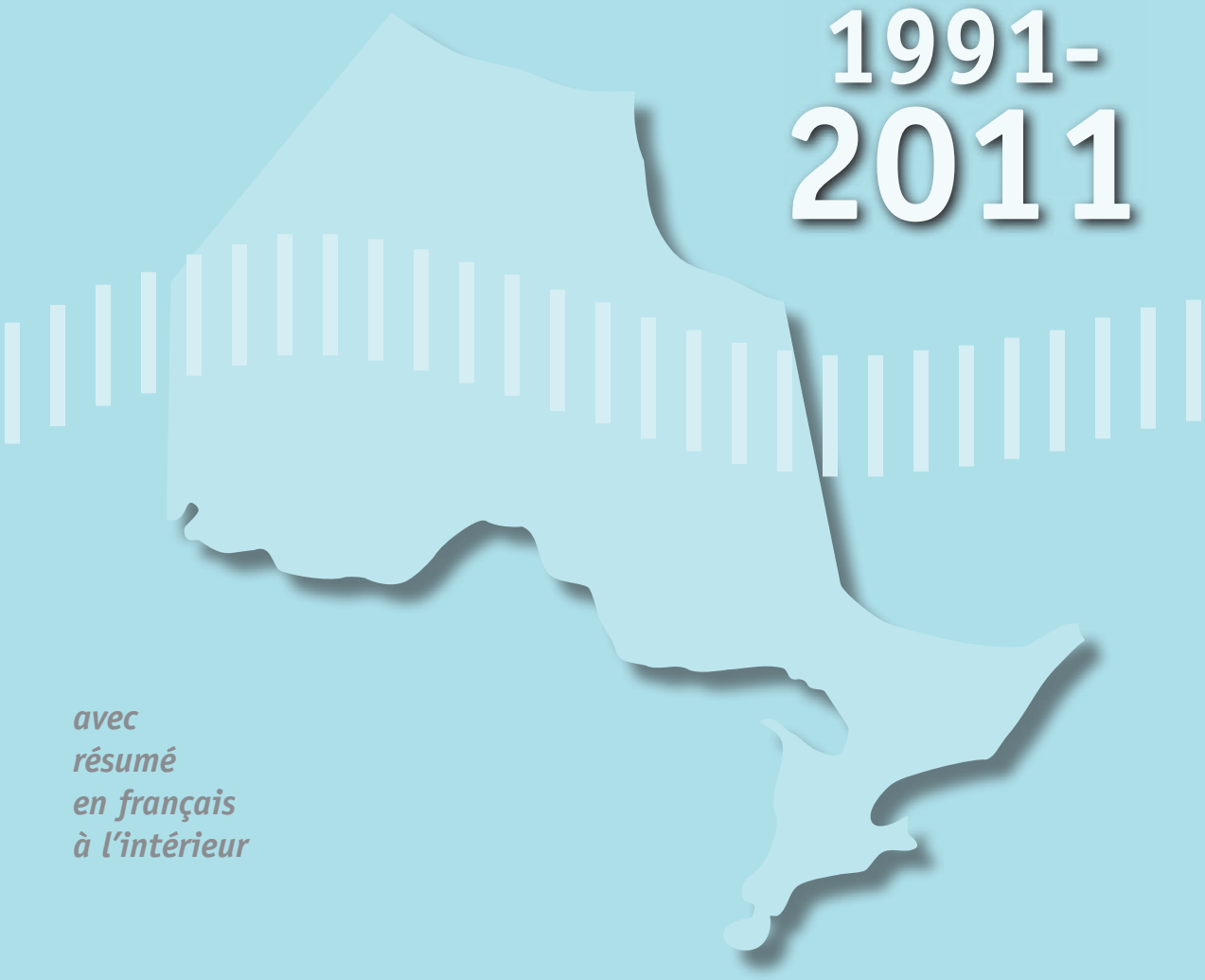
Detailed OSDUHS Findings

The Mental Health and Well-Being of Ontario Students

1991-2011



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

OSDUHS
Ontario Student Drug Use and Health Survey

Detailed OSDUHS Findings

The Mental Health and Well-Being of Ontario Students 1991-2011

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A Pan American Health Organization / World Health Organization Collaborating Centre
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The 2011 OSDUHS Mental Health and Well-Being Report Executive Summary

The Study

The Centre for Addiction and Mental Health's Ontario Student Drug Use and Health Survey (OSDUHS) is the longest ongoing school survey of adolescents in Canada, and one of the longest in the world. The study has been conducted provincially every two years since 1977. A total of 9,288 students (62% of selected students in participating schools) in grades 7 through 12 from 40 school boards, 181 schools, and 581 classes participated in the 2011 OSDUHS, which was administered by the Institute for Social Research, York University. All data are based on self-reports derived from anonymous questionnaires completed in classrooms between October 2010 and June 2011.

This report describes mental health, physical health, and risk behaviours among Ontario students in 2011 and changes since 1991, where available. Although the OSDUHS began in 1977, most health and mental health indicators were first included in the survey in the early 1990s. Results are provided for two analytical groups of students: those in grades 7–12, and those in grades 7, 9, and 11 only. The first group is used to assess current behaviour and **recent trends (1999-2011)**, and the second is used to assess **long-term trends (1991-2011)**.

New indicators in this report include estimates of asthma prevalence, seatbelt use, vehicle collisions, seeking mental health counselling over the Internet, and cyber-bulling victimization.

Family and School

- About 19% of Ontario students report living with a single parent or no parent (biological, adoptive, or step). About 13% of students report that they divide their time between two or more homes.
- One-quarter (25%) of students report spending less than one hour per week doing homework, outside of school.
- Overall, 6% of students report being suspended from school at least once during the academic year.
- Although most students generally feel safe in their school, about 18% express worry about being harmed or threatened at school.
- ➢ The percentage of students who express worry about being harmed or threatened at school is significantly higher today (18%) than estimates seen over the past decade (about 12% to 14%).

Physical Health

- Although a majority (53%) of students rate their health as excellent or very good health, about 16% report fair/poor physical health. Females are more likely than males to report fair/poor health (19% vs. 12%, respectively).
- ➢ Fair/poor self-rated health has significantly increased since 1991, when the estimate was at 6%.
- One-in-ten (9%) students report that they have a current asthma diagnosis. Females are twice as likely as males to report having asthma (12% vs. 6%, respectively).
- Only one-in-five (21%) 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, 8% were physically inactive on all seven days. Males and females are equally likely to be inactive.

- One-in-ten (10%) students spend at least seven hours per day in front of a TV or computer ("screen time" sedentary behaviour). Males (12%) are significantly more likely than females (8%) to report this sedentary behaviour.

- One-quarter (26%) of students are classified as overweight or obese. Males (30%) are significantly more likely than females (21%) to be overweight or obese.

- Over one-quarter (28%) of students report that they do not always wear a seatbelt when in a motor vehicle. Males (29%) and females (28%) are equally likely to report that they do not always wear a seatbelt.

- About 42% of students were treated for an injury at least once during the past 12 months. Regarding frequency, 22% were treated once, 10% were treated twice, 6% three times, and 4% four or more times. Males are significantly more likely than females to sustain an injury that requires treatment (44% vs. 39%).

➢ The percentage of students reporting a medically-treated injury during the past 12 months significantly increased between 2003 (35%), the first year of monitoring, and 2011 (42%).

Body Image

- Two-thirds (65%) of students are satisfied with their weight. One-quarter (24%) believe they are too fat, and one-tenth (11%) believe they are too thin.

- One-third (34%) of students are not attempting to change their weight. Another 30% are attempting to lose weight, 22% want to keep from gaining weight, and 14% want to gain weight.

- Females are significantly more likely than males to believe they are too fat (31% vs. 19%), whereas males are more likely than females to believe that they are too thin (14% vs. 7%).

➢ More females today (31%) believe they are too fat compared with their counterparts a decade ago in 2001 (24%). There has been no comparable increase among males.

Health Care Utilization

Physician Health Care Visit

- One-in-three (33%) students did not visit a doctor for their physical health, not even for a check-up, during the past 12 months. Males are more likely than females to report no physician visit (36% vs. 29%).

Mental Health Care Visit

- About 15% 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 12 months. Females (19%) are significantly more likely than males (11%) to visit a mental health professional.

Medical Drug Use

- One-in-five (21%) students report using a prescribed opioid pain reliever (e.g., Tylenol #3, Percocet) in the past 12 months; 4% used a prescribed tranquillizer/sedative (e.g., Valium, Ativan, Xanax); and 3% used a prescribed drug for Attention Deficit Hyperactivity Disorder (ADHD) (e.g., Ritalin, Adderall, Concerta).

- Females are significantly more likely than males to report medical use of opioid pain relievers. There is no significant sex difference regarding medical tranquillizer/sedative use or medical ADHD drug use.

- About 3% of students report that they were prescribed medication for either anxiety or depression, or both, during the past 12 months. Females (4%) are significantly more likely than males (2%) to report being prescribed medication to treat anxiety, depression, or both.

Sought Counselling Over the Phone or the Internet

- About 1% of students report using a telephone counselling helpline in the past 12 months. Similarly, 1% report using the Internet to seek mental health counselling in the past 12 months. Combining the two, 2% of students – an estimated 21,500 in Ontario – report using a helpline or a website or both methods to seek counselling. There is no significant sex difference.

Internalizing Indicators

Self-Rated Mental Health

- One-in-seven (14%) students rate their mental health as fair/poor, with females significantly more likely to do so than males (18% vs. 9%).

➢ The percentage of students who rated their mental health as fair/poor remained stable between 2007 (the first year of monitoring) and 2011.

Low Self-Esteem

- About 3% of students report low self-esteem, with females significantly more likely than males (4% vs. 2%).

Elevated Psychological Distress

- One-third (34%) of students indicate elevated psychological distress (symptoms of depression, anxiety, social dysfunction), with females more likely to than males (43% vs. 24%).

- The most common distress symptom experienced by students is the feeling of being constantly under stress (41%), followed by losing sleep because of worrying (30%), and then by feeling unhappy and depressed (27%).

➢ Among the total sample, elevated psychological distress has remained stable since 1999. Females, however, show a significant increase from 36% in 1999 to 43% in 2011. There has been no comparable increase among males.

Symptoms of Anxiety/Depression

- One-in-sixteen (6%) students report anxiety/depression symptoms experienced during the past few weeks, with females significantly more likely than males (9% vs. 3%).

➢ Since 1999, there has been no significant change in the percentage of student reporting symptoms of anxiety/depression.

Suicide Ideation and Attempt

- One-in-ten (10%) students had serious thoughts about suicide in the past 12 months; 3% reported a suicide attempt in the past 12 months – an estimated 28,000 students in Ontario.

- Females (14%) are more likely than males (7%) to contemplate suicide, and to report a suicide attempt in the past 12 months (4% vs. 2%).

➢ Suicide ideation remained stable between 2001 and 2011. Similarly, reports of a suicide attempt have remained stable since 2007, the first year of monitoring.

Externalizing Indicators

Antisocial Behaviour

- Among the 11 antisocial behaviours surveyed in 2011, the most common was fire setting (11%), and the least common was street racing (3%).

- Overall, 8% of students engaged in antisocial behaviour (defined as three or more behaviours) during the 12 months before the survey. Males are more likely to engage in antisocial behaviour than are females (9% vs. 7%).

➢ The percentage of students engaging in antisocial behaviour is significantly lower today than in the early 1990s.

Violent Behaviour

- One-in-ten (9%) students report that they assaulted someone at least once during the past 12 months, and 5% report carrying a weapon (a gun or knife). Males are significantly more likely than females to report these behaviours.

➢ Since the early 1990s, there have been significant declines in the percentage of students reporting assaulting someone and carrying a weapon.

School Violence

- About 12% of students report fighting on school property at least once during the past 12 months, with males significantly more likely than females to do so (17% vs. 6%).

- About 7% – an estimated 65,100 Ontario students – were threatened or injured with a weapon on school property at least once during the past 12 months. Males and females are equally likely to report being threatened or injured with a weapon at school.

Bullying at School

- About 29% of students report being bullied at school since September. The most prevalent form of bullying victimization is verbal (25%), while 3% are primarily bullied physically, and 1% of students are victims of theft/vandalism.

- One-in-five (21%) students report bullying others at school. The most prevalent form of bullying others is through verbal attacks (18%), followed by physical attacks (3%), and theft/vandalism (less than 1%).

➢ Among the total sample, the percentage reporting being bullied at school remained stable between 2003 (the first year of monitoring) and 2011. The percentage reporting bullying others at school significantly declined between 2003 (30%) and 2011 (21%). Males, but not females, show significant declines since 2003 in reports of being bullied and bullying others at school.

Victim of Cyber-Bullying

- One-in-five (22%) students – an estimated 217,500 in Ontario – report being bullied over the Internet in the past 12 months. Females are almost twice as likely as males to report being a victim of cyber-bullying (28% vs. 15%).

Gambling and Video Gaming

Gambling Activities

- Of the nine specific gambling activities asked about in the 2011 survey, the most prevalent among all students are playing card games (16%) and betting in sports pools (13%). A further 18% gambled money at "other activities" not asked about in the survey. The least prevalent activity is casino gambling (less than 1%).

- Gambling over the Internet is reported by 2% of students.

- About 38% of students report gambling at one or more activities in the past 12 months. Males are significantly more likely than females to gamble (47% vs. 30%).

- About 3% of students gambled at five or more activities. Males are more likely than females to report multi-gambling activity (4% vs. 2%).

➢ The percentage of students reporting any gambling in 2011 (38%) is significantly lower than the estimate from 2003 (57%), when this measure first began. Similarly, multi-gambling activity is significantly lower in 2011 (3%) than in 2003 (6%).

Gambling Problem

- About 2% of students – an estimated 17,300 in Ontario – report symptoms of a gambling problem (loss of control, problems with family/friends, disruption to school/work), with males more likely to do so than females (2% vs. 1%).

- The percentage of students with a gambling problem significantly decreased over the past decade, from 7% in 1999 to 2% in 2011.

Video Gaming Problem

- Almost one-quarter (23%) of students play video games daily or almost daily, with males significantly more likely to do so than females (37% vs. 9%).

- One-in-eight (12%) students – an estimated 119,800 in Ontario – report symptoms of a video gaming problem (preoccupation, tolerance, loss of control, withdrawal, escape, disregard for consequences, disruption to family/school). Males are three times as likely as females to have a video gaming problem (19% vs. 5%).

- The percentage of students with a video gaming problem remained stable between 2007 (the first year of monitoring) and 2011.

Co-Existing Problems

- The majority (55%) of students report none of the following four problems: elevated psychological distress, antisocial behaviour, hazardous/harmful drinking, or a drug use problem. About 29% report one of these problems, 10% report two, 5% report three, and 2% report all four problems.

Grade Variation

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

Regional Variation

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

Only a few indicators significantly differ according to region:

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

- Compared with the provincial average, **Northern** Ontario students are more likely to report an injury requiring medical treatment. Northern students are less likely to express worry about being threatened or harmed at school, and less likely to be physically inactive.

- Compared with the provincial average, **Western** Ontario students are more likely to report being cyber-bullied.

- Compared with the provincial average, **Eastern** Ontario students are less likely to rate their physical health as fair/poor, to be physically inactive, and to be screen time sedentary.

Readers should note that an overview of results according to Ontario's Local Health Integration Networks is provided in the report on page 84.

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

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

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

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

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

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

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

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

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

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

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

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

Résumé du rapport de 2011 sur la santé mentale et le bien-être selon le SCDSEO

Étude

Le Sondage sur la consommation de drogues et la santé des élèves de l'Ontario (SCDSEO), réalisé par le Centre de toxicomanie et de santé mentale, est la plus ancienne étude menée auprès des adolescents en milieu scolaire au Canada et est une des premières études du genre à avoir vu le jour au monde. Cette étude est menée tous les deux ans à l'échelle de la province depuis 1977. Un total de 9 288 élèves (62 % des élèves sélectionnés dans les écoles participantes) de la 7e à la 12e année répartis dans 40 conseils scolaires, 181 écoles et 581 classes ont participé au SCDSEO 2011, qui a été administré par l'Institut de recherche sociale de l'Université York. Toutes les données proviennent de questionnaires anonymes que les élèves ont remplis en classe entre octobre 2010 et juin 2011.

Le présent rapport décrit la santé physique et mentale ainsi que les comportements à risque des élèves ontariens en 2011 et les changements survenus depuis 1991, lorsque c'est possible. Bien que le SCDSEO ait commencé en 1977, la plupart des indicateurs de la santé physique et mentale ont été inclus dans le sondage pour la première fois au début des années 1990. Les résultats sont fournis pour deux groupes d'élèves analysés : ceux de la 7e à la 12e année et ceux des 7e, 9e et 11e années uniquement. Le premier groupe sert à évaluer les comportements actuels et les **tendances récentes (1999-2011)** tandis que le second est utilisé pour évaluer les **tendances à long terme (1991-2011)**.

Parmi les nouveaux indicateurs figurant dans le présent rapport, citons la prévalence de l'asthme, l'utilisation de la ceinture de sécurité, les collisions automobiles, la recherche de counseling en santé mentale sur Internet et la victimisation due à la cyberintimidation.

Vie familiale et scolaire

- Environ 19 % des élèves ontariens ont déclaré habiter avec un seul parent ou ne pas avoir de père ou de mère (parent biologique, adoptif ou beau-parent). Environ 13 % des élèves ont dit qu'ils partageaient leur temps entre deux foyers ou plus.
- Un quart des élèves (25 %) ont dit qu'ils consacraient moins d'une heure par semaine à leurs devoirs à l'extérieur de l'école.
- Sur l'ensemble des élèves, 6 % ont déclaré avoir été suspendus de l'école au moins une fois pendant l'année scolaire.
- Même si la majorité des élèves se sentent généralement en sécurité dans leur école, environ 18 % craignent d'être blessés ou menacés à l'école.

➢ Le pourcentage d'élèves qui craignent d'être blessés ou menacés à l'école est nettement plus élevé actuellement (18 %) que ce que les estimations ont révélé au cours des 10 dernières années (de 12 % à 14 % environ).

Santé physique

- Bien que la majorité des élèves (53 %) se disent en excellente ou en très bonne santé, environ 16 % signalent une santé passable ou médiocre. Les filles sont plus susceptibles de signaler une santé passable ou médiocre que les garcons (19 % et 12 % respectivement).

➢ Le nombre d'élèves qui disent avoir une santé passable ou médiocre a nettement augmenté depuis 1991, où ce nombre était estimé à 6 %.

- Un élève sur 10 (9 %) a déclaré qu'on avait diagnostiqué chez lui de l'asthme. Les filles sont deux fois plus susceptibles que les garçons de déclarer avoir de l'asthme (12 % et 6 % respectivement).

- Un élève sur cinq seulement (21 %) a déclaré avoir suivi les lignes directrices relatives à l'activité physique quotidienne (définie comme au moins 60 minutes d'activité physique modérée à vigoureuse par jour) au cours des sept derniers jours. À l'opposé, environ 8 % ont été classés comme physiquement inactifs pour tous les sept jours. Les garçons sont tout aussi susceptibles que les filles d'être inactifs.

- Un élève sur dix (10 %) passe au moins sept heures par jour devant un téléviseur ou un ordinateur (comportement sédentaire devant un écran). Les garçons (12 %) sont significativement plus susceptibles que les filles (8 %) de déclarer avoir ce type de comportement sédentaire.

- Un quart (26%) des élèves ontariens sont considérés comme ayant un excès de poids ou comme étant obèses. Les garçons (30 %) sont significativement plus susceptibles que les filles (20 %) d'avoir un excès de poids ou d'être obèses.

- Plus d'un quart des élèves (28 %) ont déclaré qu'ils ne portaient pas toujours de ceinture de sécurité lorsqu'ils étaient à bord d'un véhicule à moteur. Les garçons (29 %) sont tout aussi susceptibles que les filles (28 %) de signaler qu'ils ne portent pas toujours leur ceinture de sécurité.

- Environ 42 % des élèves ont été soignés pour blessures au moins une fois au cours des 12 derniers mois. En ce qui concerne la fréquence des blessures, 22 % des élèves ont été soignés une fois, 10 %, deux fois, 6 %, trois fois et 4 %, au moins quatre fois. Les garçons (44 %) sont plus susceptibles que les filles (39 %) d'avoir une blessure nécessitant des soins.

➢ Le pourcentage d'élèves ayant déclaré avoir une blessure médicalement traitée au cours des 12 derniers mois a nettement augmenté entre 2003 (35 %), première année de suivi, et 2011 (42 %).

Image corporelle

- Les deux-tiers (65 %) des élèves se sont dits satisfaits de leur poids. Un quart (24 %) des élèves estimaient être trop gros et un dixième (11 %), qu'ils étaient trop maigres.

- Un tiers des élèves (34 %) a déclaré ne pas chercher à changer de poids, tandis que 30 % ont déclaré qu'ils cherchaient à perdre du poids, que 22 % voulaient éviter de prendre du poids et que 14 % voulaient prendre du poids.

- Les filles sont nettement plus susceptibles que les garçons de penser qu'elles sont trop grosses (31 % des premières pour 19 % des seconds), tandis que les garçons (14 %) sont plus susceptibles que les filles (7 %) de se trouver trop maigres.

➢ Actuellement, davantage de filles (31 %) qu'en 2001, c'est-à-dire il y a dix ans (24 %), estiment qu'elles sont trop grosses. On n'a pas observé une telle augmentation chez les garçons.

Recours aux services de santé

Consultation auprès d'un médecin

- Environ un tiers (33 %) des élèves n'ont pas consulté un médecin au sujet de leur santé physique, pas même pour un examen régulier, au cours des 12 derniers mois. Les garçons (36 %) sont plus susceptibles que les filles (29 %) de déclarer ne pas avoir consulté un médecin.

Services de santé mentale

- Environ 15 % des élèves ont consulté un professionnel de la santé mentale (comme un médecin, une infirmière ou un conseiller) pour des raisons de santé mentale au moins une fois au cours des 12 derniers mois. Les filles (19 %) sont plus susceptibles que les garçons (11 %) de rendre visite à un professionnel de la santé mentale.

Utilisation de médicaments

- Un élève sur cinq (21 %) a déclaré avoir consommé des analgésiques opioïdes (p. ex.,

Tylenol 3, Percocet) qui leur avaient été prescrits, au cours des 12 derniers mois ; 4 % ont pris un tranquillisant ou un sédatif prescrit (p. ex., Valium, Ativan, Xanax) ; et 3 % ont pris un médicament prescrit pour le trouble déficitaire de l'attention avec ou sans hyperactivité (TDAH) (p. ex., Ritalin, Adderall, Concerta).

- Les filles sont plus susceptibles que les garçons de prendre des tranquillisants et des analgésiques opioïdes prescrits par un médecin. Il n'y a pas de différence significative selon le sexe concernant la prise de tranquillisants ou de sédatifs à des fins médicales ou de médicaments prescrits pour le TDAH.

- Environ 3 % des élèves ont déclaré qu'on leur avait prescrit un médicament contre l'angoisse ou la dépression ou contre ces deux problèmes au cours des 12 derniers mois. Les filles (4 %) sont plus susceptibles que les garçons (2 %) de déclarer qu'on leur a prescrit un médicament contre l'angoisse ou la dépression ou les deux.

Demande de counseling par téléphone ou par Internet

- Environ 1 % de tous les élèves ont dit avoir utilisé une ligne d'aide téléphonique en vue d'obtenir du counseling au cours des 12 derniers mois. De la même façon, 1 % de tous les élèves ont dit avoir utilisé Internet en vue d'obtenir du counseling en santé mentale au cours des 12 derniers mois. Si on combine ces deux moyens, 2 % des élèves, ce qui porte les estimations à 21 500 élèves ontariens environ, ont dit avoir utilisé une ligne d'aide ou un site Web ou les deux en vue d'obtenir du counseling au cours des 12 derniers mois. Il n'y a pas de différence significative entre les sexes à ce sujet.

Indicateurs d'intériorisation

Santé mentale auto-évaluée

- Un élève sur sept (14 %) qualifie sa santé mentale de passable ou médiocre, les filles étant plus susceptibles de signaler une santé mentale médiocre que les garçons (18 % par rapport à 9 %).

- Le pourcentage d'élèves qui qualifient leur santé mentale de passable ou médiocre est demeuré relativement stable entre 2007 (la première année de surveillance) et 2011.

Faible estime de soi

- Environ 3 % des élèves ont dit avoir une faible estime de soi, les filles étant significativement plus susceptibles que les garçons de se sentir ainsi (4 % par rapport à 2 %).

Détresse psychologique élevée

- Un tiers des élèves (34 %) ont signalé une détresse psychologique élevée (symptômes de dépression, d'angoisse, de dysfonctionnement social), les filles (43 %) étant plus susceptibles de signaler un tel état que les garçons (24 %).

- Les symptômes les plus fréquents de détresse psychologique étaient un état constant de stress (41 %), une perte de sommeil attribuable à l'inquiétude (30 %) et un sentiment de tristesse accompagné d'une dépression (27 %).

- Pour l'échantillon total, le taux de répondants ayant signalé une détresse psychologique élevée est généralement stable depuis 1999. On observe toutefois une augmentation de ce taux chez les filles : alors que ce taux était de 36 % en 1999, il a atteint 43 % en 2011. On n'a pas observé une telle augmentation chez les garçons.

Symptômes d'angoisse ou de dépression

- Un élève sur 16 (6%) a déclaré avoir des symptômes d'angoisse ou de dépression au cours des semaines précédant le sondage, les filles étant plus susceptibles de signaler cet état que les garçons (9 % des premières pour 3 % des seconds).

- Depuis 1999, il n'y a pas eu de changement significatif dans le pourcentage d'élèves signalant ces symptômes d'angoisse ou de dépression.

Idées suicidaires et tentatives de suicide

- Environ un élève sur dix (10 %) a songé sérieusement à se suicider au cours des 12 derniers mois. Environ 3 % des répondants ont signalé une tentative de suicide pendant la même période, ce qui porte les estimations à 28 000 élèves ontariens.

- Les filles sont plus susceptibles que les garçons d'avoir des idées suicidaires (14 % par rapport à 7 %) et de signaler une tentative de suicide au cours des 12 derniers mois (4% par rapport à 2 %).

➢ Le taux de répondants ayant déclaré avoir eu des idées suicidaires a peu changé entre 2001 et 2011. De même, le nombre de tentatives de suicide signalées a peu changé depuis 2007, première année de surveillance de cet indicateur.

Indicateurs d'extériorisation

Comportement antisocial

- Parmi les 11 actes antisociaux étudiés en 2011, l'acte le plus fréquent signalé était l'allumage d'un feu (11 %) et le moins commun, les courses de rue (3 %).

- Dans l'ensemble, 8 % des élèves ont eu un comportement antisocial (c.-à-d. ont commis au moins trois actes antisociaux) au cours des 12 mois ayant précédé le sondage. Ce phénomène est plus courant chez les garçons (9 %) que chez les filles (7 %).

➢ Le pourcentage d'élèves qui commettent des actes antisociaux est significativement plus faible aujourd'hui qu'il ne l'était au début des années 1990.

Comportement violent

- Un élève sur dix (9 %) a déclaré avoir agressé quelqu'un au moins une fois au cours des 12 derniers mois et 5 % ont dit qu'ils portaient une arme (pistolet ou couteau). Les garçons étaient nettement plus susceptibles que les filles de signaler ces deux comportements.

➢ Depuis le début des années 1990, il y a eu une chute significative du nombre d'élèves ayant déclaré avoir agressé quelqu'un ou porter une arme.

La violence scolaire

- Environ 12 % des élèves ont dit s'être battus au sein du périmètre scolaire au moins une fois au cours des 12 derniers mois, les garçons étant nettement plus susceptibles que les filles d'avoir un tel comportement (17 % par rapport à 6 %).

- Environ 7 % des élèves, ce qui porte les estimations à près de 65 100 élèves ontariens, ont été menacés ou blessés au sein du périmètre scolaire au moins une fois au cours des 12 derniers mois. Les filles sont tout aussi susceptibles que les garçons d'indiquer qu'elles ont été menacées ou blessées par une arme à l'école.

L'intimidation à l'école

- Près de 29 % des élèves ont dit avoir été victimes d'intimidation à l'école depuis septembre. La principale forme en est l'intimidation verbale (25 %), tandis que 3 % des élèves sont victimes d'intimidation physique et 1 % sont victimes de vol ou de vandalisme.

- Un élève sur cinq (21 %) a déclaré avoir intimidé d'autres élèves à l'école. En général, l'intimidation se faisait sous forme d'attaques verbales (18 %), d'attaques physiques (3 %) ou de vol ou de vandalisme (moins de 1 %).

➢ Sur l'échantillon total, le pourcentage de répondants ayant déclaré être victimes d'intimidation à l'école est resté stable entre 2003 (première année de surveillance) et 2011. Le pourcentage de ceux qui ont déclaré avoir intimidé d'autres à l'école a diminué significativement entre 2003 (30 %) et 2011 (21 %). Chez les garçons, on a observé une baisse dans le nombre des élèves victimes d'intimidation ou ayant intimidé d'autres élèves. Il n'y a pas eu de baisse à ce niveau chez les filles.

Victime de cyberintimidation

- Un élève sur cinq (22 %), ce qui porte les estimations à environ 217 500 élèves ontariens, ont déclaré avoir été victimes d'intimidation sur Internet au cours des 12 derniers mois. Les filles sont près de deux fois plus susceptibles de déclarer avoir été victimes de cyberintimidation que les garçons (28 % par rapport à 15 %).

Jeux de hasard et d'argent et jeux vidéo

Activités de jeu

- Parmi les 9 jeux de hasard et d'argent étudiés lors du sondage de 2011, les plus fréquents pour tous les élèves étaient les jeux de cartes (16 %) et les paris sportifs (13 %). Par ailleurs, 18 % ont déclaré s'adonner à d'« autres activités » de jeu que le sondage ne demandait pas de préciser. Les jeux de casino étaient l'activité la moins courante (1 %).

- Environ 2 % des élèves ont déclaré s'adonner à des jeux de hasard et d'argent sur Internet.

- Parmi tous les élèves, 38 % ont déclaré s'être adonnés à au moins un jeu de hasard et d'argent au cours des 12 derniers mois. Les garçons sont nettement plus susceptibles que les filles de déclarer s'adonner à de tels jeux (47 % par rapport à 30 %).

- Parmi tous les élèves, 3 % ont participé à au moins cinq activités de jeu. Les garçons sont plus susceptibles que les filles de déclarer jouer à de multiples jeux de hasard et d'argent (4 % par rapport à 2 %).

➢ Le pourcentage d'élèves ayant déclaré s'être adonnés à des jeux de hasard et d'argent en 2011 (38 %) est significativement inférieur à l'estimation faite en 2003 (57 %), première année de surveillance de cet indicateur. De même, le pourcentage d'élèves s'adonnant à de multiples jeux est significativement inférieur en 2011 (3 %) à ce qu'il n'était estimé en 2003 (6 %).

Problème de jeu

- Environ 2 % des élèves, ce qui porte les estimations à 17 000 élèves en Ontario, ont signalé des symptômes d'un problème de jeu (perte de contrôle, problèmes avec les amis et les membres de la famille, ennuis à l'école ou au travail). Les garçons risquent plus que les filles d'avoir un tel problème (2 % par rapport à 1 %).

➢ Le pourcentage d'élèves montrant des symptômes de problème de jeu a significativement diminué au cours des 10 dernières années, passant de 7 % en 1999 à 2 % en 2011.

Problème lié aux jeux vidéo

- Presque un quart (23%) des élèves ontariens s'adonnent à des jeux vidéo tous les jours ou presque, et les garçons le font nettement plus que les filles (37 % par rapport à 9 %).

- Un élève sur huit (12 %), ce qui porte les estimations à 119 800 élèves ontariens, ont déclaré avoir des symptômes d'un problème de jeux vidéo (préoccupation, tolérance, perte de contrôle, sevrage, fuite, indifférence quant aux conséquences, ennuis avec la famille et à l'école). Les garçons sont trois fois plus susceptibles que les filles de signaler un problème lié aux jeux vidéo (19 % par rapport à 5 %).

➢ Le pourcentage d'élèves affichant des symptômes de problème de jeux vidéos est resté stable entre 2007, première année de surveillance, et 2011.

Problèmes concomitants

- La majorité des élèves (55 %) disent n'avoir aucun des quatre problèmes suivants : détresse psychologique élevée, comportement antisocial, consommation dangereuse ou nocive d'alcool, problème lié à l'usage de drogues. Environ 29 % des élèves ont dit avoir un de ces problèmes ; 10 % ont déclaré en avoir deux ; 5 % ont dit en avoir trois ; et 2 % ont affirmé avoir les quatre problèmes.

Variation selon l'année d'études

L'année d'études est significativement liée à la santé mentale et au bien-être. En général, les indicateurs d'une santé médiocre (p. ex. être inactif, un comportement sédentaire, des blessures), les indicateurs d'internalisation (p. ex. déclarer un état de santé mentale passable ou médiocre, une détresse psychologique), le comportement antisocial, les jeux de hasard et d'argent et les problèmes concomitants augmentent nettement avec l'année d'études. L'intimidation et les bagarres à l'école sont des phénomènes plus fréquents chez les plus jeunes et ont tendance à diminuer à mesure de l'avancement dans l'adolescence.

Variations régionales

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

On a relevé des différences significatives entre les régions pour quelques indicateurs seulement :

- Comparativement à la moyenne provinciale, les élèves de **Toronto** sont plus susceptibles de craindre d'être menacés ou blessés à l'école; de ne pas faire d'exercice physique; et d'avoir un comportement sédentaire (nombreuses heures chaque jour devant un téléviseur ou un ordinateur). Toutefois, ils sont moins susceptibles de déclarer avoir eu une blessure requérant un traitement médical, être victimes d'intimidation à l'école ou de cyberintimidation.

- Comparativement à la moyenne provinciale, les élèves du **Nord** de l'Ontario sont plus susceptibles de déclarer avoir eu une blessure requérant un traitement médical. Ils sont moins susceptibles d'exprimer une crainte d'être menacé ou blessé à l'école et sont moins susceptibles d'être physiquement inactifs.

- Comparativement à la moyenne provinciale, les élèves de l'**Ouest** de l'Ontario sont plus susceptibles de déclarer être victimes de cyberintimidation.

- Comparativement à la moyenne provinciale, les élèves de l'**Est** de l'Ontario sont moins susceptibles de classer leur état de santé comme étant passable ou médiocre, d'être physiquement inactifs et de passer beaucoup de temps à des activités sédentaires devant un téléviseur ou un ordinateur.

On trouvera à la page 84 du rapport un aperçu des résultats par réseau local d'intégration des services de santé de l'Ontario.

Pourcentage d'élèves ayant déclaré présenter certains indicateurs de santé mentale et de bien-être, selon le sexe, lors du SCDSEO 2011 (élèves de la 7e à la 12e année)

Indicateur	Total %	(IC de 95 %)	Nombre estimatif†	Garçons %	Filles %	
Santé physique jugée passable ou médiocre par l'élève	**15,6**	(14,2-17,1)	155 100	12,2	19,2	*
Asthme diagnostiqué chez l'élève (actuel)	**8,9**	(7,0-11,3)	86 700	6,1	12,1	*
Aucune consultation médicale (an écoulé)	**32,7**	(30,4-35,0)	305 900	36,1	28,9	*
Inactivité physique (tous les jours de la semaine passée)	**8,4**	(7,4-9,6)	83 600	8,9	7,9	
Comportement sédentaire (7 h/jour et plus devant un écran)	**10,2**	(8,7-11,8)	97 100	11,9	8,3	*
Excès de poids ou obésité	**25,5**	(23,2-28,0)	245 600	29,5	21,3	*
Blessure ayant nécessité un traitement médical (an écoulé)	**41,9**	(39,4-44,4)	402 800	44,2	39,3	*
Port de ceinture irrégulier à bord d'un véhicule motorisé	**28,4**	(25,9-31,0)	280 100	28,8	27,8	
Collision automobile, en tant que conducteur *(pour les élèves qui conduisent)*	**9,8**	(7,0-13,5)	30 200	10,6	8,7	
Consultation en santé mentale (an écoulé)	**15,1**	(12,8-17,6)	154 100	11,1	19,2	*
Demande de counseling par téléphone/Internet (an écoulé)	**2,1**	(1,6-2,9)	21 500	1,7	2,5	
Usage médical de tranquillisants/sédatifs (an écoulé)	**3,6**	(2,9-4,3)	35 700	3,0	4,2	
Usage médical d'un médicament pour le TDAH (an écoulé)	**2,5**	(2,1-3,1)	25 500	3,0	2,1	
Médicaments prescrits pour dépression, anxiété ou les deux	**3,3**	(2,4-4,4)	33 400	2,2	4,4	*
Santé mentale jugée passable ou médiocre par l'élève	**13,7**	(12,2-15,7)	138 300	9,4	18,2	*
Faible estime de soi	**3,1**	(2,4-4,0)	30 100	2,0	4,3	*
Détresse psychologique élevée (dernières semaines)	**33,5**	(31,0-36,1)	341 200	24,0	43,2	*
Symptômes d'angoisse/de dépression (dernières semaines)	**6,0**	(4,6-7,9)	61 100	3,0	9,1	*
Idées suicidaires (an écoulé)	**10,3**	(9,0-11,8)	103 800	7,0	13,7	*
Tentative de suicide (an écoulé)	**2,8**	(2,1-3,6)	28 000	1,6	4,0	*
Comportement antisocial (3+/9 actes antisociaux, an écoulé)	**8,0**	(6,9-9,3)	78 700	9,2	6,8	*
Port d'armes (an écoulé)	**4,6**	(3,6-5,8)	44 300	7,6	1,6	*
Bagarres à l'école (an écoulé)	**11,9**	(9,9-14,2)	115 900	17,4	6,4	*
Menace/blessure avec arme à l'école (an écoulé)	**6,5**	(5,2-8,0)	65 100	7,4	5,5	
Crainte d'être blessé ou menacé à l'école (an écoulé)	**18,2**	(16,4-20,2)	183 700	16,8	19,7	*
Auteur d'actes d'intimidation à l'école (depuis septembre)	**20,7**	(16,9-25,2)	208 000	18,6	22,8	
Victime d'intimidation à l'école (depuis septembre)	**28,6**	(25,8-31,5)	288 000	25,8	31,3	*
Victime de cyberintimidation (depuis septembre)	**21,6**	(19,5-24,0)	217 500	15,2	28,0	*
Jeux de hasard et d'argent (1+/10 jeux lors de l'an écoulé)	**38,4**	(35,6-41,2)	380 200	47,3	29,5	*
Multi-jeu (5+/10 jeux lors de l'an écoulé)	**2,7**	(1,9-3,7)	26 300	3,6	1,7	*
Un problème de jeu (an écoulé)	**1,7**	(1,2-2,5)	17 300	2,4	1,0	*
Un problème lié aux jeux vidéo (an écoulé)	**11,9**	(9,4-14,9)	119 800	18,7	5,1	*
3 ou 4 problèmes concomitants††	**6,9**	(5,8-8,1)	70 300	6,2	7,5	

Nota : 9 288 élèves ont participé au sondage ; IC = intervalle de confiance ; usage médical d'un médicament signifie usage d'un médicament prescrit ; † le nombre estimatif d'élèves repose sur une population d'environ 1 009 900 élèves ontariens (arrondis au nombre entier inférieur) ; * indique une différence significative entre les garçons et les filles ($p < 0,05$) sans contrôle d'autres facteurs; †† parmi les quatre indicateurs de problèmes : détresse psychologique élevée, comportement antisocial, consommation dangereuse ou nocive d'alcool et problème d'usage de drogues.

Pourcentage d'élèves ayant déclaré présenter certains indicateurs de santé mentale et de bien-être, selon l'année d'études, lors du SCDSEO 2011

Indicateur	7e	8e	9e	10e	11e	12e	
Santé physique jugée passable ou médiocre par l'élève	6,2	10,2	11,4	18,3	22,3	19,8	*
Asthme diagnostiqué chez l'élève (actuel)	6,3	9,1	9,0	11,5	8,3	8,8	
Aucune consultation médicale (an écoulé)	33,4	34,7	31,2	30,8	34,9	31,9	
Inactivité physique (tous les jours de la semaine passée)	7,9	6,5	6,2	7,4	10,6	10,4	*
Comportement sédentaire (7 h/jour et plus devant un écran)	4,4	8,8	9,1	12,7	11,5	11,8	*
Excès de poids ou obésité	19,7	20,9	27,2	27,7	28,7	25,9	*
Blessure ayant nécessité un traitement médical (an écoulé)	34,9	41,0	43,2	45,7	38,5	44,8	
Ne porte pas toujours de ceinture à bord d'un véhicule motorisé	19,8	27,8	35,3	30,8	29,0	26,3	
Consultation en santé mentale (an écoulé)	13,0	13,9	12,1	16,6	17,6	14,9	
Demande de counseling par téléphone/Internet (an écoulé)	s	1,8	2,6	1,8	s	1,3	
Usage médical de tranquillisants/sédatifs (an écoulé)	1,3	2,2	2,7	4,5	4,9	4,6	*
Usage médical d'un médicament pour le TDAH (an écoulé)	3,1	3,2	3,0	3,5	s	1,4	
Médicaments prescrits pour dépression, anxiété ou les deux	s	s	s	s	s	3,8	*
Santé mentale jugée passable ou médiocre par l'élève	7,7	10,1	12,6	17,3	14,7	16,5	*
Faible estime de soi	s	2,7	2,4	4,0	s	2,2	
Détresse psychologique élevée (dernières semaines écoulées)	20,9	25,2	29,7	35,2	40,6	41,2	*
Symptômes d'angoisse/de dépression (dernières semaines)	s	3,0	6,1	7,8	8,9	5,6	*
Idées suicidaires (an écoulé)	7,2	8,1	10,1	12,4	14,0	9,0	*
Tentative de suicide (an écoulé)	s	s	2,5	3,7	2,3	3,8	
Comportement antisocial (3+/9 actes antisociaux, an écoulé)	2,5	4,7	5,3	8,9	13,1	10,2	*
Port d'armes (an écoulé)	3,1	6,0	3,7	4,6	6,8	3,5	
Bagarres à l'école (an écoulé)	24,1	20,8	9,8	9,1	7,9	7,4	*
Menace/blessure avec arme à l'école (an écoulé)	6,5	4,4	8,1	8,0	5,0	6,5	
Crainte d'être blessé ou menacé à l'école (an écoulé)	21,7	18,9	19,7	19,7	14,5	16,4	*
Auteur d'actes d'intimidation à l'école (depuis septembre)	13,9	22,1	21,4	24,9	22,3	18,7	
Victime d'intimidation à l'école (depuis septembre)	30,4	32,7	30,5	33,0	27,1	21,5	*
Victime de cyberintimidation (depuis septembre)	19,8	22,5	24,6	20,7	24,4	18,4	
Jeux de hasard et d'argent (1+/10 jeux lors de l'an écoulé)	25,2	30,2	33,5	41,1	42,9	47,6	*
Multi-jeu (5+/10 jeux lors de l'an écoulé)	s	s	s	s	5,6	2,4	*
Un problème de jeu (an écoulé)	s	s	s	s	s	2,2	
Un problème lié aux jeux vidéo (an écoulé)	8,7	9,0	9,2	11,9	12,5	16,9	
3 ou 4 problèmes concomitants†	s	s	4,0	7,1	11,8	11,9	*

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

Pourcentage d'élèves ayant déclaré présenter certains indicateurs de santé mentale et de bien-être, selon la région (de la 7e à la 12e année), lors du SCDSEO 2011

Indicateur	Toronto	Nord	Ouest	Est	
Santé physique jugée passable ou médiocre par l'élève	17,9	14,4	16,5	13,4	*
Asthme diagnostiqué chez l'élève (actuel)	6,5	10,4	9,6	9,1	
Aucune consultation médicale (an écoulé)	31,2	40,7	33,2	31,5	
Inactivité physique (tous les jours de la semaine passée)	13,0	6,8	8,0	6,8	*
Comportement sédentaire (7 h/jour et plus devant un écran)	13,8	8,8	10,3	8,3	*
Excès de poids ou obésité	26,4	27,9	26,1	24,1	
Blessure ayant nécessité un traitement médical (an écoulé)	34,6	49,3	43,6	42,3	*
Ne porte pas toujours de ceinture à bord d'un véhicule motorisé	28,6	26,4	29,6	27,0	
Collision automobile, en tant que conducteur *(pour les élèves qui conduisent)*	8,4	13,8	11,4	7,6	
Consultation en santé mentale (an écoulé)	13,3	16,5	16,4	13,8	
Demande de counseling par téléphone/Internet (an écoulé)	2,9	2,8	s	3,4	
Usage médical de tranquillisants/sédatifs (an écoulé)	2,0	4,3	3,8	4,0	
Usage médical d'un médicament pour le TDAH (an écoulé)	2,0	3,0	2,6	2,7	
Médicaments prescrits pour dépression, anxiété ou les deux	2,2	4,1	3,6	3,3	
Santé mentale jugée passable ou médiocre par l'élève	14,7	14,2	13,2	13,9	
Faible estime de soi	3,5	3,5	3,1	2,8	
Détresse psychologique élevée (dernières semaines écoulées)	38,0	31,6	32,2	33,5	
Symptômes d'angoisse/de dépression (dernières semaines)	8,1	3,7	5,8	5,6	
Idées suicidaires (an écoulé)	9,7	7,8	9,9	11,5	
Tentative de suicide (an écoulé)	s	s	2,7	3,5	
Comportement antisocial (3+/9 actes antisociaux, an écoulé)	7,5	10,4	7,6	8,4	
Port d'armes (an écoulé)	4,6	7,0	3,9	5,0	
Bagarres à l'école (an écoulé)	13,1	13,8	11,5	11,5	
Menace/blessure avec arme à l'école (an écoulé)	7,7	8,0	7,1	4,9	
Crainte d'être blessé ou menacé à l'école (an écoulé)	21,3	14,4	19,4	15,7	*
Auteur d'actes d'intimidation à l'école (depuis septembre)	17,3	19,6	22,8	19,8	
Victime d'intimidation à l'école (depuis septembre)	21,6	29,2	30,6	29,2	*
Victime de cyberintimidation (depuis septembre)	17,2	21,3	24,6	19,9	*
Jeux de hasard et d'argent (1+/10 jeux lors de l'an écoulé)	34,7	40,3	39,4	38,4	
Multi-jeu (5+/10 jeux lors de l'an écoulé)	s	4,1	2,6	2,9	
Un problème de jeu (an écoulé)	3,4	1,7	s	1,7	
Un problème lié aux jeux vidéo (an écoulé)	14,6	7,4	12,3	10,7	
3 ou 4 problèmes concomitants[†]	5,2	10,5	6,6	7,4	

Nota : * indique une différence significative selon la région ($p < 0,05$) sans contrôle d'autres facteurs ; « s » indique que l'estimation a été supprimée parce qu'elle n'est pas fiable ; usage médical d'un médicament signifie usage d'un médicament prescrit ; [†] parmi les quatre indicateurs de problèmes : détresse psychologique élevée, comportement antisocial, consommation dangereuse ou nocive d'alcool et problème d'usage de drogues.

Aperçu des tendances quant à certains indicateurs de santé mentale et de bien-être parmi l'échantillon total d'élèves, SCDSEO

Indicateur	Années d'études	Période	Variation
% d'élèves qui ont déclaré avoir une santé physique passable ou médiocre	7e, 9e, 11e	1991-2011	En hausse, de 6 % à 14 %
% d'élèves inactifs physiquement	7e – 12e	2009-2011	Stable
% d'élèves ayant un comportement sédentaire (plus de 7 h par jour)	7e – 12e	2009-2011	Stable
% d'élèves ayant un excès de poids ou obèses	7e – 12e	2009-2011	Stable
% d'élèves qui n'ont pas consulté un médecin (an écoulé)	7e – 12e	1999-2011	Stable
% d'élèves qui ont subi au moins une blessure nécessitant un traitement	7e – 12e	2003-2011	En hausse, de 35 % à 42 %
% d'élèves ayant consulté un spécialiste de la santé mentale au moins une fois (an écoulé)	7e – 12e	1999-2011	En hausse, passant de 12 % (1999) à 24 % (2009) pour redescendre à 15 % en 2011
% d'élèves qui ont déclaré utilisé des médicaments prescrits pour le TDAH	7e – 12e	2007-2011	Stable
% d'élèves qui ont déclaré que leur santé mentale était passable ou médiocre	7e – 12e	2007-2011	Stable
% d'élèves ayant une détresse psychologique élevée	7e – 12e	1999-2011	Stable
% d'élèves ayant signalé des symptômes d'angoisse ou de dépression (semaine écoulée)	7e – 12e	1999-2011	Stable
% d'élèves ayant eu des idées suicidaires (an écoulé)	7e – 12e	2001-2011	Stable
% d'élèves ayant fait une tentative de suicide (an écoulé)	7e – 12e	2007-2011	Stable
% d'élèves ayant signalé un comportement antisocial (an écoulé)	7e, 9e, 11e	1993-2011	En baisse, de 16 % à 8 %
% d'élèves ayant porté une arme (an écoulé)	7e, 9e, 11e	1993-2011	En baisse, de 16 % à 5 %
% d'élèves s'étant battu à l'école (an écoulé)	7e – 12e	2001-2011	En baisse, de 17 % à 12 %
% d'élèves ayant été menacés ou blessés avec une arme à l'école	7e – 12e	2003-2011	Stable
% d'élèves craignant d'être menacés ou blessés à l'école	7e – 12e	1999-2011	Stable entre 1999 (14 %) et 2009 (12 %) et en augmentation en 2011 (18 %)
% d'élèves ayant été victimes d'intimidation à l'école (depuis septembre)	7e – 12e	2003-2011	Stable
% d'élèves ayant joué à des jeux de hasard et d'argent sur Internet (an écoulé)	7e – 12e	2003-2011	Stable
% d'élèves ayant joué à des jeux de hasard et d'argent (an écoulé)	7e – 12e	2003-2011	En baisse, de 57 % à 38 %
% d'élèves ayant multi-joué (an écoulé)	7e – 12e	2003-2011	En baisse, de 6 % à 3 %
% d'élèves ayant pu avoir un problème de jeu (an écoulé)	7e – 12e	1999-2011	En baisse, de 7 % à 2 %
% d'élèves ayant pu avoir un problème lié aux jeux vidéo (an écoulé)	7e – 12e	2007-2011	Stable
% d'élèves ayant eu 3 ou 4 problèmes concomitants†	7e – 12e	1999-2011	En baisse, passant de 10 % à 7 %

Nota : Les changements indiqués sont fondés sur l'échantillon total des élèves pour les années d'études indiquées ; les changements dans les sous-groupes ne sont pas présentés ; † parmi les quatre indicateurs de problèmes : détresse psychologique élevée, comportement antisocial, consommation dangereuse ou nocive d'alcool et problème de l'usage de drogues.

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1. INTRODUCTION

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

Physical, emotional, and social well-being among youth are important for several reasons, not the least of which is their long-lasting effects into adulthood. Childhood and adolescence are pivotal developmental stages during which many life-long health behaviours, beliefs and attitudes become established. Therefore, healthy children should become healthy adults.

The need to address mental health and addiction challenges to better promote healthy children and youth has been prioritized within the first three years of 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 has also been prioritized within the mental health strategy for Canada (Mental Health Commission of Canada, 2012). Both strategies indicate that greater attention to child and youth mental health will contribute to long-term benefits to individual children, youth, and families as well as long-term economic benefits to larger sectors such as health, social service, and justice systems.

Physical Health

Generally, adolescence is a period of optimal physical health. Over three-quarters of Canadian children and young adolescents report "excellent" or "very good" health (Currie et al., 2008; Tremblay, Dahinten, & Kohen, 2003).

However, health problems and health-compromising behaviours tend to increase during adolescence. Poor physical health, obesity, inactivity, and poor dietary habits among youth are especially concerning given that these health states and behaviours are likely to continue into adulthood and lead to future morbidity or mortality (Hallal, Victora, Azevedo, & Wells, 2006; Singh, Mulder, Twisk, van Mechelen, & Chinapaw, 2008). Further, poor physical health is associated with concurrent negative school experience, lower academic performance, and poor mental health (Ortega, Ruiz, Castillo, & Sjöström, 2008).

During the past three decades, obesity among Canadian adolescents has tripled (Shields, 2006; Tremblay et al., 2010). Recent epidemiological estimates indicate that between 6% and 9% of Canadian adolescents are obese, and 12% to 20% are overweight (Janssen, 2008; Shields, 2006). Further, a recent study found that Canadian adolescents' overweight/obesity rates rank among the highest internationally (Currie et al., 2012).

Injuries are the leading cause of morbidity and mortality among Canadian adolescents, with motor vehicle crashes being the primary cause (Pan et al., 2007). Thus, injury may be 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 drugs (Adlaf, Mann, & Paglia, 2003). A national survey found that almost half of Canadian adolescents reported experiencing an injury that needed medical treatment in the past year (Currie et al., 2012). A positive finding is that Canadian mortality and hospitalization rates due to injuries have decreased in recent years (Pan et al., 2007; Public Health Agency of Canada, 2009).

Mental Health

Significant life transitions occur during adolescence, such as puberty and entering high school, and for most it is a stressful and emotionally turbulent period. These transitions can lead to academic, behavioural and emotional difficulties (Simmons, Burgeson, Carlton-Ford, & Blyth, 1987). Mental health is critical to all aspects of life, and impairment and disability during the formative years can adversely affect personal and social functioning throughout life. In fact, the onset of most mental disorders occurs during adolescence or young adulthood (Health Canada, 2002; Kessler et al., 2005; Patel, Flisher, Hetrick, & McGorry, 2007). The need to tackle 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).

About 20% of children and adolescents show symptoms of a mental disorder during any given year, and 5% have a serious emotional disturbance with functional impairment (US Department of Health and Human Services, 1999a). Canadian studies show that the prevalence of a psychiatric problem among children and adolescents ranges between 18% and 22% (Offord, 1995; Romano, Tremblay, Vitaro, Zoccolillo, & Pagani, 2001), and reaches about 25% among young adults (Offord et al., 1996). Adolescent girls are more likely than boys to have a mood or anxiety disorder (Public Health Agency of Canada, 2011). In Canada and the US, suicide is the third leading cause of death among adolescents, after motor vehicle fatalities and other accidents (Canadian Institute of Child Health, 2000; US Department of Health and Human Services, 1999a). Some evidence suggests that Canadian youth experience poorer mental health, in general, compared with adults (Stephens, Dulberg, & Joubert, 1999).

There is some evidence to suggest that the prevalence of mental health problems among children and adolescents may actually be increasing over time. Some examples include the following:

- The identification of mental health problems, such as emotional and conduct disorders, by family physicians in the US increased between the late 1970s and late 1990s among children aged 4 to 15 years (Kelleher, McInerny, Gardner, Childs, & Wasserman, 2000).
- US research has found that rates of prescribing anti-depressant, anti-anxiety, and anti-psychotic medication to adolescents significantly increased between about 1993 and 2002, but the reasons for these increases are not fully understood (Olfson, Blanco, Liu, Moreno, & Laje, 2006; Parks-Thomas, Conrad, Casler, & Goodman, 2006).
- Since the mid-1970s, there has been a substantial increase in conduct and emotional problems among adolescents in the UK (Collishaw, Maughan, Goodman, & Pickles, 2004). A Swedish school study shows a significant increase in mental health problems among adolescent girls between the mid-1980s and 2006 (Hagquist, 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 and school disengagement and stress (Sweeting, West, Young, & Der, 2010).
- Between the 1950s and the 1990s, anxiety among children had increased substantially, possibly due to a decrease in social connectedness (Twenge, 2000).
- The prevalence of lifetime depression increased throughout the 20th century (Lewinsohn, Rohde, Seeley, & Fischer, 1993).
- In Canada, childhood trauma (e.g., parental divorce, parental substance abuse) has increased over the last few decades, and corresponding increases in mental and physical health problems in adulthood are foreshadowed (Thompson & Cui, 2000).

Risk and Problem Behaviours

For a majority of youth, risk behaviour is experimental and a natural manifestation of emerging independence. Activities such as drug

use, gambling, and antisocial behaviours are typically "adolescent limited" – most likely to emerge during this period and then subside with time (Moffitt, 1993). However, for a minority, these risk behaviours are the beginning of a life-course trajectory leading to problems in adulthood (Gotlib & Wheaton, 1997). Multiple risk behaviours, such as concurrent alcohol use, drug use, and gambling, are particularly prevalent among young males (Federal Provincial and Territorial Advisory Committee on Population Health, 1999a).

The magnitude of youth crime and violence can be measured by two sources – confidential self-reports from surveys, and official police records. Both sources have inherent limitations (e.g., self-reports are likely to be underestimates, arrest data reflect more serious offences), yet both are necessary for a complete picture.

