15.0)	**10.8** (8.4-13.8)
9	**8.9** (6.4-12.2)	**11.2** (7.9-15.6)	**9.2** (6.3-13.1)	**9.4** (6.9-12.6)	**12.8** (10.4-15.6)	**9.6** (7.4-12.3)
10	**9.1** (6.7-12.4)	**11.4** (8.6-14.9)	**11.9** (8.6-16.2)	**9.8** (6.1-15.4)	**14.1** (10.4-18.9)	**11.1** (8.4-14.4)
11	**9.2** (6.7-12.7)	**9.7** (6.8-13.5)	**12.5** (9.3-16.5)	**11.4** (8.1-15.8)	**14.7** (10.9-19.6)	**16.4** (11.5-22.9)
12	**8.6** (6.4-11.4)	**10.0** (7.0-14.0)	**16.9** (9.1-29.1)	**9.4** (6.9-12.8)	**12.7** (9.6-16.5)	**10.7** (7.4-15.1)
Region						
Greater Toronto Area	**10.8** (8.8-13.2)	**10.0** (8.3-12.0)	**13.8** (11.1-17.1)	**11.8** (9.9-13.9)	**14.0** (11.8-16.6)	**13.5** (10.0-17.9)
North	**7.6** (5.5-10.5)	**10.5** (7.7-14.1)	**7.4** (5.8-9.4)	**8.1** (6.1-10.5)	**12.1** (8.8-16.6)	**10.4** (7.0-15.0)
West	**8.5** (6.6-10.9)	**11.7** (9.2-14.9)	**11.4** (5.5-22.3)	**10.1** (6.8-14.9)	**12.7** (9.9-16.0)	**11.3** (9.0-14.1)
East	**8.3** (5.6-12.0)	**8.3** (5.4-12.6)	**9.8** (7.8-12.4)	**8.0** (4.4-13.9)	**9.4** (7.1-12.3)	**7.0** (4.8-10.3)

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 2017 vs. 2015; [b] 2017 vs. 2007 significant difference, p<.01.

Source: OSDUHS, Centre for Addiction and Mental Health

Table A3.6.3 Percentage Reporting Using Social Media for Five Hours or More a Day, 2013–2017 OSDUHS (Grades 7–12)

	(n=)	2013 (10272)	2015 (5403)	2017 (6364)
Total		**10.7**	**16.0**	**20.1** [ab]
(95% CI)		(9.5-12.0)	(14.5-17.6)	(17.5-23.1)
Sex				
Males		**7.0** (5.8-8.6)	**10.1** (8.6-11.8)	**14.9** [ab] (11.8-18.5)
Females		**14.6** (12.6-16.7)	**22.4** (20.0-25.0)	**25.8** [b] (23.1-28.6)
Grade				
7		**5.0** (3.5-7.0)	**8.9** (6.6-11.8)	**11.5** [b] (8.0-16.1)
8		**11.1** (8.3-14.6)	**11.0** (8.5-14.2)	**15.0** (12.0-18.5)
9		**9.9** (8.1-12.0)	**14.0** (11.3-17.1)	**22.9** [ab] (18.4-28.2)
10		**12.3** (9.5-15.7)	**20.6** (17.5-24.2)	**20.6** [b] (15.5-26.8)
11		**11.8** (9.8-14.3)	**22.8** (18.3-28.0)	**24.2** [b] (18.0-31.7)
12		**11.8** (9.4-14.9)	**16.7** (13.0-21.2)	**22.1** [b] (17.5-27.5)
Region				
Greater Toronto Area		**12.3** (10.5-14.2)	**17.0** (14.8-19.4)	**21.8** [b] (17.5-26.8)
North		**9.0** (6.8-11.6)	**17.3** (14.1-21.2)	**18.8** [b] (16.1-22.0)
West		**7.9** (6.1-10.2)	**13.8** (11.5-16.4)	**19.4** [b] (15.6-23.8)
East		**12.0** (9.0-16.0)	**16.2** (12.0-21.5)	**16.6** (13.7-19.9)

Notes: (1) n=total number of students surveyed; (2) entries in brackets are 95% confidence intervals; (3) asked of a random half sample in 2015 and 2017; (4) [a] 2017 vs. 2015 significant difference, p<.01; [b] 2017 vs. 2013 significant difference, p<.01.
Q: "About how many hours a day do you usually spend on social media sites or apps, such as Instagram, Snapchat, Twitter, Facebook, Ask.fm, either posting or browsing?"
Source: OSDUHS, Centre for Addiction and Mental Health

Selected Recent OSDUHS Peer-Reviewed Publications

Mammen, G., Rueda, S., & Rehm, J. (2018). Cannabis education: Prevalence and socio-demographic correlates among Ontario middle and high school students. *Canadian Journal of Public Health, 108*(5-6), 648-649.