A national Canadian survey showed that 40% of 15 to 19 year olds were victims of at least one crime during the previous year, and that youth experience more victimization than older age groups (Statistics Canada, 2001). Another Canadian study found that 22% of 12- and 13-year-olds reported threatening to assault someone, 15% reported theft, 12% reported vandalism, and 8% reported carrying a knife (Statistics Canada, 2001). A 2006 survey of Toronto students found that 6% of 7th-, 8th-, and 9th-graders carried a weapon in the past year (Savoie, 2007).

Recent official statistics indicate that the youth (ages 12 to 17) crime rate in Canada is currently lower than the peak seen in the early 1990s (Statistics Canada, 2008). However, the youth violent crime rate is currently higher than the rates seen in the early 1990s, and has largely been driven upward by increases in assault charges (Canadian Institute of Child Health, 2000; Gannon, 2006; Statistics Canada, 2008).

Although there are no Canadian national survey trend data, American high school survey data show that weapon carrying and assault declined during the 1990s and have generally flattened during this decade (Centers for Disease Control and Prevention, 2010).

Bullying has become recognized an important public health issue not only because of the widespread prevalence of bullying behaviour, but also the harmful consequences to the victim (as noted by several recent bullying-related suicides in Ontario), the bully, and society (Feder, 2007; Gini & Pozzoli, 2009; Srabstein & Leventhal, 2010). A 2006 Canadian survey of students in grades 6 to 10 found that one-third of all students bullied others and a similar proportion were victims of bullying (Craig & McCuaig-Edge, 2008). A survey of Toronto 7th to 9th-graders conducted in 2006 showed that one-fifth of students are bullied (Savoie, 2007).

Gambling among youth, which is illegal in Ontario for those under age 19, is a growing concern given that a large majority of North American adolescents gamble (Hardoon & Derevensky, 2002). More worrisome is that the rates of gambling problems are typically higher among adolescents than adults (Shaffer, Hall, & Vander Bilt, 1999), and that future gambling disorders likely originate during this period (Gupta & Derevensky, 1998). Estimates of pathological or problem gambling among North American youth range from about 2% to 8% (Derevensky, Gupta, & Winters, 2003; Dickson & Derevensky, 2006; Huang & Boyer, 2007). The harms associated with problem gambling include an increased likelihood of antisocial and criminal activities, problems with family, work and schools, and mental health problems (Dickson & Derevensky, 2006).

Social Health

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

A strong social support network is important in its own right, and it appears to be a buffer against physical and mental health problems at all ages. Social support has been correlated with

lower reported depression and anxiety (Cohen & Wills, 1985; Hall-Lande, Eisenberg, Christenson, & Neumark-Sztainer, 2007). Similarly, a strong bond with one's parents has been associated with better mental and physical health (Canadian Institute for Health Information, 2005; Dishion & Kavanagh, 2000; Webster-Stratton, 1998). The degree of school connectedness is another area of increasing study, and may be an important protective factor against poor mental health and risk behaviours (Bond et al., 2007; Bonny, Britto, Klostermann, Hornung, & Slap, 2000; Canadian Institute for Health Information, 2005; Faulkner, Adlaf, Irving, Allison, & Dwyer, 2009; Resnick et al., 1997).

Risk and Protective Factors

Studies of risk and protective factors in the areas of mental health and risk behaviour among youth have identified several crosscutting predictors at the level of the individual, the family, the peer context, and the broader environment (Clayton, 1992; Hawkins, Catalano, & Miller, 1992; Kraemer et al., 1997; Masten & Coatsworth, 1998).

In addition to age and sex, **individual**-level factors include genetics, temperament, problem-solving and coping skills, social skills and a sense of self-efficacy. **Family**-related factors include family structure, marital discord, parent-child attachment, frequency and quality of communication, parental monitoring, parental modelling, and parental maltreatment.

In the **peer and school context** such factors as peer behaviour, peer rejection and level of social support, and academic achievement and attitudes toward school have been shown to be influential.

Some **environmental** factors associated with psychosocial problems and risk behaviours include poverty, legal policies affecting availability and access (e.g., in the cases of substance use, gambling), the media and wider cultural norms (e.g., in the cases of substance use, eating disorders).

Of course, experiencing a stressful or traumatic event during childhood, such as the death of a parent or a natural disaster, can also lead to emotional and behavioural problems.

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

The OSDUHS is a population health-oriented survey. The "population health approach" is defined as follows:

> *Population health refers to the health of a population as measured by health status indicators and as influenced by social, economic and physical environments, personal health practices, individual capacity and coping skills, human biology, early childhood development, and health services* (Federal Provincial and Territorial Advisory Committee on Population Health, 1999b, p. 7).

The ultimate goal is to maintain and improve the health of an entire population. This approach is evidenced-based, and as such, requires the surveillance of a broad set of health indicators and determinants. The resulting body of 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 information about health indicators and determinants among the general population. Important reasons for survey monitoring include:

- establishing the current and potential burden of impaired mental health arising in early and later adolescence;
- to assess changes in health status, impairment, and disability;
- to assess changes among the determinants of health (e.g., family structure);

- Because surveys have a scientific basis and a known representativeness, they can provide data that can confirm or challenge anecdotal and media reports.

- Surveys also provide a basis for program and policy evaluation and the assessment of health goals and targets established by governmental and non-governmental agencies.

- Other specific initiatives such as active lifestyle government programs and media campaigns or changes in the youth criminal justice system can be assessed using existing survey trend data.

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

What Student Health Surveys Tell Us

Student health surveys provide important information that serves as a basis for understanding:

- the size of the adolescent student population (both the percentage and absolute number) currently experiencing physical and mental health problems;

- changes in health indicators over time;

- the risk factors that correlate with these problems; and

- the identification of high-risk groups.

It is also important to mention 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 poor grades cause depression 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). Indeed, in comparison to longitudinal follow-up studies, the advantages of repeated cross-sectional studies are, firstly, that each survey takes into account population changes; and secondly, that estimates combine effects of changing beliefs and behaviours and changing populations, and therefore provide an efficient estimate of net (i.e., population) change.

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

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

- School-based surveys are cost efficient and relatively easily administered.

- A wide scope of developmental periods – early-, middle-, and late-adolescence – is "captured" in a school setting. Students are available in the classrooms during the school day and therefore one can collect data from a large number of students in one class period. Response rates for school-based surveys are usually higher than household face-to-face surveys or telephone surveys.

- The school setting is conducive to eliciting truthful responses by adolescents (rather than in the home, for example). Adolescents feel more comfortable answering questions about drug use and other illegal behaviours in a school setting than at home. Data collected through anonymous, self-administered, school-based surveys often have higher validity than data collected through other methods.

- In addition to physical and mental health indicators, we can monitor exposure to school-based prevention education and other activities in schools.

- Schools themselves are worthy of analysis. Certain school characteristics, such as school size, policies, school climate variables, may be associated with students' physical and mental health.

- Schools are part of an important hierarchical social structure: students are found in classes, which are nested in schools, nested in neighbourhoods, and nested in larger regions. The character of these linkages can affect physical and mental health problems.

What Student Health Surveys Do Not Tell Us

Because school-based surveys are based on adolescents who are in school, their data cannot fully measure the totality of health problems among all youth in the population. Student surveys cannot address the following:

- the extent of health-compromising behaviours and related harms among non-students, such as youth who are homeless, incarcerated, in group homes, or have left school;

- the causes of risk behaviours and related conditions or definitive reasons as to why changes have occurred over time.

History of the OSDUHS

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

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

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

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

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 2011 cycle of the OSDUHS. The mental health indicators are divided into internalizing and externalizing indicators. By **internalizing** indicators, we mean emotional health problems such as symptoms of anxiety/depression and suicide ideation. By **externalizing** indicators, we mean overt risk behaviours such as aggression, theft, gambling, and drug use. We also present trend data spanning back to 1991, where possible. New indicators in this report include estimates of asthma prevalence, seatbelt use, vehicle collisions, and cyber-bulling victimization.

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

Readers should note that there is an associated publication based on the 2011 OSDUHS detailing the extent of licit and illicit drug use among Ontario students since 1977. This publication entitled "*Drug Use Among Ontario Students, 1977-2011: Detailed OSDUHS Findings*" is available at: www.camh.ca/research/osduhs.aspx.

2. METHOD

Sampling Design

Target and Survey Population

For each of the 18 survey cycles, the target or in-scope population – the population we are attempting to generalize – consisted of all 7th- to 12th-graders enrolled in Ontario's publicly-funded school system (i.e., public and Catholic schools). Students excluded from the survey population as being out of scope were those enrolled in private schools, those who were home-schooled, those institutionalized for correctional or health reasons, those schooled on native reserves, military bases, or in the remote northern region of Ontario. These excluded or out-of-scope groups represent a small proportion of the Ontario adolescent population (about 7%). Therefore, although our target population represents students, it captures the vast majority of Ontario children and adolescents aged 12 to 17 years.

Table 2.1 Thirty-Four Years (18 Cycles) of the OSDUHS Program

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011
No. School Boards	20	20	31	31	20	24	25	27	25	20	22	38	41	37	42	43	47	40
No. Schools	104	87	182	227	193	170	171	179	165	137	168	111	106	126	137	119	181	181
No. Classes	196	195	198	261	205	215	224	221	233	223	234	285	272	383	445	385	573	581
No. Students	4686	4794	3270	4737	4154	4267	3915	3945	3571	3870	3990	4894	4211	6616	7726	6323	9112	9288
Design Features	three-stage selection (board; school; class), stratified by grade and region; self-weighted estimates; grades 7, 9, 11 & 13;		single-stage selection (paired selection of school board clusters), stratified by grade and region; weighted estimates									two-stage cluster selection (school, class), stratified by region and school level; North oversampled; some public health regions optionally oversampled in 2009 (n=6) and in 2011 (n=5); weighted estimates						
			grades 7, 9, 11 & 13 (OAC)									grades 7–13 (OAC)		grades 7–12 (OAC dropped in 2003)				

Note: entries for 2009 and 2011 include public health regions' oversamples

Past Survey Designs

As seen in **Table 2.1**, each 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). The proportional allocation of students by grade and region allowed for self-weighted (i.e., unweighted) estimates. In 1981, the design was modified to a stratified single-stage cluster design with paired selection ("two-per-stratum") of first-stage school board district clusters to further improve the precision and efficiency of estimates. This

resulted in the selection of more school boards and schools.

Since 1981, the Institute for Social Research (ISR) at York University has produced the OSDUHS data, having been responsible for the sample design, questionnaire printing, field operations, data processing, data file preparation, and weighting.

Current Sampling Design[1]

In 1999, the OSDUHS transitioned to a stratified (region by school level[2]), two-stage (school, class) cluster sample design, which included the oversampling of students in Northern Ontario to provide more precise estimates for that region.[3] 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 change provided greater age variation and more developmentally based detail on the relationship between risk behaviours and age. It also allows for more direct grade comparisons to American and other international studies. Another design revision introduced in 1999 was to use a probability selection of schools in stage 1, rather than selecting school board clusters. Consequently, more students per school are sampled. The advantages also include a greater geographical dispersion of schools and school boards, and more precise school-level estimates.[4]

OSDUHS Regions

Since 1977, the sample design has divided Ontario into four regional strata based on the following boundaries: City of Toronto;[5] Northern Ontario (Parry Sound District, Nipissing District and areas farther north); Western Ontario (Peel District, Dufferin County and areas farther west); and Eastern Ontario (Simcoe County, York County and areas farther east).

Oversampling Buy-Ins for Ontario Public Health Units in 2011

In addition to the four base design regional strata just described, the 2011 OSDUHS included an additional five regional strata oversamples purchased by the respective Ontario public health unit/department. The oversampling of students in these public health regions was conducted to provide more precise regional estimates for health units/departments. Schools in the following five areas of the province were oversampled: the City of Ottawa, Durham Region, York Region, Niagara Region, and the North Bay Parry Sound District. In total, there were nine regional strata designed to contain mutually exclusive school samples.

School Selection (Stage 1)

Publicly-funded English and French language schools in the public and Catholic school sectors in Ontario were eligible to participate.[6] Schools excluded as being out of scope were private schools, schools on native reserves, on Canadian Forces Bases, and schools in certain geographically inaccessible northern areas.

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[1] In addition to the authors, the 2011 OSDUHS sample design team, headed by Michael Ornstein, also included John Pollard and David Northrup, all from the Institute for Social Research.

[2] In Ontario, 7th- and 8th-graders can be enrolled in elementary schools, middle schools, or junior high schools.

[3] Prior to 1999, the allocation of students from Northern Ontario was proportional to the population, resulting in smaller samples than the other regions.

[4] The disadvantages of greater school dispersion are: (1) it increases the number of school boards and therefore resources needed to obtain permission; (2) it increases the school fieldwork coordination and travel costs. In contrast, the school dispersion provides richer, more precise school-level data necessary for various analytical statistical models, such as multilevel analysis.

[5] Throughout the OSDUHS program, the population of Toronto schools has remained unchanged despite a regional amalgamation.

[6] In Ontario, each regional county is represented by both a public and Catholic school board.

The 2011 OSDUHS school sample selection occurred as follows:[7]

1) The sampling frame used to randomly draw schools was the Ontario Ministry of Education's 2007/2008 school enrolment database (most recently available at the time). This sampling frame includes all publicly-funded schools in Ontario that include the grades in our target. For logistic reasons, schools that were too small (i.e., fewer than 20 students in schools with grades 7 and 8, and fewer than 80 students in schools with grades 9 through 12), and schools in the remote northern region of the province, were excluded from the sampling frame.

2) Within *each* of the region-by-school level primary-stage strata, a probability proportionate-to-size (PPS) selection of schools was chosen (i.e., larger schools had a greater probability of being selected). Schools were selected with systematic sampling without replacement (WOR).

3) If a selected school could not participate, or if it had closed, a replacement school from the same stratum was randomly selected, again with PPS sampling.

Class Selection (Stage 2)

Within each selected school, all eligible classes were listed by grade, from which one class per grade was randomly sub-sampled with equal probability and sampling without replacement (WOR). In elementary/middle schools, **two classes** were randomly selected – **one 7th-grade and one 8th-grade**. In secondary schools, **four classes** were randomly selected, **one in each grade between 9 and 12** from either a list of classes in a required subject (e.g., English), or a required period (e.g., homeroom).

For the public health oversamples, the class selection procedure in the secondary schools did not differ from the standard procedure, except for schools in the North Bay Parry Sound District. For this district, *two* classes per grade were selected due to a smaller population of secondary schools. In the elementary/middle schools, rather than the standard selection of one class per grade, *two* 7th-grade and *two* 8th-grade classes were selected to participate (or all students in these grades if there was fewer than two classes in each).

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

Procedures

The 2011 OSDUHS protocol was approved by the Research Ethics Boards (REBs) at CAMH, and York University,[8] as well as 27 school board research review committees (RRC).

For each school board associated with one or more randomly-selected schools, permission to survey students was first requested from the Director of Education. Depending on the school board's policy, agreement to participate was conditional upon approval from the board RRC, as well as school principals, classroom teachers, parents, and students. If a school board did not allow their schools to participate, replacement schools from the same stratum were randomly selected and the corresponding boards were contacted for permission to approach the replacement schools. Once a school agreed to participate, the principal provided ISR with a master list of classes by grade, from which a random selection was made.

[7] School selections for the 2003-2009 cycles were based on a longitudinal sample of schools initially drawn in 2001. In 2011, the school selection was refreshed with a fully independent sample.

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

All participating schools were provided with the **active parental consent forms**,[9] which were available in several languages (English, French, Spanish, Portuguese, Russian, and Mandarin). Well in advance of the survey date, each school distributed the consent forms to students, who, in turn, sought the signature of one parent/guardian if they were under age 18 (students aged 18 and older did not require parental consent). Students themselves were also required to provide a signature of assent. Those who did not return a signed consent form on or before the survey date were not allowed to participate. If a student did not participate, no substitution took place. Instead, the data were statistically weighted to adjust for this unit nonresponse.

Administration procedures were designed to protect students' privacy by allowing for anonymous and voluntary participation. The survey was administered across the province by 26 trained ISR field staff members in the classrooms of the randomly-selected classes between October 15, 2010 and June 24, 2011.[10] The survey administrators read a standardized script to participating students explaining the history of the study, its purpose, and emphasizing the anonymity of the survey. Students were informed that participation was completely voluntary and anonymous, and were instructed not to write their names on the questionnaires. Students recorded their answers directly on the paper-and-pencil instrument (PAPI). Teachers were not required to remain in the classrooms during administration, although most chose to do so. Schools were not compensated for participation. However, for the first time in 2011, students who participated received a small token of appreciation for their assistance (a $5 value gift card for downloadable music).[11]

The ISR field staff collected all completed questionnaires, which were then couriered to ISR for data capture by manual keying. The quality of the data entry was verified by re-keying a random sample of about 3% of all the questionnaires.[12] The major editing rule used for processing a valid questionnaire was that at least half of the questions had to be completed. Thirty-five questionnaires failed to meet this requirement and were not entered.

The OSDUHS Questionnaire

In addition to alcohol and other drug use, the OSDUHS questionnaire covers an array of adolescent health-related content. To include as many areas as possible in a fixed period, while minimizing the burden on students, we employed two versions of the questionnaire, Form A and Form B (available at www.camh.ca/research/osduhs.aspx). In each classroom, half the students were randomly assigned either Form A or Form B.[13] In 2011, both forms contained 160 items, with about half of the content assigned to core items, i.e., overlapping both forms.

The modularized 18-page self-administered PAPI questionnaire, printed in a two-column booklet format, took about 25 to 35 minutes to complete. The average completion time was 30 minutes (median and mode were 30 minutes). A French version of the questionnaire (Form A only) was used in French-language schools. By design, item branching (i.e., logical question skips) was not employed in the questionnaire to protect students' privacy by ensuring that

[9] *Active* parental consent requires a clear approval for their child to participate from at least one parent indicated by a "I approve" response with a signature. In contrast, *passive* consent allows a student to participate as long as a parent does not indicate objection to their child participating. In practice, active consent results in fewer students participating.

[10] While some data collection predates 2011, we retain the odd-year designation used in previous cycles for simplicity and to reduce possible confusion. The administration period was expanded, in part, to allow for a longer period in which schools could arrange an acceptable administration date.

[11] Two school boards did not permit the use of incentives.

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

[13] Although this split-matrix method extends the content coverage of the questionnaire, the disadvantage for analysis based on a single form is a reduced sample size.

students took about the same time to complete the instrument (i.e., drug-using students would not take longer to complete the questionnaire). This was achieved by having non-users 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. Furthermore, not using item branching reduces the risk of navigational errors (i.e., students skipping to the wrong questions).

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 other key student surveys such as NIDAs *Monitoring the Future* (MTF) survey,[14] the CDCs *Youth Risk Behavior Survey* (YRBS),[15] and the WHOs *Health Behaviour of School-Aged Children* (HBSC) survey,[16] and have been shown to produce valid responses (Brener et al., 2002; Currie et al., 2012; Fosse & Haas, 2009; Johnston, O'Malley, Bachman, & Schulenberg, 2011; Mawani & Gilmour, 2010; May & Klonsky, 2010; O'Malley, Bachman, & Johnston, 1983). There are two main advantages of employing existing survey questions: first, existing items have typically gone through field collection and vigorous testing for validity and reliability, and second, inter-provincial and cross-national comparisons become possible. Also included in the 2011 OSDUHS questionnaire were validated screeners and scales, such as the WHOs *Alcohol Use Disorders Identification Test* (AUDIT) to assess hazardous or harmful drinking (Saunders, Aasland, Babor, De La Fuente, & Grant, 1993), the *CRAFFT* screener to assess drug use problems (Knight et al., 1999), the *Severity of Dependence Scale* (SDS) to assess cannabis use problems (Martin, Copeland, Gates, & Gilmour, 2006), the *General Health Questionnaire* (GHQ12) to assess psychological distress (Goldberg et al., 1997; Goldberg & William, 1988), and the *Problem Video Playing* (PVP) scale (Tejeiro Salguero & Bersabe Moran, 2002).

[14] See http://www.monitoringthefuture.org
[15] See http://www.cdc.gov/healthyyouth/yrbs
[16] See http://www.hbsc.org

All new items in the 2011 questionnaire were assessed by both external expert review and pre-testing by ISR, using a small convenience sample of young adolescents. The readability of the 2011 questionnaire showed a 7th-grade level according to the Flesch-Kincaid reading score.

At the end of the questionnaire, students were asked to evaluate the comprehension and sensitive nature of the questionnaire. The majority of students reported positive assessments: 97% of students (95% of 7th-graders) reported that the questionnaire was "fairly" or "very easy" to understand; only 10% of students (11% of 7th-graders) reported that the questionnaire was "much too long"; and only 6% of students (9% of 7th-graders) reported that questions in the survey would make most students "very uncomfortable." The latter finding provides some confidence that issues of social desirability should not greatly bias our estimates, even among the youngest students.

Data Quality

2011 Sample Participation and Characteristics

Our objective is to provide a representative, unbiased sample of Ontario students in grades 7 through 12. The allocated sample size for the 2011 OSDUHS was calculated to be 9,000 students.

Schools. In total, 255 schools (228 initial selections plus 27 replacements) were invited to participate. Of these, **181 schools** (78 elementary/middle – of which one was French – and 103 secondary – of which six were French) from 40 school boards participated in the survey resulting in a school response rate of 71%. The most common reasons schools gave when refusing were that they were too busy, or that they had already committed to other external research projects. Schools that could not participate were replaced with randomly selected schools from the same regional stratum to maintain representativeness. Although we could not conduct a systematic follow-up of refusing

schools, we do not expect these refusals to have created a considerable bias. Indeed, analysis showed that this group of non-participating schools did not significantly differ from participating schools regarding school level (elementary/middle versus secondary) or public versus Catholic. However, relative to the regional breakdown of the participating schools, there were fewer refusing schools in the Northern region, and more in the Eastern region of the province.

If schools differ substantially regarding student behaviours, then which schools participated can greatly influence the survey findings. Some research suggests that school-level variables are important and show relationships between variables such as sector (public vs. Catholic), or socioeconomic status, and aggregated student drug use (Kairouz & Adlaf, 2003; O'Malley, Johnston, Bachman, Schulenberg, & Kumar, 2006; Rehm et al., 2005). However, the majority of the variance in students' behaviour may lie within schools, not *between* schools (Kairouz & Adlaf, 2003; O'Malley et al. 2006). Further, much of the between-school variance can be attributed to differences in region/urbanicity (Johnston et al., 2011) – a factor that is controlled for in the replacement sampling within the same regional stratum. This would imply that if schools are fairly similar in drug use and other risk behaviours then which particular schools participate in the survey has a small influence on estimates.

Classes. A total of **581 classes** participated in the survey (183 from elementary/middle schools, 398 from secondary schools). We must note that 119 classes were not randomly selected. Rather, these classes were convenient same-grade replacements, typically identified by principals, for classes that were originally selected but could not participate for logistic reasons.[17]

Students.[18] Finally, of the 15,005 students enrolled in these participating classes, **9,372** completed the survey (**62%** of students in the participating classes).[19] Twelve percent (12%) were lost due to absenteeism and 26% were lost due to either unreturned consent forms or parental refusal.[20] The student response rates according to the four regions were 66% in Toronto, 55% in the North, 63% in the West, and 65% in the East.

While the proportion of absent students has remained constant across cycles, the proportion of consent form loss has been increasing across all grades and all regions. The reasons for this increase are unclear. One possible explanation is the increasing number of school board RRCs that have mandated the use of an active parental consent/student assent form. This problem of declining response rates is common to the survey research field generally and is not unique to the OSDUHS (de Leeuw & de Heer, 2002; Dey, 1997; Galea & Tracy, 2007; Porter, 2004). Still, our student participation rate of 62% is above average for a student survey with active consent (Courser, Shamblen, Lavrakas, Collins, & Ditterline, 2009; White, Hill, Effendi, 2004). For example Health Canada's 2010/2011 *Youth Smoking Survey*, which was based on a combination of active and passive consent procedures, had a national student response rate of 73%, although the response rate in Ontario was 56% (University of Waterloo, 2011).

The association between the magnitude of nonresponse and nonresponse *bias* is complex. A nonresponse rate is only an indicator of the *risk* of nonresponse error. Although a high response rate is a necessary condition for valid data, a low

[17] Statistical tests comparing randomly selected versus non-randomly selected classes showed no significant differences regarding drug prevalence estimates. Further, drug prevalence estimates were evaluated with and without the inclusion of the non-random classes, and results did not differ. Thus, all classes remained in the final data set.

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

[19] The compound school-student response rate is $0.71 \times 0.62 = 0.44$.

[20] For further details about the 2011 sample selection and participation rates by the nine regions, please see Pollard, Ornstein, and Northrup (2011).

response rate does not necessarily imply that the data are characterized by elevated 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). A survey can have a high response rate, yet discernible nonresponse bias (Groves et al., 2004, p. 59).[21] Existing research examining the impact of consent form loss on estimates of student drug use and other risk behaviours has not been conclusive. Some studies have found that students who do not return signed consent forms are more likely to use substances and to engage in risk behaviours than students who return signed forms (Anderman, Cheadle, Curry, & Diehr, 1995; Courser et al., 2009; White et al., 2004), whereas others have found no such differences (Eaton, Lowry, Brener, Grunbaum, & Kann, 2004).

While we could not compare students who returned a signed consent form with those who did not, we did compare demographics, fair/poor physical health and mental health indicators, and risk behaviours in classes in which the class response rate was below 70% (n=323) with classes in which the class response rate was 70% or higher (n=258). If students who do not return consent forms are indeed "high-risk" youth, then we would expect classes with low participation rates to have lower prevalence estimates (less likely) of risk behaviours and problem indicators compared with high-participation classes. We found no significant differences between classes with low and high participation rates regarding sex and grade. Of the 20 risk behaviours and problem indicators compared between the groups, only one showed a significant difference.[22] This suggests that students who participated in the survey were not dominantly "low-risk" youth. Put another way, we have no obvious evidence of nonresponse bias in our data.

One group not represented by the OSDUHS, by design, is dropouts or 'school leavers.' We must recall 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 sample was selected.[23] Thus, readers should not attempt to extrapolate the OSDUHS findings to groups outside the target population (e.g., dropouts, homeless youth).

Data Editing. Consistent with previous OSDUHS cycles, editing rules were established to enhance data quality. **Students were excluded from the final data set if they** (1) did not report their age; (2) did not report their sex; (3) reported the use of a fictitious drug; (4) reported using 10 or more of 12 illicit drugs (excluding cannabis) 40 or more times during the past year ("faking bad"); or (5) did not respond to half or more of the core substance use questions. If a case met any one of these criteria, then it was excluded from the data set. Note that criteria 3 and 4 address the potential bias due to overreporting drug use.[24] In 2011, only 84 cases were removed from the data set, which is a proportion similar to past survey cycles. This data editing procedure resulted in **9,288 minimally complete cases** used in the data analyses (Form A n=4,816 students; Form B n=4,472 students).

Item Missingness. Both the single item missing rate and the cumulated item missing rate were low, suggesting quality responding. Item missingness averaged less than 1%. Across all the core questions (i.e., both forms), the average proportion of unanswered questions was 1.5%. Missing responses to questions were not statistically imputed, but were excluded on a casewise (i.e., listwise) basis for a given analysis.

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

[22] Low participation classes had a lower prevalence estimate for past year use of medication to treat anxiety or depression compared with high participation classes.

[23] Another source of sampling error would be when recent dropouts are not removed from the enrolment list, influencing the class response rate and expansion estimates. We expect such error to be negligible.

[24] Our data suggest that any overreporting bias should be minimal given rare reports of fictitious drug use (n=60 cases) and of exaggerated frequent multiple drug use (n=12 cases).

Dropouts 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,[25] there are some exceptions (e.g., illness, legal emancipation). One challenge in assessing the impact of dropouts on our sample lies with the differing methods of measurement and, therefore differing estimates. The Ministry of Education and Training estimates that the Ontario high school graduation rate in 2009/2010 was 81% (Office of the Premier of Ontario, March 2011). However, we cannot assume that the dropout rate was 19% because some students remain in school without graduating (i.e., take more years to graduate than the norm). Statistics Canada, on the other hand, measures the dropout rate using the Labour Force Survey and found that about 5% of 16 to 17 year-olds and 7% of 18 to 19 year-olds in Ontario were not attending high school (and did not already graduate) in 2009/2010 (McMullen & Gilmore, 2010).

Because dropouts are outside our target population (i.e., enrolled students), their omission should not greatly bias our estimates. It is known that dropouts are more likely to be male, Canadian-born, and live outside of large urban centres (Gilmore, 2010). However, our poststratification weight adjustments should reduce this problem to some extent. The omission of dropouts would not affect our drug use and other risk behaviours trends if the proportion remains constant from cycle to cycle. However, both the Ontario Ministry of Education and Training and Statistics Canada indicate that the proportion of high school dropouts has declined over the past two decades, not only in Ontario but also in most of Canada. One would assume that because of the decline in dropouts (and therefore retaining a greater number of older males in schools/classrooms 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 dropouts does not substantially affect our trend estimates.

Poststratification. We compared the 2011 OSDUHS sample to the most current school enrolment figures from the Ministry of Education and Training based on the 2009/2010 academic year. **Table 2.2** shows that there were slight discrepancies between the 2011 OSDUHS sex-by-grade weighted 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. Therefore, we calculated poststratification weight factors for the sex-by-grade distributions within each of the nine regional strata separately to restore each region's demographic composition to the population composition. The poststratified weighted sample distribution is shown in Table 2.2 (far-right columns). After adjustment, the OSDUHS weighted sample corresponds well to the Ontario enrolment. **Table 2.3** shows the demographic characteristics of the final weighted sample.

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

Table 2.2 The 2011 OSDUHS Sample vs. Ontario 2009/2010 School Enrolment

	OSDUHS Pre-Adjusted		Population Enrolment		OSDUHS Poststratification Adjusted	
	% Male	% Female	% Male	% Female	% Male	% Female
Grade 7	6.9	7.9	7.3	6.9	6.6	6.3
Grade 8	7.2	8.0	7.6	7.2	6.9	6.6
Grade 9	7.6	8.2	8.3	7.9	8.6	8.1
Grade 10	7.4	9.0	8.4	7.9	8.7	8.2
Grade 11	7.7	8.7	8.5	8.0	8.8	8.3
Grade 12	8.8	12.5	11.8	10.4	12.2	10.7
Total	45.7	54.3	51.8	48.2	51.8	48.2

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 1,009,900 students enrolled in Ontario's publicly-funded schools in the 2009/2010 academic year.

Table 2.3 Final Sample Characteristics, 2011 OSDUHS

	Final Number in the Sample	Weighted %
Total	**9,288**	
Males	4,334	51.8
Females	4,954	48.2
Grade 7	1,446	13.0
Grade 8	1,459	13.5
Grade 9	1,684	16.7
Grade 10	1,547	16.8
Grade 11	1,539	17.1
Grade 12	1,613	22.9
Toronto	1,243	16.9
North	993	4.3
North Bay Parry Sound District (OS)	800	0.9
West	1,255	41.4
Niagara Region (OS)	1,137	2.8
East	974	16.5
Ottawa (OS)	1,015	6.0
Durham Region (OS)	944	5.6
York Region (OS)	927	5.6
Public School	6,085	69.0
Catholic School	3,203	31.0

Notes: (1) OS=oversample for the public health unit/department; (2) mean age was 15.1 years (SD=1.9); (3) the 9 regional strata were mutually exclusive; (4) for the regional estimates presented in this report, the "North" region includes North Bay Parry Sound District (combined n=1,793), the "West" region includes Niagara (combined n=2,392), and the "East" region includes Ottawa, Durham Region, and York Region (combined n=3,860).

Data Analysis, Interpretation, and Presentation

Data Weighting

For several reasons, including the oversampling of schools/students in various regions, the sample design requires selection or case weights attached to each student to ensure the proper representation of students to the Ontario student population. For each student, **the final case weight is based on the product of five factors**: (1) the probability of a school being selected; (2) the probability of a class being selected within a selected school; (3) a student unit nonresponse correction factor; (4) a regional post-stratification adjustment to restore regional representation; and (5) a final post-stratification adjustment to restore the sex-by-grade distribution, using the most currently available provincial enrolment figures. Our weighted estimates are representative of all students in grades 7 through 12 enrolled in publicly-funded schools in Ontario. Our case weights expand our sample from 9,288 students to represent 1,009,900 Ontario students in grades 7 through 12, while ensuring that sample characteristics correspond to the population.[26]

Survey Estimation

Before turning to the survey results, we must first briefly discuss 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 7th- to 12th-graders who experience a physical or mental health problem. Because we do not survey 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. 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. Our goal is to obtain estimates with high precision and low bias.

Precision refers to the "probable accuracy" of a percentage; those summarized in the present report include a range, or confidence interval (CI), around a percentage value. The reason for employing confidence intervals arises 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 cover or overlap 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 coverage, problems of respondent memory and recall, and underreporting.

The confidence interval containing a percentage 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 had been injured in the past year was 41.9% (39.4%-44.4%), we infer that with repeated sampling 95% of the CIs would contain the true population value (ignoring bias). Narrower confidence intervals indicate greater precision, or less sampling error; wider intervals indicate less precision, or greater sampling error.

In our case, the width of the interval depends on three factors: first, the number of students surveyed – other things being equal, the larger the sample size the narrower or more precise is the interval; 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%

[26] One intuitive way of thinking of the sampling weight is that each student in the sample represents or "stands in" for about 109 similar students in the population.

have the narrowest interval;[27] and third, design effects – 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.[28] Changes in any of these three factors combine to affect the width of the confidence interval. All CIs reported in this study are design-adjusted, that is, accommodated for features of the complex sample design, and logit transformed to ensure that the lower and upper limits do not exceed 0% or 100%.

Bias, in contrast to precision, refers to sources of error that may inflate or deflate estimates from the true percentage. Such sources of non-sampling error include underreporting of drug use, memory effects, nonresponse, and other sources of systematic error. Thus, a percentage may have a high degree of precision (a narrow confidence interval) but may still be biased (not close to the true population value). The degree of survey error we present in this report is restricted to precision and not bias. That is, the margins of error, or confidence intervals, we present in this report include only sampling error. Confidence intervals do not include errors due to non-sampling factors such as the underreporting of drug use, or errors of memory or recall.

The data collection features of the OSDUHS (i.e., in-class, self-administered, anonymous, voluntary) are the optimal conditions under which to survey adolescents about sensitive topics such as drug use, illegal behaviours, and mental health (Brener et al., 2006; Gfroerer, Wright, & Kopstein, 1997; 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 the results. Still, the research evidence suggests that self-reported drug use and risk behaviours are generally underreported 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; Johnston et al., 2011; Tourangeau & Yan, 2007). Further, students absent from class are somewhat more likely to engage in risk behaviours than students who are consistently 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). **Therefore, the survey results should be viewed as conservative with some underestimation**.

However, assuming that underreporting and absenteeism remains rather constant across years, then the 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., 2004). Indeed, the steady and consistent nature of our trend curves provides support for this assertion.

2011 Analysis

The OSDUHS design featuring stratification, clustering, and unequal selection requires the use of estimation methods that accommodate complex survey data. Unfortunately, many standard statistical systems assume that data are derived from simple random samples, which cannot correctly estimate variance from such complex designs.[29]

[27] This is because very large and very small percentages have the lowest variability, as most students are either in the "yes" category or in the "no" category.

[28] Deffs of 1.0 indicate a variable with an equivalent precision to a simple random sample. Deffs larger than 1.0 indicate precision less than an equivalent SRS. Deffs smaller than 1.0 indicate precision greater than an equivalent SRS.

[29] Statistical systems employing simple random sample (SRS) assumptions underestimate variances of complex sample data because the latter violates some key assumptions of SRS-based software, the key violation being the independence of observations, which is readily violated by clustered data. The consequence of this (and other) violations is underestimated variances and CIs

All 2011 percentage and population estimates and confidence intervals presented in this report were design-adjusted, i.e., accommodated for characteristics of the complex sampling design (i.e., stratification, clustering, weighting) using Taylor series linearization (TSL) routines available in Stata 11 (Heeringa et al., 2010; StataCorp, 2009).[30] The design-based analysis was based on 15 strata (region by school level),[31] 181 primary sampling units (schools), and 9,288 students. The design-based degrees of freedom (*df*) for our complex sample was 166 (*df*=181 [# school PSUs] – 15 [# 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, pp. 66-67).[32]

The statistical significance of subgroup (i.e., sex, grade, region) differences in 2011 was tested using bivariate second-order design-adjusted Rao-Scott Pearson chi-square tests at the $p<.05$ level of significance.

One unique feature of complex sample analysis is the estimation among subpopulations (e.g., drinking problems among drinkers or drinking-driving among drivers). If the analysis was to employ a simple selection filter (e.g., select if drinker), the software would ignore the survey design elements and, consequently, would underestimate the error. In this report, we employ unconditional subclass analysis by specifying a command (*subpop* in Stata) that properly accounts for the selection of a subsample from the full sampling plan. 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).

Why do cluster samples "lose data"?

One means of understanding the loss of data due to clustering is to first consider a simple random sample (SRS) of students, each selected independently throughout the province. In this scenario, each student represents a count of 1 because each provides unique 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 fairly similar. Because of the high similarity, each student is no longer providing unique 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 students, for example.

The reduction in effective sample size depends on the degree of similarity – greater similarity within clusters results in greater data loss.

resulting in overstated statistical inference (i.e., deflated probability levels).

[30] Estimation of percentages and other point parameters employed pseudo-maximum likelihood estimation (PMLE); estimation of variances and related confidence intervals employed Taylor series linearization (TSL).

[31] Elementary/middle schools were not oversampled in three public health regional strata, resulting in 15 rather than 18 strata.

[32] In addition, we have ignored the finite population correction (fpc) factor, an adjustment for the expected reduction in the sampling variance due to sampling without replacement, because the proportion of our sampling units is small (< 5%) relative to the population units.

Trend Analysis

The tests contrasting 2009 and 2011 estimates and estimates from 1999 versus those from 2011 are based on grades 7 through 12. However, to ensure grade comparability across time, the long-term trend analyses (1991–2011) are based on *only* grades 7, 9 and 11, the three grades common to all survey cycles.

Although we highlight dominant long-term trends, we pay particular attention to changes since the previous survey (i.e., 2011 versus 2009), and since 1999 because this was the year the survey first included all grades in 7 through 12. To examine the nature of the trends in physical and mental health measures, a merged or "stacked" data set was employed.[33] All estimates spanning back to 1991 were corrected for the respective survey design effects. For the trend analyses, overall change was first assessed using the Wald statistic from logistic regression analysis. Second, we assess whether changes over time show significant linear and non-linear trends. A linear trend indicates a significant increase or decrease over the entire period. A non-linear (or quadratic) trend indicates a levelling-off and/or a change in direction over time. A trend can show both linear and non-linear trends. Only trends among the total sample were assessed in the long-term (1991–2011) trend analyses.

For all statistical tests comparing percentages across time, we used the more conservative $p<.01$ significance level. Because only a sample of all students in Ontario is surveyed, sampling error is involved in every estimate. Consequently, as discussed earlier, absolute differences between two percentages cannot necessarily be interpreted as indicating true or real differences in the population. Therefore, if a test comparing estimates between two cycles reached statistical significance, we also examined whether the two 95% confidence intervals overlapped. If they did not overlap, this provided confirmational evidence that the two percentages differed beyond chance. For example, 11.7% (10.3%–13.2%) of students rated their mental health as fair/poor in 2009. This percentage increased to 13.7% (12.0%–15.7%) in 2011, showing an increase of two percentage points. However, because these two confidence intervals overlap, we cannot be confident that they are different in the population (Fleiss, 1981). Using this conservative approach reduces the likelihood of inferring a false finding.

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

- Statistically significant differences must be carefully evaluated. First, our analysis does not consider 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 of public health importance is a matter that requires both statistical and extra-statistical judgement.

- Visual inspection of overlapping/non-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 translate to a $p<.05$ statistical test because two 95% CIs do not equal a single 95% statistical test.

- The scope of this report is restricted to a select few epidemiologically relevant predictors – sex, grade/age and region. Not all potentially relevant predictors are assessed in this report. Such investigations will be a matter for future work.

[33] All trend data are based on a stacked data set cumulated for the years 1977 through 2011 (18 cycles). The data set contains 82,900 students enrolled in 2,055 schools (stage 1 PSU clusters) distributed among 223 region-by-school level-by-year strata. The notion a stacked data set is descriptively accurate given that data from each cycle is stacked on top of one another.

- We intentionally emphasize the influence of grade level when describing age-based associations because grade is a factor more readily translated into school system programming. Nonetheless, readers should recognize that a discernable grade association is equivalent to a discernable age association.

- Our report is descriptive. Associations found in these data do not imply causal relationships. For example, regarding regional differences, we can only determine if a difference in drug use exists and describe the pattern of differences. Because other factors may underlie regional differences (e.g., socio-economic status), we cannot causally attribute such differences solely to the geographical location of students.

- Most estimates presented in this report are based on prevalence rates in percentages and total population or expansion estimates. Note that the total population estimates have been rounded down.

- All analyses are based on casewise, or listwise, deletion 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 is temporarily removed from the specific analysis.

- Small percentages and estimates based on a small number of students produce wide confidence intervals (i.e., large error) and are likely unstable. In this report, **estimates were suppressed due to unreliability** (unstable) if they met any *one* of the following conditions:

  (1) the estimate was less than 0.5%;
  (2) the base sample size (i.e., the denominator) was less than 50 students; or
  (3) the relative standard error, measured by the coefficient of variation[34] (CV), was greater than a value of 33.3.

[34] The coefficient of variation is the ratio of the standard error to its estimate (i.e., CV = SE/estimate). 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 identify potentially unstable estimates requiring cautious interpretation or suppression.

Table 2.4 Definitions of Terms Used in the Report

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

Table 2.5 2011 OSDUHS Method and Sample Summary

2011 OSDUHS Method and Sample Summary	
Design	▪ Target sample consisted of 7th- to 12th-graders enrolled in the English and French publicly-funded school system (public and Catholic) in Ontario during the 2010/2011 school year. Students excluded as being out-of-scope were those enrolled in private schools, those schooled in correctional or health facilities, those schooled on native reserves, military bases, those schooled in the remote areas of Northern Ontario, and those who were home-schooled. ▪ Sample selected by a stratified (region by school level), two-stage cluster design. Stage 1: schools (stratified by region by 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 optional public health oversample (5 regions × 2 school levels), resulted in a total of 15 (18-3) region-by-school level strata (elementary/middle schools were not oversampled in 3 public health regions). ▪ Schools were selected within each primary stage stratum by systematic random sampling according to PPS using the 2007/2008 Ministry of Education and Training school data base. Within selected schools, typically one class per grade (the secondary stage strata) was randomly selected with equal probability of selection (EPSEM).
Participation	▪ 9,372 7th- to 12th-graders sampled from 181 schools, 581 classes, and who provided active parental consent and student assent, completed questionnaires from October 2010 to June 2011. ▪ 71% of selected schools, and 62% of eligible students in those schools, participated. ▪ The final (edited) sample of 9,288 students is representative of the 1,009,900 7th- to 12th-graders enrolled in Ontario's publicly-funded public and Catholic schools.
Questionnaire	▪ The 18-page, anonymous, self-administered, paper-and-pencil instrument (PAPI), which averaged 30 minutes to complete, was administered in classrooms by trained administrators from the Institute for Social Research, York University.
Student Characteristics	▪ Males (4,334; 52%); Females (4,954; 48%) ▪ 7th-graders (1,446; 13%); 8th-graders (1,459; 13%); 9th-graders (1,684; 17%); ▪ 10th-graders (1,547; 17%); 11th-graders (1,539; 17%); 12th-graders (1,613; 23%). ▪ Toronto (1,243; 17%); North (1,793; 5%); West (2,392; 44%); East (3,860; 34%).
Data Quality	▪ Data editing rules were applied, resulting in 84 'incomplete' questionnaires removed from the final data set. ▪ Nonresponse analysis comparing classes with response rates of 70% or higher versus classes with lower rates showed no significant differences in most mental health and well-being measures.
Analysis	▪ Selection weights were employed to account for sampling probabilities and to restore the sample to the corresponding population distribution. The sample was poststratified to correspond to the Ontario Ministry of Education's 2009/2010 enrolment for sex-by-grade groupings. ▪ The complex sample analysis model is based on a design with 181 primary sampling unit (PSU) clusters (schools), 581 secondary sampling unit clusters (classes) distributed among 15 region-by-school level strata. For analysis, only stage 1 primary sampling units (schools) and strata were necessary to approximate the actual two-stage design actually used.

Note: percentages shown are weighted percentages

Table 2.6 Outline of Topics Presented by Survey Year

	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011
3.1 Family & School Life											
Family Living Arrangement	•	•	•	•	•	•	•	•	•	✓	✓
Relationship with Parents	•	•	•	•	•	•	•	•	•	✓[B]	✓[B]
School Performance and Attitudes	✓	✓	✓	✓	✓	✓[B]	✓[B]	✓[B]	✓[B]	✓[B]	✓[B]
School Suspensions	•	•	•	•	•	•	•	✓	✓	✓[B]	✓[B]
School Climate	•	•	•	•	✓	✓	✓	✓	✓	✓	✓
3.2 Physical Health											
Self-Rated Physical Health	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓
Asthma Diagnosis	•	•	•	•	•	•	•	•	•	•	✓[B]
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]
Medically-Treated Injury	•	•	•	•	•	•	✓[A]	✓[A]	✓[B]	✓[B]	✓[B]
Seatbelt Use	•	•	•	•	•	•	•	•	•	•	✓[B]
Vehicle Collision as a Driver	•	•	•	•	•	•	•	•	•	•	✓[B]
3.3 Health Care Utilization											
Physician Health Care Visit	•	•	•	•	✓	✓	✓	✓	✓	✓	✓[B]
Mental Health Care Visit	•	•	•	•	✓	✓	✓	✓	✓	✓	✓[A]
Medical ADHD Drug Use	•	•	•	•	•	•	•	•	✓	✓	✓
Medical Tranquillizer/Sedative Use	✓	✓	✓	✓	✓	✓	✓[B]	✓[A]	✓[A]	✓[A]	✓[A]
Medical Opioid Pain Reliever Use	•	•	•	•	•	•	•	•	✓	✓	✓
Prescription for Depression/Anxiety	•	•	•	•	•	✓[A]	✓[A]	✓[A]	✓[A]	✓[A]	✓[A]
Sought Counselling Over the Phone	•	•	•	•	•	•	•	✓[A]	✓[A]	✓[A]	✓[A]
Sought Counselling Over the Internet	•	•	•	•	•	•	•	•	•	•	✓[A]
3.4 Internalizing Indicators											
Self-Rated Mental Health	•	•	•	•	•	•	•	•	✓[A]	✓[A]	✓[A]
Low Self-Esteem	•	•	•	•	•	•	•	•	•	•	✓[B]
Elevated Psychological Distress	•	•	•	•	✓[A]	✓[A]	✓[A]	✓[A]	✓[A]	✓[A]	✓[A]
Symptoms of Anxiety/Depression	•	•	•	•	✓[A]	✓[A]	✓[A]	✓[A]	✓[A]	✓[A]	✓[A]
Suicide Ideation	•	•	•	•	•	✓[A]	✓[A]	✓[A]	✓[A]	✓[A]	✓[A]
Suicide Attempt	•	•	•	•	•	•	•	•	✓[A]	✓[A]	✓[A]
3.5 Externalizing Indicators											
Non-Violent Antisocial Behaviour	✓	✓	✓	✓[B]	✓[B]	✓[A]	✓[A]	✓[A]	✓[A]	✓[A]	✓[A]
Fire Setting Behaviour	•	•	•	•	•	•	•	•	✓[A]	✓[A]	✓[A]
Violent/Aggressive Behaviour	✓	✓	✓	✓[B]	✓[B]	✓[A]	✓[A]	✓[A]	✓[A]	✓[A]	✓[A]
Violence on School Property	•	•	•	•	•	✓[A]	✓[A]	✓[A]	✓[A]	✓[A]	✓[A]
Bullying Behaviour at School	•	•	•	•	•	•	✓[A]	✓[A]	✓[A]	✓[A]	✓[A]
Victim of Cyber-Bullying	•	•	•	•	•	•	•	•	•	•	✓[A]
3.6 Gambling & Video Gaming											
Gambling Activities	•	•	•	•	•	✓[A]	✓[A]	✓[A]	✓[A]	✓[A]	✓[A]
Gambling Problems	•	•	•	•	✓[B]	✓[A]	✓[A]	✓[A]	✓[A]	✓[A]	✓[A]
Video Gaming Problems	•	•	•	•	•	•	•	•	✓[B]	✓[B]	✓[A]
3.7 Co-Existing Problems	•	•	•	•	•	•	✓[A]	✓[A]	✓[A]	✓[A]	✓[A]
3.8 Overview by LHIN Areas	•	•	•	•	•	•	•	•	•	•	✓

• not available; [A] Form A random half sample; [B] Form B random half sample

3. RESULTS

3.1 Family and School

3.1.1 Family Living Arrangement

Family structure is an important influence on child and youth development. Indeed, family structural factors, such as an "intact" family – defined by the presence of two (or more) parents (including a stepparent) – can increase or decrease the economic, emotional and cognitive resources available to children, thereby affecting their well-being (Coleman, 1988; Gore, Aseltine, & Colton, 1992; Johnson, Hoffmann, & Gerstein, 1996; Wells & Rankin, 1991).

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

2011 (Grades 7–12):

- An estimated 19.3% (95% CI: 17.6%-21.1%) of students report that they live with one parent only or with no parent (that is, neither a biological parent, nor an adoptive parent, nor a stepparent).
- About 13.0% (95% CI: 11.8%-14.2%) of students report that they divide their time between two or more homes.

3.1.2 Relationship with Parents

Parents are a primary influence on children's lives, although as children become adolescents peers increasingly play an influential role. Nevertheless, the relationship quality between young people and their parents remains a significant factor in healthy psychosocial development.

We use three questions to assess the quality of relationships between adolescents and their parents. Students were asked how well they are getting along with their mother, how well they are getting along with their father, and whether one of their parents knows their whereabouts when away from home, an indicator of parental monitoring.

2011 (Grades 7–12):

- Roughly 4.6% (95% CI: 4.0%-5.3%) of students report not getting along with their mother, and 6.9% (95% CI: 6.0%-7.8%) report not getting along with their father.
- The majority of students (89.5%; 95% CI: 88.6%-90.3%) report that at least one parent "always" or "usually" knows where they are when away from home.

3.1.3 School Performance and Attitudes (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 health-related behaviours.

Starting in 1991, the OSDUHS included several questions about students' school experiences including school grades usually received, time spent on homework, and how much students like school. Since 2001, this module has been asked of a random half sample of students.

2011 (Grades 7–12):

- Overall, 52% of students report usually receiving grades over 80% in their subjects; 36% report grades between 70% and 79%; 9% report grades between 60% and 69%; and about 2% report usually receiving grades below 60%.
- One-quarter (24.9%) of students spend less than one hour on homework per week, outside of school. One-tenth (9.5%) report spending seven hours or more on homework weekly, outside of school.
- Almost half (44.1%) of students report liking school very much or quite a lot. In contrast, one-in-seven (13.7%) report not liking school very much or at all.

1999–2011 (Grades 7–12):

- Students in 2011 (44.1%) are more likely to report that they like school very much/a lot, than students in 2009 (35.5%), and in 1999 (29.6%).

3.1.4 School Suspensions

Starting in 2005, students were asked how many times they were suspended from school since September. We present the percentage reporting being suspended **at least once**.

- Overall, 5.5% (95% CI: 4.6%-6.5%) of students report being suspended from school at least once during the 2010/2011 academic year.
- Males are significantly more likely than females – more than two times as likely – to report a school suspension (7.2% vs. 3.5%, respectively).
- There are no significant differences among the grades.
- Students in Toronto (3.7%) are the least likely to report a suspension compared with students in the other three regions (about 5% to 7%).

2005–2011 (Grades 7–12):

- The percentage of student reporting being suspended from school at least once in 2011 (5.5%) is statistically similar to the estimates from 2009 (4.9%) and 2007 (6.4%), but is significantly lower than 2005 (8.0%).

3.1.5 School Climate

(Figure 3.1.1; Tables 3.1.1, A3.1.2)

School climate is a multidimensional construct, usually referring to the physical, organizational, and cultural elements of a school (Anderson, 1982). Examples of school climate characteristics include school size, policies and enforcement, teaching quality, student misconduct, and attachment to school. School climate can influence not only academic performance, but also skill development, social behaviour, and emotional health (Bond et al., 2007; Bonny et al., 2000; Saab & Klinger, 2010; Welsh, 2000).

Starting in 1999, the OSDUHS asked students to indicate their level of 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 s**omewhat worried**.

2011 (Grades 7–12):

- A clear majority of students feel close to people at their school (91.2%), and feel like they are part of their school (88.5%).
- A majority (95.6%) of students generally feel safe in their school. In contrast, 18.2% (95% CI: 16.4%-20.2%) – an estimated 183,700 Ontario students – are worried about being harmed or threatened at school.
- Females (19.7%) are significantly more likely than males (16.8%) to express worry about being harmed or threatened at school.
- Younger students are more likely to be worried than older students (e.g., 21.7% of 7th-graders vs. 16.4% of 12th-graders).
- There are significant regional differences, with students in Toronto (21.3%) most likely to report being worried about being harmed or threatened at school, whereas students in the North (14.4%) are least likely.

1999–2011 (Grades 7–12):

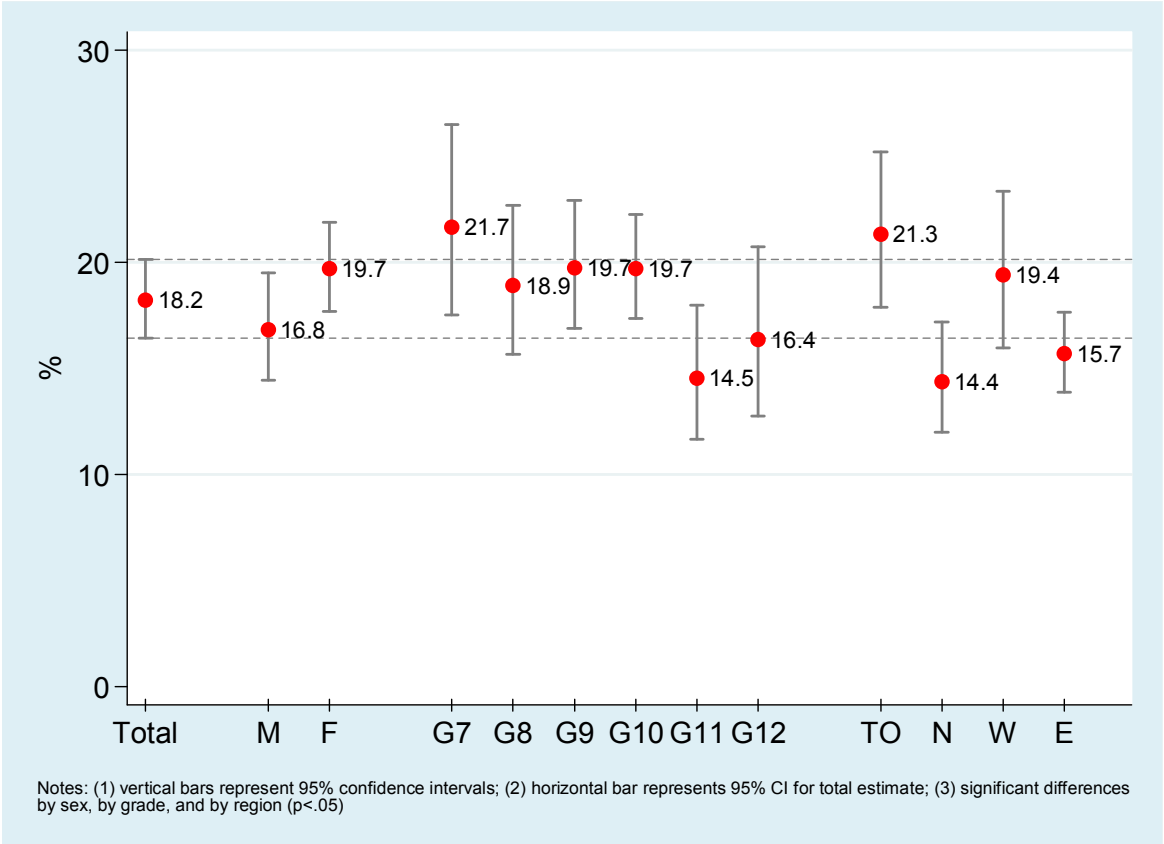
- Students in 2011 (18.2%) are more likely to express worry about being harmed or threatened at school than in 2009 (12.3%), and in 1999 (14.2%). This increase is also evident among males and females, students in the upper grades, students in the West and the East.

Table 3.1.1 Attitudes About School, 1999–2011 (Grades 7–12)

	1999	2001	2003	2005	2007	2009	2011
TOTAL SAMPLE (N=)	(4447)	(3898)	(6616)	(7726)	(6323)	(9112)	(9288)
I feel close to people at this school*	85.4	87.8	86.9	88.7	89.7	89.3	91.2
I feel like I am part of this school*	83.8	84.9	82.7	85.7	87.1	85.8	88.5
I feel safe in my school*	90.4	91.4	90.9	92.6	92.7	93.8	95.6
Like school very much or a lot	29.6	26.8	28.3	30.6	33.3	35.5	44.1 [ab]
Worried that will be harmed/threatened at school	14.2	13.1	12.4	12.8	11.7	12.3	18.2 [ab]

Notes: N=number of students surveyed; entries are percentages; * "agree" or "somewhat agree" to the statement; [a] 2011 vs. 2009 significant difference, p<.01; [b] 2011 vs. 1999 significant difference, p<.01.
Source: OSDUHS, Centre for Addiction and Mental Health

Figure 3.1.1
Percentage Expressing Worry About Being Harmed or Threatened at School by Sex, Grade, and Region, 2011 OSDUHS



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

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).

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

2011 (Grades 7–12):

- Over half of Ontario students rate their health as excellent (19.9%) or very good (32.8%). At the risk end, one-in-six (15.6%) report fair/poor health. This estimate represents roughly 155,100 Ontario students.
- Females are significantly more likely than males to report fair/poor health (19.2% vs. 12.2%, respectively).
- Fair/poor health significantly increases with grade, rising from 6.2% among 7th-graders to 22.3% among 11th-graders and 19.8% among 12th-graders.
- Reports of fair/poor health significantly vary by region, with students in the East (13.4%) least likely to rate their health as fair/poor.

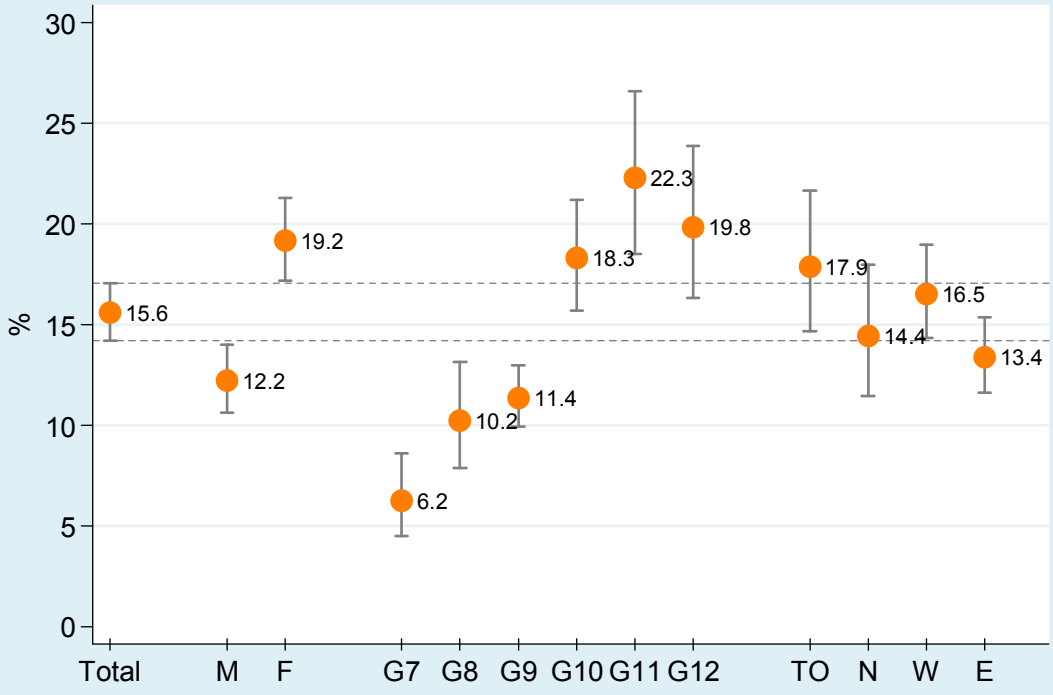
1999–2011 (Grades 7–12):

- Among the total sample of students, fair/poor self-rated health significantly increased between 1999 (8.9%) and 2011 (15.6%).
- The following subgroups also show a significant increase in fair/poor health between 1999 and 2011:
  - males (from 8.7% to 12.2%)
  - females (from 9.2% to 19.2%)
  - 10th-graders (from 10.0% to 18.3%)
  - 11th-graders (from 11.5% to 22.3%)
  - 12th-graders (from 10.9% to 19.8%)
  - Toronto students (from 9.2% to 17.9%)
  - Northern students (from 7.9% to 14.4%)
  - Western students (from 9.7% to 16.5%)
  - Eastern students (from 8.0% to 13.4%).

1991–2011 (Grades 7, 9, 11 only):

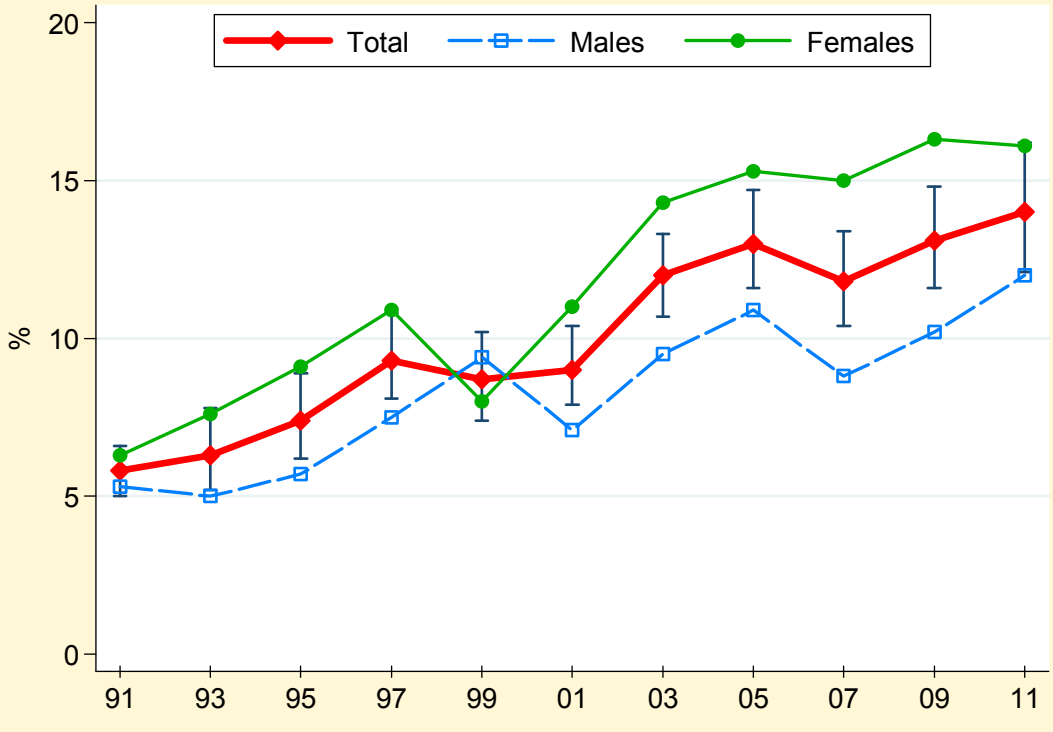
- Among 7th-, 9th-, and 11th-graders, fair/poor self-rated health was lowest in 1991, at 5.8%. This estimate significantly increased until 2003 (12.0%) and has since remained stable and elevated.
- For all subgroups, estimates of fair/poor self-rated health are currently higher compared with their respective estimates from 1991.

Figure 3.2.1
Percentage Reporting Fair/Poor Physical Health by Sex, Grade, and Region, 2011 OSDUHS



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

Figure 3.2.2
Percentage Reporting Fair/Poor Physical Health by Sex, 1991–2011 OSDUHS (Grades 7, 9, 11 only)



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

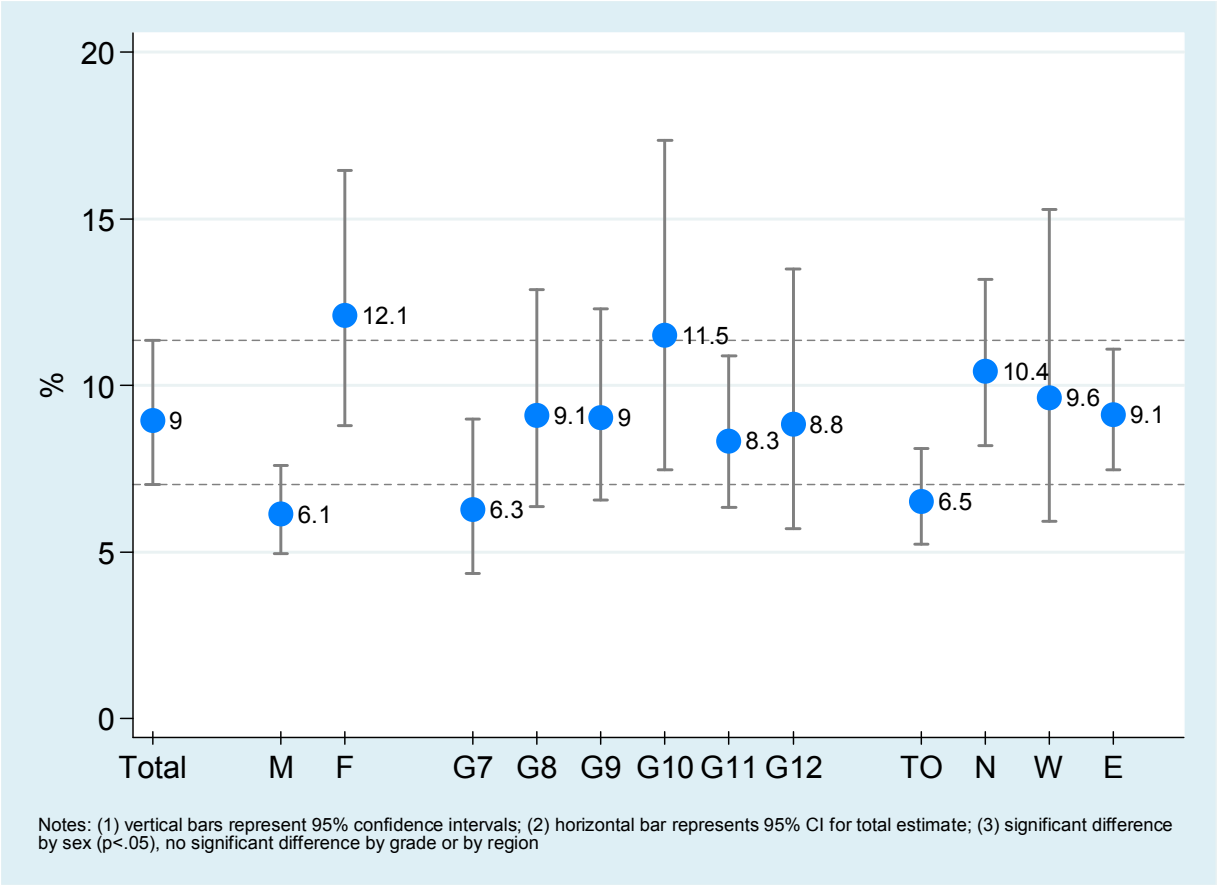
3.2.2 Asthma Diagnosis
(Figure 3.2.3)

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

2011 (Grades 7–12):

- About 9.0% (95% CI: 7.0%-11.3%) of students report that they currently have asthma. This estimate represents about 86,700 Ontario students in grades 7–12.
- Females (12.1%) are significantly more likely than males (6.1%) to report currently having asthma.
- There is no significant grade variation.
- There is no significant regional variation.

Figure 3.2.3
Percentage Reporting a Current Asthma Diagnosis by Sex, Grade, and Region, 2011 OSDUHS



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

3.2.3 Daily Physical Activity

(Figure 3.2.4; Table A3.2.2)

Regular physical activity offers short-term physical and mental health benefits, such as reducing the risk of obesity and stress, and improving self-esteem (Faulkner et al., 2007; Ferreira et al., 2007; Keays & Allison, 1995; Petty, Davis, Tkacz, Young-Hyman, & Waller, 2009; Stephens, 1988). Moreover, an active lifestyle established during adolescence is likely to extend into adulthood (Singh et al., 2008). In Canada, a minimum of 60 minutes of moderate to vigorous physical activity per day is recommended for children and youth (Janssen, 2007).

Starting in 2009, students were asked to report on how many days of the past seven they were physically active "*for a total of **at least 60 minutes** each day. Please add up all the time you spent on any kind of physical activity that increased your heart rate and made you breathe hard some of the time. (Some examples are brisk walking, running, rollerblading, biking, dancing, skateboarding, swimming, soccer, basketball, football.) Please include both school and non-school activities.* " In this section, we present the percentage of students who reported meeting the 60-minute daily recommendation on **all of the past seven days**.

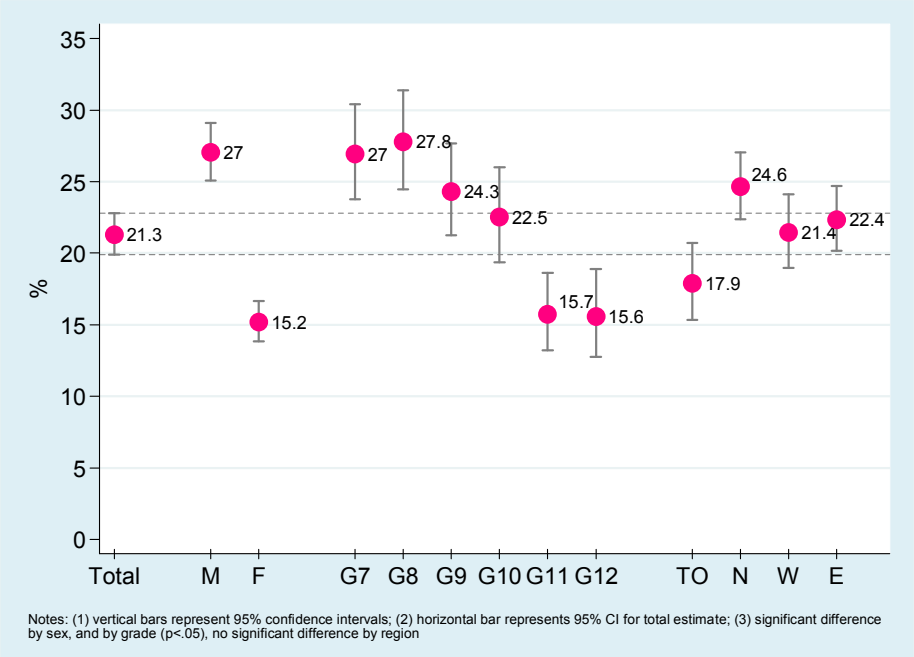
2011 (Grades 7–12):

- Among 7th- to 12th-graders, 21.3% (95% CI: 19.9%-22.8%) report meeting the 60-minute daily activity recommendation. This estimate represents about 212,000 Ontario students.
- Males (27.0%) are significantly more likely than females (15.2%) to be active daily.
- Sixty-minute daily physical activity significantly decreases with grade, from a high of about 28% among 7th- and 8th-graders to a low of about 15% among 11th- and 12th-graders.
- There are no significant differences among the four regions.

2011 vs. 2009 (Grades 7–12):

- Among all students, there has been no significant change in the percentage meeting the daily physical activity recommendation between 2009 (20.8%) and 2011 (21.3%).
- No subgroup shows a significant change between 2009 and 2011.

Figure 3.2.4
Percentage Meeting the Daily Physical Activity Recommendation in the Past Seven Days by Sex, Grade, and Region, 2011 OSDUHS



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

3.2.4 Physical Inactivity

(Figure 3.2.5; Table A3.2.3)

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

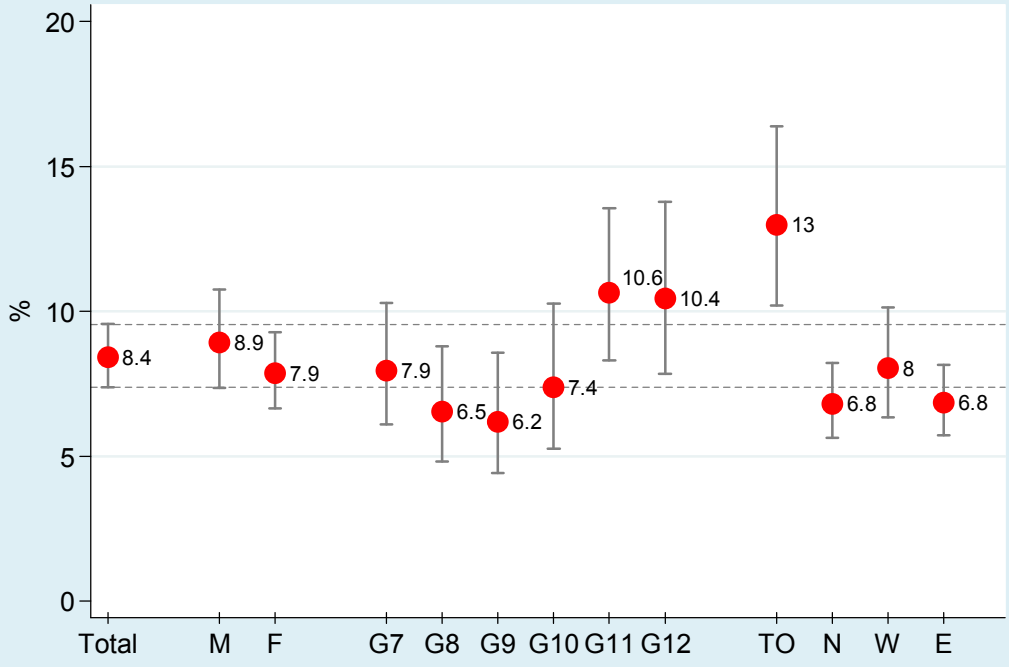
2011 (Grades 7–12):

- An estimated one-in-twelve (8.4%; 95% CI: 7.4%-9.6%) students were not physically active on at least one day during the seven days before the survey. This estimate represents about 83,600 Ontario students.
- Males (8.9%) and females (7.9%) are equally likely to be inactive.
- Students in grades 11 and 12 (about 11%) are significantly more likely than students in the lower grades to be inactive.
- Students in Toronto (13.0%) are most likely to be inactive than students in the other three regions (about 7%-8%).

2011 vs. 2009 (Grades 7–12):

- There has been no significant change in the percentage of all students reporting inactivity between 2009 (8.5%) and 2011 (8.4%).
- No subgroup shows a significant change between 2009 and 2011.

Figure 3.2.5
Percentage Reporting Physical Inactivity in the Past Seven Days by Sex, Grade, and Region, 2011 OSDUHS



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

3.2.5 Physical Inactivity at School

(Figure 3.2.6; Table A3.2.4)

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

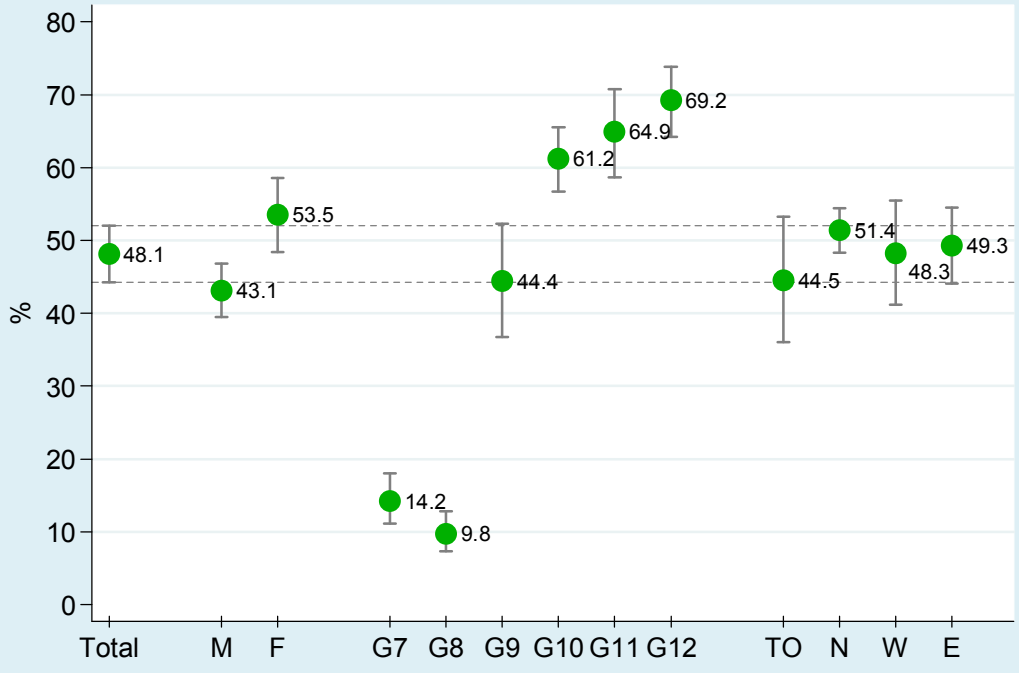
2011 (Grades 7–12):

- About half (48.1%) of all students do not engage in physically activity at school.
- Females are significantly more likely than males to be inactive at school (53.5% vs. 43.1%, respectively).
- Inactivity at school significantly varies by grade, ranging from a low of about 10% to 14% among 7th- and 8th-graders to 69.2% among 12th-graders.
- There are no significant regional differences regarding inactivity at school.

1999–2011 (Grades 7–12):

- The percentage of students in 2011 (48.1%) who report being physically inactive at school was similar to the percentage found in 2009 (45.5%), as well as that in 1999 (43.8%).
- However, among the subgroups, students in grades 7 and 8 show a significant decline in physical inactivity at school over the past decade (from 30% in 1999 to 14% in 2011 among 7th-graders; from 24% in 1999 to 10% in 2011 among 8th-graders).

Figure 3.2.6
Percentage Reporting Physical Inactivity at School in Physical Education Class in the Past Five School Days by Sex, Grade, and Region, 2011 OSDUHS



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

3.2.6 "Screen Time" Sedentary Behaviour (Figure 3.2.7; Table A3.2.5)

Starting in 2009, students were asked about the usual amount of time they spend in front of a computer or television (i.e., "screen time"). The question was "*In the last 7 days, about how many hours a day, on average, did you spend: watching TV/movies, playing video/computer games, on a computer chatting, emailing, or surfing the internet?*" Here we focus on the percentage who reported that they spent **seven or more hours a day**, on average, either watching TV or using a computer.

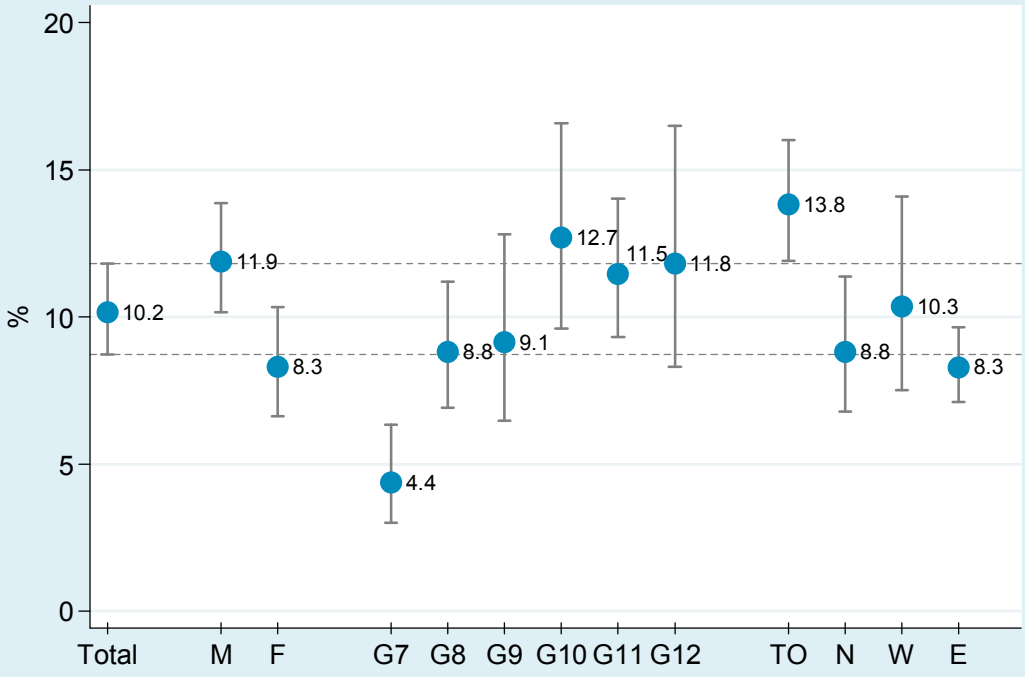
2011 (Grades 7–12):

- About 10.2% spend at least seven hours a day in front of a TV or computer. This estimate represents about 97,100 Ontario students in grades 7–12.
- Males (11.9%) are significantly more likely than females (8.3%) to spend at least seven hours in front of a TV or computer daily.
- There is significant grade variation, with students in grades 10 through 12 most likely to be sedentary.
- Among the regions, Toronto students (13.8%) are most likely to be sedentary.

2011 vs. 2009 (Grades 7–12):

- The percentage of students who spend at least seven hours of screen time daily did not significantly change between 2009 (9.7%) and 2011 (10.2%).

Figure 3.2.7
Percentage Reporting Seven or More Hours of Screen Time Sedentary Behaviour Per Day by Sex, Grade, and Region, 2011 OSDUHS



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

3.2.7 Overweight or Obese

(Figures 3.2.8, 3.2.9; Table A3.2.6)

Studies have shown that Canadian children and adolescents today are more likely to be overweight or obese than their counterparts were decades ago (Shields, 2006; Tremblay et al., 2010). Moreover, the prevalence of childhood-adolescent obesity in Canada is one of the highest internationally (Currie et al., 2012). This is a public health concern because obesity during childhood significantly increases the likelihood of obesity during adulthood, a host of illnesses, and premature mortality (Cali & Caprio, 2008; Reilly, 2006). Furthermore, youth who are overweight/obese are more likely to experience concurrent psychosocial difficulties, such as low self-esteem, bully victimization, or frequent substance use (Farhat, Iannotti, & Simons-Morton, 2010; Zametkin, Zoon, Klein, & Munson, 2004).

The OSDUHS asked students to report their current height and weight, using pre-coded response options.[35] Using the mid-point of the responses, body mass index (BMI) was calculated as weight in kilograms divided by height in metres squared.[36] Students without valid height or weight responses (n=427, or 4.8% of the total sample) were excluded from the analysis. BMI is the most commonly used indicator to measure adiposity status among children and adolescents. The age-by-sex specific BMI cut-off points created by Cole and colleagues (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).

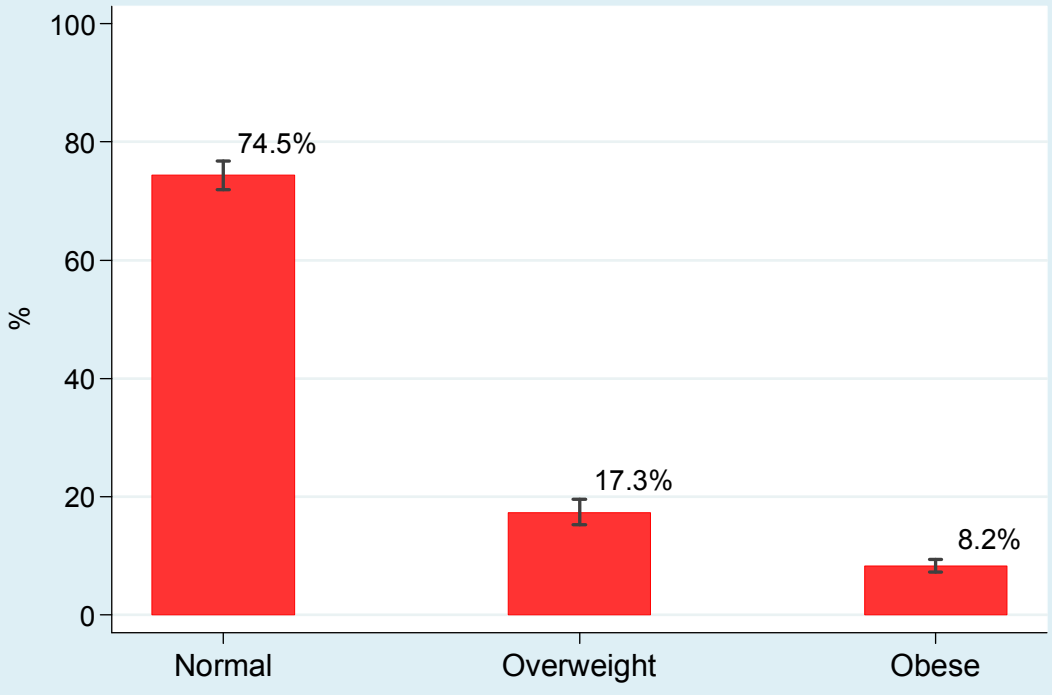
2011 (Grades 7–12):

- An estimated 17.3% (95% CI: 15.3%-19.6%) are considered to be overweight, while 8.2% (95% CI: 7.2%-9.4%) are considered obese. Combining the two, 25.5% (95% CI: 23.2%-28.0%) of students are either overweight or obese. This estimate represents about 245,600 students in Ontario in grades 7 through 12.
- Males (29.5%) are significantly more likely than females (21.3%) to be overweight or obese.
- There is significant grade variation, with students in grade 9–12 (about 27%) more likely to be overweight or obese than students in grades 7 and 8 (about 20%).
- There are no significant differences among the four regions.

[35] Experimental work on the OSDUHS showed that the pre-coded format reduced missing value responses versus open-ended formats. The height question contained 27 pre-coded categories ranging from *4'4"/132 cm or less* to *6'6"/198 cm or more*. The weight question contained 42 pre-coded categories ranging from *80 lbs/36 kg or less* in 5 lb increments to *281 lbs/127 kgs or more*.

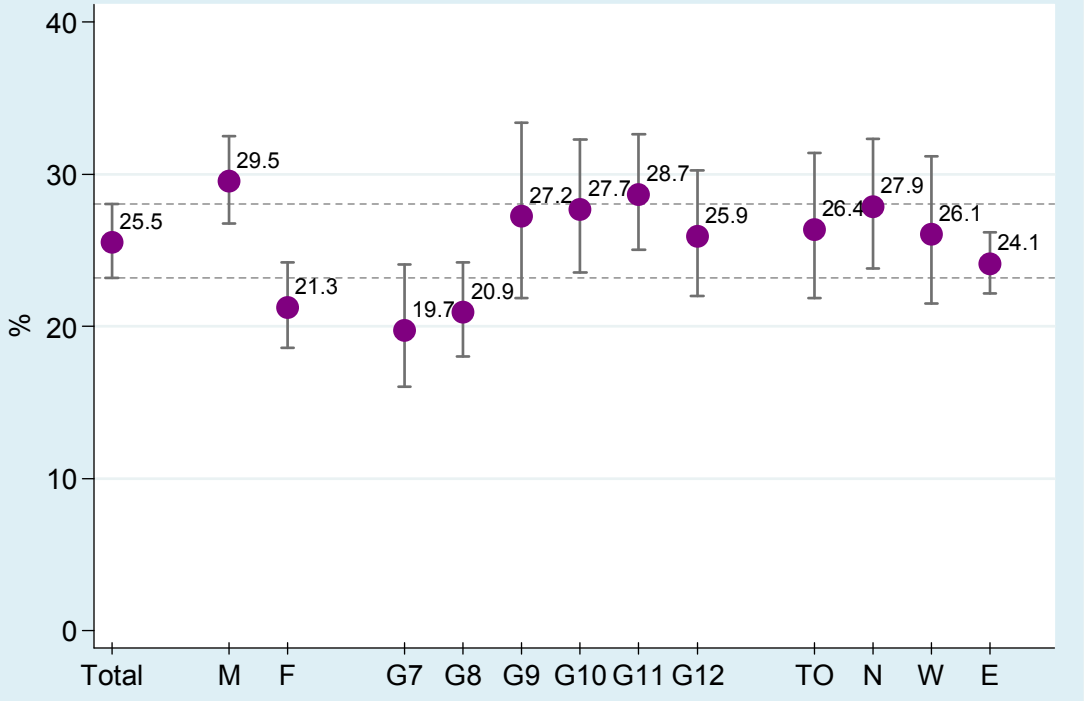
[36] Using the "zanthro" package in *Stata 11.0.*

Figure 3.2.8
Percentage Estimated to be Normal Weight, Overweight, and Obese, 2011 OSDUHS (Grades 7–12)



Notes: (1) 'Normal' weight includes underweight; (2) error bars represent 95% confidence intervals

Figure 3.2.9
Percentage Overweight or Obese by Sex, Grade, and Region, 2011 OSDUHS



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

3.2.8 Body Image and Weight Control

(Figure 3.2.10; Table A3.2.7)

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

Since 2001, the OSDUHS included questions concerning beliefs about personal weight and desired change in weight. Two questions were asked: (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?"*

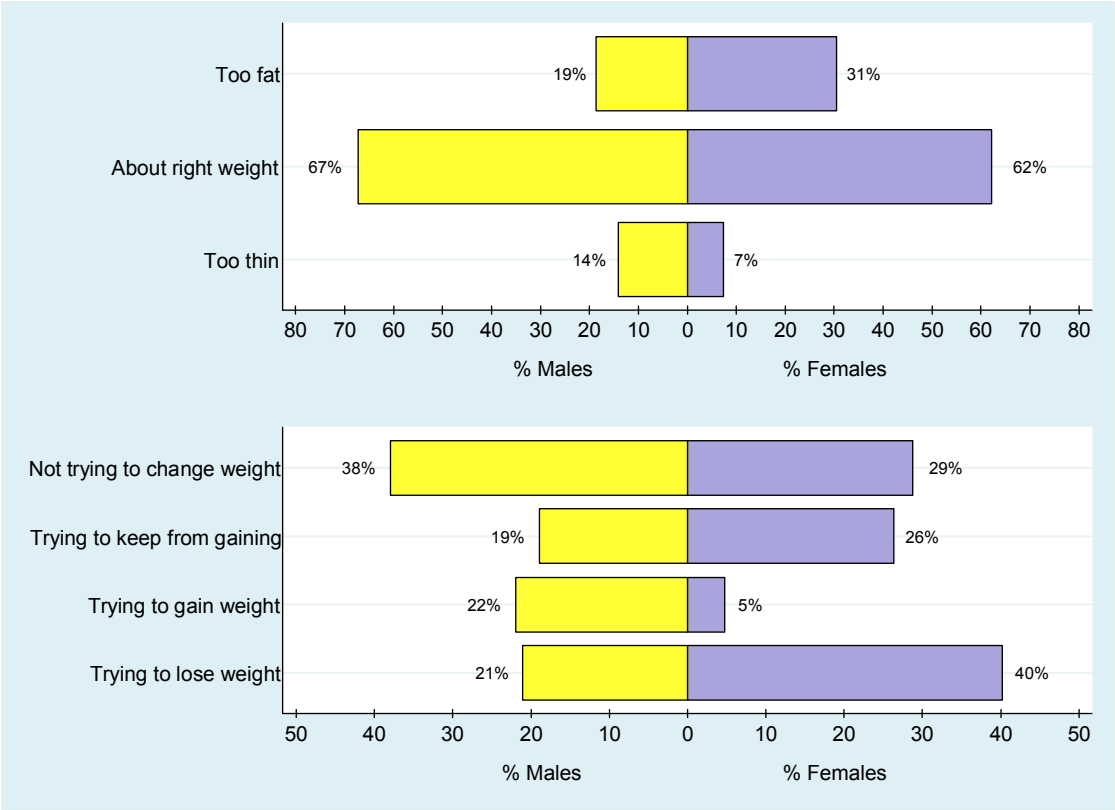
2011 (Grades 7–12):

- About two-thirds (64.8%) of students are satisfied with their weight. One-quarter (24.3%) believe they are too fat, and one-tenth (10.9%) believe they are too thin.
- Females are significantly more likely than males to believe that they are too fat, (30.6% vs. 18.6%, respectively), whereas males are more likely than females to believe that they are too thin (14.1% vs. 7.4%, respectively).
- Satisfaction with weight significantly decreases with grade level: about 70% of students in grades 7 and 8 are satisfied with their weight and this percentage declines to about 60% to 62% among students in grades 10, 11, and 12.
- One-third (33.6%) of students are not attempting to change their weight. Another 30.1% are attempting to lose weight, 22.4% want to keep from gaining weight, and 13.8% want to gain weight.
- Females are significantly more likely than males to report they are attempting to lose weight (40.2% vs. 21.1%, respectively), whereas males are more likely than females to report that they are attempting to gain weight (22.0% vs. 4.7%, respectively).
- The desire to change one's weight significantly differs by grade level, however the direction is dependent on the sex of respondents. Among males, reports of attempts to gain weight increase with grade, from about 9% of 7th- and 8th-graders up to 18.2% of 12th-graders. Among females, reports of attempts to lose weight significantly increase, from 24.4% of 7th-graders up to 49.8% of 11th-graders, followed by a small decrease to 36.8% among 12th-grade females.
- There are no significant regional differences for these two items.

2001–2011 (Grades 7–12):

- Since 2001, there has been a significant increase in the percentage of students who believe that they are "too fat" (from 18.7% in 2001 to 24.3% in 2011. Among the subgroups, this increase is evident for females (from 23.6% in 2001 to 30.6% in 2011) and for students in Toronto (from 13.0% in 2001 to 23.5% in 2011).
- There have been no significant changes over time regarding reported weight control efforts.

Figure 3.2.10
Body Image and Weight Control by Sex, 2011 OSDUHS (Grades 7–12)



3.2.9 Medically-Treated Injury

(Figure 3.2.11; Table A.2.8)

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

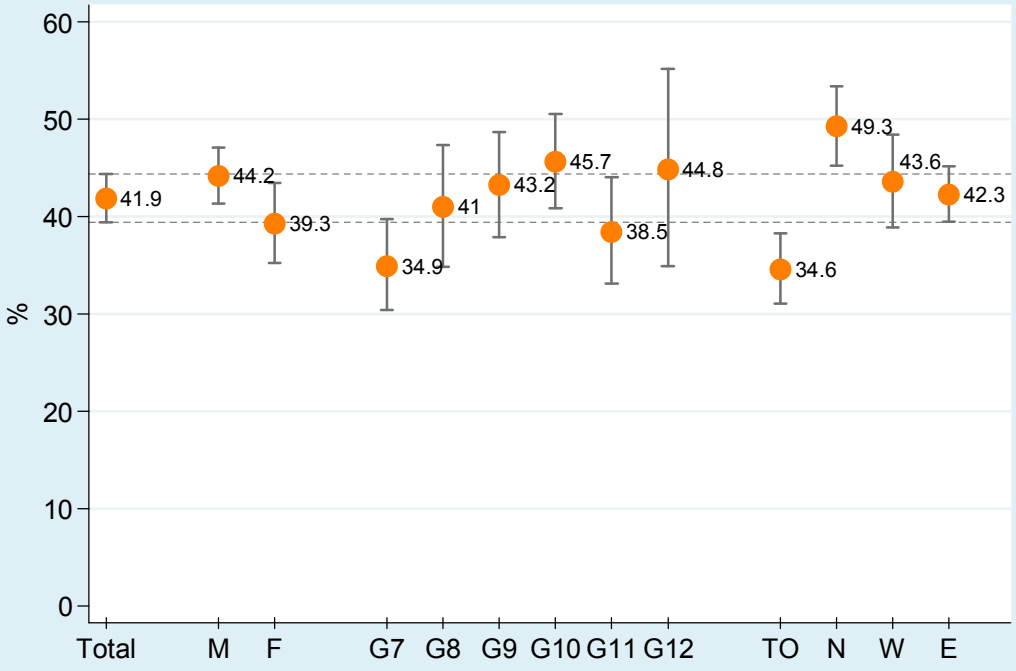
2011 (Grades 7–12):

- An estimated 41.9% (95% CI: 39.4%-44.4%) were treated for an injury at least once in the 12 months before the survey. This represents about 402,800 students across Ontario. More specifically, 21.6% were treated once, 10.3% were treated twice, 5.7% three times, and 4.3% four or more times.
- Males (44.2%) are significantly more likely than females (39.3%) to report a medically-treated injury at least once in the past year.
- There is no significant grade variation.
- There is significant regional variation, with students in Toronto (34.6%) least likely, and students in the North most likely (49.3%), to report a treated injury.

2003–2011 (Grades 7–12):

- The percentage of students who reported a treated injury in 2011 (41.9%) is similar to the estimate from 2009 (40.5%), but is significantly higher than the estimate found in 2003 (35.4%), the first year of monitoring.
- Among the subgroups, males, females, 10th-graders, and Toronto students show significantly higher estimates in 2011 compared with their respective estimates from 2003.

Figure 3.2.11
Percentage Reporting a Medically-Treated Injury at Least Once in the Past Year by Sex, Grade and Region, 2011 OSDUHS



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

3.2.10 Seatbelt Use

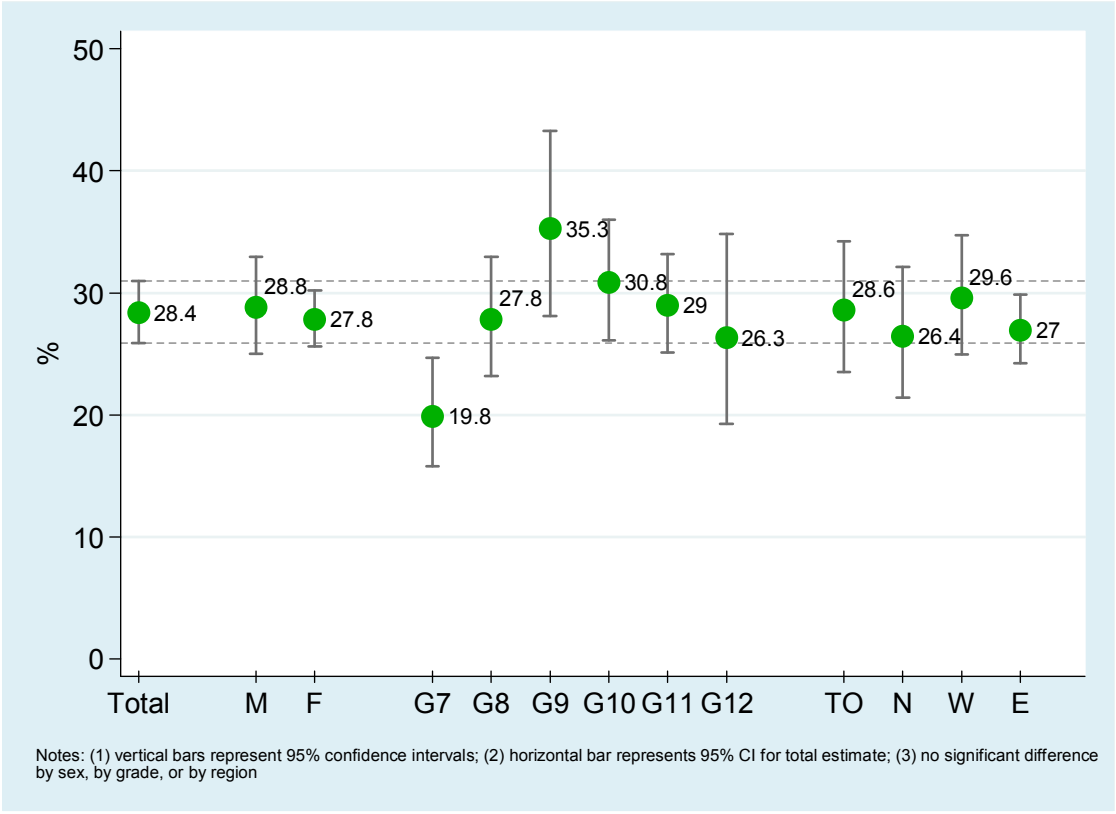
(Figure 3.2.12)

For the first time 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 describe the percentage of students who **do not always** wear a seatbelt when they are in a vehicle.

2011 (Grades 7–12):

- An estimated 28.4% (95% CI: 25.9%-31.0%) of students in grades 7–12 report they do not always wear a seatbelt. This estimate represents about 280,100 students in Ontario. Looking at the extreme end, 3.1% of students report that they rarely or never wear a seatbelt (representing 30,600 students).
- Males (28.8%) and females (27.8%) are equally likely to report that they do not always wear a seatbelt.
- Despite some variation, there are no significant grade differences regarding not always wearing a seatbelt.
- There are no significant regional differences.

Figure 3.2.12
Percentage Reporting Not Always Wearing a Seatbelt When in a Vehicle by Sex, Grade, and Region, 2011 OSDUHS



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

3.2.11 Vehicle Collision as a Driver

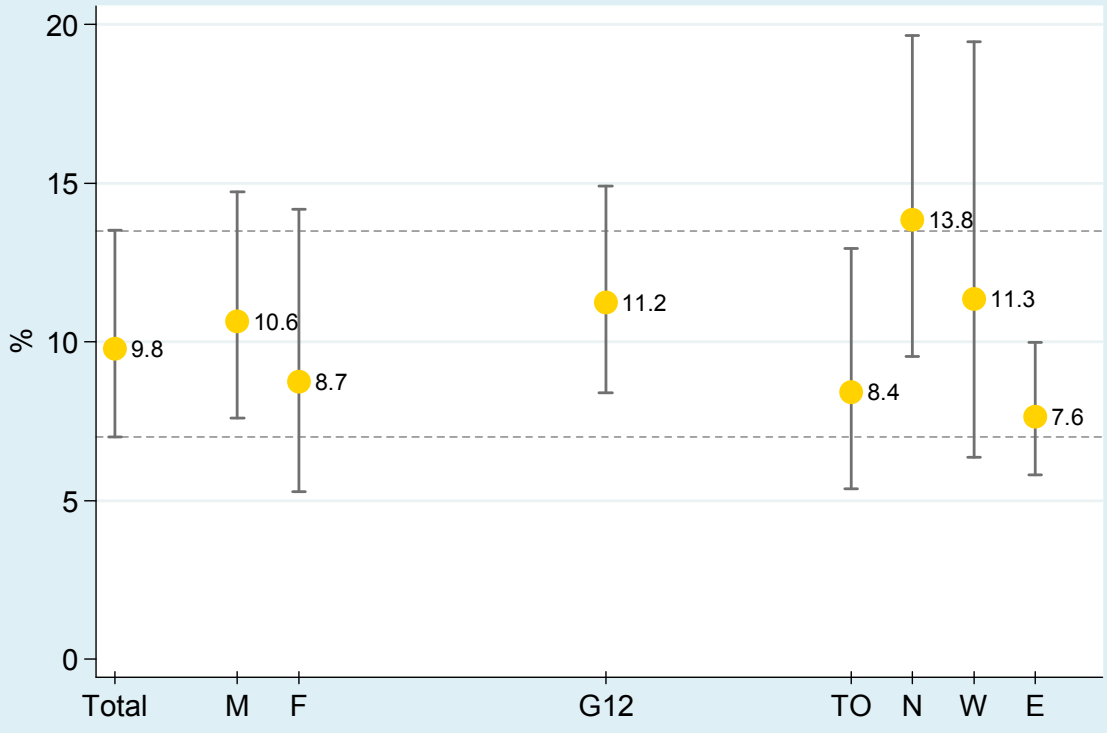
(Figure 3.2.13)

For the first time in 2011, the OSDUHS asked students about being involved in a collision as a driver. The question used was "*In the last 12 months, how often were you in a car accident involving any kind of injury to you or to another person, or damage to the vehicle, while you were driving?*" 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.

2011 (Grades 10–12):

- Among drivers in grades 10–12, about one-in-ten (9.8%; 95% CI: 7.0%-13.5%) report being involved in a collision as a driver at least once in the past year. This percentage represents an estimated 30,200 adolescent drivers.
- Male drivers (10.6%) and female drivers (8.7%) are equally likely to report involvement in a collision at least once in the past year.
- There are no significant grade differences.
- There are no significant regional differences.

Figure 3.2.13
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, 2011 OSDUHS



Notes: (1) vertical bars represent 95% confidence intervals; (2) horizontal bar represents 95% CI for total estimate; (3) estimates for Grades 10 and 11 were suppressed; (4) no significant difference by sex, by grade, or by region

3.3 Health Care Utilization

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

3.3.1 Physician Health Care Visit

(Figure 3.3.1; Table A3.3.1)

In 1999, the OSDUHS introduced a question asking students how often they visited a doctor about their physical health, including just for a check-up, during the past 12 months. Students were asked: "*In the last 12 months, how many times have you seen a doctor about your physical health or for a check-up?*" We describe the proportion of students who reported **not visiting** a doctor during the past 12 months.

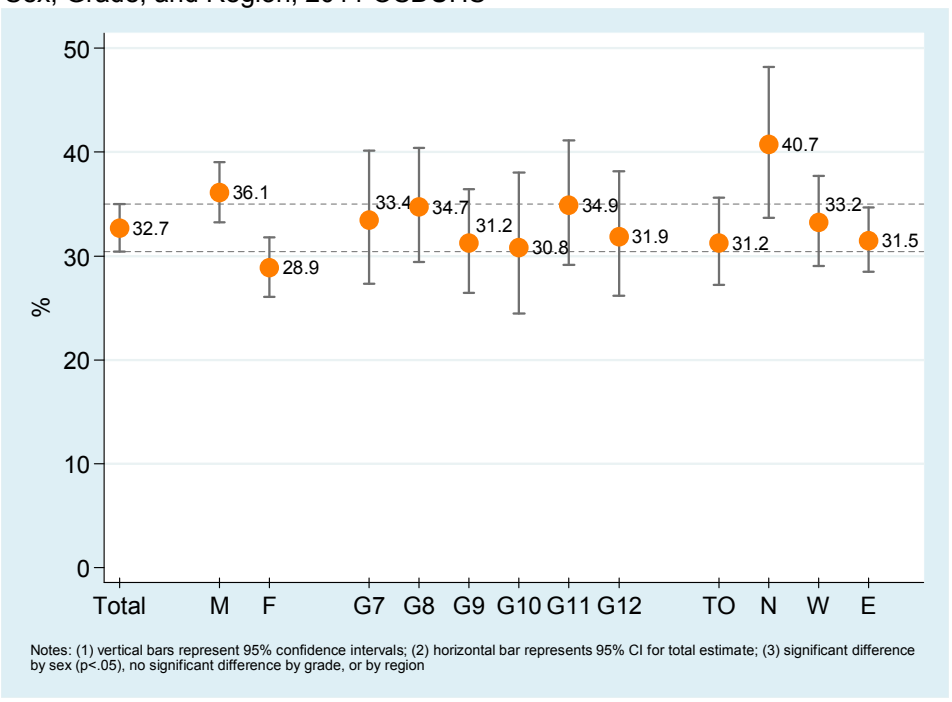
2011 (Grades 7–12):

- Among the total sample, 32.7% (95% CI: 30.4%-35.0%) did not visit a doctor, not even for a check-up, in the past year. This estimate represents about 305,900 students in Ontario.
- Males (36.1%) are significantly more likely than females (28.9%) to report no doctor visits.
- There are no significant grade differences.
- Despite some variation, there are no significant differences among the four regions.

1999–2011 (Grades 7–12):

- The percentage of students reporting not visiting a physician in 2011 (32.7%) is similar to the estimate from 2009 (33.6%), and the estimate from 1999 (30.0%). No changes are evident among the subgroups.

Figure 3.3.1
Percentage Reporting No Physician Health Care Visits in the Past Year by Sex, Grade, and Region, 2011 OSDUHS



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

3.3.2 Mental Health Care Visit

(Figure 3.3.2; Table A3.3.2)

Starting in 1999, the OSDUHS asked students whether they consulted a professional about a mental health matter. Specifically, 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.

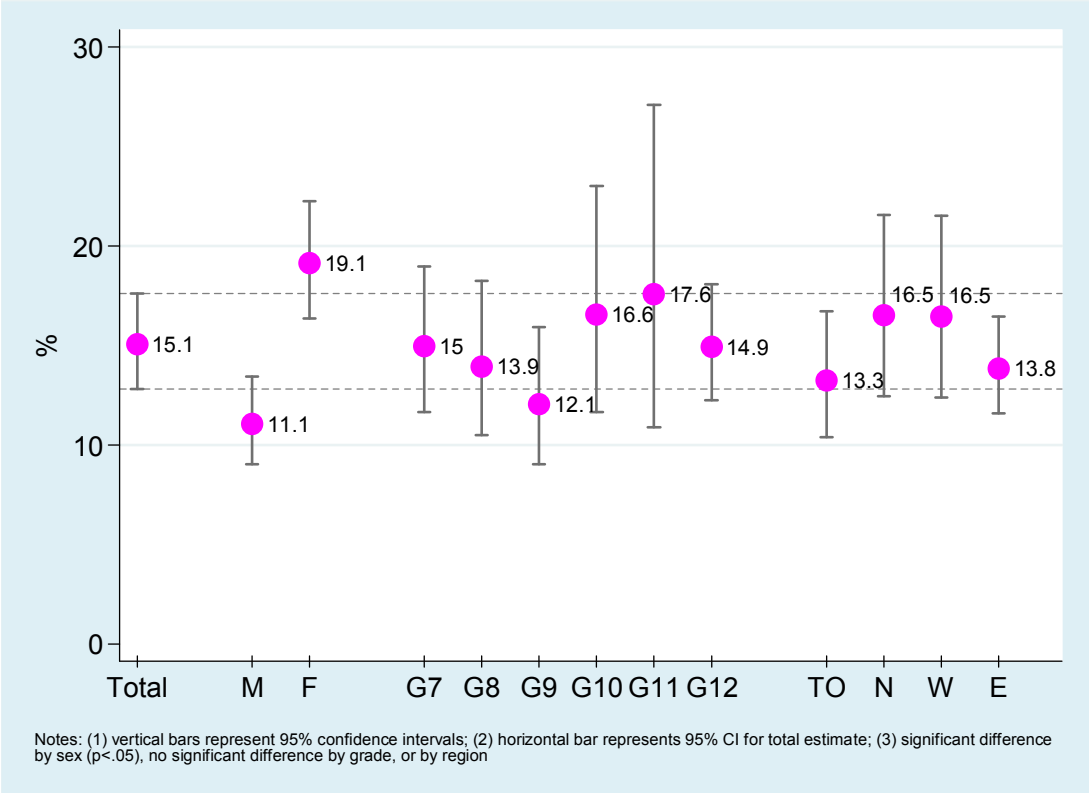
2011 (Grades 7–12):

- An estimated 15.1% (95% CI: 12.8%-17.6%) of students report visiting a professional about a mental health matter at least once in the past year. This estimate represents about 154,100 students in Ontario.
- Females (19.1%) are significantly more likely than males (11.1%) to report a mental health care visit.
- Despite some variation among the grades, these differences are not statistically significant.
- There are no significant differences among the four regions.

1999–2011 (Grades 7–12):

- The percentage of students who reported a mental health care visit was stable between the years 1999 and 2005, at 11% to 12%. However, the estimate doubled to 21.2% in 2007 and 23.8% in 2009. In 2011, the percentage significantly declined to 15.1%, resembling levels seen a decade ago.

Figure 3.3.2
Percentage Reporting at Least One Mental Health Care Visit in the Past Year by Sex, Grade, and Region, 2011 OSDUHS



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

3.3.3 Medical Drug Use

(Figures 3.3.3 to 3.3.5; Tables A3.3.3 to A3.3.5)

This section presents past year prevalence estimates for three types of prescription drug classes for medical purposes: tranquillizers/sedatives, drugs to treat Attention Deficit Hyperactivity Disorder (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?*
- *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, OxyContin, codeine) with a prescription or because a doctor told you to take them? (We do not mean regular Tylenol or Aspirin that anyone can buy in a drugstore.)*

2011 (Grades 7–12):

- Among the total sample, 3.6% (95% CI: 2.9%-4.3%) used tranquillizers/sedatives medically, that is by prescription, at least once in the past year (an estimated 35,700 students in Ontario); 2.5% (95% CI: 2.1%-3.1%) used an ADHD drug medically (25,500 students); and 21.4% (95% CI: 19.6%-23.2%) used opioid pain relievers medically (213,800 students).
- Females are significantly more likely than males to report using an opioid pain reliever medically (24.5% vs. 18.4%, respectively). In contrast, males and females are equally likely to report the medical use of ADHD drugs, and tranquillizers.
- Older students are significantly more likely than younger students to use opioid pain relievers and tranquillizers medically. Despite some variation, medical ADHD drug use does not significantly differ by grade.
- Students in Toronto (15.8%) are least likely to report medical opioid pain reliever use than students in the other three regions (about 22%). There is no significant regional effect for tranquillizer use, or for ADHD drug use.