Sampasa-Kanyinga, H., Hamilton, H., LeBlanc, A., & Chaput, J. (2018). Cannabis use among middle and high school students in Ontario: A school-based cross-sectional study. *CMAJ Open, 6*(1), E50-E56. doi:10.9778/cmajo.20170159

Sampasa-Kanyinga, H., Hamilton, H. A., & Chaput, J.-P. (2018). Sleep duration and consumption of sugar-sweetened beverages and energy drinks among adolescents. *Nutrition, 48*, 77-81. doi:https://doi.org/10.1016/j.nut.2017.11.013

Sampasa-Kanyinga, H., Hamilton, H. A., & Chaput, J. P. (2018). Use of social media is associated with short sleep duration in a dose–response manner in students aged 11 to 20 years. *Acta Paediatrica, 107*(4), 694-700. doi:doi:10.1111/apa.14210

Shi, J., Boak, A., Mann, R., & Turner, N. E. (2018). Adolescent problem video gaming in urban and non-urban regions. *International Journal of Mental Health and Addiction*. doi:10.1007/s11469-018-9872-1

Cook, S., Shank, D., Bruno, T., Turner, N. E., & Mann, R. E. (2017). Self-reported driving under the influence of alcohol and cannabis among Ontario students: Associations with graduated licensing, risk taking, and substance abuse. *Traffic Injury Prevention, 18*(5), 449-455.

Hamilton, H. A., Owusu-Bempah, A., Boak, A., & Mann, R. E. (2017). Ethnoracial differences in cannabis use among native-born and foreign-born high school students in Ontario. *Journal of Ethnicity in Substance Abuse*, 1-12.

Larsen, K., To, T., Irving, H. M., Boak, A., Hamilton, H. A., Mann, R. E., Schwartz, R., & Faulkner, G. E. J. (2017). Smoking and binge-drinking among adolescents, Ontario, Canada: Does the school neighbourhood matter? *Health & Place, 47*, 108-114.

Sampasa-Kanyinga, H., & Hamilton, H. A. (2017). Eating breakfast regularly is related to higher school connectedness and academic performance in Canadian middle- and high-school students. *Public Health, 145*, 120-123.

Sampasa-Kanyinga, H., Hamilton, H. A., Willmore, J., & Chaput, J. P. (2017). Perceptions and attitudes about body weight and adherence to the physical activity recommendation among adolescents: The moderating role of body mass index. *Public Health, 146*, 75-83.

Allison, K. R., Adlaf, E. M., Irving, H. M., Schoueri-Mychasiw, N., & Rehm, J. (2016). The search for healthy schools: A multilevel latent class analysis of schools and their students. *Preventive Medicine Reports, 4*, 331-337.

Allison, K. R., Irving, H. M., Adlaf, E. M., Faulkner, G. E. J., Boak, A., Manson, H. E., . . . 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.

Larsen, K., Faulkner, G. E. J., Boak, A., Hamilton, H. A., Mann, R. E., Irving, H. M., & To, T. (2016). Looking beyond cigarettes: Are Ontario adolescents with asthma less likely to smoke e-cigarettes, marijuana, waterpipes or tobacco cigarettes? *Respiratory Medicine, 120*, 10-15.

Mammen, G., Rehm, J., & Rueda, S. (2016). Vaporizing cannabis through e-cigarettes: Prevalence and socio-demographic correlates among Ontario high school students. *Canadian Journal of Public Health, 107*(3), 337-338.

Cook, S., Turner, N. E., Ballon, B., Paglia-Boak, A., Murray, R., Adlaf, E. M., . . . 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.

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.

Hamilton, H. A., Ferrence, R., Boak, A., O'Connor, S., Mann, R. E., Schwartz, R., & Adlaf, E. M. (2015). Waterpipe use among high school students in Ontario: Demographic and substance use correlates. *Canadian Journal of Public Health, 106*(3), e121-e126.

Hamilton, H. A., Ferrence, R., Boak, A., Schwartz, R., Mann, R. E., O'Connor, S., & Adlaf, E. M. (2015). Ever use of nicotine and nonnicotine electronic cigarettes among high school students in Ontario, Canada. *Nicotine & Tobacco Research, 17*(10), 1212-1218.

Ilie, G., Mann, R. E., Hamilton, H., Adlaf, E. M., Boak, A., Asbridge, M., . . . Cusimano, M. D. (2015). Substance use and related harms among adolescents with and without traumatic brain injury. *Journal of Head Trauma Rehabilitation, 30*(5), 293-301.

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

Webster, L., Chaiton, M., & Kirst, M. (2014). The co-use of tobacco and cannabis among adolescents over a 30-year period. *Journal of School Health, 84*(3), 151-159.

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., Adlaf, E. M., Mann, R. E., Boak, A., Hamilton, H., Asbridge, M., Rehm, J., & Cusimano, M. D. (2014). The moderating effects of sex and age on the association between traumatic brain injury and harmful psychological correlates among adolescents. *PloS One, 9*(9), e108167.

Ilie, G., Mann, R. E., Boak, A., Adlaf, E. M., Hamilton, H., Asbridge, M., Rehm, J., & Cusimano, M. D. (2014). Suicidality, bullying and other conduct and mental health correlates of traumatic brain injury in adolescents. *PLoS One, 9*(4), e94936.

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.

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.

Hamilton, H. A., Boak, A., Ilie, G., & Mann, R. E. (2013). Energy drink consumption and associations with demographic characteristics, drug use and injury among adolescents. *Canadian Journal of Public Health, 104*(7), e496-e501.

Hamilton, H. A., Boak, A., & Mann, R. E. (2013). Involvement with child protective services: Is this a useful question in population-based surveys? *Child Abuse & Neglect, 37*(9), 712-715.

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.

Smart, R. G., Stoduto, G., Mann, R. E., Ialomiteanu, A., Wickens, C. M., & Paglia-Boak, A. (2013). Bullying and hazardous driving among youthful drivers. *Canadian Journal of Public Health, 104*(3), e20.

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.

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.

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 5875 / 07-2018