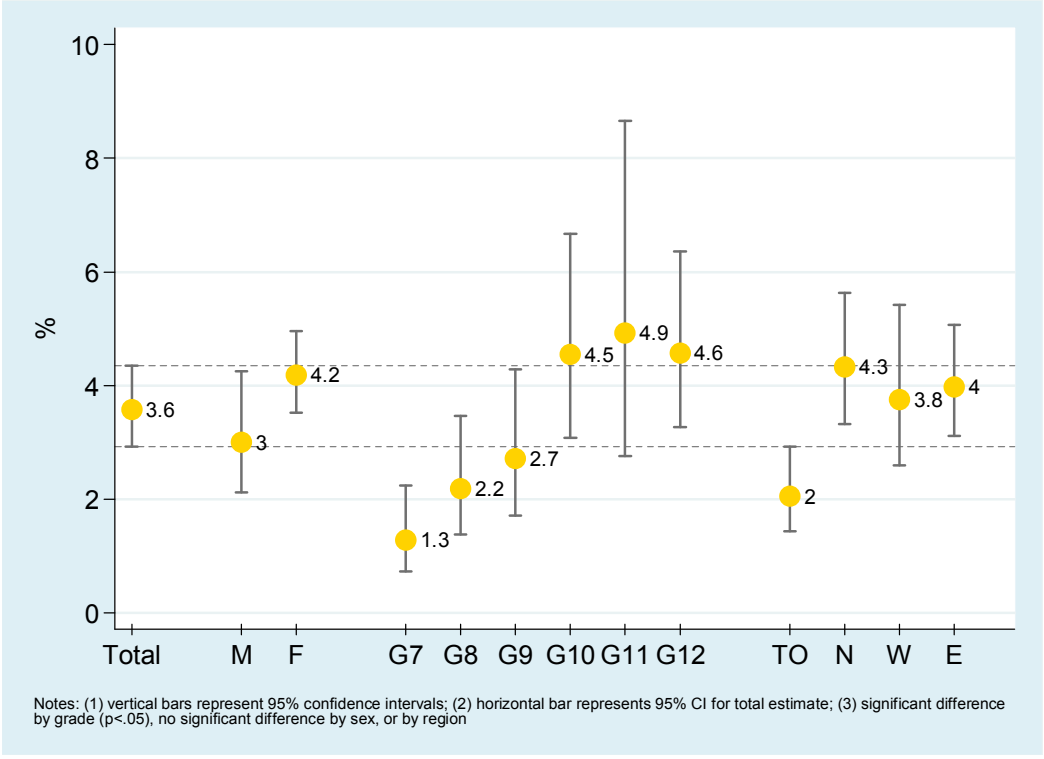
1999–2011 (Grades 7–12):

- During the past decade, medical tranquillizer use has not significantly changed, nor has medical ADHD drug use. However, medical opioid pain reliever use is significantly lower in 2011 (21.4%) than 2009 (31.8%) and 2007 (40.6%).

1977–2011 (Grades 7, 9, 11 only):

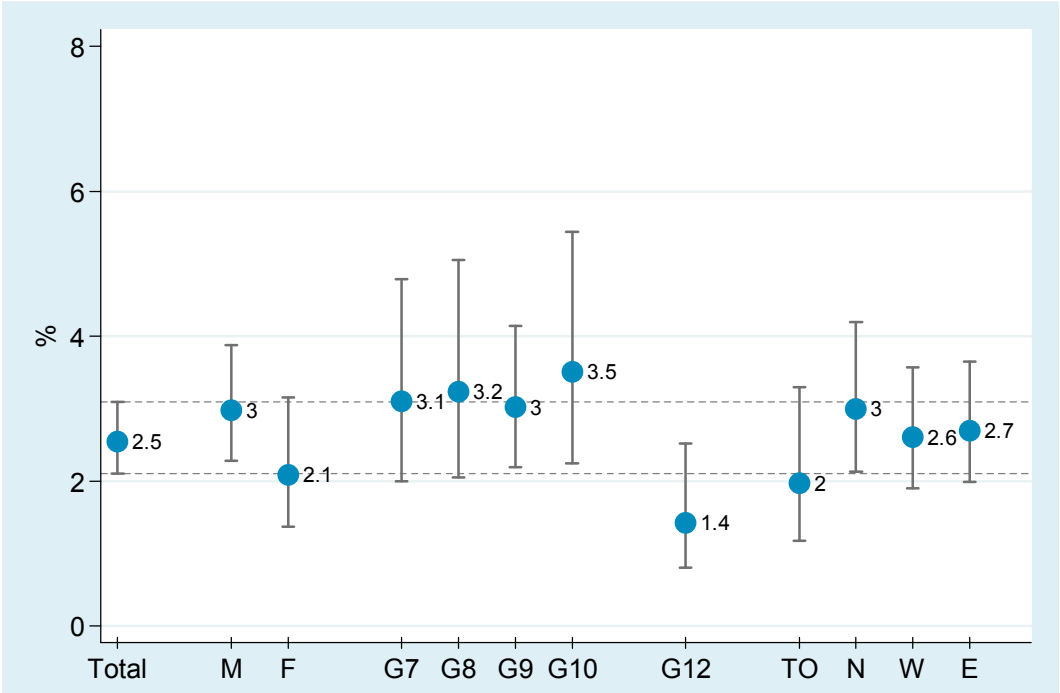
- Historically, the medical use of tranquillizers/sedatives peaked in the late 1970s, declined during the 1980s, and stabilized in the 1990s and 2000s, at 2% or 3%.

Figure 3.3.3
Percentage Reporting Medical Tranquillizer/Sedative Use in the Past Year by Sex, Grade, and Region, 2011 OSDUHS



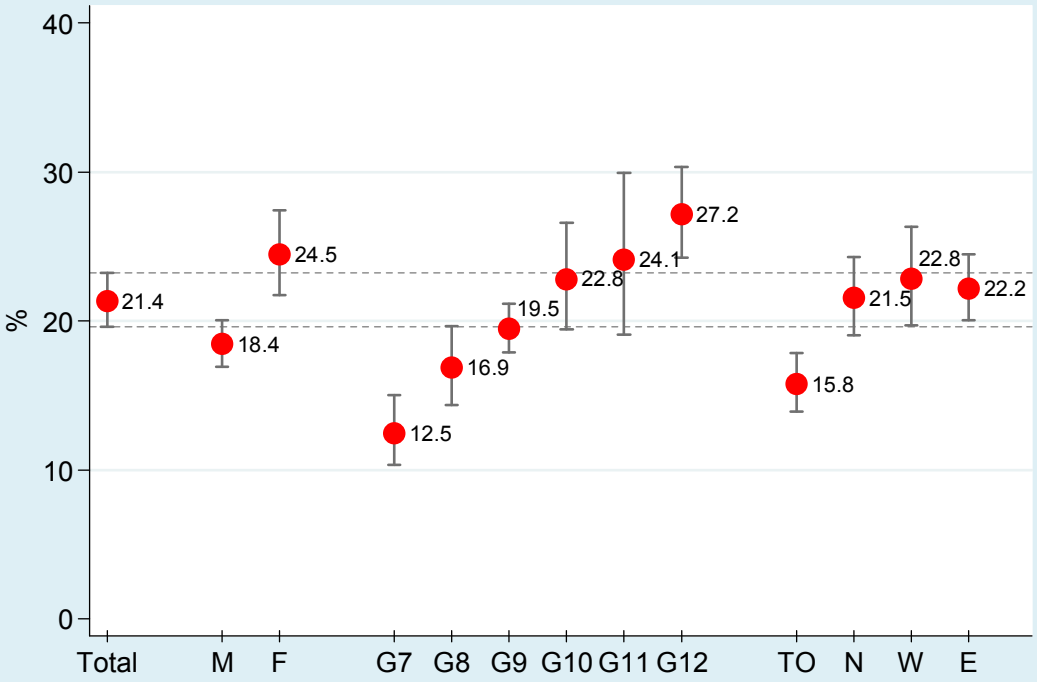
Notes: (1) vertical bars represent 95% confidence intervals; (2) horizontal bar represents 95% CI for total estimate; (3) significant difference by grade (p<.05), no significant difference by sex, or by region

Figure 3.3.4
Percentage Reporting Medical ADHD Drug Use in the Past Year by Sex, Grade, and Region, 2011 OSDUHS



Notes: (1) vertical bars represent 95% confidence intervals; (2) horizontal bar represents 95% CI for total estimate; (3) estimate for Grade 11 was suppressed; (4) no significant difference by sex, by grade, or by region

Figure 3.3.5
Percentage Reporting Medical Opioid Pain Reliever Use in the Past Year by Sex, Grade, and Region, 2011 OSDUHS



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

3.3.4 Prescription Medication to Treat Anxiety or Depression

(Figure 3.3.6)

Starting in 2001, the OSDUHS has asked a random half sample of students 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*.

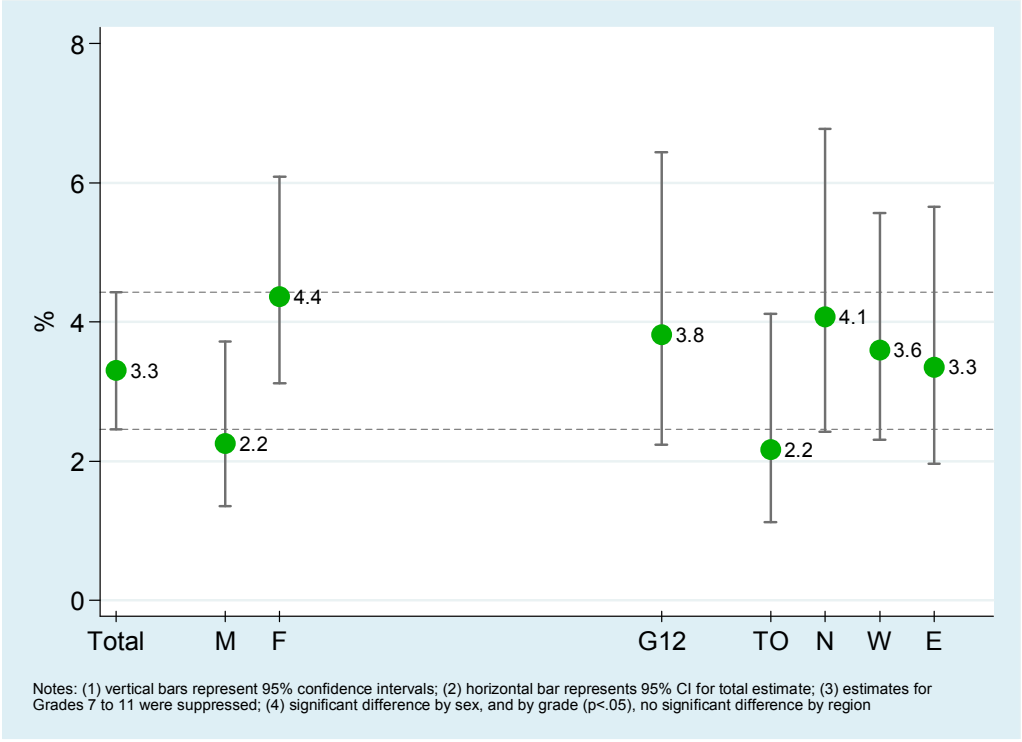
2011 (Grades 7–12):

- About 1.4% of students report being prescribed medication to treat anxiety in the past year and 1% were prescribed medication to treat depression. In combination, 1% were prescribed medication for *both* anxiety and depression.
- Combining the response options, 3.3% (95% CI: 2.5%-4.4%) report being prescribed medication to treat anxiety, depression, or both conditions. This represents about 33,400 students in Ontario.
- Females (4.4%) are significantly more likely than males (2.2%) to report being prescribed medication to treat anxiety, depression, or both conditions.
- The likelihood of being prescribed medication to treat anxiety/depression significantly increases with grade.
- Despite some variation, there are no significant regional differences.

2001–2011 (Grades 7–12):

- There has been no significant change since 2001 regarding being prescribed medication to treat anxiety, or depression, or both, as rates have been stable at around 3% to 4%.

Figure 3.3.6
Percentage Reporting Having Been Prescribed Medication to Treat Either Anxiety or Depression or Both in the Past Year by Sex, Grade, and Region, 2011 OSDUHS



Notes: (1) vertical bars represent 95% confidence intervals; (2) horizontal bar represents 95% CI for total estimate; (3) estimates for Grades 7 to 11 were suppressed; (4) significant difference by sex, and by grade (p<.05), no significant difference by region

3.3.5 Sought Counselling Over the Telephone or the Internet

(Figure 3.3.7)

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 used 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?"* 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*.

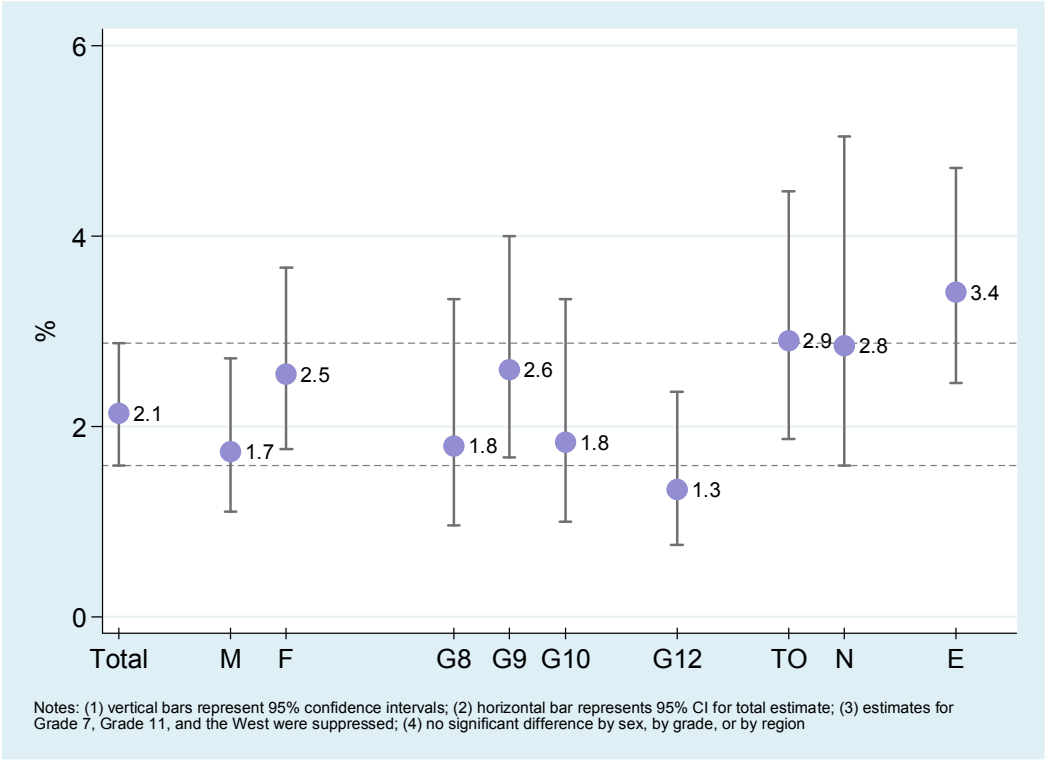
2011 (Grades 7–12):

- Among the total sample, 1.3% (95% CI: 0.9%-1.7%) report using a telephone counselling helpline in the past year (roughly 12,700 students). About 1.1% (95% CI: 0.7%-1.7%) report seeking help from a website (roughly 11,400 students). In combination, 2.1% (95% CI: 1.6%-2.9%) report using a helpline or a website or both to seek counselling (roughly 21,500 students).
- Males (1.7%) and females (2.5%) are equally likely to seek counselling either over the phone or over the Internet.
- There are no significant grade or region differences in seeking counselling over the phone or the Internet.

2005–2011 (Grades 7–12):

- The percentage of students who report using a telephone counselling helpline in 2011 is similar to the estimates from 2009 (1.9%; 95% CI: 1.4%-2.6%), 2007 (1.9%; 95% CI: 1.5%-2.5%), and 2005 (1.8%; 95% CI: 1.4%-2.4%).

Figure 3.3.7
Percentage Reporting Seeking Counselling Over the Phone, Over the Internet, or Both in the Past Year by Sex, Grade, and Region, 2011 OSDUHS



Notes: (1) vertical bars represent 95% confidence intervals; (2) horizontal bar represents 95% CI for total estimate; (3) estimates for Grade 7, Grade 11, and the West were suppressed; (4) no significant difference by sex, by grade, or by region

3.4 Internalizing Indicators

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

3.4.1 Self-Rated Mental Health

(Figure 3.4.1; Table A3.4.1)

Self-rated mental health is a simple, yet valid, way of measuring general mental health 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?"* Response options were: *poor*, *fair*, *good*, *very good*, or *excellent*. We describe the percentage of students who rate their mental health as **fair or poor**.

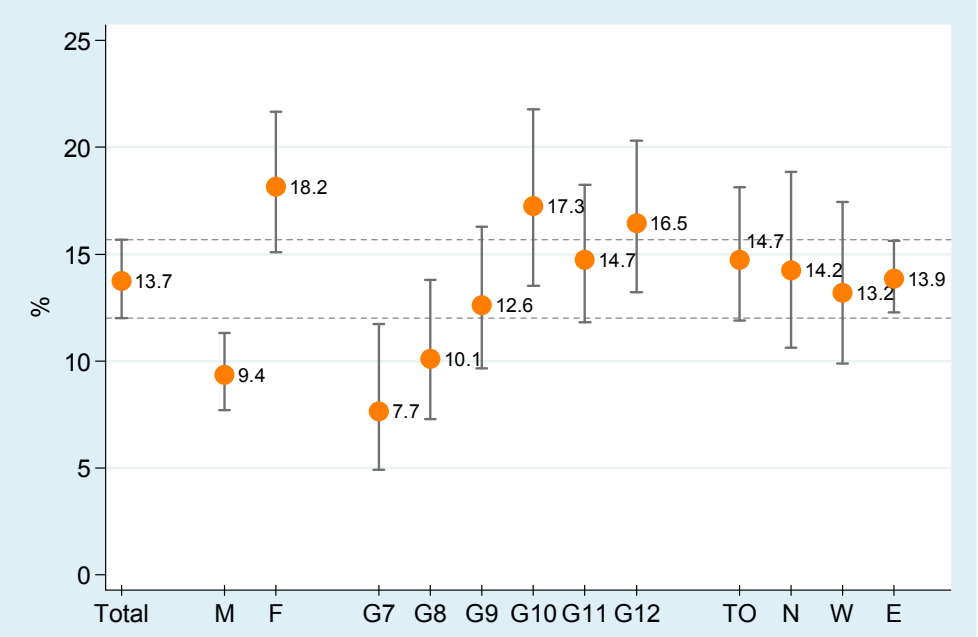
2011 (Grades 7–12):

- Almost two-thirds of Ontario students rate their mental health as excellent (24.5%) or very good (38.7%). At the risk end, 13.7% (95% CI: 12.0%-15.7%) report fair/poor mental health. This estimate represents about 138,300 students in Ontario.
- Females (18.2%) are significantly more likely than males (9.4%) to rate their mental health as fair/poor.
- Ratings of fair/poor mental health significantly increase with grade, ranging from 7.7% among 7th-graders to about 15% to 17% among 10th- to 12th-graders.
- There are no significant differences among the four regions.

2007–2011 (Grades 7–12):

- The percentage of students who rate their mental health as fair/poor in 2011 (13.7%) does not significantly differ from 2009 (11.7%) or from 2007 (11.4%).

Figure 3.4.1
Percentage Reporting Fair/Poor Mental Health by Sex, Grade, and Region, 2011 OSDUHS



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

3.4.2 Low Self-Esteem
(Figure 3.4.2)

Research has shown that low self-esteem, or self-worth, is associated not only with risky health behaviours such as illicit drug use (Clayton, 1992), but also with poor physical and mental health status, and poor school and personal achievement (Masten & Coatsworth, 1998; Mechanic & Hansell, 1987; Park, 2003).

The following five items adapted from the 20-item *Rosenberg Self-Esteem Scale* (Rosenberg, Schooler, & Schoenback, 1989) were used in 2011:

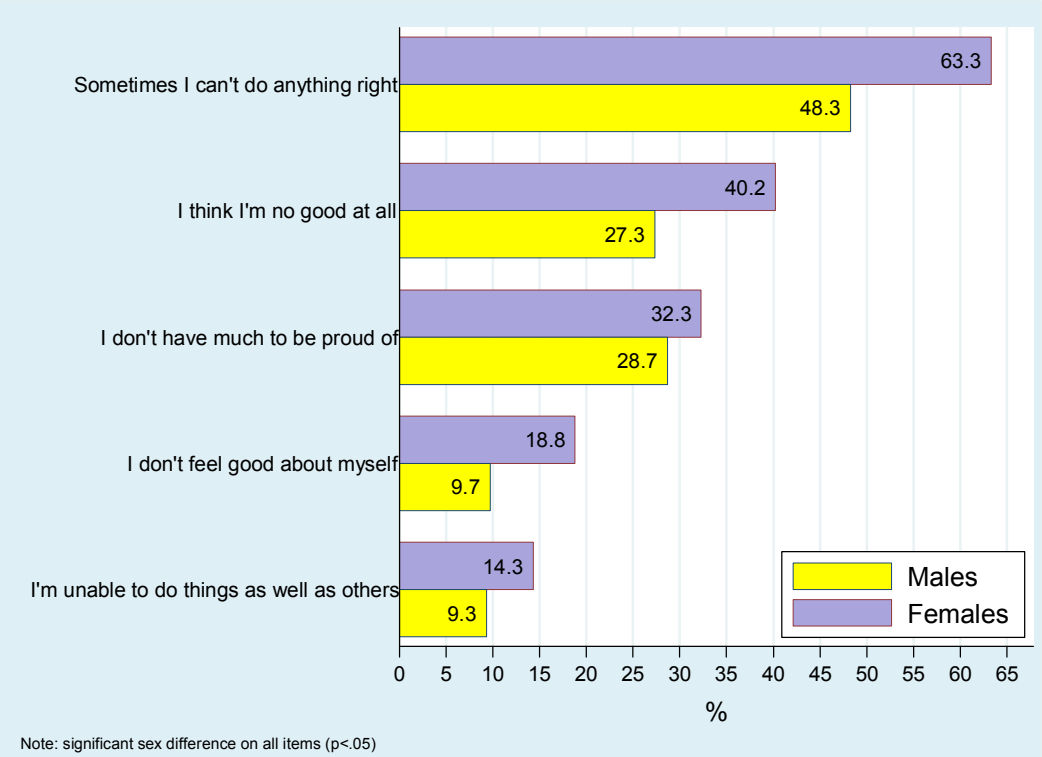
- *Sometimes I feel that I can't do anything right*
- *I feel I do not have much to be proud of*
- *Sometimes I think I am no good at all*
- *I feel good about myself*
- *I am able to do most things as well as other people can*

Each item has a 4-point response scale ranging from *strongly agree* to *strongly disagree*. An overall indicator for **low self-esteem** is defined here as negative responses (lower esteem) on **all five** of the items (i.e., *strongly agree* or *somewhat agree* for negative statements; *strongly disagree* or *somewhat disagree* for positive statements). The reliability coefficient (α) for these five items is 0.70.

2011 (Grades 7–12):

- A majority (55.4%) of students agree that sometimes they can't do anything right; 30.4% agree that they do not have much to be proud of; 33.4% agree that they are no good at all; 14.0% do not feel good about themselves; and 11.7% do not agree that they can do things as wells as others.
- About 3.1% (95% CI: 2.5%-4.0%) of students express low self-esteem – that is, report low esteem on all five items.
- Females are significantly more likely than males to report low self-esteem (4.3% vs. 2.0%, respectively).
- There are no significant grade differences.
- There are no significant regional differences.

Figure 3.4.2
Self-Esteem Items (% Agree) by Sex, 2011 OSDUHS (Grades 7–12)



3.4.3 Elevated Psychological Distress (Figures 3.4.3, 3.4.4; Table A3.4.2)

The 12-item *General Health Questionnaire* (GHQ12) is a screening instrument designed to assess overall psychological well-being and to detect non-psychotic psychiatric symptomology (Goldberg et al., 1997; Goldberg & William, 1988). Although the GHQ was developed and calibrated on adults, research has validated the GHQ among adolescents as well (Baksheev et al, 2011; French & Tait, 2004; Tait, French, & Hulse, 2003). The GHQ12 screens for three overarching domains: depressed mood, anxiety, and problems with social functioning. Note that this instrument is used as a screener and not for clinical diagnoses.

The GHQ12 was first in the OSDUHS in 1999. The item wording took the form: *"Over the last few weeks, have you...."* Response categories are on a 4-point frequency scale ranging from *better [more so] than usual* to *much less than usual*; or *not at all* to *much more than usual*.[37] The following items comprise the GHQ12:

- *been able to concentrate on whatever you're doing*
- *felt that you are playing a useful part in things*
- *felt capable of making decisions about things*
- *been able to enjoy your normal day-to-day activities*
- *been able to face up to your problems*
- *been feeling reasonably happy, all things considered*
- *lost much sleep because you were worried about something*
- *felt constantly under stress*
- *felt you couldn't overcome difficulties*
- *been feeling unhappy and depressed*
- *been losing confidence in yourself*
- *been thinking of yourself as a worthless person*

The GHQ12 yields a summated measure to estimate the percentage experiencing **elevated psychological distress**, defined as reporting **three or more of the 12 symptoms** using the binary scoring method (positive statements were reverse-coded). The scale assessment of these 12 items indicates an excellent reliability (α=0.88).

[37] Note that the response scale measures frequency relative to an individual's *usual* pattern. Thus, the GHQ categories capture relative change rather than absolute level.

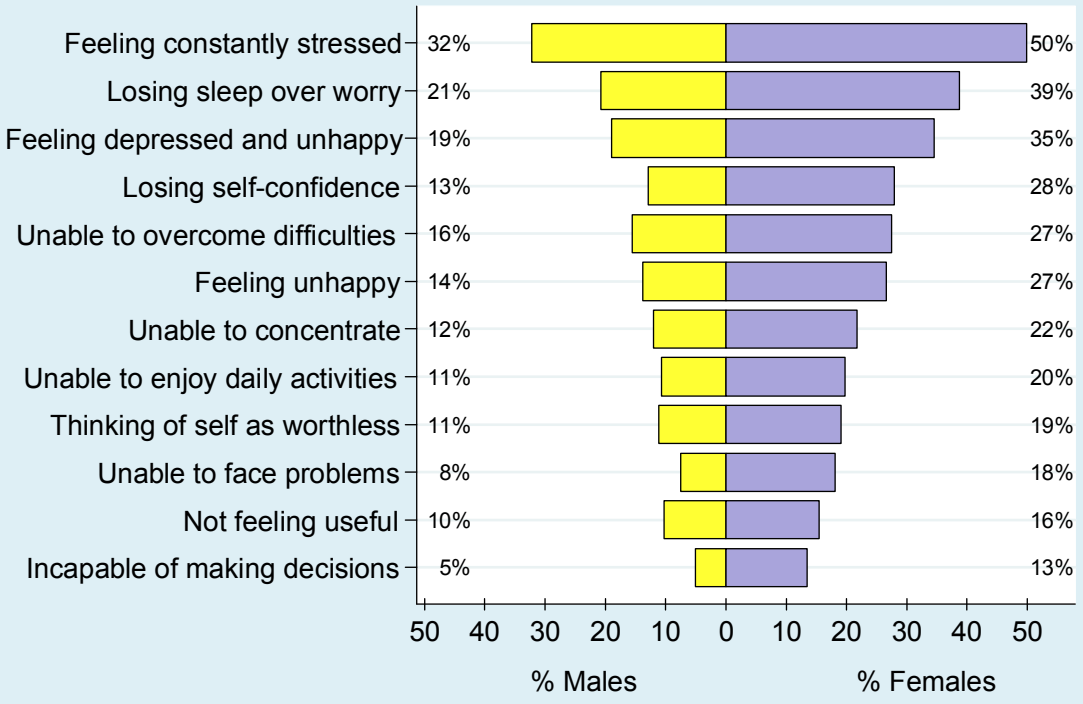
2011 (Grades 7–12):

- Among 7th- to 12th-graders, the three most common symptoms are feeling constantly under stress (41.0%), followed by losing sleep because of worrying (29.7%), and feeling unhappy and depressed (26.7%).
- Elevated psychological distress is reported by 33.5% (95% CI: 31.0%-36.1%) of students. This represents about 341,200 Ontario students in grades 7–12.
- Females are more likely than males to report elevated psychological distress (43.2% vs. 24.0%, respectively). Indeed, females are significantly more likely than males to report all 12 symptoms.
- Psychological distress significantly increases with grade, peaking in the 11th- and 12th-grade (about 40%).
- There is significant grade variation for 8 of 12 symptoms, generally showing increasing distress with increasing grade. For example, constantly feeling stressed increases more than two-fold with grade, with 20.3% of 7th-graders reporting so versus 53.9% of 12th-graders.
- There is no significant regional variation regarding elevated psychological distress.

1999–2011 (Grades 7–12):

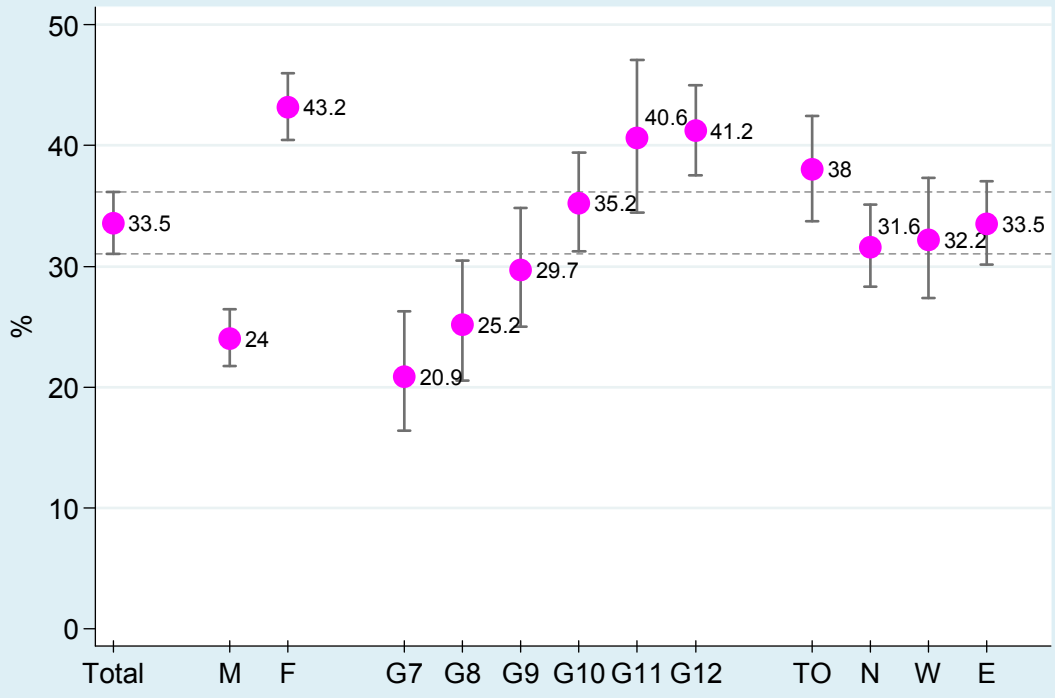
- Between 1999 and 2011, elevated psychological distress remained stable among the total sample at around 30% to 34%.
- However, there have been significant changes in elevated psychological distress among two subgroups. Among females, distress has significantly increased from 35.8% in 1999 to 43.2% in 2011. Similarly, distress has significantly increased among 12th-graders from 31.7% in 1999 to 41.2% in 2011.

Figure 3.4.3
GHQ12 Symptoms Experienced Over the Past Few Weeks by Sex, 2011 OSDUHS (Grades 7–12)



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

Figure 3.4.4
Percentage Reporting Elevated Psychological Distress (GHQ12 3+) by Sex, Grade, and Region, 2011 OSDUHS



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

3.4.4 Symptoms of Anxiety and Depression (Figure 3.4.5; Table A3.4.3)

Anxiety and depression disorders begin to manifest themselves in adolescence and early adulthood, affecting more females than males (Cicchetti & Toth, 1998; Public Health Agency of Canada, 2011; US Department of Health and Human Services, 1999a). Anxiety and depression disorders adversely affect the lives of many youth in Canada, not only affecting their current quality of life, but their future as well. Indeed, the World Health Organization (WHO) estimates that mental health disorders, such as depression, are a significant contributor to burden of disease – a measure that looks at the impact of mortality and morbidity a disease has on the population (Collins et al., 2011).

To estimate anxiety and depression symptoms among students, we conducted a factor analysis[38] using the 2011 data on the 12 GHQ items. We found that a two- factor structure fit the data well. Here, we present results for only one factor.[39] The following six items from the GHQ12 were found to factor together:

- *lost much sleep because you were worried about something*
- *felt constantly under stress*
- *felt you couldn't overcome difficulties*
- *been feeling unhappy and depressed*
- *been losing confidence in yourself*
- *been thinking of yourself as a worthless person*

We named this factor "symptoms of anxiety/depression." To estimate the prevalence in the student population, we provide a measure of **symptoms of anxiety/depression** defined as experiencing **all six** symptoms during the past few weeks (using the binary scoring method). Note that this is a screening tool and does not represent a clinical diagnosis of anxiety/depression. The reliability coefficient (α) for these six items is 0.82.

2011 (Grades 7–12):

- About one-in-sixteen (6.0%; 95% CI: 4.6%-7.9%) students report anxiety/depression symptoms (this represents an estimated 61,100 Ontario students in grades 7–12).
- Females are three times more likely than males to report symptoms of anxiety/depression (9.1% vs. 3.0%, respectively).
- There are significant differences among the grades, with the prevalence varying from 3.0% of 8th-graders to 8.9% of 11th-graders.
- There are no significant differences among the four regions.

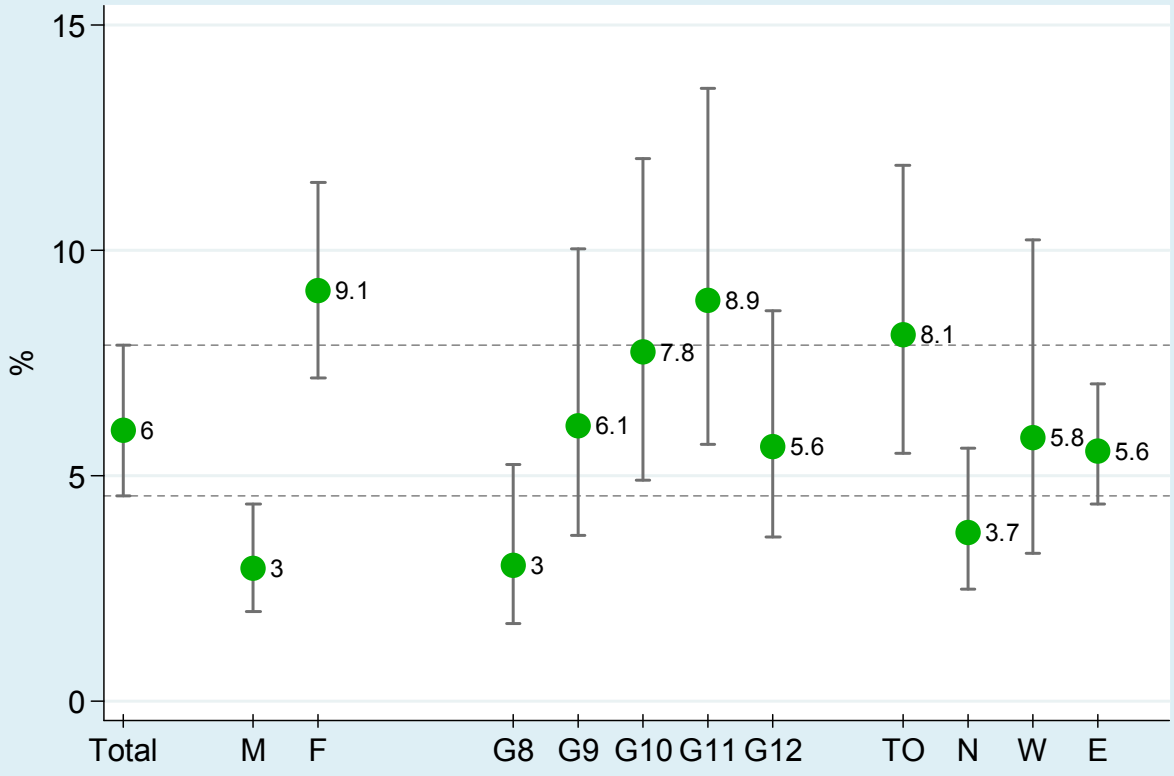
1999–2011 (Grades 7–12):

- The percentage of students reporting symptoms of anxiety/depression in 2011 (6.0%) is statistically similar to the estimate from 2009 (4.2%) and from 1999 (4.9%).
- There are no significant changes over time among any of the subgroups.

[38] An exploratory factor analysis with oblique rotation was first conducted, followed by a confirmatory factor analysis.

[39] The second factor was named "Social Dysfunction" and consisted of the remaining six items, which refer to problems with daily functioning.

Figure 3.4.5
Percentage Reporting Symptoms of Anxiety/Depression Experienced Over the Past Few Weeks by Sex, Grade, and Region, 2011 OSDUHS



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

3.4.5 Suicide Ideation and Attempt

(Figures 3.4.6, 3.4.7; Tables A3.4.4, A3.4.5)

Suicide is the second leading cause of death among Canadians aged 10 to 19 (Pan et al., 2007). Between 1980 and 2008, suicide decreased among male adolescents in Canada, but increased among female adolescents (Skinner & McFaull, 2012).

Starting in 2001, the OSDUHS included a question about suicide ideation. Specifically, a random half-sample of students were asked: "*In the last 12 months, did you ever seriously consider attempting suicide?"* Starting in 2007, students were also asked about attempts: "*In the last 12 months, did you actually attempt suicide?"* Response options to both questions were *yes* or *no*.

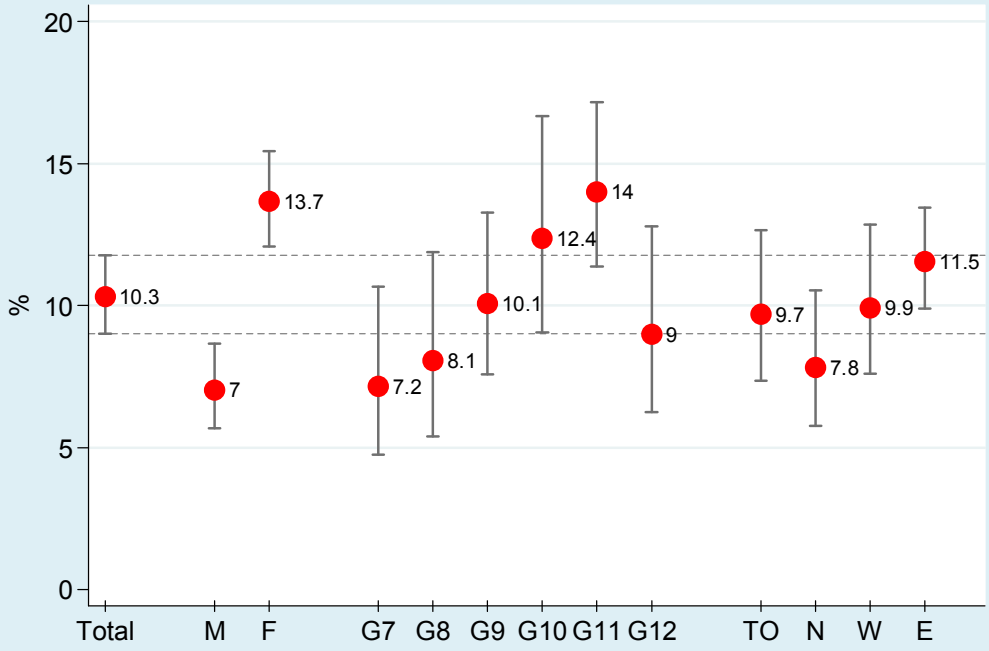
2011 (Grades 7–12):

- One-in-ten (10.3%; 95% CI: 9.0%-11.8%) students report that they had seriously contemplated suicide in the past year. This percentage represents an estimated 103,800 Ontario students. Roughly 2.8% (95% CI: 2.1%-3.6%) of students report attempting suicide in the past year. This represents about 28,000 Ontario students.
- Females are significantly more likely than males to report suicide ideation (13.7% vs. 7.0%, respectively), as well as a suicide attempt (4.0% vs. 1.6%, respectively).
- Suicide ideation significantly differs by grade, varying from 7.2% of 7th-graders to 14.0% of 11th-graders. However, suicide attempt does not significantly differ by grade.
- Neither of the two indicators significantly differs by region.

2001–2011 (Grades 7–12):

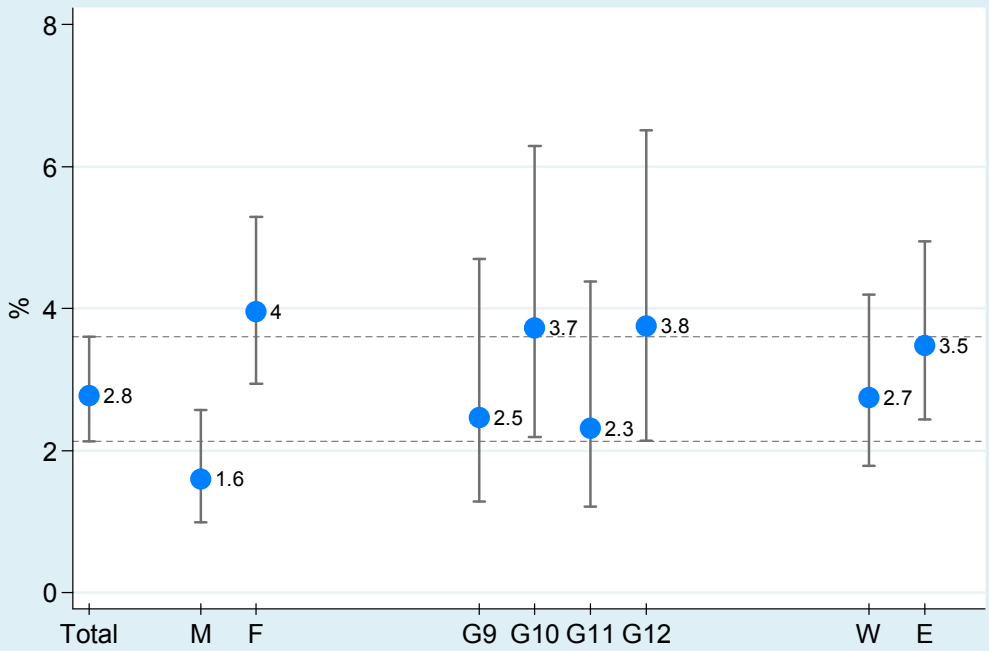
- Between 2001 and 2011, there was no significant trend in the percentage of students who reported contemplating suicide, remaining stable at 10% to 12%.
- The percentage of students reporting a suicide attempt in 2011 (2.8%) is not significantly different than the estimate from 2009 (2.8%), or 2007 (3.3%), which was the first year of monitoring.

Figure 3.4.6
Percentage Reporting Suicide Ideation in the Past Year by Sex, Grade, and Region, 2011 OSDUHS



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

Figure 3.4.7
Percentage Reporting a Suicide Attempt in the Past Year by Sex, Grade, and Region, 2011 OSDUHS



Notes: (1) vertical bars represent 95% confidence intervals; (2) horizontal bar represents 95% CI for total estimate; (3) estimates for Grade 7, Grade 8, Toronto, and North were suppressed; (4) significant difference by sex (p<.05), no significant difference by grade, or by region

3.5 Externalizing Indicators

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

3.5.1 Antisocial Behaviour

Since 1991, the OSDUHS has asked students about engaging in violent and non-violent antisocial behaviours. This section looks at the percentage of students engaging in antisocial behaviours at least once during the past year. Specifically, the questions used were: "*How often (if ever) in the last 12 months have you done each of the following…?*"

Non-Violent 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)
- *driven a car in a street race* (added in 2009)

Violent Behaviours:

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

An overall measure of antisocial behaviour was created, based on the nine items consistently used since 1991 (this excludes setting something on fire, and street racing). 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, 3.5.2; Tables A3.5.1a, A3.5.1b)

2011 (Grades 7–12):

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

Fire setting	10.8%
Ran away	10.5%
Vandalism	9.8%
Theft of goods worth $50/less	9.7%
Assault	8.7%
Car theft/joyride	6.0%
Sold cannabis	5.2%
Carried a weapon	4.6%
Break and entering	4.4%
Theft of goods worth > $50	3.8%
Street racing	3.0%

- About 8.0% (95% CI: 6.9%-9.3%) of students engage in antisocial behaviour (defined as three or more of nine behaviours asked about over time). This percentage represents about 78,700 students.
- Males are significantly more likely than females to engage in antisocial behaviour (9.2% vs. 6.8%, respectively).
- Students in grades 11 and 12 are the most likely to engage in antisocial behaviour (about 10% to 13%).
- Despite some variation, there are no significant differences among the regions.

1999–2011 (Grades 7–12):

- Among the total sample of students, antisocial behaviour is significantly lower today compared with the estimate from a about decade ago (8.0% in 2011 vs.16.0% in 1999).

- There was a significant decline among males over the past decade, from 22.7% in 1999 to 9.2% in 2011, but not among females.

- Among the grades, students in grades 7, 8, 9, and 10 show a significant decline in antisocial behaviour since 1999.

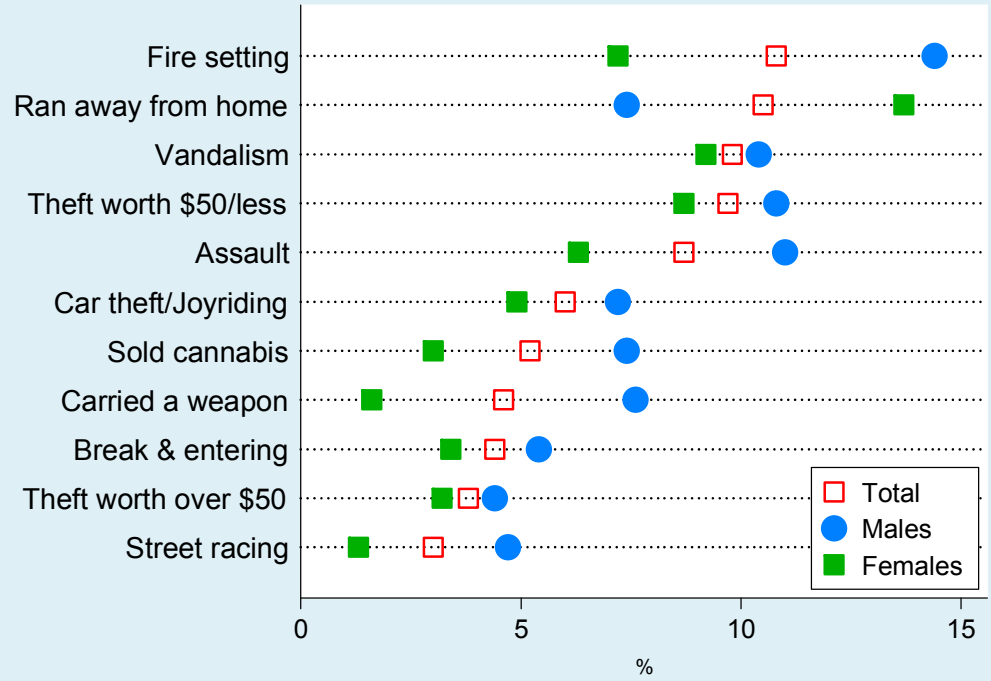
- Regionally, the West and East regions show a significant decline in antisocial behaviour between 1999 and 2011.

1993–2011 (Grades 7, 9, 11 only):

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

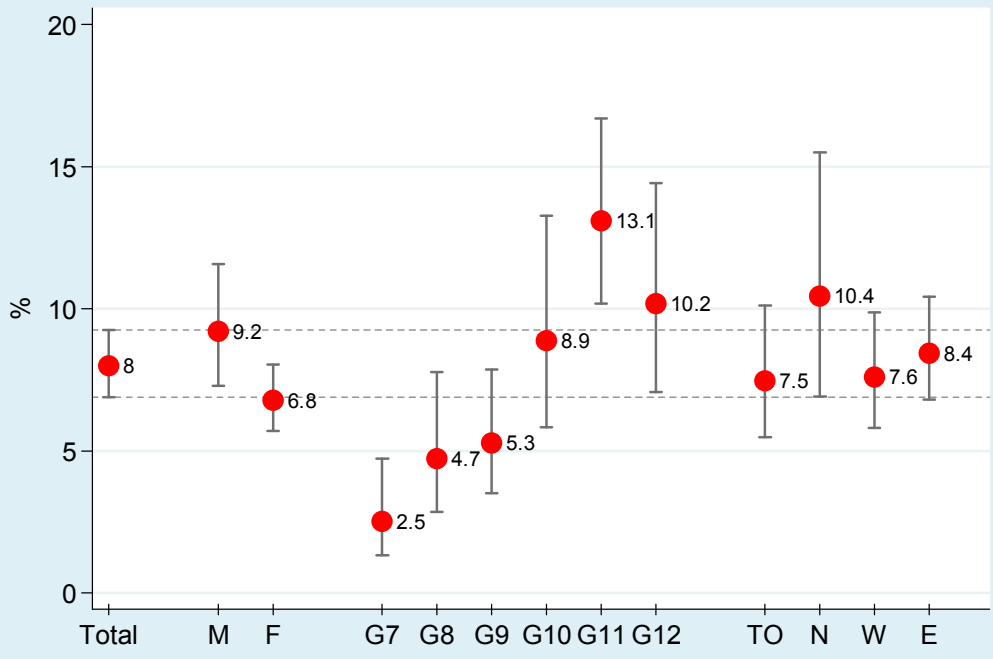
- The 2011 estimate (7.5%) for antisocial behaviour among grades 7, 9, and 11 only is significantly lower than the estimate found in 1993 (15.1%). The long-term decline in antisocial behaviour is especially evident among males (from 21.0% in 1993 down to 8.4% in 2011).

Figure 3.5.1
Percentage Reporting Engaging in Antisocial Behaviours at Least Once in the Past Year by Sex, 2011 OSDUHS (Grades 7–12)



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

Figure 3.5.2
Percentage Reporting Antisocial Behaviour (3+ of 9 Behaviours) in the Past Year by Sex, Grade, and Region, 2011 OSDUHS



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

3.5.2 Non-Violent Antisocial Behaviours

(Figures 3.5.1, 3.5.3, 3.5.4; Tables A3.5.1a, A3.5.1b)

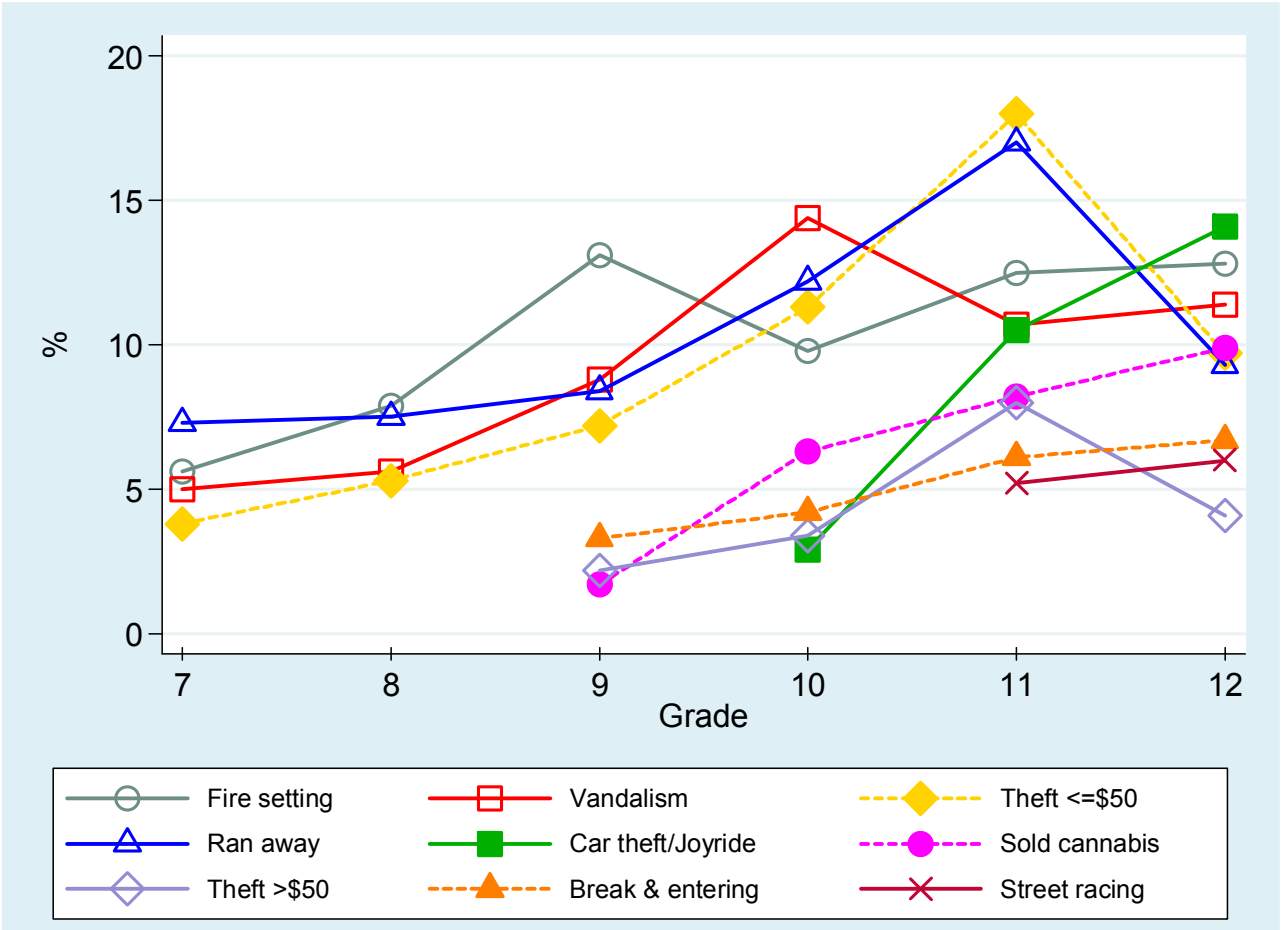
2011 (Grades 7–12):

- Males are significantly more likely than females to report six of the nine non-violent behaviours. Females are more likely to report running away from home. Vandalism and theft of goods worth more than $50 show no significant sex differences.
- Eight of the nine non-violent behaviours are significantly related to grade. Generally, the behaviours are most likely to be reported by students in grades 11 or 12. Fire setting does not significantly vary by grade.
- Car theft/joyriding significantly varies by region, with Toronto students least likely to report this behaviour. Break and entering also significantly varies by region, with students in the West least likely to report this behaviour.

1999–2011 (Grades 7–12):

- Among the total sample, the following five of the nine non-violent behaviours show declines between 1999 and 2011: vandalism (from 24.1% down to 9.8%); theft worth less than $50 (from 17.3% to 9.7%); theft worth more than $50 (6.6% to 3.8%); car theft/joyriding (from 10.2% to 6.0%); and fire setting which decreased from 15.9% in 2007 to 10.8% in 2011.

Figure 3.5.3
Grade Profile: Percentage Reporting Non-Violent Antisocial Behaviours at Least Once in the Past Year, 2011 OSDUHS

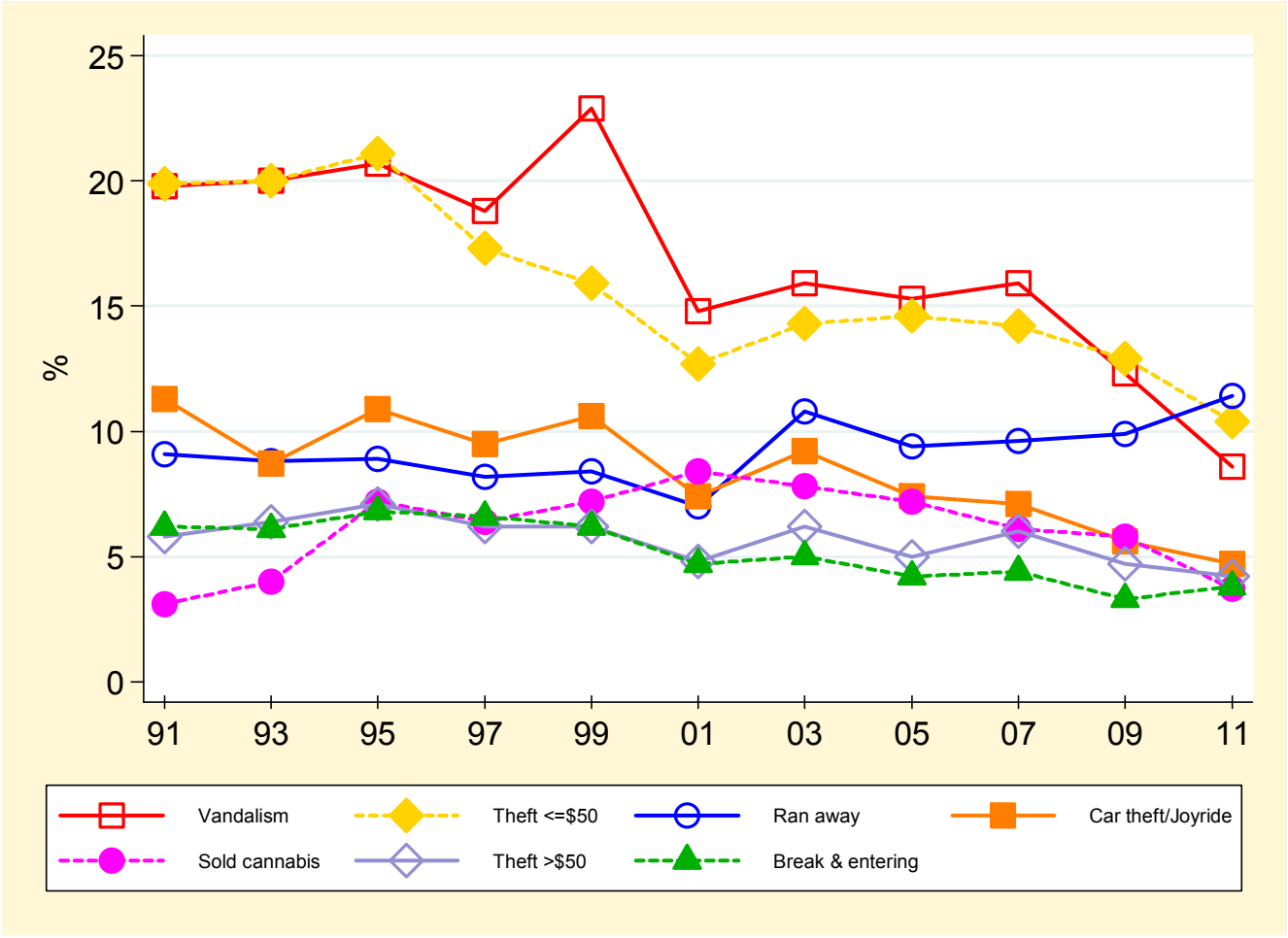


1991–2011 (Grades 7, 9, 11 only):

Over the long-term, five non-violent behaviours significantly changed among the total sample of students in grades 7, 9, and 11.

- Vandalism has been on a steady decline since 1991 despite a spike in 1999. The 2011 estimate is significantly lower than all previous estimates; that is, the lowest on record.
- Among the total sample, theft under $50 significantly declined between 1991 and 2001 and has since remained stable. The 2011 estimate is significantly lower than estimates in the 1990s.
- The percentage of students reporting car theft/joyriding remained stable over the 1990s and early 2000s. However, the 2011 estimate is significantly lower than estimates in the 1990s.
- The percentage of students reporting selling cannabis significantly increased between 1991 and 2001, and has since steadily declined. The 2011 estimate is significantly lower than the estimates in the late 1990s and early 2000s.
- The percentage reporting breaking into a locked building is significantly lower in 2011 compared with estimates from the early-to-mid 1990s.

Figure 3.5.4
Percentage Reporting Non-Violent Antisocial Behaviours, 1991–2011 OSDUHS
(Grades 7, 9, and 11 only)



3.5.3 Violent Behaviours

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

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

2011 (Grades 7–12):

Assault

- Among all students, 8.7% (95% CI: 7.3%-10.2%) report assaulting someone at least once during the 12 months before the survey. This percentage represents about 82,700 students in Ontario.
- Males are significantly more likely than females to report assaulting someone (11.0% vs. 6.3%, respectively).
- Assault does not significantly vary by grade, or by region.

Weapon Carrying

- Overall, 4.6% (95% CI: 3.6%-5.8%) of students report carrying a weapon, such as a knife or gun, at least once during the 12 months before the survey. This percentage represents about 44,300 students.
- Males are significantly more likely than females to report carrying a weapon (7.6% vs. 1.6%, respectively).
- Weapon carrying does not significantly vary by grade, or by region.

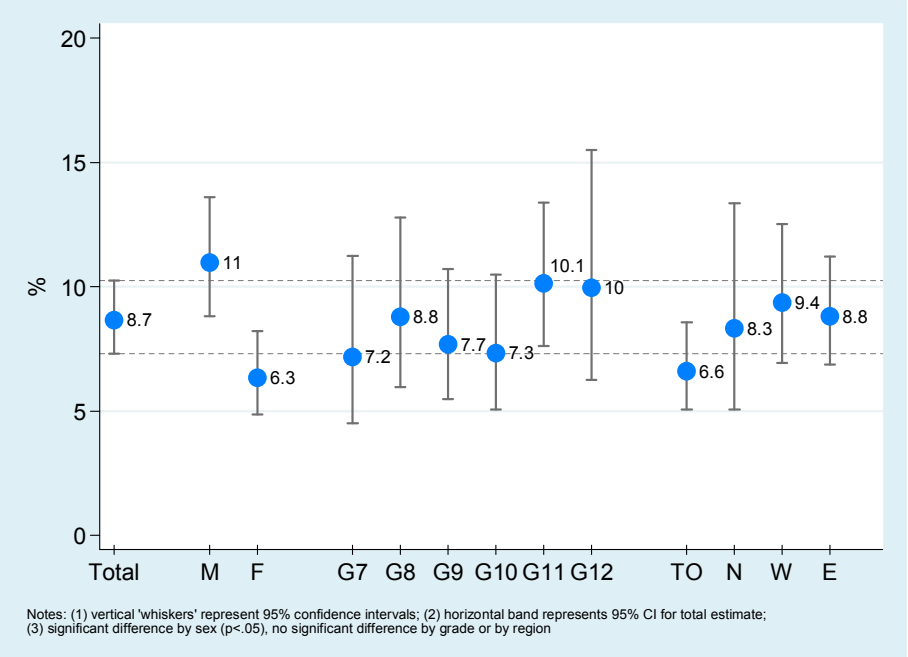
1999–2011 (Grades 7–12):

- The percentage of students reporting assaulting someone significantly declined over the past decade, from 19.9% in 1999 down to 8.7% in 2011.
- As well, the percentage of students reporting carrying a weapon significantly declined from 13.5% in 1999 to 4.6% in 2011.

1991–2011 (Grades 7, 9, 11 only):

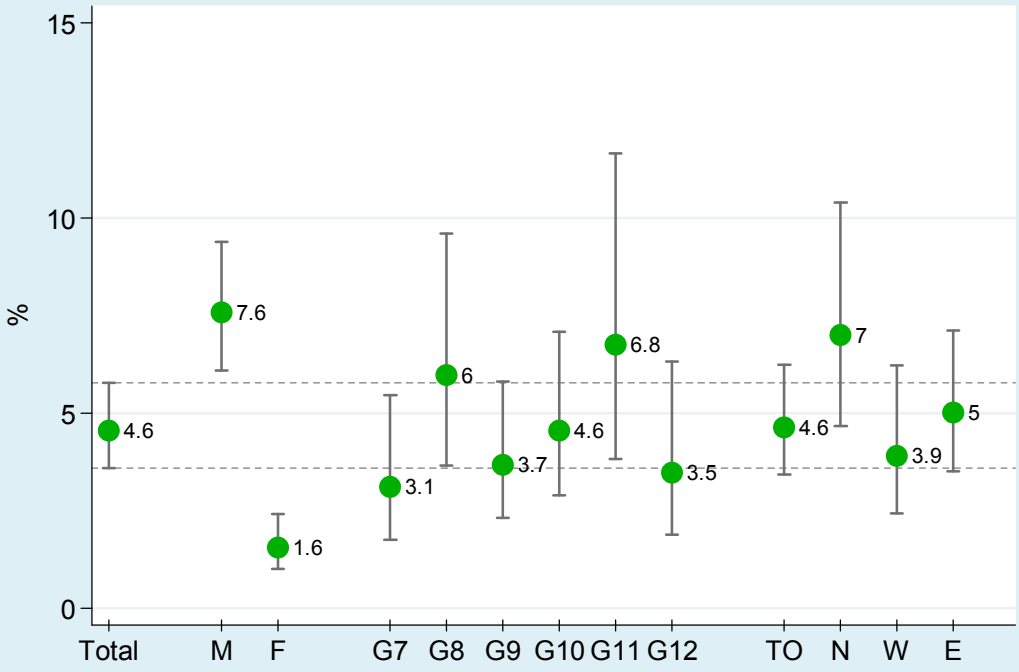
- Assault peaked in the late 1990s, declined sharply in 2001, followed by a steady decline. The 2011 estimate is significantly lower that estimates seen in the 1990s.
- Carrying a weapon, such as a knife or gun, was highest in 1993 and has since declined. The 2011 estimate is significantly lower than estimates seen in the 1990s.

Figure 3.5.5
Percentage Reporting Assaulting Someone at Least Once in the Past Year by Sex, Grade, and Region, 2011 OSDUHS



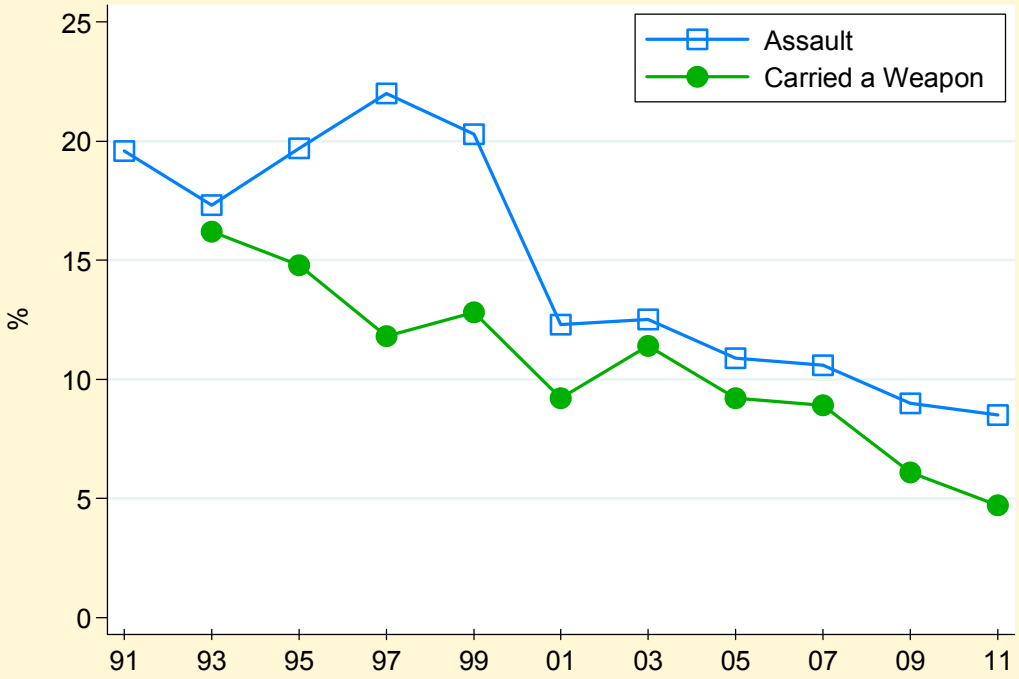
Notes: (1) vertical 'whiskers' represent 95% confidence intervals; (2) horizontal band represents 95% CI for total estimate; (3) significant difference by sex (p<.05), no significant difference by grade or by region

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, 2011 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 difference by grade or by region

Figure 3.5.7
Percentage Reporting Violent Behaviours, 1991–2011 OSDUHS (Grades 7, 9, 11 only)



Note: weapon carrying not asked about in 1991

3.5.4 Violence on School Property

(Figures 3.5.8, 3.5.9; Tables A3.5.2, A3.5.3)

Starting in 2001, the OSDUHS included a question about fighting on school property: *"During the last 12 months, how many times were you in a physical fight on school property?"* In this section, we present 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. Specifically, the question was: *"During the last 12 months, how many times has someone threatened or injured you with a weapon, such as a gun, knife or club on school property?"* In this section, we describe the percentage reporting **at least one occasion** during the past year.

2011 (Grades 7–12):

Physical Fighting

- Among the total sample, 11.9% (95% CI: 9.9%-14.2%) – an estimated 115,900 students – report fighting on school property at least once in the past 12 months (8.0% report one time only, while 3.9% report two or more times).
- There is a significant sex difference, with males much more likely to report fighting at school than females (17.4% vs. 6.4%, respectively).
- Fighting at school significantly decreases with grade. Students in grades 7 (24.1%) are most likely to fight at school, whereas 11th- and 12th-graders are the least likely (7% to 8%).
- There are no significant differences among the regions.

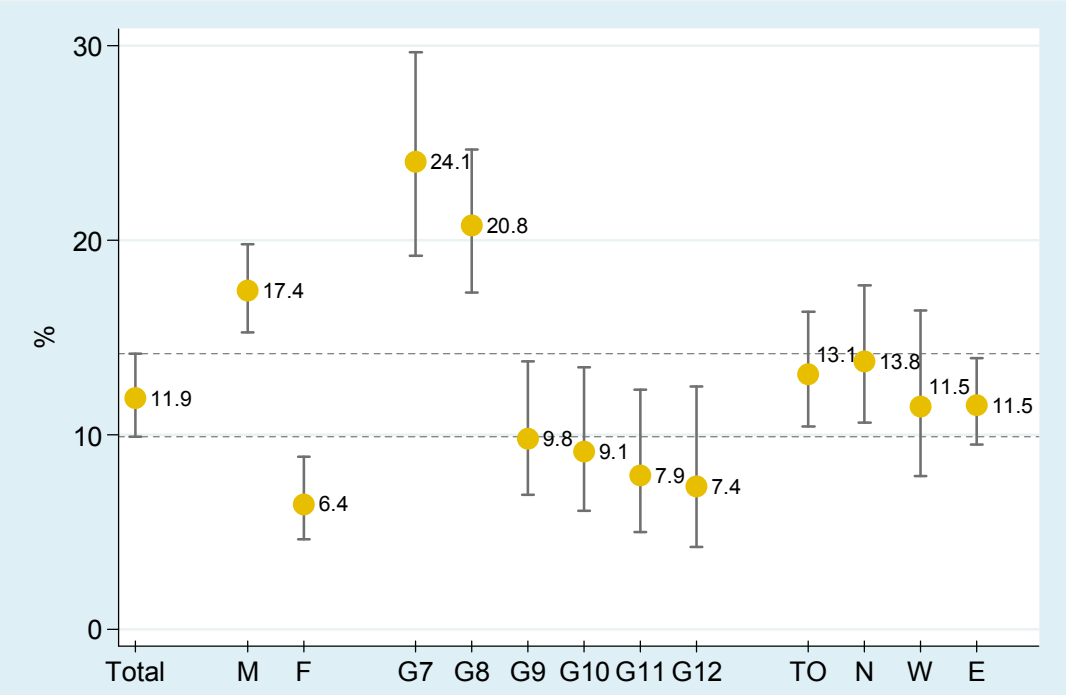
Threatened or Injured with a Weapon

- Among the total sample, 6.5% (95% CI: 5.2%-8.0%) – an estimated 65,100 students – report being threatened or injured with a weapon on school property at least once in the past year (4.0% report this occurred only once, while 2.5% report two or more times).
- Males (7.4%) and females (5.5%) are equally likely to report being threatened or injured with a weapon at school.
- There are no significant differences among the grades.
- There are no significant differences among the regions.

2001–2011 (Grades 7–12):

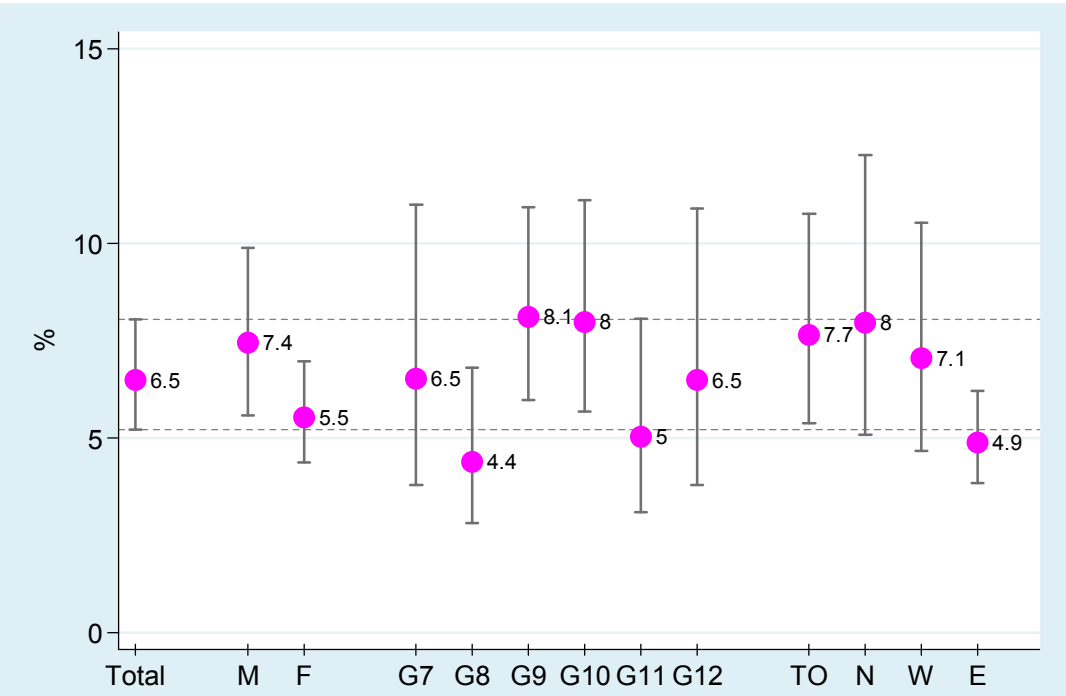
- The percentage of students reporting fighting at school is significantly lower in 2011 (11.9%) compared with 2001 (16.9%). The 2011 estimate among males (17.2%) is the lowest on record (past decade), whereas there has been no significant change among females.
- There have been no significant changes over the past decade regarding being threatened with a weapon at school among the total sample. Further, no significant changes among subgroups are evident.

Figure 3.5.8
Percentage Reporting Fighting at School at Least Once in the Past Year by Sex, Grade, and Region, 2011 OSDUHS



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

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, 2011 OSDUHS



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

3.5.5 Bullying at School

(Figures 3.5.10 to 3.5.12; Table A3.5.4)

Beginning in 2003, the OSDUHS included four questions about bullying. Bullying was defined in the questionnaire as "*...when one or more people tease, hurt or upset a weaker person on purpose, again and again. It is also bullying when someone is left out of things on purpose*." Note that the last sentence was added in 2005.

Students were asked about the typical way they were bullied at school, and the typical way they bullied others, if at all. The questions were: *"In what way were you bullied the most at school?"* and *"In what way did you bully other students the most at school?"* For each of these questions, students were asked to choose only one among the following four response options: *Was not involved in bullying at school*; *Physical attacks (for example, beat up, pushed or kicked)*; Verbal attacks (for example, teased, threatened, spread rumours); or *Stole or damaged* possessions. **The prevalence estimates for bullying victim and perpetrator are based on these modal questions**.

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

2011 (Grades 7–12):

Bullying Victims at School

- Among students in grades 7 through 12, 28.6% (95% CI: 25.8%-31.5%) report being bullied at school since September. This represents about 288,000 students in Ontario.
- The most prevalent form of victimization is verbal (24.5%), while 2.6% are mainly bullied physically, and 1.4% are mainly victims of theft or vandalism.
- About 9.4% of students report being bullied on a daily or weekly basis, and about 17.9% are bullied monthly or less often.
- Females are more likely than males to report being bullied in any manner (31.3% vs. 25.8%, respectively). Females are more likely to be bullied verbally than males (29.5% vs. 19.6%, respectively), whereas males are more likely to be bullied physically than are females (4.4% vs. 0.9%, respectively). Both are equally likely to be victims of theft or vandalism (about 1% to 2%).
- There is significant grade variation, with students in grades 7 through 10 most likely to be bullied (about one-third) in any manner, while 12th-graders (21.5%) are least likely. Grade 7 and 8 students are the most likely to be bullied physically. These youngest grades are also most likely to be bullied on a daily/weekly basis (about 12% to 16%).
- Among the regions, Toronto students (21.6%) are the least likely to be bullied, compared with students in the other three regions (about 30%).

Bullying Perpetrators at School

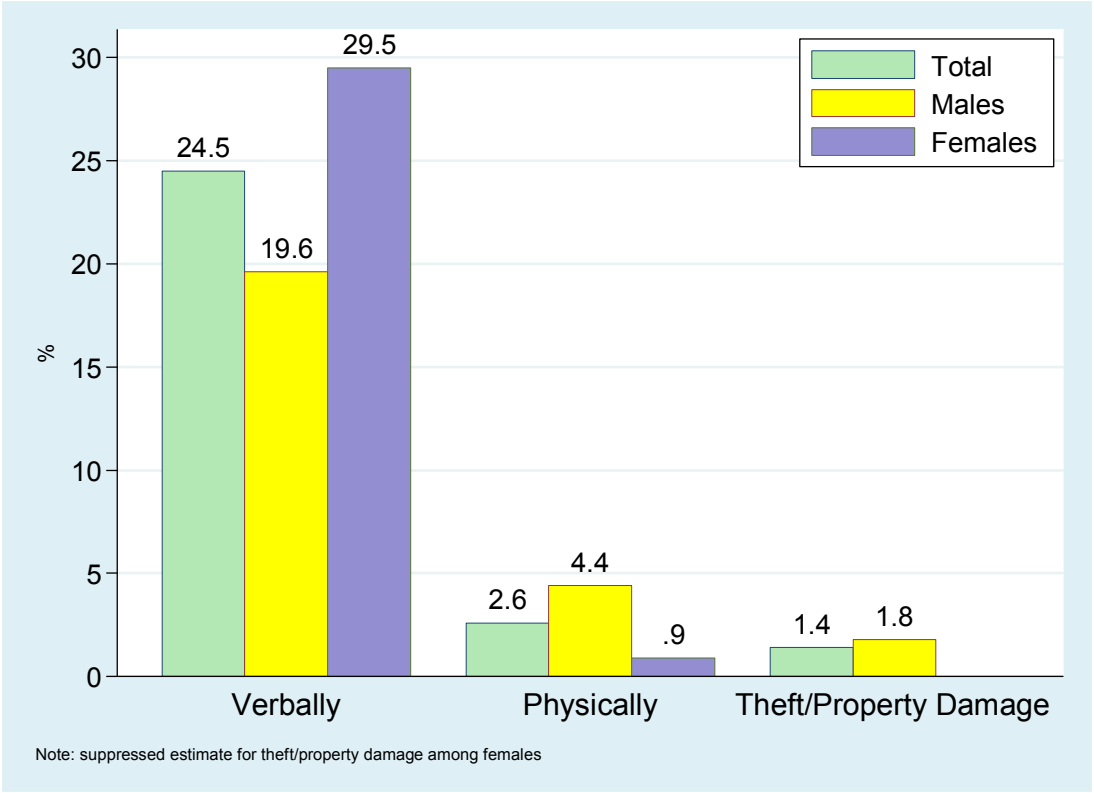
- Among all students, 20.7% (95% CI: 16.9%-25.2%) report bullying other students at school. This represents about 208,000 students in Ontario.
- The most prevalent form of bullying others is through verbal attacks (17.9%), followed by physical attacks (2.5%). Theft or damage to others' property is reported by less than 1% of students.
- About 4.6% of students report bullying others on a daily or weekly basis, and 16.2% report bullying others monthly or less often.

- Males (18.6%) and females (22.8%) are equally likely to report bullying others at school.
- There are no significant differences among the grades.
- There are no significant regional differences.

2003–2011 (Grades 7–12):

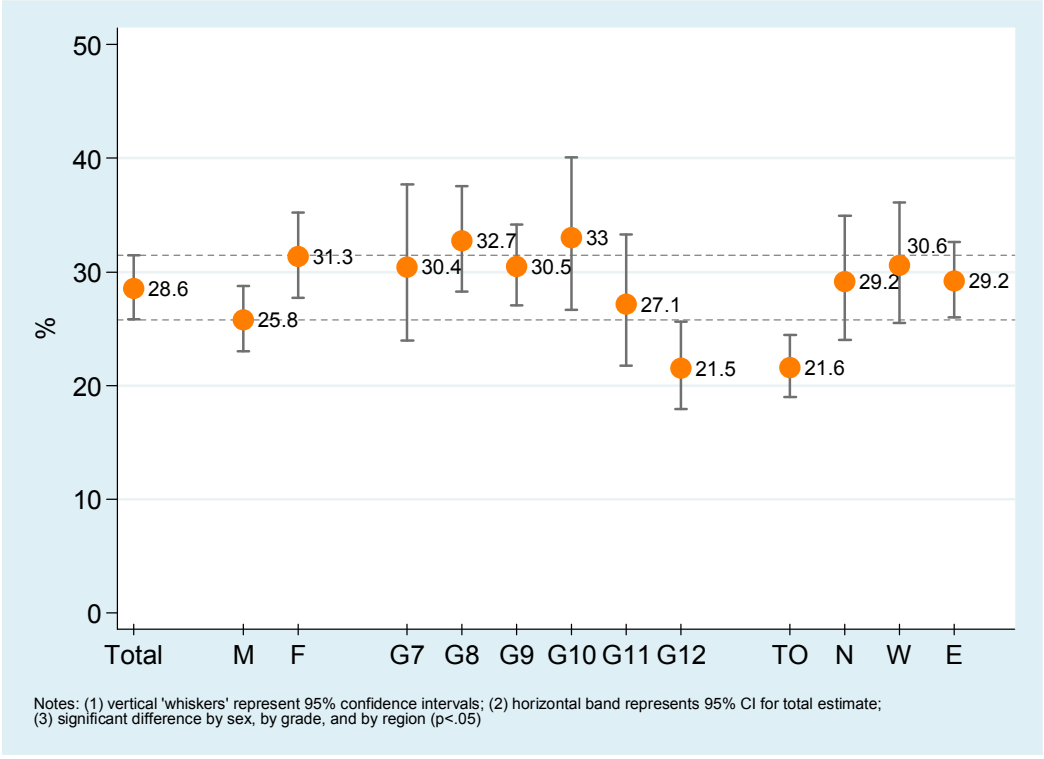
- The percentage of students reporting being bullied at school did not significantly change between 2009 (28.9%) and 2011 (28.6%), nor is the current estimate statistically significantly different from that seen in 2003 (32.7%). However, bullying victimization did significantly decline since 2003 among males, but not among females. The declining trend since 2003 is also significant among the youngest grade in our sample, the 7th-graders.
- There has been no significant change in reports about the main way students are bullied, or in the frequency of being bullied.
- Among the total sample, the percentage reporting bullying others in 2011 (20.7%) is not significantly different than the estimate from 2009 (25.1%), but is significantly lower than the estimate from 2003 (29.7%). Again, males show a decline over time, but females do not.
- There has been no change in the main way students report bullying others, or in the frequency of bullying others.

Figure 3.5.10
Percentage of All Student Reporting the Most Common Way They Were Bullied at School by Sex, 2011 OSDUHS



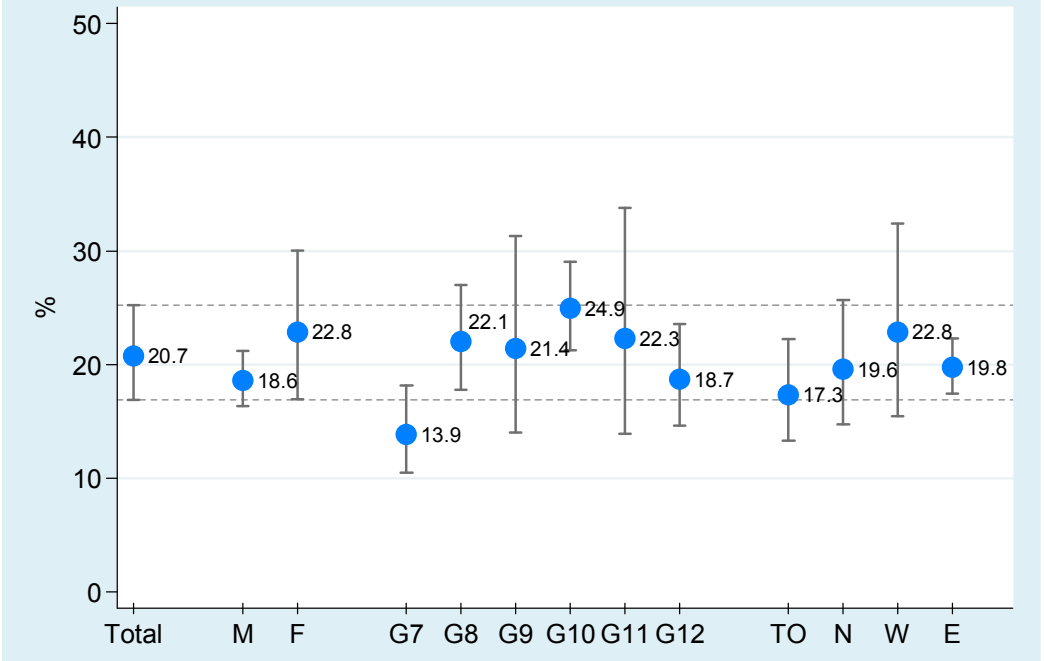
Note: suppressed estimate for theft/property damage among females

Figure 3.5.11
Percentage Reporting Being Bullied at School (in Any Manner) Since September by Sex, Grade, and Region, 2011 OSDUHS



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

Figure 3.5.12
Percentage Reporting Bullying Others at School (in Any Manner) Since September by Sex, Grade, and Region, 2011 OSDUHS



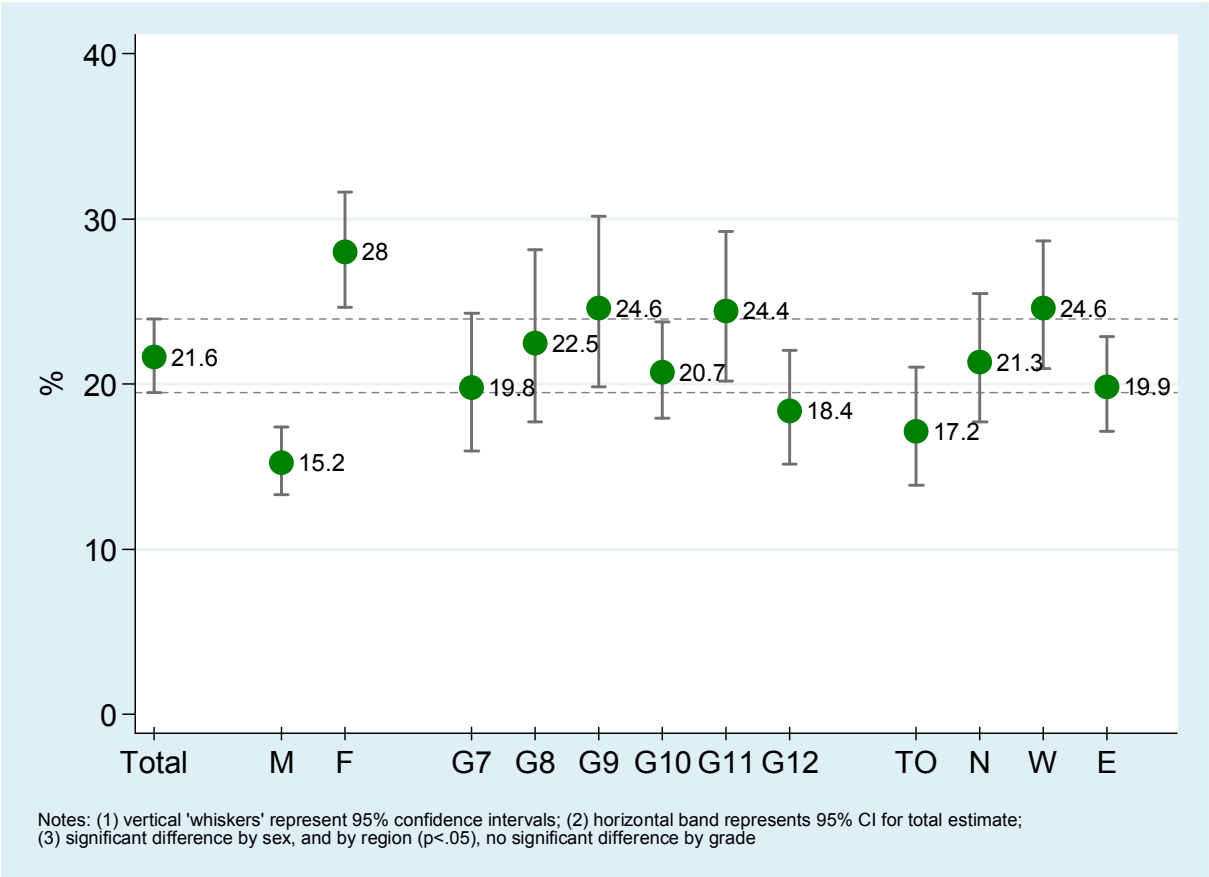
Notes: (1) vertical 'whiskers' represent 95% confidence intervals; (2) horizontal band represents 95% CI for total estimate; (3) no significant difference by sex, by grade, or by region

3.5.6 Victim of Cyber-Bullying
(Figure 3.5.13)

For the first time in 2011, the OSDUHS included a question about being victimized over the Internet. The question asked was *"In the last 12 months, how many times did other people bully or pick on you through the Internet?"* The response options were: *never*, *once*, *two or three times*, or *four or more times*. Students also had the option of responding that they do not use the Internet. We present the percentage of students who report they were bullied over the Internet **at least once** in the previous 12 months. (Note that those who responded they did not use the Internet [4.5%] remained in the denominator.)

- Among students in grades 7 through 12, 21.6% (95% CI: 19.5%-24.0%) report being bullied over the Internet in the past year. This represents about 217,500 students in Ontario.
- Females are significantly more likely than males to report being a victim of cyber-bullying (28.0% vs. 15.2%, respectively).
- There are no significant differences among the grades.
- There is a significant regional difference, with students in the Western region (24.6%) most likely to report being a victim of cyber-bullying whereas students in Toronto are least likely (17.2%).

Figure 3.5.13
Percentage Reporting Being a Victim of Cyber-Bullying in the Past Year by Sex, Grade, and Region, 2011 OSDUHS



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

3.6 Gambling and Video Gaming

3.6.1 Gambling Activity

(Figures 3.6.1 to 3.6.4; Table A3.6.1)

Starting in 2001, the OSDUHS included 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 10 activities listed below were asked about in 2011.

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

In this section, we present the percentage of students who report gambling money on each activity at least once in the past 12 months, and the percentage who report **at least one of the 10 activities**. In addition, the percentage reporting gambling at **5 or more of 10 activities** is also presented as an indicator of multi-gambling activity.

Individual Gambling Activities in 2011 (Grades 7–12):

- The activities ranked as follows:

  Gambled in other ways.....17.6%
  Cards 15.9%
  Sports pools 13.3%
  Lottery tickets..... 12.7%
  Dice 5.2%
  Bingo 5.1%
  Sports lottery tickets..... 3.6%
  Video gambling machines ... 2.9%
  Any Internet gambling 2.1%

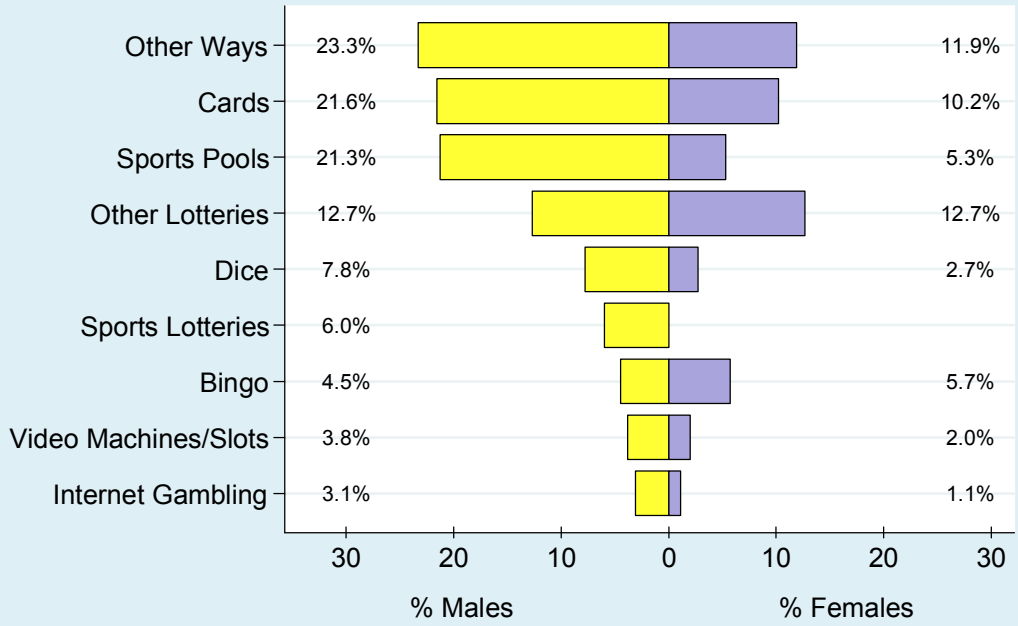
  The estimate for the percentage of students reporting gambling in an Ontario casino was suppressed (less than 1.0%).

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

- There are significant grade differences for 6 of the 10 activities: playing cards, sports pools, sports lottery tickets, other lottery tickets, casino gambling, and playing dice. Generally, these activities increase with grade and peak in grade 11 or grade 12.

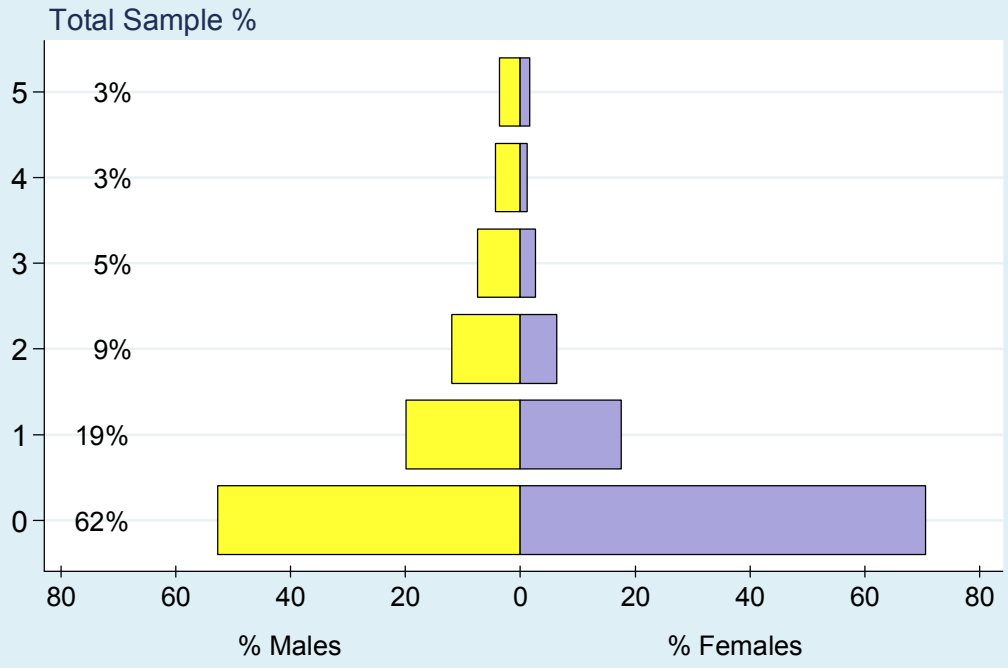
- None of the gambling activities significantly varies by region.

Figure 3.6.1
Percentage Reporting Gambling Activities in the Past Year by Sex, 2011 OSDUHS



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

Figure 3.6.2
Percentage Reporting Number of Gambling Activities (of 10) in the Past Year by Sex, 2011 OSDUHS



Note: the maximum value of 5 refers to 5 or more gambling activities in the past year

Any Gambling Activity in 2011 (Grades 7–12)

- Among all students, 38.4% (95% CI: 35.6%-41.2%) report at least one gambling activity during the past 12 months. This percentage represents about 380,200 students across Ontario.
- Males are more likely to report any gambling activity than females (47.3% vs. 29.5%, respectively).
- Gambling significantly increases with grade, peaking in 11th- or 12th-grade (about 43%-48%).
- There are no significant differences among the four regions.

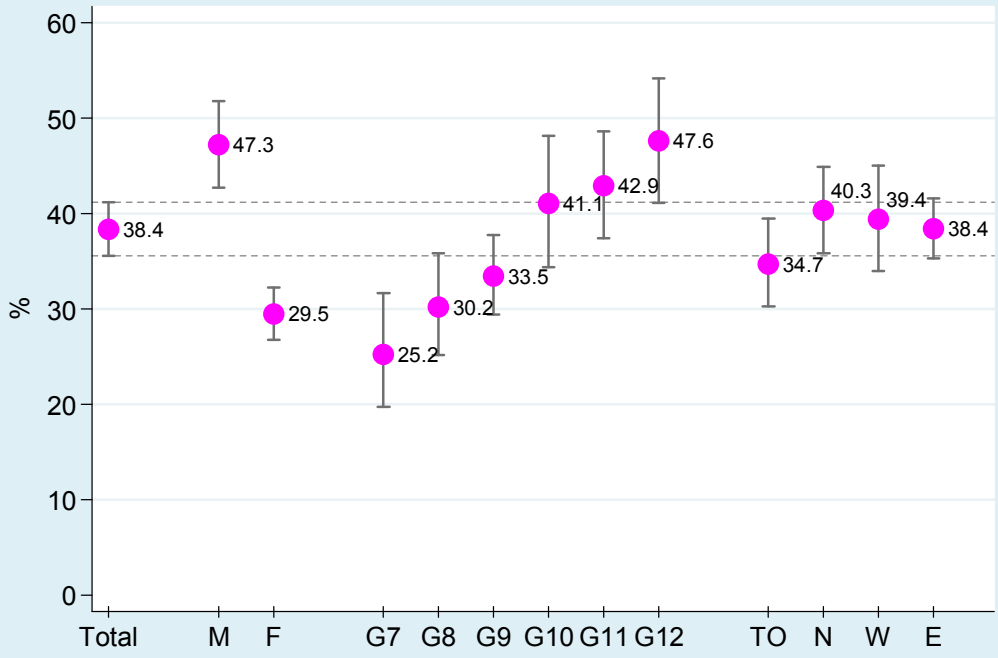
Multi-Gambling Activity in 2011 (Grades 7–12):

- Among all students, 2.7% (95% CI: 1.9%-3.7%) gambled at five or more activities during the past 12 months. This percentage represents about 26,300 students across Ontario.
- Males are more likely to report multi-gambling activity than females (3.6% vs. 1.7%, respectively).
- There is a significant difference among the grades, with students in 11th-grade most likely to report multi-gambling activity.
- There are no significant differences among the regions.

2001–2011 (Grades 7–12):

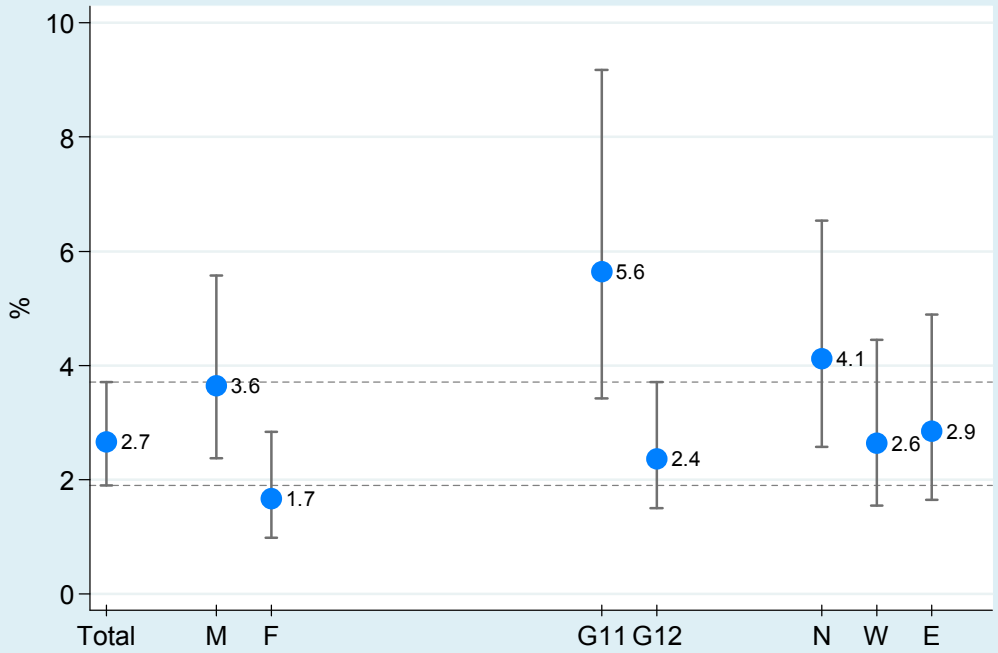
- Among the total sample, no individual gambling activity increased in 2011. In fact, most activities show significant declines in 2011 compared with estimates from earlier years and these are: cards, bingo, sports pools, sports lottery tickets, other lottery tickets, video gambling machines, dice, and other gambling activities. The percentage gambling over the Internet and the percentage gambling in casinos remained stable over time.
- There has been a significant decline in the percentage of students who report any gambling activity between 2003 (57.3%) and 2011 (38.4%).
- There has been a significant decline in the percentage of students who report multi-gambling activity between 2003 (6.1%) and 2011 (2.7%).

Figure 3.6.3
Percentage Reporting Any Gambling Activity (of 10 Activities) in the Past Year by Sex, Grade, and Region, 2011 OSDUHS



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

Figure 3.6.4
Percentage Reporting Multi-Gambling Activity (5+ /10 Activities) in the Past Year by Sex, Grade, and Region, 2011 OSDUHS



Notes: (1) vertical 'whiskers' represent 95% confidence intervals; (2) horizontal band represents 95% CI for total estimate; (3) estimates for Grades 7-10 and Toronto were suppressed; (4) significant difference by sex and by grade (p<.05), no significant difference by region

3.6.2 Gambling Problems

(Tables 3.6.1, A3.6.2)

Starting in 1999, students were asked about gambling problems using the *South Oaks Gambling Screen Revised for Adolescents* (SOGS-RA; Winters, Stinchfield, & Fulkerson, 1993). Between 1999 and 2003, the 12-item screen was used, but in 2005 this was reduced to six items.[40] The following six questions were asked, each referring to the past 12 months:

- *Has your betting ever caused any problems for you such as arguments with family/friends, problems at school/work?*
- *Have you ever gambled more than you had planned to?*
- *Has anyone criticized your betting or told you that you had a gambling problem, regardless of whether you thought it was true or not?*
- *Have you had arguments with family/friends because of the money you spend on gambling?*
- *Have you ever skipped or been absent from school or work due to betting activities?*
- *Have you borrowed money or stolen something in order to bet or to cover gambling debts?*

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*.

To identify those who may have a **gambling problem**, we examined the percentage that answered positive to **two or more of the six** questions. The reliability coefficient (α) for these items is 0.71.

[40] A ROC analysis on the 2003 data was performed to reduce the number of SOGS items from 12 to 6 in 2005, and to determine the corresponding cut-off for a gambling problem.

2011 (Grades 7–12):

- Among only those students who report gambling in the past year, the majority (89%) report that the largest amount of money gambled was less than $50. About 5% report gambling between $50 and $99; 3% report between $100 and $199; and another 3% report spending $200 or more.
- Of the six SOGS-RA problems, the most prevalent is gambling more than one had planned to, and the least prevalent is arguing with family/friends about one's gambling.
- Overall, 1.7% (95% CI: 1.2%-2.5%) of students have a gambling problem. This percentage represents about 17,300 Ontario students. When we look only among students who report gambling at one or more activities in the past year, 4.3% (95% CI: 2.9%-6.3%) have a gambling problem.
- Males (2.4%) are more likely than females (1.0%) to have a gambling problem.
- There are no significant grade differences.
- There are no significant regional differences.

1999–2011 (Grades 7–12):

- The percentage of all students indicating a gambling problem in 2011 (1.7%) does not significantly differ from the estimate from 2009 (2.8%), but is significantly lower than the estimate from 1999 (6.8%).
- The decline in problem gambling over the past decade is evident among both male and female students.
- Students in grade 12 show a significant decline over the past decade.
- Students in the North and East regions show significantly lower estimates in 2011 compared with their respective estimates from 1999.

Table 3.6.1: Percentage of All Students Reporting SOGS-RA Gambling Problem Indicators Experienced in the Past Year, 2011 OSDUHS (Grades 7–12)

South Oaks Gambling Screen Items (Reduced)	Total Sample (N=4,816)	Males (N=2,598)	Females (N=2,218)	
1. Gambled more than you had planned to	3.8	5.1	2.4	*
2. Betting caused problems such as arguments with family/friends, problems at school/work	1.5	1.8	1.2	
3. Anyone criticized your betting or told you that you had a gambling problem, regardless of whether you thought it was true or not	1.3	2.1	†	*
4. Skipped or been absent from school or work due to betting activities	1.1	1.3	†	
5. Borrowed money/stolen something in order to bet or to cover gambling debts	1.1	1.2	1.0	
6. Had arguments with family/friends because of the money you spend on gambling	0.6	†	†	

Notes: (1) entries are the percentages responding "Yes"; (2) N=number of students surveyed; (3) † indicates estimate suppressed; (4) * indicates significant sex difference, $p<.05$; (4) based on a random half sample

3.6.3 Video Gaming

(Figures 3.6.5, 3.6.6; Tables 3.6.2, A3.6.3)

Starting in 2007, the OSDUHS asked a random half sample of students about video game playing (either on a computer, TV, or in an arcade) and related problems using the 9-item *Problem Video Playing* (PVP) scale (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** problems was used to indicate a **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.

Frequency of Playing Video Games 2011 (Grades 7–12):

- Among the total sample, 10.0% report that they do not play video games; 27.9% report playing about 3 times a month or less often; 8.2% play once a week; 18.1% play 2 to 3 times a week; 12.8% play 4 to 5 times a week; and 23.0% play daily or almost daily.
- Males are significantly more likely than females to play video games daily (37.0% vs. 9.0%, respectively).
- There are no significant differences among the grades regarding the percentage that play daily.
- There are no significant regional differences regarding the percentage that play daily.

Video Gaming Problems 2011 (Grades 7–12):

- The percentage of students reporting each of the nine individual problems is presented in Table 3.6.2. Males are significantly more likely than females to report each problem.
- Among the total sample, 11.9% (95% CI: 9.4%-14.9%) have a video gaming problem. This represents about 119,800 students.
- Males are significantly more likely than females to indicate a problem with video gaming (18.7% vs. 5.1%, respectively).
- Despite some variation, there are no significant differences among the grades.
- There are no significant differences among the regions.

2007–2011 (Grades 7–12):

- There was no significant change in the percentage of all students indicating a video gaming problem between 2007 (9.4%), 2009 (10.3%), and 2011 (11.9%).

Figure 3.6.5
Frequency of Playing Video Games in the Past Year, 2011 OSDUHS (Grades 7–12)

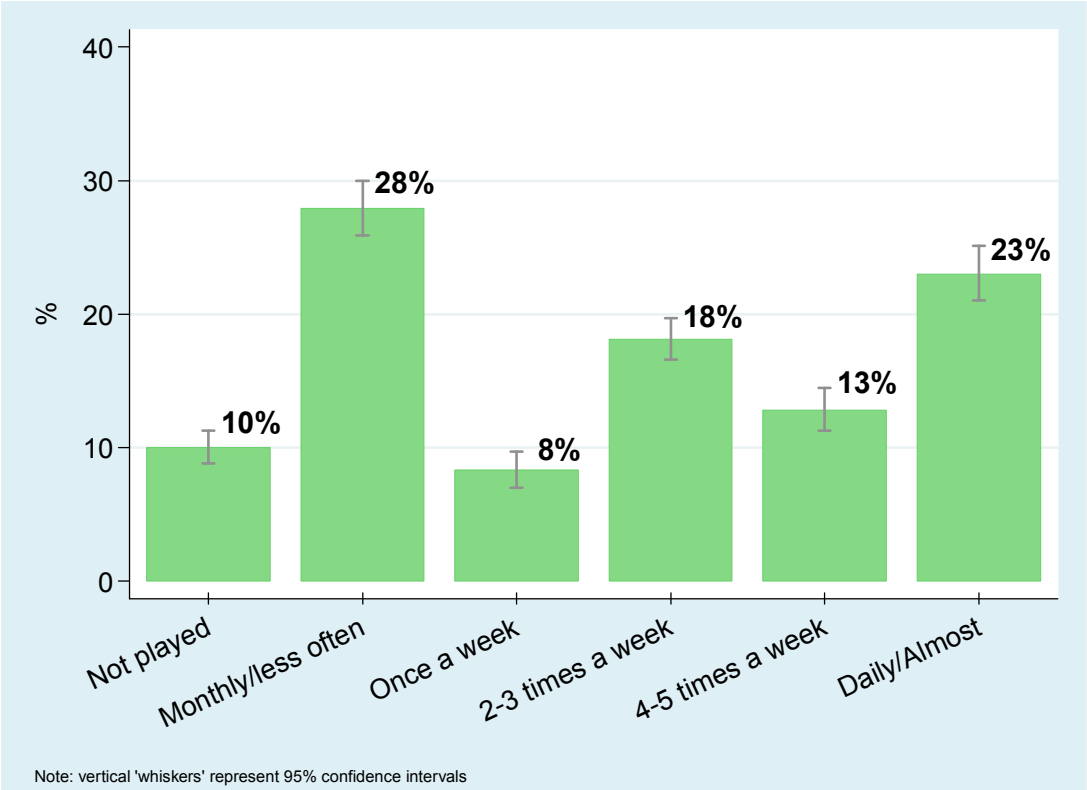
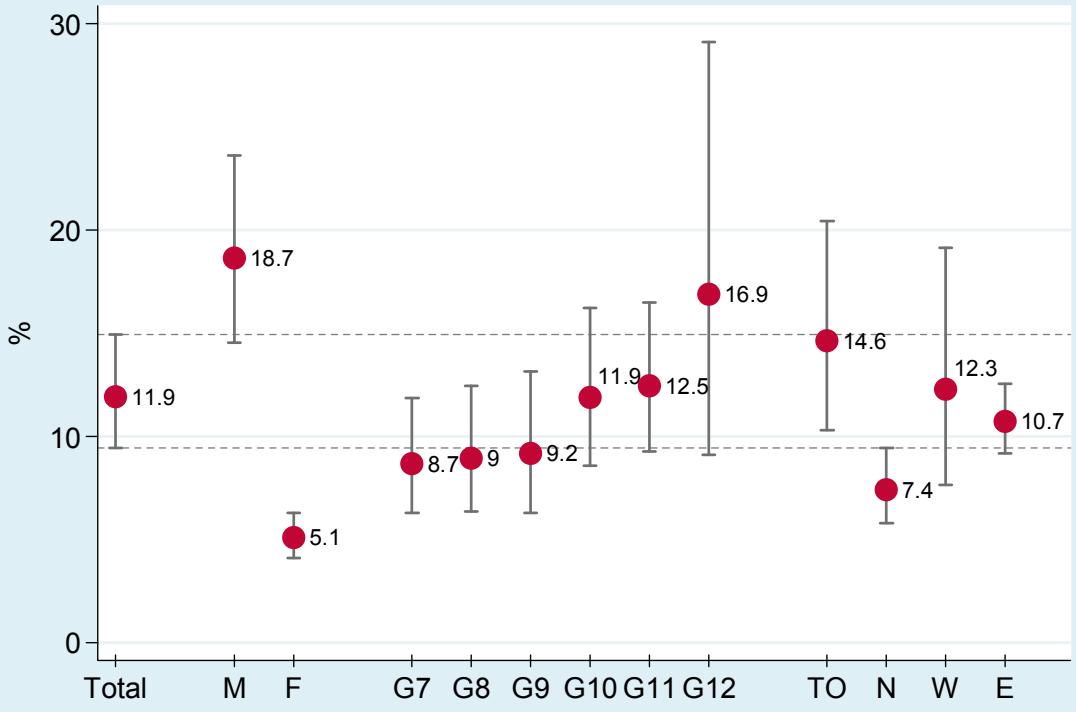


Table 3.6.2: Percentage of All Students Reporting Video Game Playing Problem Indicators in the Past Year, 2011 OSDUHS (Grades 7–12)

Problem Video Game Playing (PVP) Scale Items	Total Sample (N=4,816)	Males (N=2,218)	Females (N=2,598)
1. Kept thinking about playing video games, when not playing	23.6	36.0	11.2
2. Spent an increasing amount of time playing video games	19.2	27.7	10.8
3. Tried to control, cut back, stop playing video games, or played for longer than intended	20.3	29.1	11.5
4. Became restless or irritated when could not play video games	9.3	13.9	4.7
5. Played more often when felt bad (sad, angry or nervous) or had problems	16.9	23.3	10.5
6. When lost in a game or did not get the desired results, played again to achieve the target	48.0	61.7	34.2
7. Skipped school or work, or lied/stole/argued with someone in order to play	5.4	8.0	2.8
8. Ignored homework, went to bed late, or spent less time with family and friends because of video game playing	26.8	39.2	14.3
9. Hid video game playing from family or friends	5.7	8.8	2.5

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 3.6.6
Percentage of All Students Indicating a Video Gaming Problem (PVP Scale) by Sex, Grade, and Region, 2011 OSDUHS



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

3.7 Co-Existing Problems

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

Research on co-existing substance use and mental disorders among clinical samples indicate that this problem is not uncommon. Epidemiological estimates, however, are less conclusive mainly due to the lack of general population surveys on adolescents in Canada and the United States. Much is yet to be understood about the prevalence of co-existing disorders, patterns of onset, and the specific combinations of substances and mental health problems.

A Canadian study of adolescents found a strong association between an existing mental disorder (e.g., conduct disorder) and substance use (Boyle & Offord, 1991). An American study found that adolescents with severe emotional or behavioural problems were much more likely to be dependent on alcohol or illicit drugs, than those without problems (US Department of Health and Human Services, 1999b). The *National Comorbidity Survey* found that half of those aged 15-54 who had a mental disorder during their lifetime also had a history of substance use disorder (Kessler et al., 1994). Notably, studies have shown that younger age groups have a higher likelihood of co-existing disorders than older age groups (Kessler et al., 1994; Wang & El-Guebaly, 2004).

In general, mental health problems (e.g., anxiety disorders, conduct disorder, depression) are thought to precede the onset of substance abuse (Clark et al., 1997; Kessler et al., 1996; Kessler et al., 2005; Kumpulainen, 2000). Some have explained this via the "self-medicating hypothesis" which argues that substance abuse is a coping strategy. Another theory is the "common cause hypothesis" that suggests pre-existing factors common to both mental health and substance abuse, such as stress, play a role in the onset of both conditions (US Department of Health and Human Services, 1999b).

3.7.1 Configurations of Risk

(Figures 3.7.1 to 3.7.3; Tables A3.7.1, A3.7.2)

This section presents the degree of overlap among the following four problems: (1) elevated **psychological distress** (as indicated by a score of 3 or more on the GHQ-12 screener – 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 8 or more on the AUDIT screener); and (4) a **drug use problem** (indicated by a score of 2 or more on the CRAFFT-D screener).[41] This section examines the nature of the overlap, and the group of students who report three or all four of these problems.

2011 (Grades 7–12):

- Overall, the majority (54.8%) of students report none of the four problems. About 28.8% report one problem, 9.7% report two problems, 4.6% report three problems, and 2.3% report all four problems.

- By far, the most prevalent configuration is psychological distress only, reported by 22% of students. The remaining configurations, such as hazardous/harmful drinking only or drug problem only, are reported by 4% or less (see Table A3.7.1 for all configurations).

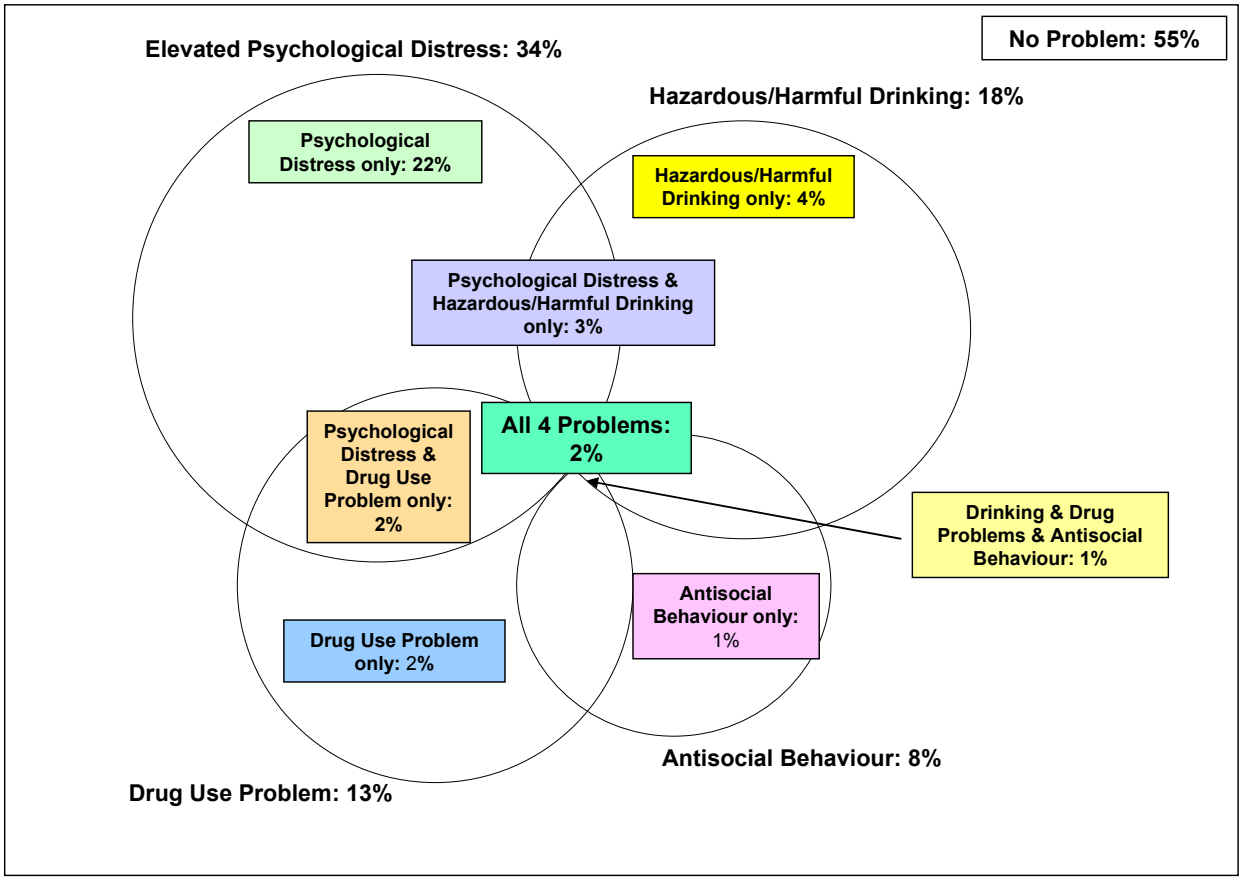
[41] Details about the AUDIT and CRAFFT-D screeners can be found in the companion OSDUHS drug use report "*Drug Use Among Ontario Students, 1977-2011: Detailed OSDUHS Findings"* available on our website at http://www.camh.ca/research/osduhs.aspx.

- The percentage reporting three or all four problems is 6.9% (95% CI: 5.8%-8.1%), representing about 70,300 students across Ontario.
- There is no significant sex difference in the likelihood of experiencing three or all four of these problems (6.2% for males, 7.5% for females).
- There is significant grade variation, with 11th- and 12th-graders most likely to indicate three or all four of these problems (about 12%).
- Despite some variation, the differences among the regions are not statistically significant.

2003–2011 (Grades 7–12):

- The percentage of students reporting three or all four problems in 2011 (6.9%) is significantly lower than the percentage seen in 2003 (10.0%), the first year this indicator was measured.

Figure 3.7.1
Co-Existing Problems: Elevated Psychological Distress, Antisocial Behaviour, Hazardous/Harmful Drinking, and Drug Use Problem, 2011 OSDUHS (Grades 7–12)



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

Figure 3.7.2
Count of Co-Existing Problems, 2011 OSDUHS (Grades 7–12)

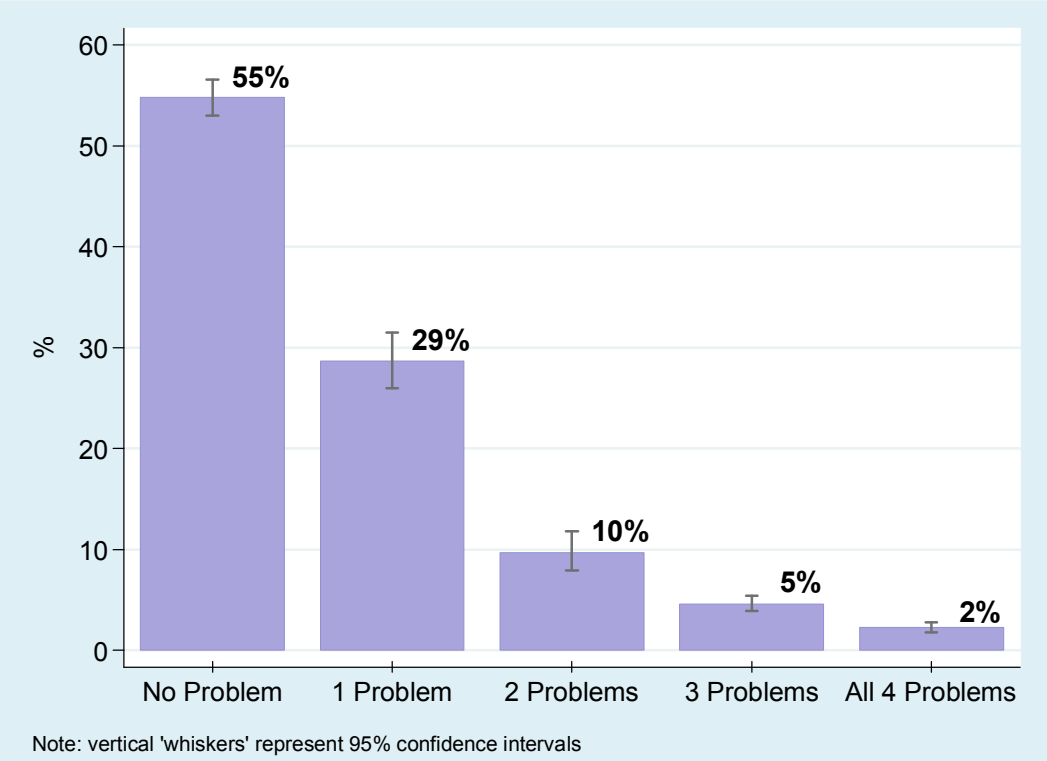
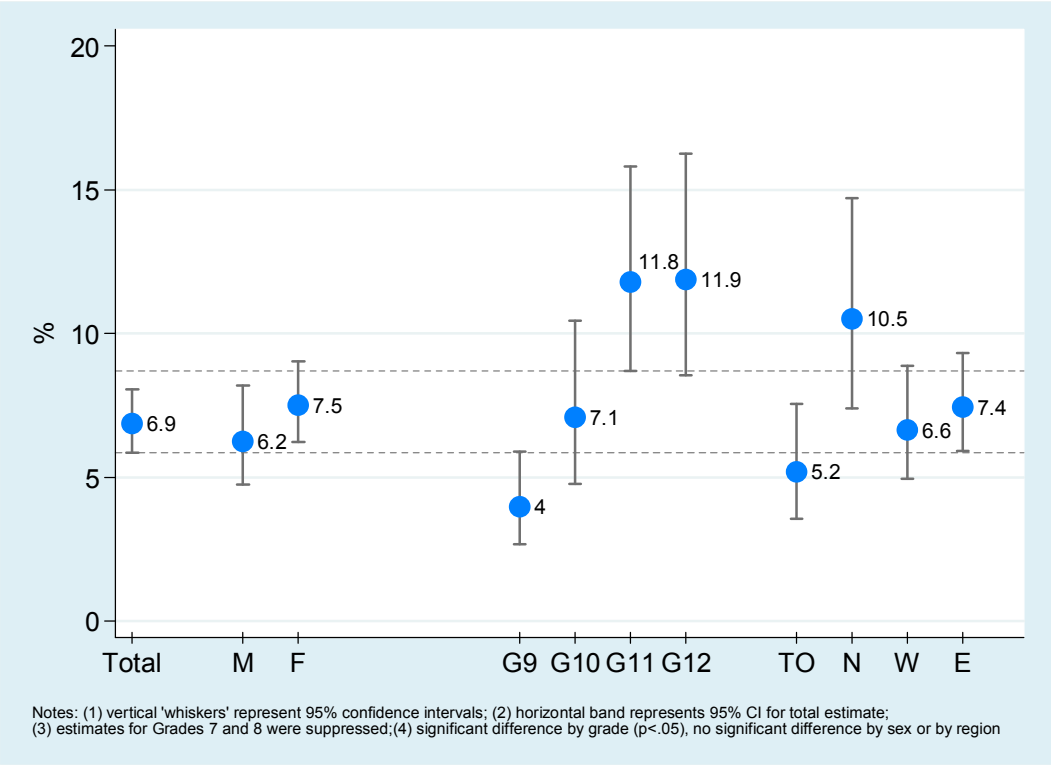


Figure 3.7.3
Percentage Indicating Three or All Four Problems by Sex, Grade, and Region, 2011 OSDUHS



3.8 Overview by Ontario LHIN Areas

In 2006, the province designated 14 geographic areas each to function as health systems that plan, integrate and fund local health services. These areas are called Local Health Integration Networks or LHINs (see http://www.lhins.on.ca). This section provides the 2011 estimates for most mental health and well-being indicators presented in the report **among high school students only (grades 9 through 12)** according to the LHINs. Students in grade 7 and 8 were excluded from the analysis because of a considerable imbalance of the number of elementary/middle schools across the LHINs. For the present analysis, students were assigned to LHINs using the six-digit postal code of the school. Due to small sample sizes, some adjacent LHINs were merged. The nine LHIN areas presented here are:

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

Figure 3.8.1
Local Health Integration Networks of Ontario

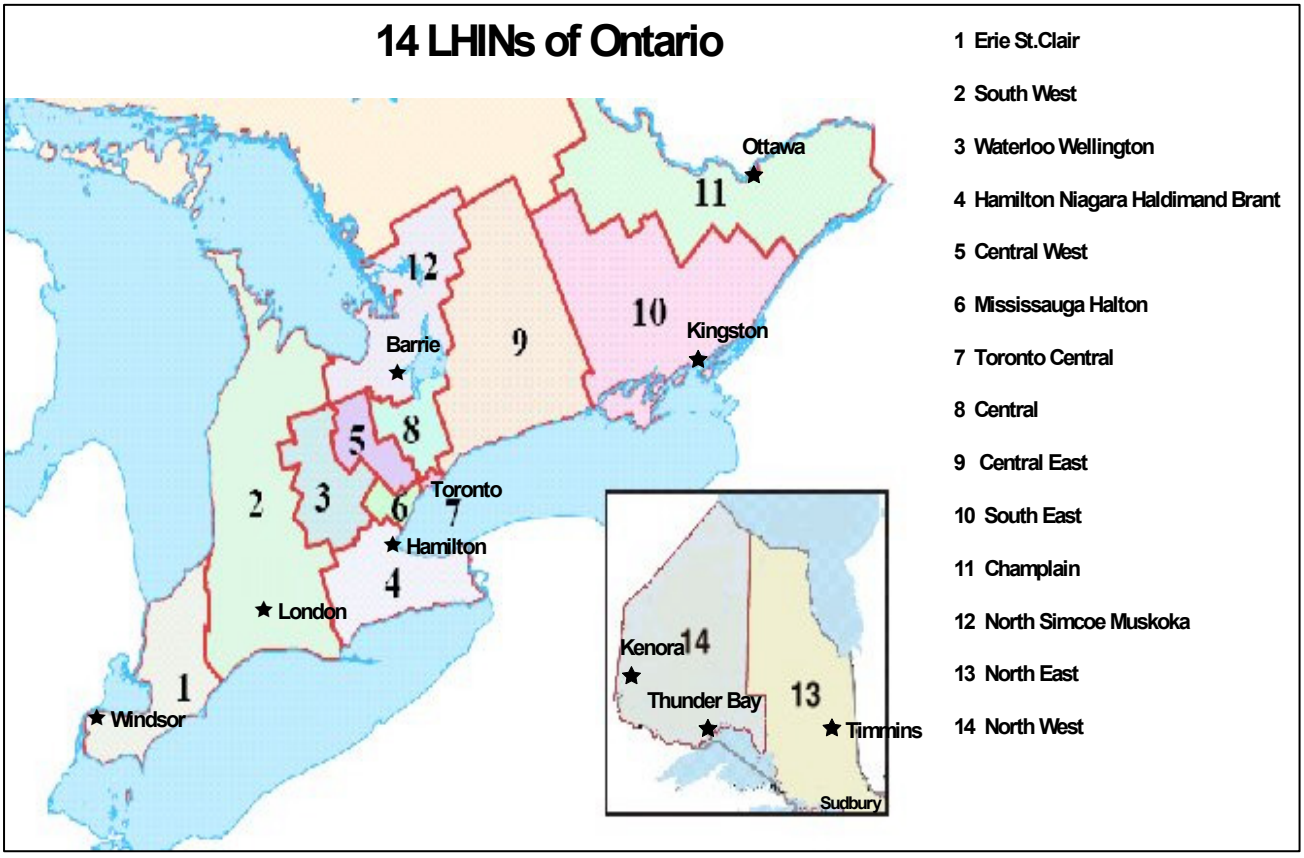


Table 3.8.1: Percentage of Secondary School Students **(Grades 9–12)** Reporting Mental Health and Well-Being Indicators, by Ontario Local Health Integration Network (LHIN) Areas, 2011 OSDUHS

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

(Continued…)

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

Notes: (1) no secondary schools from the South West LHIN participated in the survey; (2) due to small sample sizes, the Erie St. Clair and the Waterloo Wellington LHINs were merged, the Central West and the Mississauga Halton LHINs were merged, the South East and the Champlain LHINs were merged, and the North West and the North East LHINs were merged; (3) for indicator definitions, please see Table 2.4 or the individual chapters; (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 & 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 various disciplines to work collaboratively on matters of prevention. Preventing problems from occurring, or reducing their risk, is preferable over treating problems, both on an individual and a societal level.

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

Study Limitations

Before discussing our findings, we must first remind readers of some of the limitations of this study. Although sample surveys are the most feasible means to monitor health behaviours and any negative consequences in the student population, those interpreting the OSDUHS results should consider the following limitations. First, these data are based on self-reports, which cannot be readily verified, and are therefore subjective and not based on clinical evaluation. Second, self-reports of height and weight (used to calculate BMI, 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 vary over time. Thus, estimates of change should remain valid and unaffected by this bias. Third, another factor that can affect our estimates is the bias caused by non-respondents. We do not know whether, or by how much, non-respondents differ from respondents. It is possible that absent students, suspended students, and those who did not want to participate are more likely to have physical and mental health difficulties than those who did participate. Fourth, the data reflect a snapshot in time and consequently, because we do not follow the same students across time, we cannot identify causes of individual change or the temporal ordering of risk factors. In addition, we cannot determine from these data whether our findings are adolescent-limited, for example, to what extent antisocial behaviours decline or cease with transition into young adulthood.

The array of findings in such a large study can be numerous and complex. Indeed, some findings are likely more reliable than others. For example, random variation causes us to be cautious in interpreting change between two points in time. Therefore, we place more emphasis on steady trends with multiple time points.

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

Encouraging Findings

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

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

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

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

Public Health Concerns

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

About **one-in-three students** report…
- being bullied at school
- elevated distress
- gambling in the past year
- being injured in the past year

About **one-in-four students …**
- are classified as overweight or obese
- report that they do not always wear a seatbelt in a motor vehicle

About **one-in-five students** report…
- being cyber-bullied
- worry about being harmed at school
- hazardous/harmful drinking

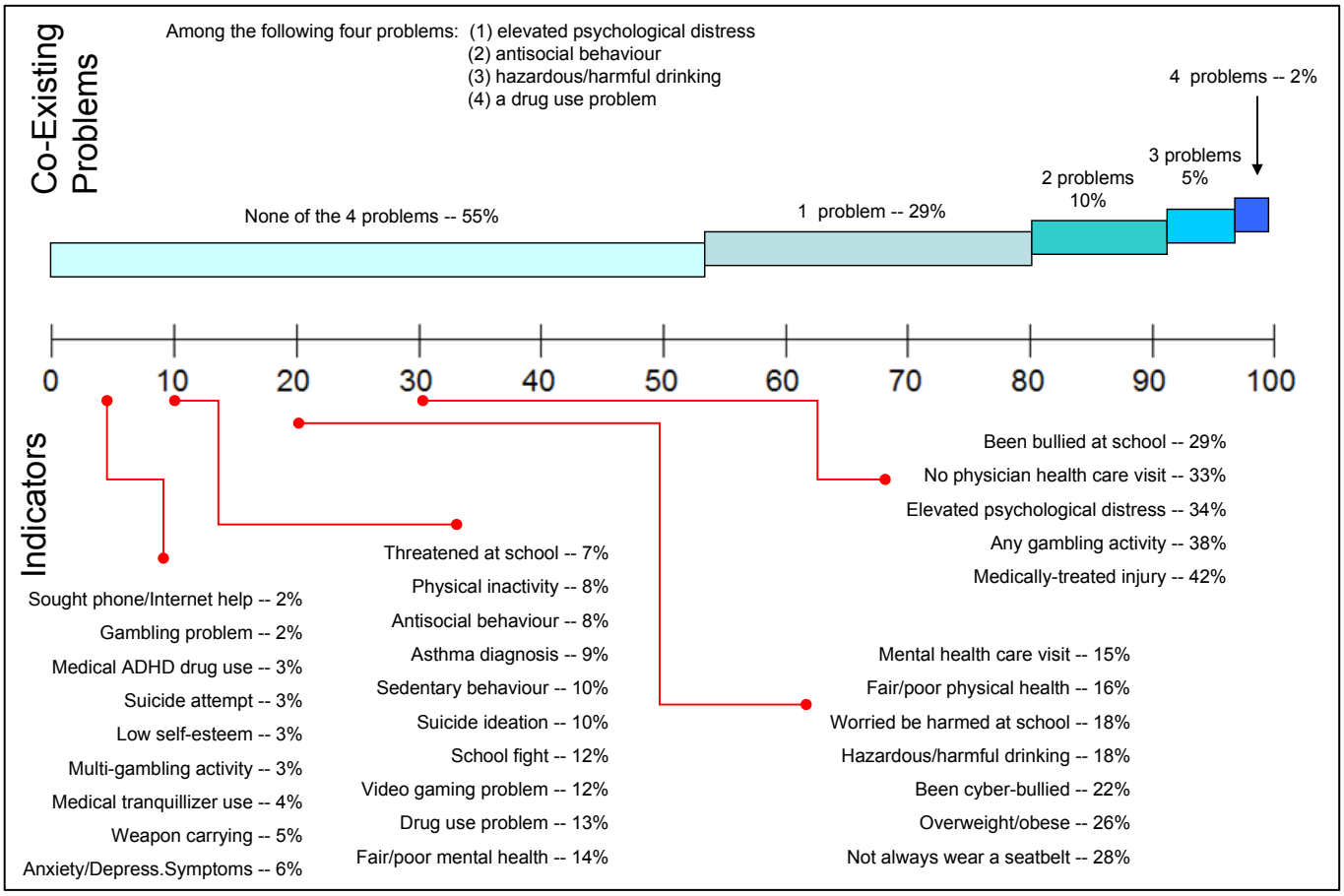
About **one-in-six to one-in-seven students** report…
- fair/poor physical health
- fair/poor mental health
- a drug use problem

About **one-in-ten students** report…
- a video gaming problem
- fighting at school
- suicide ideation
- "screen time" sedentary behaviour
- antisocial behaviour
- physical inactivity

Some findings point to **concerning trends**:

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

Figure 4.1
Overview of Mental Health and Well-Being Indicators, 2011 OSDUHS (Grades 7–12)



Demographic Correlates

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

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

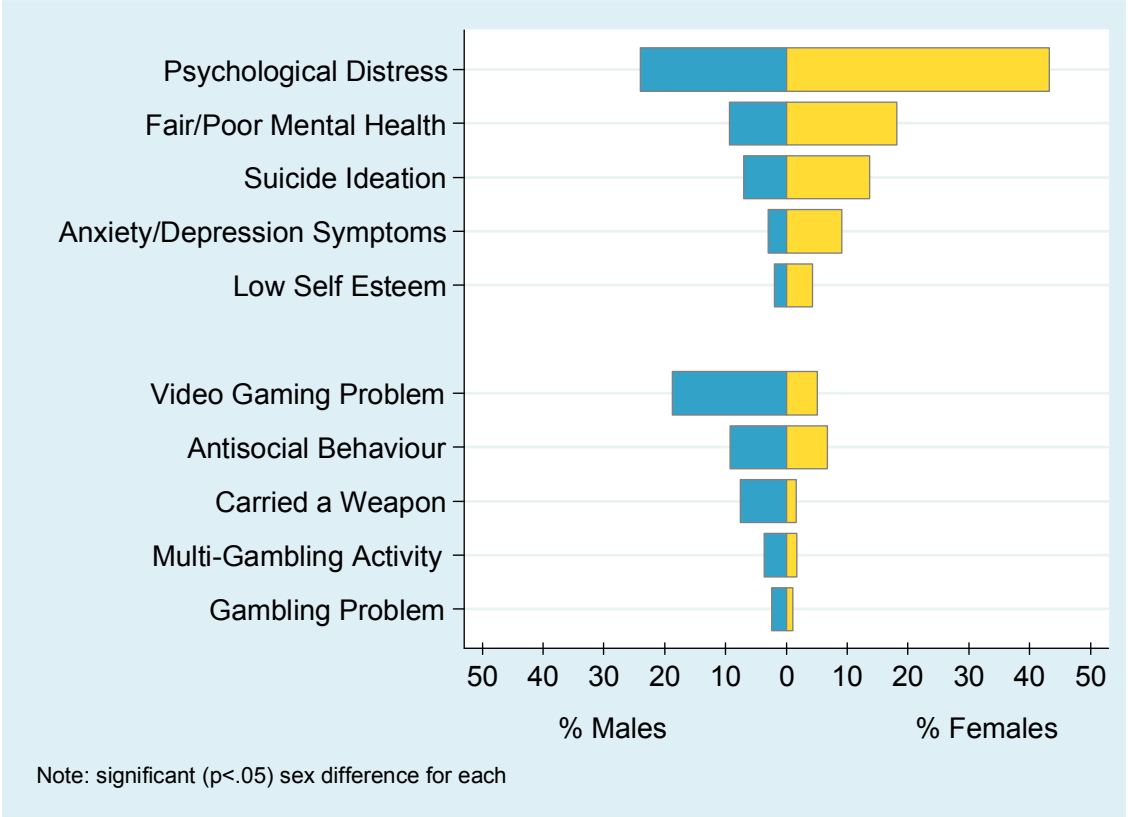
Only a few indicators in the report significantly differ according to **region**:

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

- Compared with the provincial average, **Northern** Ontario students are more likely to report an injury requiring medical treatment. Northern students are less likely to express worry about being threatened or harmed at school, and less likely to be physically inactive.

- Compared with the provincial average, **Western** Ontario students are more likely to report being cyber-bullied.

Figure 4.2
Internalizing and Externalizing Indicators by Sex, 2011 OSDUHS (Grades 7–12)



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

- Compared with the provincial average, **Eastern** Ontario students are less likely to rate their physical health as fair/poor, to be physically inactive, and to be screen time sedentary.

Conclusion

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

Our findings are consistent with many expectations of the adolescent stage of life. While most Ontario students are in good physical and mental health, a sizeable minority experience an array of functional impairments. Some mental health indicators, such as suicide ideation and elevated distress remain high. One-in-ten Ontario students (an estimated 103,800) report suicide ideation and one-in-twenty-five (about 28,000) report a suicide attempt. These large numbers should remind us of the vulnerability of this age group. Reports of bullying victimization at school have not declined despite the media and political attention this issue has recently received in Ontario. Cyber-bullying is a growing concern as electronic media become predominant in the lives of adolescents. This report showed that one-in-five students are cyber-bullied. Bullying victimization not only causes immediate adverse consequences, it can also have serious, enduring effects on mental health (Arseneault, Bowes, & Shakoor, 2010; Meltzer, Vostanis, Ford, Bebbington, & Dennis, 2011).

In the past, there has been a lack of focus and priority on adolescent mental health in Canada (Waddell, McEwan, Peters, Hua, & Garland, 2007). However, this is shifting with the release of the recent *Mental Health Strategy for Canada* (Mental Health Commission of Canada, 2012), which seeks to bring mental health issues "out of the shadows" and into the public health domain. One of the Strategy's priorities is to promote the mental health of children and adolescents. School-based prevention and treatment programs are an ideal way to reach this age group. Systematic reviews of school programs promoting mental health and reducing behavioural problems have found that universal programs can be effective if implemented with fidelity to the program, intensity, and a long-term commitment (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011; Ttofi & Farrington, 2011; Weare & Nind, 2011; Wolfe, Crooks, Hughes, Chiodo, & Jaffe, 2008).

This report also presented some concerning findings about the physical health of Ontario students. We found continuing increases in self-rated fair/poor physical health and medically-treated injuries – in fact almost half of Ontario students report a treated injury in the past year. This is especially worrisome given that injuries are the leading cause of death among Canadian children and adolescents (Pan et al., 2007; Public Health Agency of Canada, 2009). Related to this, over one-in-four students do not always wear a seatbelt when riding in a vehicle. Our report also showed that the proportion of Ontario students who are overweight or obese remains elevated, at one-in-four. Continued and enhanced surveillance of these health indicators is clearly needed.

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

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

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

	Worried Be Harmed or Threatened at School	Fair/Poor Self-Rated Physical Health	Believe You Are Too Fat	Medically-Treated Injury	Mental Health Care Visit	Elevated Psycho-logical Distress	Antisocial Behaviour Index	Carried a Weapon	Victim of Bullying at School	Multi-Gambling Activity	Gambling Problem	Co-Existing Problems
Total	↑△	△	△	△	↓		▽	↓▽		▽	▽	▽
Males	↑△	△		△	↓		▽	↓▽	▽	▽	▽	▽
Females	↑	△	△	△	↓	△		↓▽			▽	
Grade 7					↓▽		▽	▽	▽			
Grade 8					↓		▽	▽				
Grade 9					↓		▽	▽				▽
Grade 10	↑	△		△			▽	↓▽				
Grade 11	↑	△						▽				
Grade 12	↑△	△				△				▽	▽	
Toronto		△	△	△	↓			▽				
North		△		↑							▽	
West	↑	△					▽	▽				
East	↑	△			↓		▽	▽			▽	

Notes: (1) for indicator definitions, please see Table 2.4 or individual chapters; (2) ↑↓ significant increase or decrease in 2011 vs. 2009, p<.01; (3)△▽ significant increase or decrease in 2011 vs. 1999, p<.01 (vs. 2001 for Believe You Are Too Fat; vs. 2003 for Victim of Bullying at School, Any Gambling Activity, and Multi-Gambling Activity); (4) the following major indicators showed no change and, therefore, are not presented: daily physical activity; physical inactivity; screen time sedentary behaviour; no physician health care visit; medical tranquillizer use; medical ADHD drug use; fair/poor self-rated mental health; symptoms of anxiety/depression; suicide ideation; suicide attempt; threatened/injured with a weapon at school; and video gaming problem.

Source: OSDUHS, Centre for Addiction & Mental Health

Table 4.2: Subgroup Differences for Selected Indicators, 2011 OSDUHS (Grades 7–12)

	Fair/Poor Self-Rated Physical Health	Physically Inactive	Screen Time Sedentary Behaviour	Overweight or Obese	Medically-Treated Injury	Fair/Poor Self-Rated Mental Health	Elevated Psycho-logical Distress	Symptoms of Anxiety or Depression	Suicide Ideation	Antisocial Behaviour	Carried a Weapon	Victim of Bullying at School	Victim of Cyber-Bullying	Multi-Gambling Activity	Gambling Problem	Video Gaming Problem	Co-Existing Problems
Sex Difference	***	ns	**	***	*	***	***	***	***	**	***	**	***	*	*	***	ns
	F ↑		M ↑	M ↑	M ↑	F ↑	F ↑	F ↑	F ↑	M ↑	M ↑	F ↑	F ↑	M ↑	M ↑	M ↑	
Grade Difference	***	***	***	*	ns	***	***	*	*	***	ns	***	ns	*	ns	ns	***
(compared with previous grade)	8 ↑ 7		8 ↑ 7														
				9 ↑ 8				9 ↑ 8									9 ↑ 8
	10 ↑ 9					10 ↑ 9				10 ↑ 9							
														12 ↓ 11			
Region Difference	*	***	***	ns	***	ns	ns	ns	ns	ns	ns	***	*	ns	ns	ns	ns
(region compared with Ontario)		TO ↑	TO ↑		TO ↓							TO ↓	TO ↓				
		N ↓			N ↑												
													W ↑				
	E ↓	E ↓	E ↓														

Notes: (1) for indicator definitions, please see Table 2.4 or individual chapters; (2) overall tests of effect are based on a univariate chi-square statistic, *p<.05, **p<.01, ***p<.001; (3) subgroup comparisons are based on contrasts in adjusted logistic regression models; (4) ns=non-significant; (5) TO=Toronto, N=North, W=West, E=East.

Source: OSDUHS, Centre for Addiction & Mental Health

5. REFERENCES

Adlaf, E. M. (2005). Collecting drug use data from different populations. In Z. Sloboda (Ed.), *Epidemiology of drug abuse* (pp. 99-111). New York: Springer.

Adlaf, E. M., Mann, R., & Paglia, A. (2003). Drinking, cannabis use and driving among Ontario students. *Canadian Medical Association Journal, 168*, 565-566.

Anderman, C., Cheadle, A., Curry, S., Diehr, P., Shultz, L., & Wagner, E. (1995). Selection bias related to parental consent in school-based survey research. *Evaluation Review, 19*, 663-674.

Anderson, C. S. (1982). The search for school climate: A review of the research. *Review of Educational Research, 52*, 368-420.

Arseneault, L., Bowes, L., & Shakoor, S. (2010). Bullying victimization in youths and mental health problems: "Much ado about nothing"? *Psychological Medicine, 40*, 717-729. doi:710.1017/S0033291709991383

Baksheev, G. N., Robinson, J., Cosgrave, E. M., Baker, K., & Yung, A. R. (2011). Validity of the 12-item General Health Questionnaire (GHQ-12) in detecting depressive and anxiety disorders among high school students. *Psychiatry Research, 187*, 291-296.

Bond, L., Butler, H., Thomas, L., Carlin, J., Glover, S., Bowes, G., et al. (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*, 357-375.

Bond, L., Toumbourou, J. W., Thomas, L., Catalano, R. F., & Patton, G. (2005). Individual, family, school, and community risk and protective factors for depressive symptoms in adolescents: A comparison of risk profiles for substance use and depressive symptoms. *Prevention Science, 6*, 73-88.

Bonny, A. E., Britto, M. T., Klostermann, B. K., Hornung, R. W., & Slap, G. B. (2000). School disconnectedness: Identifying adolescents at risk. *Pediatrics, 106*, 1017-1021.

Bovet, P., Viswanathan, B., Faeh, D., & Warren, W. (2006). Comparison of smoking, drinking, and marijuana use between students present or absent on the day of a school-based survey. *Journal of School Health, 76*, 133-137.

Boyle, M. H., & Offord, D. R. (1991). Psychiatric disorder and substance use in adolescence. *The Canadian Journal of Psychiatry, 36*, 699-705.

Brener, N., Kann, L. K., McManus, T., Kinchen, S., Sundberg, E., & Ross, J. (2002). Reliability of the 1999 Youth Risk Behavior Survey questionnaire. *Journal of Adolescent Health, 31*, 336-342.

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*, 436-457.

Brener, N. D., Eaton, D. K., Kann, L., Grunbaum, J. A., Gross, L. A., Kyle, T. M., et al. (2006). The association of survey setting and mode with self-reported health risk behaviors among high school students. *Public Opinion Quarterly, 70*, 354-374. doi:310.1093/poq/nfl1003

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*, 281-287.

Cali, A. M. G., & Caprio, S. (2008). Obesity in children and adolescents. *Journal of Clinical Endocrinology & Metabolism November, 93(11)*(Supplement 1), S31-S36.

Canadian Institute for Health Information. (2005). *Improving the health of young Canadians*. Ottawa: Canadian Institute for Health Information.

Canadian Institute of Child Health. (2000). *The health of Canada's children: A CICH Profile, 3rd Edition*. Ottawa: Canadian Institute of Child Health.

Carriere, G. (2003). Parent and child factors associated with youth obesity. *Supplement to Health Reports, (Statistics Canada Catalogue 82-003)*, 29-39.

Catalano, R. F., Berglund, M. L., Ryan, J. A. M., Lonczak, H. S., & Hawkins, J. D. (2004). Positive youth development in the United States: Research findings on evaluations of positive youth development programs. *Annals of the American Academy of Political and Social Science, 591*, 98-124.

Centers for Disease Control and Prevention. (1994). Health risk behaviors among adolescents who do and do not attend school -- United States, 1992. *MMWR, 43*, 129-132.

Centers for Disease Control and Prevention. (2010). Youth Risk Behavior Surveillance -- United States, 2009. *Morbidity and Mortality Weekly Report Surveillance Summaries, 59*(No. SS-5), 1-142.

Cicchetti, D., & Toth, S. L. (1998). The development of depression in children and adolescents. *American Psychologist, 53*, 221-241.

Clark, D. B., Pollack, N., Bukstein, O. G., Mezzich, A. C., Bromberger, J. T., & Donovan, J. E. (1997). Gender and comorbid psychopathology in adolescents with alcohol dependence. *Journal of the American Academy of Child and Adolescent Psychiatry, 36*, 1195-1203.

Clayton, R. R. (1992). Transitions in drug use: Risk and protective factors. In M. Glantz & R. Pickens (Eds.), *Vulnerability to drug abuse*. Washington, DC: American Psychological Association.

Cochran, W. G. (1977). *Sampling techniques* (3rd ed.). New York: Wiley.

Cohen, S., & Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin, 98*, 310-357.

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. *British Medical Journal, 320*, 1240-1243.

Coleman, J. S. (1988). Social capital in the creation of human capital. *American Journal of Sociology, 94*(Supplement), S95-S120.

Collins, P., Patel, V., Joestl, S., March, D., Insel, T., Daar, A., et al. (2011). Grand challenges in global mental health. *Nature, 475*, 27-30.

Collishaw, S., Maughan, B., Goodman, R., & Pickles, A. (2004). Time trends in adolescent mental health. *Journal of Child Psychology and Psychiatry, 45*, 1350-1362.

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*, 370-395.

Craig, W. M., & McCuaig-Edge, H. (2008). Bullying and fighting. In W. F. Boyce, M. A. King & J. Roche (Eds.), *Healthy settings for young people in Canada*. Ottawa: Public Health Agency of Canada.

Currie, C., Gabhainn, S. N., Godeau, E., Roberts, C., Smith, R., Currie, D., et al. (Eds.). (2008). *Inequalities in young people's health: HBSC international report from the 2005/2006 survey.* Copenhagen: WHO Regional Office for Europe.

Currie, C., Zanotti, C., Morgan, A., Currie, D., Looze, M. d., Roberts, C., et al. (Eds.). (2012). *Social determinants of health and well-being among young people. Health Behaviour in School-aged Children (HBSC) study: International report from the 2009/2010 survey*. Copenhagen: WHO Regional Office for Europe.

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.

Delaney-Black, V., Chiodo, L. M., Hannigan, J. H., Greenwald, M. K., Janisse, J., Patterson, G., et al. (2010). Just say "I don't": Lack of concordance between teen report and biological measures of drug use. *Pediatrics, 126*, 887-893. doi:810.1542/peds.2009-3059

Derevensky, J. L., Gupta, R., & Winters, K. (2003). Prevalence rates of youth gambling problems: Are the current rates inflated? *Journal of Gambling Studies, 19*, 405-425.

DeWit, D. J. (1998). Frequent childhood geographic relocation: Its impact on drug use initiation and the development of alcohol and other drug-related problems among adolescents and young adults. *Addictive Behaviors, 23*, 623-634.

Dey, E. L. (1997). Working with low survey response rates: The efficacy of weighting adjustments. *Research in Higher Education, 38*, 215-227.

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*, 59-72.

Dishion, T. J., & Kavanagh, K. (2000). A multilevel approach to family-centered prevention in schools: Process and outcome. *Addictive Behaviors, 25*, 899-911.

Dishion, T. J., & McMahon, R. J. (1998). Parental monitoring and the prevention of child and adolescent behavior problems: A conceptual and empirical formulation. *Clinical Child and Family Psychology Review, 1*, 61-75.

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*, 405-432.

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*, 223-229.

Eaton, D. K., Lowry, R., Brener, N. D., Grunbaum, A., & Kann, L. (2004). Passive versus active parental permisison in school-based survey research: Does the type of permission affect prevalence estimates of risk behaviors? *Evaluation Review, 28*, 564-577.

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*, 423-427.

Farhat, T., Iannotti, R. J., & Simons-Morton, B. G. (2010). Overweight, obesity, youth, and health-risk behaviors. *American Journal of Preventive Medicine, 38*, 258-267.

Faulkner, G. E. J., Adlaf, E. M., Irving, H., Allison, K. R., Dwyer, J. J., & Goodman, J. (2007). The relationship between vigorous physical activity and juvenile delinquency: A mediating role for self-esteem? *Journal of Behavioral Medicine, 30*, 155-163.

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*, 312-318.

Feder, L. (2007). Bullying as a public health issue. *International Journal of Offender Therapy and Comparative Criminology, 51*, 491-494.

Federal Provincial and Territorial Advisory Committee on Population Health. (1999a). *Statistical report on the health of Canadians*. Ottawa: Health Canada.

Federal Provincial and Territorial Advisory Committee on Population Health. (1999b). *Toward a healthy future: Second report on the health of Canadians*. Ottawa: Health Canada.

Ferreira, I., vanderHorst, K., Wendel-Vos, W., Kremers, S., vanLenthe, F. J., & Brug, J. (2007). Environmental correlates of physical activity in youth - a review and update. *Obesity Reviews, 8*, 129-154.

Fleiss, J. L. (1981). *Statistical methods for rates and proportions* (2nd ed.). New York: Wiley.

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:410.1542/peds.2008-1552

Fox, K. (1999). The influence of physical activity on mental well-being. *Public Health Nutrition, 2*, 411-418.

French, D. J., & Tait, R. J. (2004). Measurement invariance in the General Health Questionnaire-12 in young Australian adolescents. *European Child and Adolescent Psychiatry, 13*, 1-7.

Fuligni, A. J. (1997). The academic achievement of adolescents from immigrant families: The roles of family background, attitudes, and behavior. *Child Development, 68*, 351-363.

Galambos, N. L., Leadbeater, B. J., & Barker, E. T. (2004). Gender differences in and risk factors for depression in adolescence: A 4-year longitudinal study. *International Journal of Behavioral Development, 28*, 16-25.

Galea, S., & Tracy, M. (2007). Participation rates in epidemiologic studies. *Annals of Epidemiology, 17*, 643-653. doi:610.1016/j.annepidem.2007.1003.1013

Gannon, M. (2006). *Crime statistics in Canada, 2005 (Juristat Catalogue no. 85-002-XIE)*. Ottawa: Statistics Canada.

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*, 19-30.

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. Statistics Canada Catalogue no. 81-004-X, 7*(4).

Gini, G., & Pozzoli, T. (2009). Association between bullying and psychosomatic problems: A meta-analysis. *Pediatrics, 123*, 1059-1065. doi:1010.1542/peds.2008-1215

Goldberg, D. P., Gater, R., Sartorius, N., Ustun, T. B., Piccinelli, M., Gureje, O., et al. (1997). The validity of two versions of the GHQ in the WHO study of mental illness in general health care. *Psychological Medicine, 27*, 191-197.

Goldberg, D. P., & William, P. (1988). *A user's guide to the General Health Questionnaire*. Windsor: NFER-Nelson.

Gore, S., Aseltine, R. H., & Colton, M. E. (1992). Social structure, life stresses and depressive symptoms in a high school-aged population. *Journal of Health and Social Behavior, 33*, 97-113.

Gotlib, I. H., & Wheaton, B. (Eds.). (1997). *Stress and adversity over the life course: Trajectories and turning points*. Cambridge: Cambridge University Press.

Government of Ontario. (2011). *Open minds, health minds: Ontario's comprehensive mental health and addictions strategy*. Toronto, ON: Government of Ontario. Retrieved from http://www.health.gov.on.ca/en/public/publications/ministry_reports/mental_health2011/mentalhealth_rep2011.pdf.

Griffin, K. W., Botvin, G. J., Scheier, L. M., Diaz, T., & Miller, N. L. (2000). Parenting practices as predictors of substance use, delinquency, and aggression among urban minority youth: Moderating effects of family structure and gender. *Psychology of Addictive Behaviors, 14*, 174-184.

Groves, R. M. (2006). Nonresponse rates and nonresponse bias in household surveys. *Public Opinion Quarterly, 70*, 646-675.

Groves, R. M., Fowler, F. J., Couper, M. P., Lepkowski, J. M., Singer, E., & Tourangeau, R. (2004). *Survey methodology*. Hoboken, New Jersey: 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*, 319-345.

Hagquist, C. (2010). Discrepant trends in mental health complaints among younger and older adolescents in Sweden: An analysis of WHO data 1985-2005. *Journal of Adolescent Health, 46*, 258-264.

Hallal, P., Victora, C., Azevedo, M., & Wells, J. (2006). Adolescent physical activity and health: A systematic review. *Sports Medicine, 36*, 1019-1030.

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.

Hardoon, K. K., & Derevensky, J. L. (2002). Child and adolescent gambling behavior: Current knowledge. *Clinical Child Psychology and Psychiatry, 7*, 263-281.

Hawkins, J. D., Catalano, R. F., Kosterman, R., Abbott, R., & Hill, K. G. (1999). Preventing adolescent health-risk behaviors by strengthening protection during childhood. *Archives of Pediatric Adolescent Medicine, 153*, 226-234.

Hawkins, J. D., Catalano, R. F., & Miller, J. Y. (1992). Risk and protective factors for alcohol and other drug problems in adolescence and early adulthood: Implications for substance abuse prevention. *Psychological Bulletin, 112*, 64-105.

Hawkins, J. D., Kosterman, R., Catalano, R. F., Hill, K. G., & Abbott, R. D. (2005). Promoting positive adult functioning through social development intervention in childhood. *Archives of Pediatric Adolescent Medicine, 159*, 25-31.

Health Canada. (2002). *A report on mental illness in Canada*. Ottawa: Health Canada.

Heeringa, S. G., West, B. T., & Berglund, P. A. (2010). *Applied survey data analysis*. Boca Raton: Taylor & Francis Group.

Herrenkohl, T. I., Maguin, E., Hill, K. G., Hawkins, J. D., Abbott, R. D., & Catalano, R. F. (2000). Developmental risk factors for youth violence. *Journal of Adolescent Health, 26*, 176-186.

Hibell, B., Adlaf, E. M., Andersson, B., Bjarnason, T., Delapenha, C., Hasbun, J., et al. (2003). *Conducting school surveys on drug abuse. Toolkit module 3*. Vienna: United Nations Office on Drugs and Crime.

Huang, J., & Boyer, R. (2007). Epidemiology of youth gambling problems in Canada: A national prevalence study. *Canadian Journal of Psychiatry, 52*, 657-665.

Janssen, I. (2007). Physical activity guidelines for children and youth. *Applied Physiology, Nutrition, and Metabolism, 32*(S2E), S109-S121.

Janssen, I. (2008). Healthy living and healthy weight. In W. F. Boyce, M. A. King & J. Roche (Eds.), *Healthy settings for young people in Canada*. Ottawa: Public Health Agency of Canada.

Johnson, R. A., Hoffmann, J. P., & Gerstein, D. R. (1996). *The relationship between family structure and adolescent substance use*. Rockville, MD: U. S. Department of Health and Human Services.

Johnston, L. D., O'Malley, P. M., Bachman, J. G., & Schulenberg, J. E. (2011). *Monitoring the Future national survey results on drug use, 1975–2010: Volume I, Secondary school students*. Ann Arbor: Institute for Social Research, University of Michigan.

Kairouz, S., & Adlaf, E. M. (2003). Schools, students and heavy drinking: A multilevel analysis. *Addiction Research & Theory, 11*, 427-439.

Keays, J., & Allison, K. (1995). The effects of regular moderate to vigorous physical activity on student outcomes: A review. *Canadian Journal of Public Health, 86*, 62-65.

Kelleher, K. J., McInerny, T. K., Gardner, W. P., Childs, G. E., & Wasserman, R. C. (2000). Increasing identification of psychosocial problems: 1979-1996. *Pediatrics, 105*, 1313-1321.

Kessler, R. C., Berglund, P., Demler, O., Jin, R., Merikangas, K. R., & Walters, E. E. (2005). Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the National Comorbidity Survey Replication. *Archives of General Psychiatry, 62*, 593-602.

Kessler, R. C., McKonagle, K. A., Zhao, S., Nelson, C. B., Hughes, M., Eshleman, S., et al. (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*, 8-19.

Kessler, R. C., Nelson, C. B., McKonagle, 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*, 17-31.

King, K. A., Vidourek, R. A., Davis, B., & McClellan, W. (2002). Increasing self-esteem and school connectedness through a multidimensional mentoring program. *The Journal of School Health, 72*, 294-299.

Kish, L. (1965). *Survey sampling*. New York: Wiley & Sons.

Knight, J. R., Shrier, L. A., Bravender, T. D., Farrell, M., Bilt, J. V., & Shaffer, H. J. (1999). A new brief screen for adolescent substance abuse. *Archives of Pediatrics and Adolescent Medicine, 153*, 591-596.

Korn, E. L., & Graubard, B. I. (1999). *Analysis of health surveys*. New York: Wiley.

Kraemer, H. C., Kazdin, A. E., Offord, D. R., Kessler, R. C., Jensen, P. S., & Kupfer, D. J. (1997). Coming to terms with the terms of risk. *Archives of General Psychiatry, 54*, 337-343.

Kumpulainen, K. (2000). Psychiatric symptoms and deviance in early adolescence predict heavy alcohol use 3 years later. *Addiction, 95*, 1847-1857.

Lewinsohn, P. M., Rohde, P., Seeley, J. R., & Fischer, S. A. (1993). Age-cohort changes in the lifetime occurrences of depression and other mental disorders. *Journal of Abnormal Psychology, 102*, 110-120.

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*, 90-93.

Masten, A. S., & Coatsworth, J. D. (1998). The development of competence in favorable and unfavorable environments. *American Psychologist, 53*, 205-220.

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*, 379-381. doi:310.1177/1073191110374285

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*, 413-418. doi:410.1080/09595230600868496

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. Statistics Canada Catalogue no. 81-004-X, 7*(4).

Mechanic, D., & Hansell, S. (1987). Adolescent competence, psychological well-being, and self-assessed physical health. *Journal of Health and Social Behavior, 28*, 364-374.

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*, 498-503. doi:410.1016/j.eurpsy.2010.1011.1006

Mental Health Commission of Canada. (2009). *Toward recovery and well-being: A framework for a mental health strategy for Canada*. Ottawa: Mental Health Commission of Canada.

Mental Health Commission of Canada. (2012). *Changing directions, changing lives: A mental health strategy for Canada*. Calgary, AB: Mental Health Commission of Canada. Retrieved from http://strategy.mentalhealthcommission.ca/pdf/strategy-images-en.pdf

Michaud, P. A., Delbos-Piot, I., & Narring, 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*, 326-333.

Moffitt, T. E. (1993). Adolescent-limited and life-course-persistent antisocial behavior: A developmental taxonomy. *Psychological Review, 100*, 674-701.

Motl, R. W., Birnbaum, A. S., Kubik, M. Y., & Dishman, R. K. (2004). Naturally occurring changes in physical activity are inversely related to depressive symptoms during early adolescence. *Psychosomatic Medicine, 66*, 336-342.

Office of the Premier of Ontario. (March 8, 2011). *72,000 More Students Succeed in Ontario High Schools*. Retrieved March 9, 2011, from http://news.ontario.ca/opo/en/2011/03/81-per-cent-of-high-school-students-graduating.html

Offord, D. R. (1995). Child psychiatric epidemiology: Current status and future prospects. *Canadian Journal of Psychiatry, 40*, 284-288.

Offord, D. R., Boyle, M. H., Campbell, D., Goering, P., Lin, E., Wong, M., et al. (1996). One-year prevalence of psychiatric disorder in Ontarians 15 to 64 years of age. *Canadian Journal of Psychiatry, 41*, 559-563.

Olfson, M., Blanco, C., Liu, L., Moreno, C., & Laje, G. (2006). National trends in the outpatient treatment of children and adolescents with antipsychotic drugs. *Archives of General Psychiatry, 63*, 679-685.

O'Malley, P., Johnston, L., Bachman, J., Schulenberg, J., & Kumar, R. (2006). How substance use differs among American secondary schools. *Prevention Science, 7*, 409-420. doi:410.1007/s11121-11006-10050-11125

O'Malley, P. M., Bachman, J. G., & Johnston, L. D. (1983). Reliability and consistency in self-reports of drug use. *International Journal of the Addictions, 18*, 805-824.

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*, 35-54.

Ortega, F., Ruiz, J., Castillo, M., & Sjöström, M. (2008). Physical fitness in childhood and adolescence: a powerful marker of health. *International Journal of Obesity, 32*, 1-11.

Pan, S. Y., Desmeules, M., Morrison, H., Semenciw, R., Ugnat, A.-M., Thompson, W., et al. (2007). Adolescent injury deaths and hospitalization in Canada: Magnitude and temporal trends. *Journal of Adolescent Health, 41*, 84-92.

Park, J. (2003). Adolescent self-concept and health into adulthood. *Supplement to Health Reports, (Statistics Canada Catalogue 82-003)*, 41-52.

Parks-Thomas, C., Conrad, P., Casler, R., & Goodman, E. (2006). Trends in the use of psychotropic medications among adolescents, 1994-2001. *Psychiatric Services, 57*, 63-69.

Patel, V., Flisher, A. J., Hetrick, S., & McGorry, P. (2007). Mental health of young people: A global public-health challenge. *Lancet, 369*, 1302-1313.

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*, 929-939.

Pollard, J., Ornstein, M., & Northrup, D. (2011). *The design and implementation of the Ontario Student Drug Use and Health Survey 2011, Centre for Addiction and Mental Health*. Toronto: Institute for Social Research, York University.

Porter, S. R. (2004). Raising response rates: What works? *New Directions for Institutional Research, 2004*(121), 5-21. doi:10.1002/ir.1097

Public Health Agency of Canada. (2009). *Child and youth injury in review, 2009 edition – spotlight on consumer product safety*. Ottawa: Public Health Agency of Canada.

Public Health Agency of Canada. (2011). *The Chief Public Health Officer's report on the state of public health in Canada, 2011: Youth and young adults - life in transition*. Ottawa: Public Health Agency of Canada. Retrieved from: http://www.phac-aspc.gc.ca/cphorsphc-respcacsp/2011/index-eng.php.

Radloff, L. (1977). The CES-D scale: A self report depression scale for research in the general population. *Applied Psychological Measurement, 1*, 385-401.

Rehm, J., Monga, N., Adlaf, E., 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*, 569-574. doi: 510.1093/alcalc/agh1212

Reilly, J. J. (2006). Obesity in childhood and adolescence: evidence based clinical and public health perspectives. *Postgraduate Medical Journal, 82*(969), 429-437.

Resnick, M. D., Bearman, P. S., Blum, R. W., Bauman, K. E., Harris, K. M., Jones, J., et al. (1997). Protecting adolescents from harm: Findings from the National Longitudinal Studey on Adolescent Health. *Journal of the American Medical Association, 278*, 823-832.

Ringback Weitoft, G., Hjern, A., Haglund, B., & Rosen, M. (2003). Mortality, severe mobidity, and injury in children living with single parents in Sweden: a population-based study. *Lancet, 361*, 289-295.

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*, 451-461.

Rosenberg, M., Schooler, C., & Schoenbach, C. (1989). Self-esteem and adolescent problems: Modeling reciprocal effects. *American Sociological Review, 54*, 1004-1018.

Saab, H., & Klinger, D. (2010). School differences in adolescent health and wellbeing: Findings from the Canadian Health Behaviour in School-aged Children study. *Social Science & Medicine, 70*, 850-858.

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. *Addiction, 88*, 791-804.

Savoie, J. (2007). *Youth self-reported delinquency, Toronto, 2006 (Juristat Catalogue no. 85-002-XPE, vol. 27, no. 6)*. Ottawa: Statistics Canada.

Shaffer, H. J., Hall, M. N., & Vander Bilt, J. (1999). Estimating the prevalence of disordered gambling behavior in the United States and Canada: A research synthesis. *American Journal of Public Health, 89*, 1369-1376.

Sherry, B., Jefferds, M. E., & Grummer-Strawn, L. M. (2007). Accuracy of adolescent self-report of height and weight in assessing overweight status: A literature review. *Archives of Pediatrics & Adolescent Medicine, 161*, 1154-1161.

Shields, M. (2006). Overweight and obesity among children and youth. *Health Reports (Statistics Canada, Catalogue 82-003), 17*(3), 27-42.

Simmons, R. G., Burgeson, R., Carlton-Ford, S., & Blyth, D. A. (1987). The impact of cumulative change in early adolescence. *Child Development, 58*, 1220-1234.

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*, 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*, 1029-1034. doi:10.1503/cmaj.111867

Sprott, J. B., Jenkins, J. M., & Doob, A. N. (2000). *Early offending: Understanding the risk and protective factors of delinquency (HRDC Catalogue No. W-01-1-9E)*. Ottawa: Human Resources Development Canada.

Srabstein, J. C., & Leventhal, B. L. (2010). Prevention of bullying-related morbidity and mortality: A call for public health policies. *Bulletin of the World Health Organization, 88*(6), 403-404.

StataCorp. (2009). *Stata statistical software: Release 11.0*. College Station, TX: Stata Corporation.

Statistics Canada. (2001). *Children and youth in Canada. Canadian Centre for Justice Statistics profile series (Catalogue No. 85F0033MIE)*. Ottawa: Ministry of Industry.

Statistics Canada. (2008, May 16). Youth crime. *The Daily,* pp. Retrieved from http://www.statcan.gc.ca/dai-quo/index-eng.htm.

Stephens, T. (1988). Physical activity and mental health in the United States and Canada: Evidence from four population surveys. *Preventive Medicine, 17*, 35-47.

Stephens, T., Dulberg, C., & Joubert, N. (1999). Mental health of the Canadian population: A comprehensive analysis. *Chronic Diseases in Canada, 20*, 118-126.

Sweeting, H., West, P., Young, R., & Der, G. (2010). Can we explain increases in young people's psychological distress over time? *Social Science & Medicine, 71*, 1819-1830.

Sweeting, H., Young, R., & West, P. (2009). GHQ increases among Scottish 15 year olds 1987-2006. *Social Psychiatry and Psychiatric Epidemiology, 44*, 579-586.

Tait, R. J., French, D. J., & Hulse, G. K. (2003). Validity and psychometric properties of the General Health Questionnaire-12 in young Australian adolescents. *Australian and New Zealand Journal of Psychiatry, 37*, 374-381.

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

Thompson, A. H., & Cui, X. (2000). Increasing childhood trauma in Canada: Findings from the National Population Health Survey, 1994/95. *Canadian Journal of Public Health, 91*, 197-200.

Tourangeau, R., & Yan, T. (2007). Sensitive questions in surveys. *Psychological Bulletin, 133*, 859-833. doi:810.1037/0033-2909.1133.1035.1859

Tremblay, M. S., Shields, M., Laviolette, M., Craig, C. L., Janssen, I., & Connor-Gorber, S. (2010). Fitness of Canadian children and youth: Results from the 2007-2009 Canadian Health Measures Survey. *Health Reports (Statistics Canada, Catalogue 82-003-XPE), 21*(1), 1-14.

Tremblay, S., Dahinten, S., & Kohen, D. (2003). Factors related to adolescents' self-perceived health. *Supplement to Health Reports, (Statistics Canada Catalogue 82-003)*, 7-16.

Tsigilis, N. (2006). Can secondary school students' self-reported measures of height and weight be trusted? An effect size approach. *European Journal of Public Health, 16*, 532-535.

Ttofi, M., & Farrington, D. (2011). Effectiveness of school-based programs to reduce bullying: a systematic and meta-analytic review. *Journal of Experimental Criminology, 7*, 27-56.

Twenge, J. M. (2000). The age of anxiety? Birth cohort change in anxiety and neuroticism, 1952-1993. *Journal of Personality and Social Psychology, 79*, 1007-1021.

U.S. Department of Health and Human Services. (1999a). *Mental health: A report of the Surgeon General*. Rockville, MD: U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Center for Mental Health Services, National Institutes of Health, National Institute of Mental Health.

U.S. Department of Health and Human Services. (1999b). *The relationship between mental health and substance abuse among adolescents*. Rockville, MD: U.S. Department of Health and Human Services, Substance Abuse and Mental Health Services Administration, Office of Applied Studies.

University of Waterloo. (2011). *Youth Smoking Survey (YSS): 2010-11 YSS Microdata User Guide*. Waterloo, ON: Propel Centre for Population Health Impact. Retrieved from http://www.yss.uwaterloo.ca/results/yss10_user_guide.pdf

Waddell, C., McEwan, K., Peters, R. D., Hua, J. M., & Garland, O. (2007). Preventing mental disorders in children: A public health priority. *Canadian Journal of Public Health, 98*, 174-178.

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*, 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.

Webster-Stratton, C. (1998). Preventing conduct problems in Head Start children: Strengthening parenting competencies. *Journal of Consulting and Clinical Psychology, 66*, 715-730.

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.1157.1131.1163

Wells, L. E., & Rankin, J. E. (1991). Families and delinquency: A meta-analysis of the impact of broken homes. *Social Problems, 38*, 71-93.

Welsh, W. N. (2000). The effects of school climate on school disorder. *Annals of the American Academy of Political and Social Science, 567*, 88-107.

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*, 246-260. doi:210.1177/0193841X03259549

Winters, K. C., Stinchfield, R. D., & Fulkerson, J. (1993). Toward the development of an adolescent gambling problem severity scale. *Journal of Gambling Studies, 9*, 63-84.

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. Peper & W. Craig (Eds.), *Understanding and addressing bullying: An international perspective* (pp. 184-197). Bloomington, IN: AuthorHouse.

Wood, D., Halfon, N., Scarlata, D., Newacheck, P., & Nessim, S. (1993). Impact of family relocation on children's growth, development, school function, and behaviour. *Journal of the American Medical Association, 270*, 1334-1338.

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: World Health Organization.

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. *Journal of the American Academy of Child and Adolescent Psychiatry, 43*, 134-150.

6. APPENDIX TABLES

Table A3.1.1 School Performance and Attitudes, 1991–2011

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

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

Table A3.1.2 Percentage Reporting Being Very or Somewhat Worried About Being Harmed or Threatened at School, 1999–2011 (Grades 7–12)

		1999	2001	2003	2005	2007	2009	2011
	(N=)	(4447)	(3898)	(6616)	(7726)	(6323)	(9211)	(9288)
Total		**14.2**	**13.1**	**12.4**	**12.8**	**11.7**	**12.3**	**18.2** [ab]
(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)
Sex	Males	**11.9**	**11.0**	**12.3**	**12.0**	**11.3**	**11.6**	**16.8** [ab]
		(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)
	Females	**16.5**	**15.2**	**12.4**	**13.6**	**12.1**	**13.0**	**19.7** [a]
		(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)
Grade	7	**15.4**	**15.8**	**16.5**	**15.7**	**14.4**	**18.6**	**21.7**
		(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)
	8	**18.6**	**15.7**	**15.2**	**17.4**	**13.7**	**12.2**	**18.9**
		(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)
	9	**16.3**	**14.5**	**12.5**	**14.5**	**14.0**	**14.3**	**19.7**
		(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)
	10	**15.6**	**12.0**	**12.7**	**11.5**	**11.4**	**12.9**	**19.7** [a]
		(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)
	11	**9.1**	**9.8**	**10.4**	**9.5**	**9.3**	**9.1**	**14.5** [a]
		(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)
	12	**9.6**	**9.6**	**7.6**	**8.6**	**8.2**	**8.8**	**16.4** [ab]
		(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)
Region	Toronto	**18.5**	**14.7**	**15.5**	**18.5**	**13.1**	**18.0**	**21.3**
		(14.4-23.4)	(10.5-20.3)	(11.7-20.3)	(16.2-21.0)	(10.4-16.5)	(15.0-21.4)	(17.9-25.2)
	North	**12.1**	**10.7**	**13.1**	**9.8**	**10.0**	**11.1**	**14.4**
		(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)
	West	**13.9**	**13.7**	**12.0**	**12.7**	**12.7**	**11.9**	**19.4** [a]
		(11.6-16.6)	(11.8-15.9)	(10.3-14.0)	(11.0-14.6)	(10.6-15.1)	(10.4-13.7)	(16.0-23.4)
	East	**12.5**	**11.8**	**10.6**	**10.4**	**10.0**	**10.2**	**15.7** [a]
		(10.7-14.7)	(9.8-14.2)	(8.8-12.7)	(9.2-11.7)	(8.0-12.3)	(8.5-12.1)	(13.9-17.7)

Notes: (1) N=total number of students surveyed; (2) entries in brackets are 95% confidence intervals; (3) [a] 2011 vs. 2009 significant difference, p<.01; [b] 2011 vs. 1999 significant difference, 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/Poor Physical Health, 1991–2011

	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011
(N[1])					(4447)	(3898)	(6616)	(7726)	(6323)	(9112)	(9288)
(N[2])	(2961)	(2617)	(2907)	(3072)	(2421)	(2013)	(3389)	(3969)	(3215)	(4424)	(4669)
Total[1]	—	—	—	—	**8.9**	**10.3**	**12.6**	**13.1**	**12.9**	**14.5**	**15.6** [b]
(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)
Total[2]	**5.8**	**6.3**	**7.4**	**9.3**	**8.7**	**9.0**	**12.0**	**13.0**	**11.8**	**13.1**	**14.0**
(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)
Males[1]	—	—	—	—	**8.7**	**8.3**	**9.9**	**10.5**	**9.6**	**10.8**	**12.2** [b]
					(7.3-10.4)	(6.8-10.1)	(8.7-11.3)	(9.3-11.7)	(8.3-11.1)	(9.6-12.2)	(10.6-14.0)
Males[2]	**5.3**	**5.0**	**5.7**	**7.5**	**9.4**	**7.1**	**9.5**	**10.9**	**8.8**	**10.2**	**12.0**
	(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)
Females[1]	—	—	—	—	**9.2**	**12.3**	**15.2**	**15.9**	**16.6**	**18.5**	**19.2** [b]
					(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)
Females[2]	**6.3**	**7.6**	**9.1**	**10.9**	**8.0**	**11.0**	**14.3**	**15.3**	**15.0**	**16.3**	**16.1**
	(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)
Grade 7	**3.9**	**5.5**	**5.0**	**5.8**	**3.8**	**6.2**	**6.8**	**5.5**	**4.1**	**6.3**	**6.2**
	(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)
Grade 8	—	—	—	—	**7.2**	**7.5**	**9.8**	**8.1**	**7.8**	**10.6**	**10.2**
					(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)
Grade 9	**6.9**	**5.8**	**6.6**	**10.0**	**9.8**	**8.9**	**11.4**	**14.6**	**11.7**	**14.3**	**11.4**
	(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)
Grade 10	—	—	—	—	**10.0**	**13.0**	**14.8**	**15.3**	**14.1**	**14.5**	**18.3** [b]
					(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)
Grade 11	**6.4**	**7.5**	**10.3**	**11.8**	**11.5**	**12.2**	**16.6**	**18.7**	**18.9**	**17.6**	**22.3** [b]
	(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)
Grade 12	—	—	—	—	**10.9**	**15.1**	**14.9**	**15.7**	**18.6**	**19.8**	**19.8** [b]
					(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)
Toronto[1]	—	—	—	—	**9.2**	**9.3**	**13.7**	**13.6**	**13.3**	**17.8**	**17.9** [b]
					(7.7-10.8)	(7.1-12.2)	(10.8-17.3)	(10.3-17.8)	(9.8-17.8)	(14.0-22.4)	(14.7-21.7)
Toronto[2]	**6.5**	**6.5**	**7.4**	**7.1**	**7.4**	**7.5**	**13.4**	**15.2**	**13.0**	**16.1**	**15.3**
	(5.1-8.2)	(4.6-9.1)	(3.9-13.8)	(5.5-9.2)	(5.1-10.7)	(5.6-10.0)	(9.8-17.9)	(10.9-20.9)	(9.3-17.9)	(12.4-20.5)	(11.9-19.4)
North[1]	—	—	—	—	**7.9**	**10.0**	**12.9**	**10.5**	**16.0**	**16.0**	**14.4** [b]
					(6.2-9.9)	(7.8-12.7)	(10.1-16.5)	(8.3-13.2)	(12.8-19.7)	(12.4-20.3)	(11.5-18.0)
North[2]	**3.4**	**1.8**	**6.3**	**6.3**	**7.0**	**11.0**	**14.2**	**10.7**	**14.0**	**14.0**	**13.0**
	(1.1-10.1)	(1.1-2.8)	(2.6-14.4)	(4.8-8.2)	(4.8-10.0)	(7.8-15.2)	(10.3-19.4)	(7.1-15.6)	(9.3-20.4)	(10.8-17.9)	(9.7-17.2)
West[1]	—	—	—	—	**9.7**	**11.2**	**13.3**	**14.2**	**13.0**	**14.7**	**16.5** [b]
					(7.8-12.0)	(9.3-13.4)	(12.0-14.6)	(12.6-16.0)	(11.2-15.0)	(12.8-16.7)	(14.3-19.0)
West[2]	**5.7**	**5.9**	**8.2**	**10.9**	**9.4**	**10.0**	**13.1**	**14.0**	**12.5**	**13.8**	**13.8**
	(4.7-6.8)	(3.7-9.3)	(6.6-10.1)	(8.5-13.9)	(7.3-12.0)	(7.9-12.5)	(11.2-15.3)	(11.8-16.5)	(10.4-14.9)	(11.2-16.8)	(10.2-18.4)
East[1]	—	—	—	—	**8.0**	**9.7**	**11.0**	**12.0**	**12.1**	**12.3**	**13.4** [b]
					(6.4-9.9)	(7.3-12.8)	(9.3-12.9)	(10.2-14.0)	(10.6-13.8)	(10.8-14.1)	(11.6-15.4)
East[2]	**6.1**	**8.3**	**6.6**	**9.3**	**8.8**	**8.5**	**8.7**	**11.3**	**10.0**	**10.7**	**13.9**
	(46-8.1)	(7.1-9.6)	(5.6-7.9)	(7.6-11.4)	(6.6-11.7)	(6.6-11.0)	(7.1-10.6)	(9.2-13.8)	(7.6-12.9)	(8.8-12.9)	(11.7-16.5)

Notes: (1) based on Grades 7-12 (full sample); (2) based on Grades 7, 9, 11 only (long-term sample); (3) N=total number of students surveyed; (4) entries in brackets are 95% confidence intervals; (5) no significant differences, 2011 vs. 2009; [b] 2011 vs. 1999 significant difference, p<.01.

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

Source: OSDUHS, Centre for Addiction and Mental Health

Table A3.2.2 Percentage Reporting Daily Physical Activity in the Past Week, 2009–2011 (Grades 7–12)

		2009 (N=9112)	2011 (N=9288)
Total % (95% CI)		**20.8** (19.6-22.2)	**21.3** (19.9-22.8)
Sex	Males	**26.2** (24.3-28.2)	**27.0** (25.1-29.1)
	Females	**15.2** (13.8-16.6)	**15.2** (13.8-16.6)
Grade	7	**28.2** (24.5-32.3)	**27.0** (23.8-30.4)
	8	**26.7** (23.4-30.1)	**27.8** (24.4-31.4)
	9	**23.1** (20.2-26.4)	**24.3** (21.3-27.7)
	10	**19.9** (17.1-22.9)	**22.5** (19.4-26.0)
	11	**17.5** (14.5-21.0)	**15.7** (13.2-18.6)
	12	**14.1** (12.4-16.0)	**15.6** (12.8-18.9)
Region	Toronto	**18.4** (14.9-22.5)	**17.9** (15.4-20.7)
	North	**21.8** (18.3-25.6)	**24.6** (22.4-27.0)
	West	**20.7** (18.8-22.7)	**21.4** (19.0-24.1)
	East	**22.1** (20.1-24.2)	**22.4** (20.2-24.7)

Notes: (1) N=total number of students surveyed; (2) entries in brackets are 95% confidence intervals; (3) no significant differences, 2011 vs. 2009.

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 of Reporting No Days of Physical Activity in the Past Week, 2009–2011 (Grades 7–12)

		2009 (N=9112)	2011 (N=9288)
Total % (95% CI)		**8.5** (7.6-9.5)	**8.4** (7.4-9.6)
Sex	Males	**7.9** (6.6-9.3)	**8.9** (7.4-10.8)
	Females	**9.1** (8.0-10.4)	**7.9** (6.6-9.3)
Grade	7	**6.9** (5.4-8.8)	**7.9** (6.1-10.3)
	8	**7.3** (5.5-9.6)	**6.5** (4.8-8.8)
	9	**6.8** (5.1-9.0)	**6.2** (4.4-8.6)
	10	**7.6** (5.7-10.1)	**7.4** (5.2-10.3)
	11	**9.5** (7.3-12.2)	**10.6** (8.3-13.6)
	12	**11.4** (9.1-14.3)	**10.4** (7.8-13.8)
Region	Toronto	**11.2** (8.7-14.3)	**13.0** (10.2-16.4)
	North	**7.4** (5.7-9.4)	**6.8** (5.6-8.2)
	West	**8.3** (6.9-10.0)	**8.0** (6.3-10.1)
	East	**7.6** (6.3-9.0)	**6.8** (5.7-8.2)

Notes: (1) N=total number of students surveyed; (2) entries in brackets are 95% confidence intervals; (3) no significant differences, 2011 vs. 2009.

Q: "On how many days of the last 7 days were you physically active for a total of at least 60 minutes each day? Please add up all the time you spent on any kind of physical activity that increased your heart rate and made you breathe hard some of the time. (Some examples are brisk walking, running, rollerblading, biking, dancing, skateboarding, swimming, soccer, basketball, football.) Please include both school and non-school activities."

Source: OSDUHS, Centre for Addiction and Mental Health

Table A3.2.4 Percentage Reporting No Days of Physical Activity in Physical Education Classes at School in the Past Five School Days, 1999–2011 (Grades 7–12)

		1999	2001	2003	2005	2007	2009	2011
	(N=)	(2229)	(2061)	(6616)	(7726)	(6323)	(9211)	(9288)
Total		**43.8**	**44.2**	**46.4**	**49.5**	**44.5**	**45.5**	**48.1**
(95% CI)		(40.3-47.4)	(40.4-48.2)	(44.0-48.7)	(47.0-52.1)	(41.6-47.4)	(43.4-47.6)	(44.2-52.1)
Sex	Males	**41.2**	**39.0**	**43.5**	**45.9**	**40.6**	**42.2**	**43.1**
		(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)
	Females	**46.5**	**49.4**	**49.0**	**53.4**	**48.6**	**49.0**	**53.5**
		(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)
Grade	7	**30.0**	**20.0**	**27.9**	**26.4**	**21.6**	**15.4**	**14.2** [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)
	8	**23.9**	**21.8**	**22.3**	**29.9**	**16.5**	**12.8**	**9.8** [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)
	9	**35.6**	**44.9**	**43.5**	**45.1**	**43.1**	**40.9**	**44.4**
		(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)
	10	**55.7**	**57.6**	**55.9**	**63.3**	**57.4**	**58.9**	**61.2**
		(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)
	11	**57.2**	**61.3**	**59.8**	**60.8**	**58.3**	**61.8**	**64.9**
		(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)
	12	**64.7**	**62.2**	**60.8**	**67.7**	**61.6**	**66.3**	**69.2**
		(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)
Region	Toronto	**44.3**	**39.6**	**48.5**	**49.0**	**41.2**	**46.3**	**44.5**
		(33.7-55.5)	(29.5-50.6)	(43.2-53.8)	(40.4-57.6)	(34.3-48.5)	(38.1-54.8)	(36.0-53.3)
	North	**49.1**	**46.9**	**45.6**	**42.3**	**47.6**	**49.5**	**51.4**
		(43.1-55.2)	(39.2-54.8)	(41.3-49.9)	(36.2-48.6)	(42.4-52.8)	(45.8-53.2)	(48.3-54.4)
	West	**45.6**	**44.1**	**46.4**	**51.4**	**43.7**	**47.4**	**48.3**
		(40.2-51.1)	(39.0-49.4)	(43.4-49.5)	(47.7-55.0)	(39.1-48.4)	(44.6-50.3)	(41.2-55.5)
	East	**39.8**	**46.7**	**45.2**	**49.0**	**46.5**	**41.9**	**49.3**
		(34.2-45.6)	(38.7-54.8)	(39.9-50.6)	(45.2-52.8)	(41.6-51.5)	(39.1-44.8)	(44.1-54.5)

Notes: (1) N=total number of students surveyed; (2) data based on a random half sample in 1999 and 2001; (3) entries in brackets are 95% confidence intervals; (4) students who were not enrolled in a physical education class were assigned a value of "0 days"; (5) no significant difference, 2011 vs. 2009; [b] 2011 vs. 1999 significant difference, 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?"

Source: OSDUHS, Centre for Addiction and Mental Health

Table A3.2.5 Percentage Reporting Daily "Screen Time" Sedentary Behaviour in the Past Week, 2009–2011 (Grades 7–12)

		2009 (N=9112)	2011 (N=9288)
Total % (95% CI)		**9.7** (8.7-10.7)	**10.2** (8.7-11.8)
Sex	Males	**11.4** (9.8-13.1)	**11.9** (10.2-13.9)
	Females	**7.8** (6.8-9.0)	**8.3** (6.6-10.4)
Grade	7	**4.9** (3.4-7.0)	**4.4** (3.-6.3)
	8	**7.6** (6.1-9.4)	**8.8** (6.9-11.2)
	9	**8.1** (6.5-10.0)	**9.1** (6.5-12.8)
	10	**9.6** (7.6-12.2)	**12.7** (9.6-16.6)
	11	**12.6** (10.3-15.2)	**11.5** (9.3-14.)
	12	**12.8** (9.9-16.4)	**11.8** (8.3-16.5)
Region	Toronto	**14.5** (12.3-17.1)	**13.8** (11.9-16.0)
	North	**8.3** (5.7-11.8)	**8.8** (6.8-11.4)
	West	**8.7** (7.6-10.0)	**10.3** (7.5-14.1)
	East	**8.8** (6.9-11.0)	**8.3** (7.1-9.6)

Notes: (1) N=total number of students surveyed; (2) entries in brackets are 95% confidence intervals; (3) no significant differences, 2011 vs. 2009.

Q: "In the last 7 days, about how many hours a day, on average, did you spend: watching TV/movies, playing video/computer games, on a computer chatting, emailing, or surfing the Internet?" Screen time sedentary behaviour is defined as 7 or more hours daily.

Source: OSDUHS, Centre for Addiction and Mental Health

Table A3.2.6 Percentage Overweight or Obese, 2009–2011 (Grades 7–12)

		2009 (N=9112)	2011 (N=9288)
Total % (95% CI)		**25.2** (23.8-26.7)	**25.5** (23.2-28.0)
Sex	Males	**30.0** (27.6-32.5)	**29.5** (26.8-32.5)
	Females	**20.1** (18.4-21.9)	**21.3** (18.6-24.2)
Grade	7	**23.5** (20.0-27.1)	**19.7** (16.0-24.1)
	8	**27.4** (24.4-30.7)	**20.9** [a] (18.0-24.2)
	9	**26.1** (22.9-29.6)	**27.2** (21.9-33.4)
	10	**25.8** (23.0-28.9)	**27.7** (23.5-32.3)
	11	**25.4** (21.6-29.6)	**28.7** (25.0-32.6)
	12	**23.8** (20.6-27.2)	**25.9** (22.0-30.3)
Region	Toronto	**24.5** (21.4-27.9)	**26.4** (21.9-31.4)
	North	**31.4** (27.7-35.4)	**27.9** (23.8-32.3)
	West	**25.9** (23.5-28.5)	**26.1** (21.5-31.2)
	East	**23.6** (21.6-25.8)	**24.1** (22.2-26.2)

Notes: (1) N=total number of students surveyed; (2) entries in brackets are 95% confidence intervals; (3) [a] 2011 vs. 1999 significant difference, p<.01.

Q: "What is your current height without shoes?"; "What is your current weight without shoes?"; body mass index (BMI) was calculated based on self-reported height and weight using age-by-sex BMI cut-off points created by Cole and colleagues (2000).

Source: OSDUHS, Centre for Addiction and Mental Health

Table A3.2.7 Body Image and Weight Control, 2001–2011 (Grades 7–12)

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

(Cont'd)

		2001	2003	2005	2007	2009	2011
GRADE 10		(384)	(559)	(685)	(528)	(720)	(722)
Belief:	too thin	7.7	11.7	9.9	9.8	8.4	11.3
	about right weight	73.8	64.2	68.8	68.7	66.5	60.7
	too fat	18.4	24.1	21.2	21.5	25.1	28.0
Trying to:	lose weight	34.3	32.2	29.7	28.3	33.6	35.6
	gain weight	11.0	11.9	11.3	12.4	11.3	14.4
	keep from gaining weight	16.8	21.6	23.6	20.6	21.1	17.2
	not trying to do anything	37.8	34.3	35.4	38.7	34.0	32.8
GRADE 11		(273)	(568)	(718)	(589)	(659)	(731)
Belief:	too thin	12.2	11.6	13.5	12.0	10.6	10.2
	about right weight	66.1	65.5	66.1	67.2	64.4	60.2
	too fat	21.7	23.0	20.3	20.8	24.9	29.6
Trying to:	lose weight	31.1	31.8	30.1	28.2	28.5	30.6
	gain weight	17.1	13.9	15.0	18.9	15.8	13.8
	keep from gaining weight	16.5	20.1	21.5	20.1	26.3	22.7
	not trying to do anything	35.3	34.2	33.4	32.8	29.4	33.0
GRADE 12		(188)	(511)	(631)	(569)	(688)	(767)
Belief:	too thin	15.4	11.8	12.1	11.4	13.6	14.1
	about right weight	63.0	67.0	67.1	66.7	64.5	62.6
	too fat	21.6	21.2	20.8	21.9	21.9	23.3
Trying to:	lose weight	27.4	31.5	31.7	31.2	27.5	27.8
	gain weight	18.5	13.9	16.7	17.0	18.8	18.2
	keep from gaining weight	17.6	20.6	18.9	24.2	21.7	25.6
	not trying to do anything	36.4	34.0	32.7	27.6	32.1	28.4
TORONTO		(266)	(549)	(595)	(473)	(419)	(622)
Belief:	too thin	12.4	13.7	14.4	10.6	11.4	13.4
	about right weight	74.6	69.7	66.7	72.4	71.5	63.1
	too fat	13.0	16.6	18.8	17.0	17.1	23.5 [b]
Trying to:	lose weight	28.4	26.1	29.9	25.4	30.0	33.0
	gain weight	13.6	11.5	14.3	16.2	14.9	15.9
	keep from gaining weight	20.8	18.7	20.4	19.8	19.8	16.9
	not trying to do anything	37.2	43.7	35.3	38.6	35.2	32.4
NORTH REGION		(415)	(539)	(517)	(376)	(290)	(771)
Belief:	too thin	8.3	9.7	10.8	9.7	6.7	8.0
	about right weight	67.5	70.4	70.8	68.8	68.9	68.8
	too fat	24.3	19.8	18.4	21.5	24.4	23.2
Trying to:	lose weight	31.2	26.8	27.3	28.1	31.3	29.0
	gain weight	11.9	10.6	10.9	9.4	17.1	12..0
	keep from gaining weight	19.5	19.9	21.9	22.2	19.6	24.2
	not trying to do anything	37.4	42.7	39.9	40.3	32.0	34.7
WEST REGION		(707)	(1254)	(1428)	(1316)	(1439)	(1147)
Belief:	too thin	9.6	11.4	9.0	11.2	10.6	11.0
	about right weight	71.3	67.2	70.1	69.0	64.4	61.9
	too fat	19.1	21.4	20.9	19.8	25.0	27.1
Trying to:	lose weight	31.4	30.6	31.6	28.6	29.7	31.1
	gain weight	11.9	11.7	11.3	13.6	12.4	14.2
	keep from gaining weight	20.0	21.2	20.2	23.4	24.0	22.2
	not trying to do anything	36.8	36.6	36.8	34.4	33.9	32.5

(Cont'd)

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

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 difference, 2011 vs. 2009; [b] 2011 vs. 2001 significant difference, $p<.01$.

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

Source: OSDUHS, Centre for Addiction and Mental Health

Table A3.2.8 Percentage Reporting a Medically-Treated Injury at Least Once in the Past Year, 2003–2011 (Grades 7–12)

		2003	2005	2007	2009	2011
	(N=)	(6616)	(7726)	(2935)	(4261)	(4472)
Total %		**35.4**	**33.8**	**37.4**	**40.5**	**41.9** [b]
(95% CI)		(33.7-37.1)	(32.2-35.5)	(35.2-39.6)	(38.5-42.5)	(39.4-44.4)
Sex	Males	**38.0**	**37.9**	**39.4**	**43.0**	**44.2** [b]
		(35.6-40.5)	(35.8-40.0)	(36.3-42.6)	(40.2-46.0)	(41.3-47.1)
	Females	**33.0**	**29.5**	**35.2**	**37.6**	**39.3** [b]
		(30.9-35.2)	(27.6-31.4)	(32.2-38.2)	(35.0-40.3)	(35.3-43.5)
Grade	7	**32.5**	**29.6**	**31.3**	**39.1**	**34.9**
		(27.9-37.4)	(26.7-32.6)	(25.3-37.9)	(33.9-44.6)	(30.4-39.8)
	8	**36.3**	**35.3**	**31.4**	**40.8**	**41.0**
		(32.2-40.5)	(31.2-39.6)	(26.8-36.3)	(37.0-44.8)	(34.9-47.4)
	9	**38.3**	**35.1**	**39.9**	**42.9**	**43.2**
		(34.9-41.8)	(32.2-38.1)	(34.4-45.7)	(38.2-47.7)	(37.9-48.7)
	10	**35.1**	**33.3**	**37.7**	**42.0**	**45.7** [b]
		(31.6-38.8)	(30.1-36.6)	(33.5-42.1)	(37.8-46.5)	(40.8-50.6)
	11	**36.0**	**33.1**	**38.9**	**40.8**	**38.5**
		(32.2-40.0)	(30.1-36.4)	(34.7-43.2)	(36.4-45.3)	(33.1-44.1)
	12	**33.6**	**36.0**	**42.7**	**37.8**	**44.8**
		(30.1-37.4)	(32.1-40.0)	(37.3-48.3)	(33.5-42.4)	(34.9-55.2)
Region	Toronto	**26.4**	**26.7**	**33.0**	**34.7**	**34.6** [b]
		(22.4-31.0)	(22.7-31.1)	(27.9-38.6)	(28.6-41.4)	(31.0-38.3)
	North	**41.8**	**39.1**	**40.7**	**34.6**	**49.3** [a]
		(38.1-45.6)	(35.7-42.7)	(33.9-47.8)	(26.3-41.5)	(45.3-53.4)
	West	**36.2**	**33.5**	**38.4**	**41.7**	**43.6**
		(33.4-39.0)	(31.0-36.2)	(35.6-41.4)	(38.8-44.6)	(38.9-48.4)
	East	**38.1**	**36.8**	**37.8**	**43.2**	**42.3**
		(35.0-41.3)	(34.5-39.3)	(33.5-42.3)	(40.4-46.0)	(39.5-45.2)

Notes: (1) N=total number of students surveyed; (2) entries in brackets are 95% confidence intervals; (3) asked of a random half sample in 2007 and 2009; (4) [a] 2011 vs. 2009 significant difference, p<.01; [b] 2011 vs. 2003 significant difference, 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 A3.3.1 Percentage Reporting No Physician Health Care Visit in the Past Year, 1999–2011 (Grades 7–12)

		1999	2001	2003	2005	2007	2009	2011
	(N=)	(4447)	(3898)	(6616)	(7726)	(2935)	(4261)	(4207)
Total		**30.0**	**34.0**	**39.8**	**38.9**	**39.0**	**33.6**	**32.7**
(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)
Sex	Males	**34.0**	**38.9**	**46.2**	**43.4**	**44.6**	**39.3**	**36.1**
		(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)
	Females	**25.9**	**29.2**	**33.8**	**34.0**	**32.8**	**27.2**	**28.9**
		(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)
Grade	7	**33.6**	**33.8**	**42.6**	**44.8**	**40.9**	**33.6**	**33.4**
		(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)
	8	**31.5**	**33.0**	**43.2**	**44.0**	**45.5**	**33.4**	**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)
	9	**31.4**	**35.3**	**39.4**	**37.1**	**42.4**	**31.1**	**31.2**
		(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)
	10	**26.9**	**36.0**	**38.4**	**36.7**	**35.4**	**30.3**	**30.8**
		(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)
	11	**26.9**	**29.3**	**37.8**	**35.8**	**31.1**	**35.0**	**34.9**
		(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)
	12	**29.6**	**35.0**	**38.6**	**35.9**	**39.7**	**36.9**	**31.9**
		(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)
Region	Toronto	**25.5**	**30.3**	**38.7**	**36.1**	**39.2**	**35.8**	**31.2**
		(21.7-29.8)	(26.7-34.2)	(36.8-40.6)	(31.5-41.1)	(32.3-46.5)	(30.8-41.0)	(27.2-35.6)
	North	**39.5**	**39.7**	**45.9**	**49.3**	**47.5**	**39.1**	**40.7**
		(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)
	West	**32.4**	**37.5**	**42.0**	**41.4**	**40.1**	**33.2**	**33.2**
		(29.2-35.7)	(34.1-41.1)	(39.9-44.2)	(39.0-43.8)	(37.1-43.3)	(29.5-37.2)	(29.1-37.7)
	East	**26.6**	**29.2**	**35.5**	**35.1**	**35.2**	**31.7**	**31.5**
		(23.8-29.6)	(24.9-33.9)	(31.9-39.2)	(31.6-38.8)	(30.5-40.1)	(27.6-36.1)	(28.5-34.7)

Notes: (1) N=total number of students surveyed; (3) asked of a random half sample since 2007; (3) entries in brackets are 95% confidence intervals; (4) no significant difference, 2011 vs. 2009, or 2011 vs. 1999.
Q: "In the last 12 months, how many times have you seen a doctor about your physical health or for a check-up?"
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, 1999–2011 (Grades 7–12)

		1999	2001	2003	2005	2007	2009	2011
	(N=)	(4447)	(3898)	(6616)	(7726)	(3388)	(4851)	(4816)
Total % (95% CI)		**12.4** (11.3-13.7)	**10.9** (9.8-12.2)	**11.0** (10.0-12.2)	**11.7** (10.5-12.9)	**21.2** (19.4-23.1)	**23.8** (22.0-25.8)	**15.1** [a] (12.8-17.6)
Sex	Males	**9.5** (8.0-11.2)	**8.1** (6.9-9.5)	**8.1** (7.1-9.3)	**8.7** (7.4-10.2)	**19.5** (17.1-22.1)	**22.3** (19.6-25.2)	**11.1** [a] (9.0-13.5)
	Females	**15.5** (13.6-17.6)	**13.6** (12.0-15.4)	**13.7** (12.1-15.4)	**14.8** (13.3-16.4)	**23.0** (20.7-25.4)	**25.4** (23.1-28.0)	**19.1** [a] (16.4-22.3)
Grade	7	**8.9** (7.0-11.3)	**7.4** (5.8-9.4)	**10.0** (8.2-12.1)	**9.8** (7.4-12.9)	**23.3** (18.7-28.6)	**28.9** (24.3-34.0)	**15.0** [ab] (11.7-19.0)
	8	**11.3** (8.9-14.3)	**9.3** (7.2-11.9)	**10.3** (7.5-14.0)	**11.4** (8.6-15.0)	**18.5** (14.3-23.6)	**23.2** (19.4-27.5)	**13.9** [a] (10.5-18.3)
	9	**14.4** (11.4-18.1)	**11.0** (8.9-13.6)	**9.0** (7.1-11.3)	**11.2** (9.4-13.1)	**22.4** (18.8-26.5)	**26.1** (21.9-30.8)	**12.1** [a] (9.0-15.9)
	10	**14.8** (11.3-19.1)	**12.4** (10.6-14.6)	**11.1** (8.5-14.2)	**14.2** (12.0-16.7)	**19.0** (15.4-23.2)	**24.6** (21.0-28.6)	**16.6** (11.6-23.0)
	11	**14.6** (11.2-18.8)	**12.4** (10.6-14.6)	**14.4** (12.0-17.3)	**12.7** (10.2-15.8)	**21.3** (17.6-25.6)	**23.3** (18.1-29.5)	**17.6** (10.9-27.1)
	12	**9.3** (7.2-12.1)	**13.0** (7.8-21.0)	**11.0** (9.0-13.4)	**10.7** (8.9-12.8)	**22.5** (18.5-27.1)	**19.0** (15.4-23.3)	**14.9** (12.2-18.1)
Region	Toronto	**10.5** (8.3-13.2)	**10.8** (9.0-12.8)	**8.3** (6.4-10.6)	**11.2** (7.9-15.6)	**25.2** (20.7-30.3)	**27.0** (21.5-33.3)	**13.3** [a] (10.4-16.7)
	North	**11.7** (8.9-15.3)	**11.0** (8.8-13.6)	**12.0** (10.0-14.4)	**14.6** (12.0-17.7)	**21.2** (15.8-27.8)	**19.8** (15.6-24.7)	**16.5** (12.5-21.6)
	West	**13.5** (11.4-16.0)	**10.8** (8.7-13.2)	**10.6** (8.9-12.5)	**12.1** (10.3-14.1)	**18.9** (16.2-21.8)	**23.1** (20.4-26.0)	**16.5** (12.4-21.5)
	East	**12.3** (10.6-14.2)	**11.2** (9.6-13.2)	**13.2** (11.2-15.4)	**10.7** (9.3-12.3)	**22.0** (18.9-25.4)	**24.1** (21.3-27.1)	**13.8** [a] (11.6-16.5)

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) [a] 2011 vs. 2009 significant difference, p<.01; (5) [b] 2011 vs. 1999 significant difference, 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?"
Source: OSDUHS, Centre for Addiction and Mental Health

Table A3.3.3 Percentage Reporting Medical Tranquillizer/Sedative Use at Least Once in the Past Year, 1977–2011

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011
(N[1])												(4447)	(3898)	(3152)	(4078)	(3388)	(4851)	(9288)
(N[2])	(3927)	(3920)	(3010)	(3614)	(3146)	(3376)	(3340)	(2961)	(2617)	(2907)	(3072)	(2421)	(2013)	(1618)	(2107)	(1727)	(2355)	(4669)
Total[1] (95% CI)	—	—	—	—	—	—	—	—	—	—	—	**3.2** (2.6-4.0)	**3.2** (2.7-3.9)	**2.7** (2.2-3.4)	**2.2** (1.6-2.9)	**4.5** (3.7-5.3)	**3.7** (3.0-4.7)	**3.6** (2.9-4.3)
Total[2] (95% CI)	**8.5** (7.6-9.4)	**6.8** (6.0-7.6)	**7.1** (6.2-8.1)	**6.3** (5.4-7.4)	**4.5** (3.9-5.2)	**4.8** (3.7-6.1)	**2.8** (2.1-3.6)	**2.8** (2.0-3.7)	**2.3** (1.6-3.3)	**1.6** (1.1-2.4)	**1.9** (1.5-2.4)	**3.0** (2.2-4.0)	**2.9** (2.2-3.8)	**3.0** (2.2-4.2)	**1.9** (1.4-2.7)	**3.8** (2.9-4.9)	**3.4** (2.6-4.5)	**3.1** (2.2-4.4)
Sex																		
Males[1]	—	—	—	—	—	—	—	—	—	—	—	**3.6** (2.6-4.9)	**4.1** (3.1-5.4)	**3.4** (2.6-4.6)	**2.2** (1.5-3.3)	**3.2** (2.5-4.2)	**2.8** (2.0-3.8)	**3.0** (2.1-4.2)
Males[2]	**8.0** (6.8-9.4)	**7.0** (6.0-8.2)	**6.8** (5.7-8.0)	**5.8** (5.1-6.7)	**4.4** (3.6-5.3)	**4.4** (2.7-6.9)	**2.4** (1.4-4.2)	**3.1** (2.3-4.2)	**2.6** (1.8-3.8)	**2.0** (1.3-2.9)	**2.1** (1.4-3.0)	**3.0** (1.9-4.7)	**3.4** (2.2-5.2)	**4.2** (2.8-6.4)	**2.0** (1.4-3.0)	**2.8** (1.9-4.1)	**2.3** (1.5-3.7)	**2.8** (1.7-4.8)
Females[1]	—	—	—	—	—	—	—	—	—	—	—	**2.9** (2.2-3.8)	**2.4** (1.8-3.2)	**2.1** (1.4-3.0)	**2.1** (1.3-3.3)	**5.8** (4.6-7.2)	**4.7** (3.6-6.2)	**4.2** (3.5-5.0)
Females[2]	**8.9** (7.8-10.2)	**6.4** (5.4-7.7)	**7.4** (5.8-9.3)	**6.8** (5.3-8.7)	**4.6** (3.5-6.0)	**5.1** (4.2-6.3)	**3.1** (2.6-3.8)	**2.4** (1.4-4.0)	**2.0** (1.2-3.1)	**1.3** (0.7-2.4)	**1.7** (1.1-2.7)	**3.0** (2.0-4.5)	**2.4** (1.6-3.6)	**1.9** (1.0-3.4)	**1.8** (1.1-3.0)	**4.8** (3.5-6.6)	**4.5** (3.3-6.2)	**3.4** (2.7-4.4)
Grade																		
7	**6.3** (5.2-7.5)	**5.4** (4.2-6.8)	**3.2** (2.0-5.0)	**4.2** (3.0-5.9)	**2.9** (1.8-4.7)	**3.2** (2.0-5.3)	**1.8** (1.2-2.6)	**1.6** (0.7-4.0)	**1.4** (0.8-2.7)	**1.2** (0.5-2.7)	†	**1.9** (0.8-4.6)	**1.2** (0.6-2.4)	**2.4** (1.1-4.8)	†	**2.7** (1.4-5.1)	**2.4** (1.4-4.1)	**1.3** (0.7-2.2)
8	—	—	—	—	—	—	—	—	—	—	—	**3.5** (1.9-6.3)	**3.7** (1.9-6.9)	**1.7** (0.9-3.4)	**2.4** (0.9-6.1)	**3.7** (2.2-6.1)	**2.4** (1.2-4.5)	**2.2** (1.4-3.5)
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)
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)
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)
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)

(Cont'd)

	1977	1979	1981	1983	1985	1987	1989	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011
(N[1])												(4447)	(3898)	(3152)	(4078)	(3388)	(4851)	(9288)
(N[2])	(3927)	(3920)	(3010)	(3614)	(3146)	(3376)	(3340)	(2961)	(2617)	(2907)	(3072)	(2421)	(2013)	(1618)	(2107)	(1727)	(2355)	(4669)
Region																		
Toronto[1]	—	—	—	—	—	—	—	—	—	—	—	**2.8** (1.7-4.7)	**2.5** (1.5-4.2)	**2.8** (1.6-4.6)	**1.6** (0.6-4.0)	**2.8** (1.7-4.8)	**2.6** (1.3-5.1)	**2.0** (1.4-2.9)
Toronto[2]	—	—	**6.3** (4.9-8.0)	**4.7** (3.1-7.1)	**3.7** (3.2-4.3)	**4.4** (2.7-6.9)	**0.9** (0.4-2.1)	**2.5** (1.6-3.6)	**1.2** (0.6-2.4)	**1.1** (0.5-2.4)	**1.0** (0.4-2.2)	**1.9** (0.8-4.5)	**2.0** (1.4-3.0)	**2.6** (0.9-6.8)	**2.1** (1.0-4.3)	**2.7** (1.1-6.2)	†	†
North[1]	—	—	—	—	—	—	—	—	—	—	—	**3.7** (1.7-7.7)	**3.8** (2.7-5.4)	**2.4** (1.2-4.7)	**2.0** (1.0-3.9)	**3.9** (2.3-6.6)	**3.7** (1.9-6.9)	**4.3** (3.3-5.6)
North[2]	—	—	**8.4** (5.3-13.0)	**7.4** (4.3-12.3)	**4.8** (3.6-6.4)	**6.2** (3.5-10.9)	**4.0** (2.7-6.0)	**4.1** (1.9-8.5)	**2.4** (1.2-4.6)	**1.8** (0.5-7.2)	**1.7** (1.4-2.2)	**5.0** (1.3-17.7)	**4.0** (2.6-6.3)	**2.2** (1.1-4.4)	**2.4** (1.1-5.4)	**3.8** (1.8-7.6)	†	**4.7** (3.3-6.7)
West[1]	—	—	—	—	—	—	—	—	—	—	—	**2.6** (1.7-4.0)	**3.3** (2.4-4.5)	**2.7** (1.9-3.9)	**1.9** (1.2-3.0)	**3.9** (2.7-5.5)	**3.7** (2.3-5.8)	**3.8** (2.6-5.4)
West[2]	—	—	**7.2** (6.1-8.3)	**6.2** (5.3-7.4)	**4.7** (3.5-6.2)	**4.8** (3.0-7.5)	**3.1** (2.0-4.8)	**2.6** (1.4-4.7)	**2.5** (1.5-4.2)	**2.0** (1.2-3.3)	**2.1** (1.4-3.1)	**1.9** (1.1-3.1)	**2.8** (1.6-4.9)	**3.3** (2.0-5.3)	**1.6** (0.8-3.3)	**3.1** (2.0-4.9)	**2.9** (1.6-5.1)	†
East[1]	—	—	—	—	—	—	—	—	—	—	—	**4.2** (3.2-5.5)	**3.5** (2.6-4.7)	**2.8** (1.9-4.1)	**2.8** (1.6-2.9)	**5.9** (4.7-7.3)	**4.4** (3.4-5.6)	**4.0** (3.1-5.1)
East[2]	—	—	**7.0** (4.6-10.4)	**7.2** (5.2-10.0)	**4.6** (3.6-5.8)	**4.4** (2.7-7.4)	**3.0** (2.0-4.6)	**2.9** (1.9-4.4)	**2.6** (1.2-5.8)	**1.4** (0.6-3.0)	**2.2** (1.5-3.3)	**4.7** (3.3-6.6)	**3.4** (2.2-5.4)	**3.1** (1.6-5.8)	**2.0** (1.3-3.2)	**5.0** (3.4-7.2)	**4.3** (3.2-5.8)	**3.6** (2.7-4.7)

Notes: (1) based on Grades 7-12 (full sample); (2) based on Grades 7, 9, and 11 only (long-term sample); (3) N=total number of students surveyed; (4) asked of a random half sample starting in 2003; (5) entries in brackets are 95% confidence intervals; (6) regional stratification differed in 1977 and 1979 and therefore regions are not presented; (7) †=estimate suppressed due to unreliability; (8) no significant difference, 2011 vs. 2009; (9) no significant difference, 2011 vs. 1999.

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 & Mental Health

Table A3.3.4 Percentage Reporting Medical Use of an ADHD Drug at Least Once in the Past Year, 2007–2011 (Grades 7–12)

		2007 (N=6323)	2009 (N=4851)	2011 (N=9288)
Total % (95% CI)		**2.3** (1.9-2.9)	**2.7** (2.1-3.5)	**2.5** (2.1-3.1)
Sex	Males	**3.2** (2.5-4.1)	**3.9** (2.8-5.3)	**3.0** (2.3-3.9)
	Females	**1.3** (0.9-2.0)	**1.4** (0.9-2.2)	**2.1** (1.4-3.2)
Grade	7	**3.4** (2.1-5.6)	**3.2** (1.9-5.4)	**3.1** (2.0-4.8)
	8	**1.7** (0.9-3.1)	**2.8** (1.5-5.1)	**3.2** (2.0-5.0)
	9	**3.0** (1.9-4.4)	**4.2** (2.6-6.7)	**3.0** (2.2-4.1)
	10	**2.2** (1.4-3.4)	**2.4** (1.3-4.4)	**3.5** (2.2-5.4)
	11	**1.7** (1.0-2.9)	**2.6** (0.9-7.1)	†
	12	**2.1** (1.2-3.6)	**1.4** (0.6-2.9)	**1.4** (0.8-2.5)
Region	Toronto	**1.3** (0.7-2.2)	†	**2.0** (1.2-3.3)
	North	**2.7** (1.4-5.1)	†	**3.0** (2.1-4.2)
	West	**2.3** (1.6-3.2)	**2.6** (1.7-3.8)	**2.6** (1.9-3.6)
	East	**2.8** (2.0-4.0)	**3.7** (2.5-5.3)	**2.7** (2.0-3.6)

Notes: (1) N=total number of students surveyed; (2) asked of a random half sample in 2009; (3) entries in brackets are 95% confidence intervals; (4) ADHD=Attention Deficit Hyperactivity Disorder; (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, 2007–2011 (Grades 7–12)

		2007 (N=6323)	2009 (N=9112)	2011 (N=9288)
Total % (95% CI)		**40.6** (39.0-42.1)	**31.8** (30.3-33.3)	**21.4** [ab] (19.6-23.2)
Sex	Males	**35.8** (33.8-37.9)	**26.7** (24.7-28.8)	**18.4** [ab] (16.9-20.1)
	Females	**45.7** (43.3-48.1)	**37.3** (35.2-39.3)	**24.5** [ab] (21.8-27.4)
Grade	7	**33.4** (29.5-37.4)	**23.9** (20.7-27.3)	**12.5** [ab] (10.3-15.0)
	8	**39.5** (35.7-43.4)	**28.7** (25.2-32.3)	**16.8** [ab] (14.4-19.7)
	9	**44.6** (41.2-48.0)	**33.9** (30.1-38.0)	**19.5** [ab] (17.9-21.2)
	10	**44.0** (40.7-47.4)	**33.6** (30.4-37.1)	**22.8** [ab] (19.4-26.6)
	11	**41.0** (37.7-44.4)	**33.9** (30.1-38.0)	**24.1** [ab] (19.1-30.0)
	12	**40.3** (36.9-43.8)	**34.1** (30.6-37.9)	**27.2** [ab] (24.2-30.3)
Region	Toronto	**36.4** (32.5-40.5)	**26.9** (22.4-31.9)	**15.8** [ab] (13.9-17.8)
	North	**39.7** (35.7-43.9)	**31.1** (26.7-35.9)	**21.5** [ab] (19.0-24.3)
	West	**40.9** (38.9-42.9)	**31.9** (29.6-34.3)	**22.8** [ab] (19.7-26.3)
	East	**42.5** (39.3-45.6)	**34.1** (32.2-36.1)	**22.2** [ab] (20.0-24.5)

Notes: (1) N=total number of students surveyed; (2) entries in brackets are 95% confidence intervals; (3) [a] 2011 vs. 2009 significant difference, $p<.01$; [b] 2011 vs. 2007 significant difference, $p<.01$.

Q: "In the last 12 months, how often did you use pain relief pills (such as Percocet, Percodan, Tylenol #3, Demerol, OxyContin, codeine) *with a prescription* or because a doctor told you to take them? (We do not mean regular Tylenol or Aspirin that anyone can buy in a drugstore.)"

Source: OSDUHS, Centre for Addiction and Mental Health

Table A3.4.1 Percentage Reporting Fair/Poor Mental Health, 2007–2011 (Grades 7–12)

		2007 (N=3388)	2009 (N=4851)	2011 (N=4816)
Total % (95% CI)		**11.4** (10.0-12.9)	**11.7** (10.3-13.2)	**13.7** (12.0-15.7)
Sex	Males	**7.1** (5.7-8.8)	**8.4** (6.9-10.3)	**9.4** (7.7-11.3)
	Females	**15.8** (13.7-18.2)	**15.0** (13.2-17.0)	**18.2** (15.1-21.7)
Grade	7	**6.1** (4.0-9.2)	**6.9** (4.5-10.4)	**7.7** (4.9-11.7)
	8	**9.1** (6.5-12.5)	**9.1** (6.4-12.7)	**10.1** (7.3-13.8)
	9	**12.4** (9.6-15.9)	**12.6** (9.6-16.1)	**12.6** (9.7-16.3)
	10	**12.3** (9.2-16.3)	**10.9** (8.3-14.3)	**17.3** (13.5-21.8)
	11	**12.5** (9.7-16.0)	**13.2** (10.5-16.4)	**14.7** (11.8-18.2)
	12	**14.5** (11.3-18.4)	**15.1** (12.0-18.8)	**16.5** (13.2-20.3)
Region	Toronto	**8.8** (5.9-12.9)	**14.4** (11.2-18.4)	**14.7** (11.9-18.1)
	North	**14.6** (10.7-19.7)	**12.3** (9.4-16.0)	**14.2** (10.6-18.9)
	West	**12.3** (10.4-14.5)	**12.2** (10.0-14.8)	**13.2** (9.9-17.4)
	East	**11.0** (8.5-14.1)	**9.7** (7.8-12.1)	**13.9** (12.3-15.6)

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) no significant changes over time.
Q: "How would you rate your mental or emotional health?" (Fair/poor mental health is defined as a rating of "poor" or "fair")
Source: OSDUHS, Centre for Addiction and Mental Health

Table A3.4.2 Percentage Reporting Elevated Psychological Distress (GHQ12 3+), 1999–2011 (Grades 7–12)

		1999	2001	2003	2005	2007	2009	2011
	(N=)	(2299)	(2061)	(3464)	(4078)	(3388)	(4851)	(4816)
Total % (95% CI)		**30.0** (27.8-32.2)	**26.5** (24.2-29.0)	**30.8** (28.9-32.8)	**29.6** (27.8-31.4)	**30.8** (28.8-32.8)	**31.0** (29.1-32.9)	**33.6** (31.0-36.1)
Sex	Males	**24.3** (21.4-27.6)	**23.3** (20.1-26.8)	**22.2** (19.8-24.8)	**22.2** (20.2-24.5)	**19.9** (17.8-22.2)	**23.4** (21.0-25.9)	**24.0** (21.7-26.4)
	Females	**35.8** (32.8-38.8)	**29.6** (26.4-33.2)	**38.7** (36.3-41.2)	**37.3** (34.4-40.2)	**42.0** (39.0-45.1)	**38.8** (36.0-41.6)	**43.2** [b] (40.4-46.0)
Grade	7	**20.1** (15.7-25.4)	**15.9** (12.3-20.3)	**20.8** (16.9-25.4)	**21.7** (18.1-25.9)	**18.5** (14.8-22.8)	**19.5** (15.9-23.6)	**20.9** (16.4-26.3)
	8	**24.3** (20.4-28.6)	**21.9** (17.3-27.4)	**23.6** (19.3-28.5)	**24.3** (18.3-31.6)	**22.7** (18.7-27.2)	**22.0** (17.9-26.8)	**25.2** (20.5-30.5)
	9	**30.4** (25.1-36.4)	**29.8** (25.6-34.4)	**26.9** (23.4-30.6)	**29.0** (24.8-33.6)	**31.1** (26.3-36.4)	**29.5** (25.2-34.2)	**29.7** (25.0-34.8)
	10	**31.9** (26.8-37.5)	**23.8** (19.4-28.9)	**38.6** (34.1-43.2)	**28.8** (25.1-32.9)	**32.5** (27.5-37.9)	**33.4** (29.7-37.4)	**35.2** (31.2-39.4)
	11	**39.8** (33.8-46.0)	**37.8** (31.8-44.1)	**38.6** (34.1-43.2)	**34.9** (30.7-39.5)	**34.9** (30.3-39.9)	**38.8** (34.5-43.3)	**40.6** (34.4-47.1)
	12	**31.7** (27.0-36.7)	**32.9** (26.2-40.5)	**37.8** (33.3-42.5)	**37.5** (33.0-42.2)	**41.1** (36.6-45.8)	**37.8** (33.4-42.5)	**41.2** [b] (37.6-45.0)
Region	Toronto	**31.4** (26.1-37.2)	**27.5** (21.8-32.0)	**31.7** (28.1-35.6)	**31.7** (28.4-35.1)	**27.4** (22.2-33.4)	**33.8** (28.1-39.9)	**38.0** (33.8-42.5)
	North	**26.9** (21.8-32.7)	**24.5** (20.6-28.9)	**29.1** (24.4-34.4)	**29.3** (23.7-35.6)	**36.2** (31.6-41.0)	**31.0** (26.3-36.0)	**31.6** (28.3-35.1)
	West	**30.7** (27.1-34.6)	**26.8** (23.0-31.0)	**31.2** (28.1-34.4)	**30.6** (28.0-33.2)	**28.7** (25.8-31.8)	**30.5** (27.8-33.3)	**32.2** (27.4-37.4)
	East	**29.2** (25.9-32.7)	**26.0** (22.3-30.2)	**30.2** (26.7-34.1)	**27.6** (24.2-31.2)	**33.5** (30.0-37.2)	**30.3** (27.2-33.6)	**33.5** (30.2-37.1)

Notes: (1) N=total number of students surveyed; (2) based on a random half sample in each year; (3) entries in brackets are 95% confidence intervals; (4) "Elevated Psychological Distress" is defined as experiencing 3 or more of the 12 symptoms in the General Health Questionnaire (GHQ12) over the past few weeks; (5) no significant differences, 2011 vs. 2009; [b] significant difference, 2011 vs. 1999.

Source: OSDUHS, Centre for Addiction and Mental Health

Table A3.4.3 Percentage Reporting Symptoms of Anxiety/Depression (GHQ12), 1999–2011 (Grades 7–12)

		1999	2001	2003	2005	2007	2009	2011
	(N=)	(2299)	(2061)	(3464)	(4078)	(3388)	(4851)	(4816)
Total % (95% CI)		**4.9** (3.9-6.1)	**4.2** (3.0-5.7)	**4.8** (4.1-5.7)	**4.1** (3.4-4.9)	**4.7** (3.9-5.6)	**4.2** (3.5-5.1)	**6.0** (4.6-7.9)
Sex	Males	**3.5** (2.4-4.9)	**2.3** (1.5-3.5)	**3.0** (2.1-4.1)	**2.3** (1.6-3.3)	**2.6** (1.9-3.6)	**2.5** (1.7-3.6)	**3.0** (2.0-4.4)
	Females	**6.4** (4.8-8.4)	**6.0** (4.0-8.9)	**6.6** (5.4-8.0)	**6.0** (4.9-7.3)	**6.8** (5.6-8.4)	**6.1** (4.9-7.4)	**9.1** (7.2-11.5)
Grade	7	†	†	†	**2.5** (1.4-4.4)	**3.9** (2.4-6.4)	†	†
	8	**5.7** (3.5-9.1)	†	**6.1** (3.9-9.6)	**3.2** (1.9-5.5)	**3.6** (2.3-5.8)	**1.8** (1.0-3.4)	**3.0** (1.7-5.3)
	9	**5.7** (3.4-9.3)	**4.0** (2.2-7.3)	**3.6** (2.3-5.7)	**4.0** (2.7-6.0)	**3.9** (2.5-6.)	**4.4** (2.7-7.2)	**6.1** (3.7-10.0)
	10	**5.7** (3.4-9.4)	†	**4.7** (3.2-7.0)	**5.3** (3.8-7.5)	**4.9** (3.3-7.2)	**5.1** (3.3-7.6)	**7.8** (4.9-12.0)
	11	**5.9** (4.0-8.7)	**4.1** (2.1-7.8)	**6.6** (4.4-9.8)	**5.6** (4.0-7.9)	**5.5** (3.7-8.1)	**5.7** (3.9-8.3)	**8.9** (5.7-13.6)
	12	†	†	**5.0** (3.3-7.4)	**3.9** (2.4-6.2)	**5.9** (4.0-8.7)	**5.1** (3.5-7.6)	**5.6** (3.6-8.7)
Region	Toronto	†	†	**4.4** (2.8-6.8)	**4.2** (2.8-6.2)	**4.3** (2.6-7.0)	**5.7** (3.9-8.2)	**8.1** (5.5-11.9)
	North	**3.4** (2.1-5.5)	**4.5** (3.2-6.1)	**5.5** (3.8-8.1)	**4.2** (2.9-6.0)	**4.0** (2.3-6.8)	**4.7** (2.8-7.7)	**3.7** (2.5-5.6)
	West	**5.3** (3.7-7.5)	**3.6** (2.4-5.4)	**4.8** (3.6-6.4)	**4.5** (3.4-6.1)	**4.2** (3.1-5.8)	**4.0** (2.9-5.4)	**5.8** (3.3-10.2)
	East	**5.8** (4.0-8.3)	**5.2** (2.7-9.8)	**4.9** (3.8-6.3)	**3.5** (2.6-4.8)	**5.4** (4.2-7.0)	**3.9** (2.8-5.2)	**5.6** (4.4-7.0)

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) based on a factor analysis of the General Health Questionnaire (GHQ12); (5) †=estimate suppressed due to unreliability; (6) no significant changes over time.

Source: OSDUHS, Centre for Addiction and Mental Health

Table A3.4.4 Percentage Reporting Suicide Ideation in the Past Year, 2001–2011 (Grades 7–12)

		(N=)	2001 (2061)	2003 (3464)	2005 (4078)	2007 (3388)	2009 (4851)	2011 (4816)
Total (95% CI)			**11.4** (9.5-13.8)	**12.5** (11.1-14.2)	**11.2** (10.0-12.5)	**9.8** (8.6-11.1)	**9.5** (8.3-10.8)	**10.3** (9.0-11.8)
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)
	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)
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)
	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)
	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)
	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)
	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)
	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)
Region	Toronto		**11.0** (6.7-17.6)	**9.3** (6.8-12.6)	**10.8** (8.5-13.5)	**6.8** (4.8-9.5)	**11.0** (8.2-14.5)	**9.7** (7.4-12.6)
	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)
	West		**12.1** (8.9-16.3)	**13.8** (11.3-16.7)	**12.8** (10.5-15.5)	**10.1** (8.4-12.1)	**10.1** (7.9-12.8)	**9.9** (7.6-12.8)
	East		**10.6** (7.6-14.7)	**12.5** (10.0-15.5)	**9.4** (7.7-11.5)	**10.5** (8.3-13.2)	**8.2** (6.8-9.8)	**11.5** (9.9-13.5)

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 changes over time.
Q: "During the last 12 months, did you ever seriously consider attempting suicide?" (% responding "yes" is shown)
Source: OSDUHS, Centre for Addiction & Mental Health

Table A3.4.5 Percentage Reporting a Suicide Attempt in the Past Year, 2007–2011 (Grades 7–12)

		2007 (N=3388)	2009 (N=4851)	2011 (N=4816)
Total % (95% CI)		**3.3** (2.6-4.2)	**2.8** (2.2-3.4)	**2.8** (2.1-3.6)
Sex	Males	**1.8** (1.2-2.6)	**2.5** (1.7-3.6)	**1.6** (1.0-2.6)
	Females	**4.9** (3.8-6.4)	**3.1** (2.3-4.1)	**4.0** (2.9-5.3)
Grade	7	**2.7** (1.4-5.1)	†	†
	8	**3.0** (1.8-5.1)	**2.5** (1.4-4.6)	†
	9	**3.2** (2.0-5.0)	**3.4** (2.0-5.8)	**2.5** (1.3-4.7)
	10	**5.5** (3.7-8.2)	**2.6** (1.6-4.0)	**3.7** (2.2-6.3)
	11	**3.1** (2.0-4.7)	**3.1** (2.0-4.8)	**2.3** (1.2-4.4)
	12	**2.5** (1.4-4.6)	**3.4** (1.7-6.4)	**3.8** (2.1-6.5)
Region	Toronto	†	†	†
	North	**3.8** (2.2-6.3)	†	†
	West	**3.4** (2.3-4.8)	**2.4** (1.7-3.6)	**2.7** (1.8-4.2)
	East	**4.2** (2.9-6.0)	**3.7** (2.7-5.0)	**3.5** (2.4-4.9)

Notes: (1) N=total number of students surveyed; (2) asked of a random half sample in each year; (3) entries in brackets are 95% confidence intervals; (4) †=estimate suppressed due to unreliability; (5) no significant changes over time.
Q: "During the last 12 months, did you actually attempt suicide?" (% responding "yes" is shown)
Source: OSDUHS, Centre for Addiction & Mental Health

Table A3.5.1a Percentage Reporting Antisocial Behaviours at Least Once in the Past Year by Sex, Grade, and Region, 1999–2011 (Grades 7–12)

	1999	2001	2003	2005	2007	2009	2011
TOTAL SAMPLE (N=)	(2148)	(2061)	(3464)	(4078)	(3388)	(4851)	(4816)
fire-setting	—	—	—	—	15.9	14.5	10.8 [b]
ran away from home	8.4	7.4	10.2	9.2	9.7	9.6	10.5
vandalism	24.1	16.3	15.1	15.3	15.8	13.5	9.8 [ab]
theft of goods worth $50/less	17.3	14.1	14.7	14.7	14.0	14.1	9.7 [ab]
assault	19.9	12.8	11.5	11.7	10.6	9.8	8.7 [b]
car theft/ joyriding	10.2	9.1	9.3	7.8	7.2	6.9	6.0 [b]
sold marijuana or hashish	7.8	10.1	8.3	7.6	6.8	6.4	5.2
carried a weapon	13.5	10.6	9.6	9.6	8.7	7.3	4.6 [ab]
break and entering	6.4	5.0	4.4	4.7	4.6	4.4	4.4
theft of goods worth > $50	6.6	5.8	5.3	5.5	5.1	5.2	3.8 [b]
street racing (car)	—	—	—	—	—	4.1	3.0
gang fighting	7.7	5.3	6.4	5.8	4.8	2.8	—
sold other drugs	3.3	3.2	2.8	2.9	3.0	2.2	—
carried a handgun	—	—	—	1.9	1.5	1.4	—
% 3+ behaviours /9 (95% CI)	**16.0** (14.0-18.2)	**13.0** (11.4-14.8)	**12.8** (11.4-14.4)	**11.8** (10.4-13.4)	**12.1** (10.8-13.5)	**10.4** (9.0-11.8)	**8.0** [b] (6.9-9.3)
MALES	(1101)	(1018)	(1654)	(1934)	(1618)	(2286)	(2218)
fire-setting	—	—	—	—	19.6	19.5	14.4 [b]
ran away from home	5.6	7.4	7.9	7.4	6.6	8.0	7.4
vandalism	29.3	21.2	18.2	18.0	19.1	16.4	10.4 [ab]
theft of goods worth $50/less	20.9	17.5	17.9	16.5	16.2	17.1	10.8 [ab]
assault	29.4	17.1	14.4	15.9	14.3	12.9	11.0 [b]
car theft/ joyriding	12.5	12.5	12.7	8.8	8.3	9.1	7.2
sold marijuana or hashish	11.1	13.8	11.9	9.8	9.0	8.6	7.4
carried a weapon	21.5	17.0	14.9	14.9	13.2	11.4	7.6 [ab]
break and entering	9.6	6.5	6.7	6.0	5.5	5.8	5.4
theft of goods worth > $50	9.1	8.2	8.0	6.7	6.2	6.6	4.4
street racing (car)	—	—	—	—	—	6.8	4.7
gang fighting	11.6	8.4	9.0	8.6	7.1	4.4	—
sold other drugs	5.2	4.8	4.3	3.9	3.7	3.3	—
carried a handgun	—	—	—	3.1	2.5	2.4	—
% 3+ behaviours /9 (95% CI)	**22.7** (19.7-26.0)	**17.5** (15.1-20.3)	**16.8** (14.8-19.0)	**14.7** (12.5-17.2)	**14.5** (12.5-16.7)	**13.6** (11.5-16.1)	**9.2** [b] (7.3-11.6)
FEMALES	(1047)	(1043)	(1810)	(2144)	(1770)	(2565)	(2598)
fire-setting	—	—	—	—	12.2	9.4	7.2 [b]
ran away from home	11.2	7.4	12.3	11.0	13.0	11.4	13.7
vandalism	18.9	11.6	12.3	12.4	12.6	10.5	9.2 [b]
theft of goods worth $50/less	13.7	10.9	11.8	12.9	11.8	11.1	8.7 [b]
assault	10.4	8.6	8.9	7.2	6.8	6.7	6.3 [b]
car theft/ joyriding	7.8	5.9	6.3	6.7	6.0	4.7	4.9
sold marijuana or hashish	4.4	6.5	5.1	5.3	4.5	4.2	3.0
carried a weapon	5.5	4.5	4.9	4.0	4.2	3.2	1.6 [ab]
break and entering	3.2	3.5	2.4	3.3	3.7	3.0	3.4
theft of goods worth > $50	4.0	3.4	2.9	4.3	4.0	3.8	3.2
street racing (car)	—	—	—	—	—	1.3	1.3
gang fighting	3.8	2.2	4.1	2.9	2.4	1.1	—
sold other drugs	1.4	1.6	1.5	2.0	2.2	1.1	—
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)

(Cont'd…)

	1999	2001	2003	2005	2007	2009	2011
GRADE 7	(369)	(404)	(497)	(508)	(383)	(883)	(728)
fire-setting	—	—	—	—	6.1	8.0	5.6
ran away from home	7.4	7.2	9.7	7.4	5.0	6.3	7.3
vandalism	18.9	10.3	14.7	9.6	6.7	7.5	5.0 [b]
theft of goods worth $50/less	9.3	8.1	9.9	7.7	6.0	6.1	3.8
assault	17.1	13.5	11.1	8.6	8.1	7.6	7.2 [b]
car theft/ joyriding	†	1.1	1.8	†	†	†	†
sold marijuana or hashish	†	0.8	2.0	†	†	†	†
carried a weapon	7.8	5.4	9.9	4.4	4.8	4.5	3.1 [b]
break and entering	3.1	2.1	2.7	1.7	1.6	1.2	†
theft of goods worth > $50	2.4	3.2	3.2	1.9	1.7	†	†
street racing (car)	—	—	—	—	—	†	†
gang fighting	5.9	4.4	7.8	3.4	4.3	2.1	—
sold other drugs	†	†	2.0	1.1	†	†	—
carried a handgun	—	—	—	†	†	†	—
% 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** [b] (1.3-4.7)
GRADE 8	(391)	(379)	(512)	(501)	(418)	(913)	(730)
fire-setting	—	—	—	—	15.3	11.0	7.9
ran away from home	9.2	9.7	9.5	9.8	9.2	9.2	7.5
vandalism	26.0	19.5	12.6	15.6	16.6	11.1	5.6 [ab]
theft of goods worth $50/less	15.6	14.3	13.3	11.1	10.5	7.6	5.3 [b]
assault	24.8	15.5	12.3	13.6	12.1	7.4	8.8 [b]
car theft/ joyriding	4.3	4.4	2.2	3.1	†	2.7	†
sold marijuana or hashish	4.0	4.4	3.8	3.6	†	1.9	†
carried a weapon	15.2	9.6	6.6	8.6	10.2	6.4	6.0 [b]
break and entering	6.8	4.0	2.2	5.3	2.8	3.3	†
theft of goods worth > $50	4.8	5.5	2.3	3.8	2.2	2.8	†
street racing (car)	—	—	—	—	—	†	†
gang fighting	9.8	4.4	3.7	7.3	5.3	3.0	—
sold other drugs	2.3	1.5	2.2	2.1	†	†	—
carried a handgun	—	—	—	†	†	†	—
% 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** [b] (2.8-7.8)
GRADE 9	(442)	(368)	(654)	(780)	(660)	(753)	(879)
fire-setting	—	—	—	—	23.8	15.7	13.1 [b]
ran away from home	7.8	6.9	9.6	10.8	11.9	13.1	8.4
vandalism	26.8	17.4	16.1	16.6	21.8	13.7	8.8 [ab]
theft of goods worth $50/less	16.9	15.4	13.7	16.4	17.8	13.7	7.2 [ab]
assault	22.6	13.4	11.0	12.9	11.7	9.6	7.7 [b]
car theft/ joyriding	9.4	7.2	7.8	7.5	5.9	3.7	† [b]
sold marijuana or hashish	6.5	8.8	7.3	8.2	6.6	5.3	1.7
carried a weapon	13.4	12.6	12.2	11.5	11.3	7.7	3.7 [b]
break and entering	4.6	5.0	5.3	6.2	4.8	4.1	3.3
theft of goods worth > $50	6.3	6.0	5.5	5.3	6.0	4.9	2.2 [b]
street racing (car)	—	—	—	—	—	†	†
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	—	—	—	1.8	2.2	1.9	—
% 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** [b] (3.5-7.9)

(Cont'd…)

	1999	2001	2003	2005	2007	2009	2011
GRADE 10	(296)	(422)	(622)	(742)	(577)	(814)	(825)
fire-setting	—	—	—	—	18.8	19.1	9.8 [b]
ran away from home	10.6	7.7	11.6	10.8	11.1	9.8	12.2
vandalism	34.2	20.0	16.3	17.3	17.0	17.6	14.4 [b]
theft of goods worth $50/less	24.8	16.6	17.5	17.1	15.6	17.8	11.3 [b]
assault	23.5	13.5	10.1	14.4	10.4	11.6	7.3 [b]
car theft/ joyriding	12.8	14.5	13.3	7.8	7.0	6.7	2.9 [b]
sold marijuana or hashish	12.8	15.5	10.4	10.0	9.3	8.6	6.3
carried a weapon	18.3	15.9	8.6	12.6	8.6	10.0	4.6 [ab]
break and entering	8.1	6.7	4.8	7.5	6.1	5.2	4.2
theft of goods worth > $50	9.3	8.4	5.1	7.3	6.1	5.4	3.4
street racing (car)	—	—	—	—	—	†	†
gang fighting	10.3	6.7	5.2	7.0	4.1	3.4	—
sold other drugs	3.5	4.8	2.3	3.4	3.6	2.0	—
carried a handgun	—	—	—	2.7	†	1.8	—
% 3+ behaviours /9 (95% CI)	**24.4** (18.6-31.4)	**16.5** (12.9-20.9)	**16.2** (12.6-20.5)	**14.2** (11.0-18.3)	**13.3** (10.7-16.5)	**13.4** (10.8-16.4)	**8.9** [b] (5.8-13.3)
GRADE 11	(357)	(288)	(620)	(819)	(684)	(719)	(808)
fire-setting	—	—	—	—	18.8	17.9	12.5
ran away from home	9.8	7.1	12.6	9.9	11.3	10.0	17.0
vandalism	21.4	16.0	16.6	19.3	18.1	15.2	10.7 [b]
theft of goods worth $50/less	20.1	14.0	18.2	19.5	18.0	18.1	18.0
assault	20.1	9.5	15.1	11.0	11.9	9.7	10.1 [b]
car theft/ joyriding	20.1	14.3	16.2	13.8	13.7	12.2	10.5
sold marijuana or hashish	13.8	16.1	12.6	12.5	10.2	10.6	8.2
carried a weapon	16.2	8.5	11.8	11.3	10.1	5.9	6.8 [b]
break and entering	10.4	7.2	6.4	4.6	6.6	4.4	6.1
theft of goods worth > $50	9.2	5.1	9.1	7.5	7.7	7.5	8.0
street racing (car)	—	—	—	—	—	8.5	5.2
gang fighting	6.9	2.8	6.8	6.0	6.4	2.2	—
sold other drugs	8.3	5.0	3.6	4.0	6.3	3.4	—
carried a handgun	—	—	—	2.2	2.6	1.8	—
% 3+ behaviours /9 (95% CI)	**19.7** (15.0-25.4)	**14.4** (10.2-20.0)	**16.6** (13.1-20.9)	**16.2** (13.4-19.4)	**17.0** (13.4-21.2)	**13.0** (9.2-18.2)	**13.1** (10.2-16.7)
GRADE 12	(293)	(200)	(559)	(728)	(666)	(769)	(846)
fire-setting	—	—	—	—	12.2	14.4	12.8
ran away from home	5.6	5.6	7.5	6.5	9.4	9.1	9.3
vandalism	16.7	11.9	13.3	13.2	14.0	14.4	11.4
theft of goods worth $50/less	18.0	15.9	14.0	16.2	14.9	18.4	9.7 [ab]
assault	9.0	9.6	9.0	9.5	9.5	11.8	10.0
car theft/ joyriding	12.9	14.4	11.4	12.6	12.0	12.8	14.1
sold marijuana or hashish	10.0	15.5	11.6	10.3	10.0	9.2	9.9
carried a weapon	9.6	8.3	8.0	8.7	7.1	8.7	3.5
break and entering	5.5	4.0	4.3	2.8	5.1	7.0	6.7
theft of goods worth > $50	7.5	7.1	5.4	6.8	6.1	7.9	4.1
street racing (car)	—	—	—	—	—	9.8	6.0
gang fighting	4.4	4.9	6.7	4.7	2.9	2.5	—
sold other drugs	3.2	5.1	3.7	3.5	3.2	3.7	—
carried a handgun	—	—	—	2.1	1.0	1.6	—
% 3+ behaviours /9 (95% CI)	**14.3** (9.5-21.0)	**13.4** (7.9-21.8)	**12.0** (9.2-15.7)	**12.2** (9.6-15.3)	**12.3** (9.5-15.8)	**14.6** (11.1-18.8)	**10.2** (7.1-14.4)

(Cont'd…)

	1999	2001	2003	2005	2007	2009	2011
TORONTO	(369)	(267)	(548)	(577)	(470)	(417)	(621)
fire-setting	—	—	—	—	11.7	11.8	8.9
ran away from home	5.4	4.5	6.2	7.6	5.5	7.1	8.3
vandalism	17.6	13.0	16.1	15.3	14.4	9.1	11.5
theft of goods worth $50/less	13.0	10.5	14.3	15.8	12.8	12.2	11.0
assault	17.9	9.1	8.8	11.0	9.6	7.5	6.6 [b]
car theft/ joyriding	8.2	4.1	8.3	8.2	4.6	3.7	3.0 [b]
sold marijuana or hashish	4.4	5.1	10.6	4.6	4.2	3.3	5.2
carried a weapon	11.9	7.9	11.4	7.7	8.5	5.8	4.6 [b]
break and entering	3.3	3.6	3.8	3.9	3.9	4.7	4.3
theft of goods worth > $50	6.0	5.9	7.4	6.4	6.7	4.8	5.4
street racing (car)	—	—	—	—	—	†	†
gang fighting	8.7	3.7	6.6	7.4	4.1	3.4	—
sold other drugs	1.4	1.7	2.0	2.4	1.7	†	—
carried a handgun	—	—	—	2.2	1.7	2.3	—
% 3+ behaviours /9 (95% CI)	**10.7** (7.2-15.7)	**9.2** (6.2-13.6)	**13.1** (10.6-16.0)	**11.5** (8.5-15.3)	**9.4** (6.7-13.0)	**7.4** (4.8-11.1)	**7.5** (5.5-10.1)
NORTH REGION	(384)	(599)	(746)	(728)	(421)	(359)	(1022)
fire-setting	—	—	—	—	19.1	10.3	10.5 [b]
ran away from home	8.2	6.2	14.8	12.9	11.2	11.4	12.8
vandalism	23.0	15.7	16.6	15.5	19.2	14.8	10.8 [b]
theft of goods worth $50/less	16.7	9.6	15.6	15.3	13.4	14.9	12.6
assault	16.7	13.1	15.1	12.2	10.7	11.1	8.3
car theft/ joyriding	11.9	8.4	9.4	10.5	8.5	6.2	7.8
sold marijuana or hashish	7.9	5.8	9.8	8.0	9.2	6.9	7.6
carried a weapon	12.1	11.3	9.5	9.6	12.0	7.6	7.0
break and entering	7.8	5.2	7.6	6.2	6.4	4.2	6.1
theft of goods worth > $50	4.1	3.8	4.9	4.8	6.9	7.1	5.1
street racing (car)	—	—	—	—	—	3.7	4.1
gang fighting	4.5	5.4	5.4	6.4	4.5	2.8	—
sold other drugs	3.0	2.1	3.6	2.4	3.3	†	—
carried a handgun	—	—	—	1.9	†	†	—
% 3+ behaviours /9 (95% CI)	**13.8** (10.5-18.1)	**10.1** (7.1-14.0)	**14.4** (11.1-18.4)	**13.3** (10.5-16.8)	**14.6** (10.6-19.8)	**11.5** (8.0-16.3)	**10.4** (6.9-15.5)
WEST REGION	(763)	(718)	(1259)	(1437)	(1323)	(1422)	(1245)
fire-setting	—	—	—	—	17.1	16.1	10.8
ran away from home	8.6	9.7	10.6	9.9	9.2	10.2	12.0
vandalism	25.6	16.3	14.8	15.5	15.9	14.9	8.8 [ab]
theft of goods worth $50/less	19.8	16.6	14.4	15.4	15.1	14.4	8.7 [ab]
assault	22.2	13.3	12.0	13.2	11.9	10.0	9.4 [b]
car theft/ joyriding	10.5	10.9	10.4	8.0	7.7	7.4	6.1
sold marijuana or hashish	9.3	13.2	7.8	8.7	6.9	7.5	†
carried a weapon	14.5	9.7	9.5	11.7	8.6	7.8	3.9 [b]
break and entering	7.5	5.7	4.0	4.8	4.5	3.9	3.1
theft of goods worth > $50	7.3	5.8	5.1	6.0	4.6	4.9	3.0 [b]
street racing (car)	—	—	—	—	—	4.9	2.9
gang fighting	8.9	5.0	6.3	6.3	4.8	2.2	—
sold other drugs	4.2	4.6	3.2	3.5	2.7	1.7	—
carried a handgun	—	—	—	2.2	1.2	1.4	—
% 3+ behaviours /9 (95% CI)	**17.6** (14.2-21.6)	**14.8** (12.4-17.7)	**13.3** (11.2-15.6)	**13.8** (11.8-16.0)	**12.6** (10.8-14.6)	**10.6** (8.9-12.7)	**7.6** [b] (5.8-9.9)

(Cont'd…)

	1999	2001	2003	2005	2007	2009	2011
EAST REGION	(632)	(477)	(911)	(1336)	(1174)	(2653)	(1928)
fire-setting	—	—	—	—	15.9	14.7	11.6
ran away from home	10.0	6.5	10.8	8.2	11.8	9.7	9.3
vandalism	26.1	18.8	14.4	14.9	15.9	13.6	10.3 [b]
theft of goods worth $50/less	16.5	14.5	15.2	13.4	13.5	14.5	10.0 [ab]
assault	18.6	14.4	11.3	10.2	9.6	10.4	8.8 [b]
car theft/ joyriding	10.2	10.3	8.3	6.7	7.4	8.0	7.3
sold marijuana or hashish	7.5	10.5	7.3	7.7	7.3	6.5	5.5
carried a weapon	13.4	13.6	8.8	8.0	8.3	7.5	5.0 [b]
break and entering	6.4	4.7	4.6	4.5	4.7	5.0	5.9
theft of goods worth > $50	6.5	6.3	4.5	4.6	4.6	5.5	3.9
street racing (car)	—	—	—	—	—	4.2	3.7
gang fighting	6.4	6.7	6.8	4.3	5.2	3.3	—
sold other drugs	3.2	2.3	2.6	2.7	3.8	3.2	—
carried a handgun	—	—	—	1.3	1.7	1.1	—
% 3+ behaviours /9 (95% CI)	**17.3** (14.3-20.8)	**13.9** (10.6-18.0)	**11.6** (8.9-15.1)	**9.4** (6.8-12.8)	**12.3** (10.0-15.0)	**11.2** (8.6-14.3)	**8.4** [b] (6.8-10.4)

Notes: (1) behaviours are listed in descending order according to 2011 total sample percentages; (2) percentages reflect engaging in the behaviour at least once during the 12 months before the survey; (3) N=the number of students surveyed; (4) based on a random half sample in each year; (5) — indicates data not available; (6) †=estimate suppressed due to unreliability; (7) "% 3+ behaviours /9" shows the percentage reporting 3 or more behaviours out of 9 (excludes fire-setting, gang fighting, sold other drugs, and carried a handgun); (8) [a] 2011 vs. 2009 significant difference, p<.01; [b] 2011 vs. 1999 (vs. 2007 for fire-setting) significant difference, p<.01.

Source: OSDUHS, Centre for Addiction and Mental Health

Table A3.5.1b Percentage Reporting Antisocial Behaviours at Least Once in the Past Year by Sex, 1991–2011 (based on Grades 7, 9, and 11 only)

	1991	1993	1995	1997	1999	2001	2003	2005	2007	2009	2011
TOTAL SAMPLE (N=)	(2961)	(2617)	(2907)	(1527)	(1168)	(1060)	(1771)	(2107)	(1727)	(2355)	(2415)
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
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
vandalism	19.8	20.0	20.7	18.8	22.9	14.8	15.9	15.3	15.9	12.3	8.6
assault	19.6	17.3	19.7	22.0	20.3	12.3	12.5	10.9	10.6	9.0	8.5
carried a weapon	—	16.2	14.8	11.8	12.8	9.2	11.4	9.2	8.9	6.1	4.7
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
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
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
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
gang fighting	7.4	6.0	7.3	7.1	7.4	4.7	7.5	5.3	5.7	2.7	—
sold other drugs	2.0	2.2	3.7	2.4	3.6	2.6	2.9	2.8	3.3	2.2	—
% 3+ behaviours /9 (95% CI)	—	**15.9** (15.0-16.9)	**16.8** (15.4-18.3)	**14.2** (12.7-15.7)	**14.5** (12.3-17.0)	**11.3** (9.5-13.4)	**13.1** (11.3-15.1)	**11.6** (9.8-13.8)	**12.8** (10.8-15.0)	**8.9** (7.1-11.0)	**7.5** (6.3-9.0)
MALES	(1554)	(1270)	(1412)	(723)	(582)	(529)	(888)	(1024)	(842)	(1107)	(1129)
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
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
vandalism	26.3	24.1	27.0	21.4	27.7	20.0	18.6	17.2	18.4	13.9	8.4
assault	26.1	22.6	27.7	29.6	30.6	16.9	14.6	14.8	14.9	10.8	11.2
carried a weapon	—	23.6	23.7	18.6	20.8	15.3	16.4	14.7	12.1	9.8	8.0
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
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
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
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
gang fighting	10.7	8.3	10.7	10.4	9.8	8.7	9.6	7.8	8.9	4.3	—
sold other drugs	2.9	2.3	4.8	4.0	5.9	†	4.4	3.7	4.3	3.4	—
% 3+ behaviours /9 (95% CI)	—	**21.0** (18.3-23.9)	**22.8** (20.7-25.1)	**18.2** (15.6-21.0)	**20.8** (17.4-24.8)	**15.5** (12.4-19.1)	**16.0** (13.2-19.1)	**14.1** (11.2-17.5)	**14.8** (12.1-17.9)	**11.2** (8.8-14.3)	**8.4** (6.3-11.1)
FEMALES	(1407)	(1347)	(1495)	(804)	(586)	(531)	(883)	(1083)	(885)	(1248)	(1286)
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
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
vandalism	12.6	16.1	14.8	16.4	18.2	9.5	13.2	13.2	13.4	10.8	8.7
assault	12.5	12.2	12.2	15.1	10.0	7.7	10.5	6.9	6.4	7.3	5.7
carried a weapon	—	9.2	6.7	5.8	4.9	3.2	6.6	3.5	5.6	2.4	1.3
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
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
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
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
gang fighting	3.8	3.4	4.1	4.1	4.8	†	5.4	2.7	2.6	1.1	—
sold other drugs	†	2.2	2.6	1.0	†	†	1.4	2.0	2.4	1.0	—
% 3+ behaviours /9 (95% CI)	—	**11.2** (9.4-13.2)	**11.2** (8.9-13.9)	**10.6** (8.9-12.4)	**8.1** (5.9-11.0)	**7.1** (4.9-10.3)	**10.2** (7.9-13.1)	**9.1** (7.0-11.8)	**10.7** (8.2-13.8)	**6.5** (4.8-8.8)	**6.6** (4.5-9.5)

Notes: (1) behaviours are listed in descending order according to 2011 total sample percentages; (2) percentages reflect engaging in the behaviour at least once during the 12 months before the survey; (3) N=number of students surveyed; (4) based on a random half sample in each year starting in 1997; (5) — indicates data not available; (6) †=estimate suppressed due to unreliability; (7) "% 3+ behaviours /9" shows the percentage reporting 3 or more behaviours out of 9 (excludes gang fighting and sold other drugs).

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, 2001–2011 (Grades 7–12)

		(N=)	2001 (2061)	2003 (3464)	2005 (4078)	2007 (3388)	2009 (4851)	2011 (4816)
Total (95% CI)			**16.9** (15.0-18.9)	**17.6** (15.7-19.6)	**18.1** (16.6-19.7)	**15.8** (14.2-17.7)	**15.1** (13.4-16.9)	**11.9** [b] (9.9-14.2)
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** [ab] (15.3-19.8)
	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)
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)
	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)
	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** [b] (6.9-13.8)
	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)
	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)
	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)
Region	Toronto		**13.9** (10.8-17.7)	**14.6** (10.3-20.1)	**21.1** (15.9-27.4)	**17.2** (12.5-23.3)	**15.0** (10.4-21.1)	**13.1** (10.4-16.3)
	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)
	West		**18.4** (15.1-22.1)	**19.0** (15.8-22.7)	**18.5** (16.3-21.0)	**17.3** (14.7-20.2)	**14.9** (12.3-18.0)	**11.5** (7.9-16.4)
	East		**16.6** (13.5-20.4)	**16.7** (14.0-19.8)	**16.5** (14.4-18.8)	**13.8** (11.4-16.6)	**15.2** (12.7-18.2)	**11.5** (9.5-13.9)

Notes: (1) N=total number of students surveyed; (2) based on a random half sample in each year; (3) entries in brackets are 95% confidence intervals; (4) [a] 2011 vs. 2009 significant difference, p<.01; [b] 2011 vs. 1999 significant difference, 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 & 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, 2003–2011 (Grades 7–12)

		2003	2005	2007	2009	2011
	(N=)	(3464)	(4078)	(3388)	(4851)	(4816)
Total		**7.7**	**8.2**	**8.6**	**6.8**	**6.5**
(95% CI)		(6.5-9.0)	(6.9-9.8)	(7.5-9.8)	(5.7-8.1)	(5.2-8.0)
Sex	Males	**10.1**	**11.6**	**11.0**	**8.5**	**7.4**
		(8.3-12.2)	(9.6-13.9)	(9.3-13.1)	(6.7-10.6)	(5.6-9.9)
	Females	**5.5**	**4.8**	**6.0**	**5.1**	**5.5**
		(4.0-7.4)	(3.7-6.2)	(4.7-7.7)	(4.0-6.5)	(4.4-7.0)
Grade	7	**7.3**	**7.0**	**9.3**	**3.9**	**6.5**
		(5.2-10.3)	(3.6-13.0)	(6.9-12.4)	(2.6-5.8)	(3.8-11.0)
	8	**9.8**	**8.5**	**10.1**	**6.7**	**4.4**
		(6.2-15.1)	(6.5-11.2)	(7.0-14.2)	(4.9-9.3)	(2.8-6.8)
	9	**7.7**	**9.2**	**10.8**	**8.7**	**8.1**
		(5.8-10.0)	(6.3-13.3)	(8.2-14.2)	(6.2-12.1)	(6.0-10.9)
	10	**10.0**	**9.2**	**8.2**	**5.5**	**8.0**
		(7.2-13.6)	(6.9-12.2)	(5.5-12.2)	(3.8-7.8)	(5.7-11.1)
	11	**6.8**	**9.6**	**8.6**	**6.6**	**5.0**
		(4.8-9.6)	(7.1-13.0)	(6.4-11.5)	(4.6-9.5)	(3.1-8.1)
	12	**4.6**	**6.1**	**5.2**	**8.4**	**6.5**
		(2.8-7.4)	(4.4-8.4)	(3.6-7.4)	(5.7-12.1)	(3.8-10.9)
Region	Toronto	**7.8**	**9.6**	**7.7**	**6.3**	**7.7**
		(5.6-10.7)	(7.0-13.0)	(5.3-10.9)	(3.3-11.7)	(5.4-10.8)
	North	**7.4**	**6.4**	**9.0**	**7.7**	**8.0**
		(5.6-9.7)	(4.0-10.0)	(5.8-13.7)	(5.0-11.6)	(5.1-12.3)
	West	**8.5**	**8.1**	**9.4**	**6.7**	**7.1**
		(6.7-10.8)	(6.5-10.0)	(7.9-11.1)	(5.2-8.5)	(4.7-10.5)
	East	**6.4**	**8.2**	**7.9**	**7.0**	**4.9**
		(4.5-9.1)	(5.4-12.1)	(6.2-10.2)	(5.1-9.5)	(3.8-6.2)

Notes: (1) N=total number of students surveyed; (2) based on a random half sample in each year; (3) entries in brackets are 95% confidence intervals; (4) no significant changes over time.

Q: "During the last 12 months, how many times has someone threatened or injured you with a weapon, such as a gun, knife or club on school property?"

Source: OSDUHS, Centre for Addiction & Mental Health

Table A3.5.4 Percentage Reporting Bullying Behaviour at School Since September, 2003–2011 (Grades 7–12)

		2003	2005	2007	2009	2011
TOTAL	(N=)	(3464)	(4078)	(3388)	(4851)	(4816)
Method you were bullied the most:	physical attacks	3.9	3.8	4.2	2.9	2.6
	verbal attacks	26.5	24.6	23.1	23.6	24.5
	theft/vandalism	2.3	2.5	2.6	2.4	1.4
% bullied in any way (95% CI)		**32.7 (30.6-34.9)**	**30.9 (29.0-32.8)**	**29.9 (27.8-32.0)**	**28.9 (27.0-31.0)**	**28.6 (25.8-31.5)**
Often you've been bullied at school:	daily/weekly	7.7	9.5	8.7	8.1	9.4
	monthly or less	21.4	19.5	18.9	19.6	17.9
Method you bullied others the most:	physical attacks	3.9	4.5	3.8	3.5	2.5
	verbal attacks	24.9	22.2	20.0	21.3	17.9
	theft/vandalism	1.0	0.5	1.9	†	†
% bullied others in any way (95% CI)		**29.7 (27.6-32.0)**	**27.3 (25.2-29.5)**	**24.7 (22.8-26.7)**	**25.1 (23.2-27.2)**	**20.7 (16.9-25.2)** [b]
Often bullied someone at school:	daily/weekly	7.0	6.5	5.6	6.2	4.6
	monthly or less	22.5	22.0	20.5	18.8	16.3
MALES		(1654)	(1934)	(1618)	(2286)	(2218)
Method you were bullied the most:	physical attacks	7.3	5.5	6.4	4.1	4.4
	verbal attacks	24.7	19.4	18.1	19.1	19.6
	theft/vandalism	3.3	2.9	3.2	3.3	1.8
% bullied in any way (95% CI)		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) [b]
Method you bullied others the most:	physical attacks	6.7	7.0	6.2	5.5	3.4
	verbal attacks	26.7	21.4	18.6	22.1	15.
	theft/vandalism	1.6	1.0	1.2	0.5	†
% bullied others in any way (95% CI)		34.9 (31.7-38.3)	29.4 (26.9-32.0)	26.0 (23.4-28.8)	28.1 (25.3-31.2)	18.6 (16.3-21.2) [b]
FEMALES		(1810)	(2144)	(1770)	(2565)	(2598)
Method you were bullied the most:	physical attacks	0.8	1.9	1.9	1.7	0.9
	verbal attacks	28.1	30.0	28.3	28.1	29.5
	theft/vandalism	1.5	2.0	1.9	1.5	†
% bullied in any way (95% CI)		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)
Method you bullied others the most:	physical attacks	1.4	2.0	1.3	1.4	1.6
	verbal attacks	23.3	23.1	21.4	20.4	20.8
	theft/vandalism	†	†	0.7	†	†
% bullied others in any way (95% CI)		25.1 (22.3-28.0)	25.2 (22.4-28.1)	23.4 (20.8-26.2)	22.1 (19.7-24.7)	22.8 (17.0-30.0)
GRADE 7		(497)	(508)	(383)	(883)	(728)
Method you were bullied the most:	physical attacks	8.2	7.9	6.0	5.8	4.9
	verbal attacks	35.2	27.9	25.0	23.1	23.6
	theft/vandalism	3.6	2.5	3.2	2.7	†
% bullied in any way (95% CI)		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) [b]
Method you bullied others the most:	physical attacks	4.3	4.5	3.6	4.2	†
	verbal attacks	27.1	21.2	12.9	16.7	11.4
	theft/vandalism	†	†	†	†	†
% bullied others in any way (95% CI)		31.7 (25.6-38.6)	26.1 (21.0-31.9)	17.2 (13.6-21.4)	21.3 (17.5-25.8)	13.9 (10.5-18.1)
GRADE 8		(512)	(501)	(418)	(913)	(730)
Method you were bullied the most:	physical attacks	5.9	3.0	6.8	5.3	4.6
	verbal attacks	29.2	35.5	26.1	24.1	27.1
	theft/vandalism	3.6	2.7	1.8	2.1	†
% bullied in any way (95% CI)		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)
Method you bullied others the most:	physical attacks	5.2	5.7	4.7	5.5	†
	verbal attacks	26.3	23.4	23.4	18.9	14.9
	theft/vandalism	†	1.3	2.2	†	†
% bullied others in any way (95% CI)		32.2 (25.9-39.3)	30.4 (22.5-40.0)	30.4 (25.0-36.3)	25.2 (20.3-31.0)	22.1 (17.8-27.0)

(Continued…)

		2003	2005	2007	2009	2011
GRADE 9		(654)	(780)	(660)	(753)	(879)
Method you were bullied the most:	physical attacks	4.2	5.0	5.8	3.6	1.9
	verbal attacks	25.8	27.5	27.2	25.7	27.2
	theft/vandalism	2.8	2.1	3.7	3.3	†
% bullied in any way (95% CI)		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)
Method you bullied others the most:	physical attacks	3.6	4.0	4.2	3.4	†
	verbal attacks	28.0	24.9	20.7	19.7	19.5
	theft/vandalism	1.1	†	†	†	†
% bullied others in any way (95% CI)		32.7 (28.8-36.8)	29.3 (25.7-33.3)	25.9 (21.6-30.6)	23.9 (20.2-28.1)	21.4 (14.0-31.3) [b]
GRADE 10		(622)	(742)	(577)	(814)	(825)
Method you were bullied the most:	physical attacks	2.4	2.8	3.1	1.6	†
	verbal attacks	28.2	20.6	26.8	28.3	27.8
	theft/vandalism	1.9	2.8	3.1	2.8	†
% bullied in any way (95% CI)		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)
Method you bullied others the most:	physical attacks	3.2	4.7	3.1	2.4	†
	verbal attacks	25.2	21.5	23.9	24.0	21.1
	theft/vandalism	2.2	†	†	†	†
% bullied others in any way (95% CI)		30.5 (26.8-34.6)	26.4 (22.4-30.8)	27.8 (23.6-32.4)	26.8 (23.3-30.5)	24.9 (21.2-29.0)
GRADE 11		(620)	(819)	(684)	(719)	(808)
Method you were bullied the most:	physical attacks	2.8	2.1	2.4	1.8	†
	verbal attacks	24.7	20.8	19.0	21.2	24.8
	theft/vandalism	1.2	3.0	2.9	2.2	†
% bullied in any way (95% CI)		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)
Method you bullied others the most:	physical attacks	3.6	3.9	4.2	3.5	†
	verbal attacks	25.0	25.5	20.0	23.2	19.7
	theft/vandalism	†	†	†	†	†
% bullied others in any way (95% CI)		29.4 (25.7-33.4)	30.1 (26.4-34.0)	24.7 (21.8-27.9)	27.0 (23.1-31.3)	22.3 (13.9-33.8)
GRADE 12		(559)	(728)	(666)	(769)	(846)
Method you were bullied the most:	physical attacks	1.0	2.0	1.6	1.0	†
	verbal attacks	17.4	16.4	16.5	20.1	18.9
	theft/vandalism	1.4	2.1	1.1	1.6	†
% bullied in any way (95% CI)		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)
Method you bullied others the most:	physical attacks	3.6	4.3	2.9	2.5	†
	verbal attacks	17.8	17.6	18.6	23.2	17.9
	theft/vandalism	†	†	†	--	†
% bullied others in any way (95% CI)		22.1 (17.5-27.5)	22.2 (18.6-26.3)	22.2 (18.4-26.5)	25.7 (21.4-30.5)	18.7 (14.6-23.6)
TORONTO		(548)	(577)	(470)	(417)	(621)
Method you were bullied the most:	physical attacks	2.2	3.8	4.2	†	2.8
	verbal attacks	20.7	23.8	16.2	19.5	16.6
	theft/vandalism	1.8	2.9	2.7	2.3	†
% bullied in any way (95% CI)		24.8 (20.4-29.7)	30.5 (26.4-35.0)	23.1 (18.3-28.8)	23.0 (18.3-28.5)	21.6 (19.0-24.5)
Method you bullied others the most:	physical attacks	3.1	5.3	4.8	3.2	2.3
	verbal attacks	17.6	21.3	18.2	20.1	14.6
	theft/vandalism	1.2	1.3	†	†	†
% bullied others in any way (95% CI)		22.0 (18.0-26.7)	27.9 (23.9-32.2)	23.9 (18.9-29.6)	23.8 (18.5-30.0)	17.3 (13.3-22.2)
NORTH REGION		(746)	(728)	(421)	(359)	(1022)
Method you were bullied the most:	physical attacks	4.4	4.4	2.3	4.0	4.3
	verbal attacks	29.5	25.7	27.0	24.9	23.0
	theft/vandalism	4.2	2.1	2.0	3.2	†
% bullied in any way (95% CI)		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)
Method you bullied others the most:	physical attacks	4.9	5.0	3.1	3.6	†
	verbal attacks	29.4	21.1	21.0	23.8	17.1
	theft/vandalism	1.8	†	†	†	†
% bullied others in any way (95% CI)		36.0 (31.2-41.2)	26.6 (22.6-31.0)	25.4 (20.5-31.0)	27.8 (21.6-35.0)	19.6 (14.7-25.6) [b]

(Continued….)

		2003	2005	2007	2009	2011
WEST REGION		(1259)	(1437)	(1323)	(1422)	(1245)
Method you were bullied the most:	physical attacks	5.2	3.4	5.1	2.8	†
	verbal attacks	25.4	24.4	24.6	25.4	27.0
	theft/vandalism	2.8	2.4	2.9	2.5	†
% bullied in any way (95% CI)		33.3 (30.0-36.8)	30.1 (27.3-33.2)	32.7 (29.4-36.0)	30.6 (27.3-34.1)	30.6 (25.5-36.1)
Method you bullied others the most:	physical attacks	3.5	4.9	3.7	4.2	2.4
	verbal attacks	26.1	23.3	22.3	22.8	10.2
	theft/vandalism	1.0	†	1.0	†	†
% bullied others in any way (95% CI)		30.7 (27.7-33.8)	28.5 (25.7-31.6)	27.0 (23.7-30.5)	27.3 (23.9-30.9)	22.8 (15.4-32.4)
EAST REGION		(911)	(1336)	(1174)	(2653)	(1928)
Method you were bullied the most:	physical attacks	2.9	4.0	3.4	3.7	2.3
	verbal attacks	30.5	25.0	23.8	23.1	25.3
	theft/vandalism	1.5	2.5	2.4	2.3	1.5
% bullied in any way (95% CI)		34.9 (30.9-39.1)	31.6 (28.1-35.2)	29.7 (26.2-33.3)	29.1 (26.1-32.4)	29.2 (26.0-32.6)
Method you bullied others the most:	physical attacks	4.5	3.6	3.5	2.7	2.7
	verbal attacks	26.1	21.8	18.1	19.6	16.6
	theft/vandalism	†	†	0.9	†	†
% bullied others in any way (95% CI)		31.1 (26.5-36.1)	25.8 (21.7-30.5)	22.5 (19.9-25.4)	22.8 (20.2-25.7)	19.8 (17.4-22.3) [b]

Notes: (1) N=number of students surveyed; (2) based on a random half sample in each year; (3) CI=confidence interval; (4) † indicates estimate suppressed due to unreliability; (5) no significant differences, 2011 vs. 2009; (6) [b] 2011 vs. 2003 significant difference, 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? Since September, how often were you bullied at school? Since September, in what way did you bully other students the most at school? Since September, how often have you taken part in bullying other students at school?"

Source: OSDUHS, Centre for Addiction and Mental Health

Table A3.6.1 Percentage Reporting Gambling Activities in the Past Year, 2001–2011 (Grades 7–12)

	2001	2003	2005	2007	2009	2011
TOTAL (N=)	(2061)	(3464)	(4078)	(3388)	(4851)	(4816)
Cards	24.9	24.0	32.7	28.7	20.2	15.9 [ab]
Bingo	11.6	9.9	8.6	7.6	7.2	5.1 [b]
Sports Pools	22.3	20.3	17.0	15.6	12.6	13.3 [b]
Sports Lottery Tickets	9.9	7.8	7.2	6.1	5.1	3.6 [b]
Other Lottery Tickets	22.1	22.4	18.5	18.8	15.5	12.7 [b]
Video Gambling or Slot Machines	6.8	6.7	6.2	4.8	3.9	2.9 [b]
Casino in Ontario	1.7	1.7	1.1	1.1	1.3	†
Any Internet Gambling	—	2.5	2.1	3.0	3.0	2.1
Dice	—	12.7	14.7	10.7	6.1	5.2 [b]
Other ways	—	27.1	23.6	24.1	18.8	17.6 [b]
Internet Poker	—	—	—	3.0	2.7	—
Any Gambling Activity of 10 (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)** [b]
5+ Gambling Activities of 10 (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)** [b]
MALES	(1018)	(1654)	(1934)	(1618)	(2286)	(2218)
Cards	35.4	32.1	44.2	41.0	28.1	21.6 [ab]
Bingo	12.5	9.5	7.4	6.7	7.4	4.5 [b]
Sports Pools	38.1	32.7	26.1	25.4	20.6	21.3 [b]
Sports Lottery Tickets	16.3	13.7	11.2	10.0	8.3	6.0 [b]
Other Lottery Tickets	23.2	20.4	18.5	18.0	15.3	12.7 [b]
Video Gambling or Slot Machines	8.1	8.9	7.4	5.9	5.0	3.8
Casino in Ontario	2.6	2.5	1.6	1.4	1.9	†
Any Internet Gambling	—	3.4	3.0	4.1	4.8	3.1
Dice	—	19.1	22.0	16.5	9.6	7.8 [b]
Other ways	—	32.9	28.8	30.3	24.1	23.2 [b]
Internet Poker	—	—	—	4.4	4.5	—
Any Gambling Activity of 10 (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) [b]
5+ Gambling Activities of 10 (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) [b]
FEMALES	(1043)	(1810)	(2144)	(1770)	(2565)	(2598)
Cards	14.8	16.7	20.8	16.2	12.1	10.2 [b]
Bingo	10.6	10.2	9.9	8.4	6.8	5.7 [b]
Sports Pools	7.3	9.1	7.7	5.6	4.4	5.3
Sports Lottery Tickets	3.8	2.4	3.1	2.2	1.9	†
Other Lottery Tickets	21.0	24.2	18.4	19.5	15.7	12.7 [b]
Video Gambling or Slot Machines	5.7	4.7	4.9	3.8	2.8	2.0
Casino in Ontario	0.8	1.0	0.6	0.7	†	†
Any Internet Gambling	—	1.6	1.2	1.9	1.2	1.1
Dice	—	7.0	7.1	4.9	2.5	2.7 [b]
Other ways	—	21.9	18.2	17.8	13.4	11.9 [b]
Internet Poker	—	—	—	1.7	0.9	—
Any Gambling Activity of 10 (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) [b]
5+ Gambling Activities of 10 (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)

(Continued….)

	2001	2003	2005	2007	2009	2011
GRADE 7	(404)	(497)	(508)	(383)	(883)	(728)
Cards	17.1	19.1	19.4	15.0	10.9	7.3 [b]
Bingo	8.9	10.3	7.6	8.1	7.3	6.3
Sports Pools	10.1	15.8	10.4	9.3	6.5	6.0
Sports Lottery Tickets	3.8	4.8	2.7	3.0	3.2	†
Other Lottery Tickets	13.8	13.6	10.7	12.4	8.9	5.3 [b]
Video Gambling or Slot Machines	3.1	7.2	†	†	3.1	†
Casino in Ontario	†	†	†	†	†	†
Any Internet Gambling	—	†	†	†	†	†
Dice	—	9.7	†	6.1	2.9	†
Other ways	—	27.7	20.9	16.6	15.7	14.9 [b]
Internet Poker	—	—	—	†	†	—
Any Gambling Activity of 10 (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) [b]
5+ Gambling Activities of 10 (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)	†
GRADE 8	(379)	(512)	(501)	(418)	(913)	(730)
Cards	24.3	20.0	24.7	24.2	14.7	12.1 [b]
Bingo	11.6	10.0	11.1	6.0	5.7	3.4 [b]
Sports Pools	15.5	14.2	15.2	11.4	7.0	9.8
Sports Lottery Tickets	7.9	3.8	4.6	2.5	†	† [b]
Other Lottery Tickets	16.2	14.9	13.1	11.5	7.2	6.7 [b]
Video Gambling or Slot Machines	4.8	6.8	6.0	3.3	2.4	†
Casino in Ontario	†	†	†	†	†	†
Any Internet Gambling	—	†	†	†	†	†
Dice	—	8.3	9.2	7.9	5.4	† [b]
Other ways	—	28.9	23.7	25.9	14.8	18.3 [b]
Internet Poker	—	—	—	†	†	—
Any Gambling Activity of 10 (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) [b]
5+ Gambling Activities of 10 (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)
Cards	24.2	24.1	33.9	27.4	18.2	13.6 [b]
Bingo	13.7	9.6	8.9	8.7	8.0	6.4 [b]
Sports Pools	27.0	23.6	19.3	16.4	10.6	9.7 [b]
Sports Lottery Tickets	9.4	7.0	6.0	4.7	3.4	2.1 [b]
Other Lottery Tickets	18.7	15.9	15.4	17.0	10.3	8.6 [b]
Video Gambling or Slot Machines	5.1	5.3	7.5	7.2	†	†
Casino in Ontario	†	†	†	†	†	†
Any Internet Gambling	—	3.5	†	2.6	3.1	†
Dice	—	16.7	16.4	12.9	5.3	1.5 [ab]
Other ways	—	31.2	24.9	28.2	21.7	17.1 [b]
Internet Poker	—	—	—	2.8	3.0	—
Any Gambling Activity of 10 (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) [b]
5+ Gambling Activities of 10 (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)	†

(Continued…)

	2001	2003	2005	2007	2009	2011
GRADE 10	(422)	(622)	(742)	(577)	(814)	(825)
Cards	29.6	25.3	36.6	29.8	20.2	14.9 [b]
Bingo	11.3	9.8	7.6	5.6	5.6	3.4 [b]
Sports Pools	28.7	24.1	17.4	15.4	15.2	16.9
Sports Lottery Tickets	10.0	6.9	7.0	4.4	3.5	† [b]
Other Lottery Tickets	23.4	18.2	16.0	14.9	11.5	7.9 [b]
Video Gambling or Slot Machines	10.4	6.6	6.2	4.9	3.7	† [b]
Casino in Ontario	†	†	†	†	†	†
Any Internet Gambling	—	3.3	2.8	3.0	2.8	†
Dice	—	12.3	18.5	8.9	7.3	8.8
Other ways	—	26.9	26.2	23.4	20.9	19.8
Internet Poker	—	—	—	2.9	2.5	—
Any Gambling Activity of 10 (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) [b]
5+ Gambling Activities of 10 (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)	†
GRADE 11	(288)	(620)	(819)	(684)	(719)	(808)
Cards	28.4	27.0	39.0	36.5	25.2	22.5
Bingo	9.7	9.5	7.4	7.6	7.7	6.5
Sports Pools	23.1	20.5	17.1	19.0	7.3	15.8
Sports Lottery Tickets	12.8	9.6	9.4	8.9	18.8	5.3
Other Lottery Tickets	27.8	28.9	21.4	20.3	18.8	18.2
Video Gambling or Slot Machines	7.8	5.2	4.9	5.3	5.7	†
Casino in Ontario	†	†	†	1.6	†	†
Any Internet Gambling	—	†	†	4.7	†	†
Dice	—	14.7	17.2	14.0	9.2	6.4 [b]
Other ways	—	26.8	22.2	25.6	21.0	20.2
Internet Poker	—	—	—	4.6	†	—
Any Gambling Activity of 10 (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) [b]
5+ Gambling Activities of 10 (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)
GRADE 12	(200)	(559)	(728)	(666)	(769)	(846)
Cards	25.0	26.6	40.6	36.0	27.9	19.8
Bingo	14.7	10.3	8.9	9.0	8.1	4.6 [b]
Sports Pools	28.7	21.3	21.8	20.2	17.9	17.0 [b]
Sports Lottery Tickets	19.3	13.8	12.5	11.7	9.3	6.2 [b]
Other Lottery Tickets	40.3	40.5	32.1	32.6	30.1	22.0 [b]
Video Gambling or Slot Machines	10.9	9.4	6.0	5.2	5.1	4.2
Casino in Ontario	7.8	4.5	2.6	†	3.3	†
Any Internet Gambling	—	†	1.8	2.6	3.9	†
Dice	—	12.8	14.7	13.4	6.1	7.3
Other ways	—	21.2	23.4	24.0	18.4	15.2
Internet Poker	—	—	—	3.9	2.8	—
Any Gambling Activity of 10 (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) [b]
5+ Gambling Activities of 10 (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) [b]

(Continued…)

	2001	2003	2005	2007	2009	2011
TORONTO	(267)	(548)	(577)	(470)	(417)	(621)
Cards	17.8	22.4	30.4	25.9	15.3	16.8
Bingo	8.7	8.3	7.0	4.9	6.5	4.1
Sports Pools	23.4	16.9	12.6	12.0	7.0	8.9 [b]
Sports Lottery Tickets	12.1	8.7	7.4	6.9	6.7	2.6 [b]
Other Lottery Tickets	18.6	19.0	14.6	15.3	13.4	11.2
Video Gambling or Slot Machines	5.2	7.9	2.8	3.3	†	3.0
Casino in Ontario	†	†	†	†	†	†
Any Internet Gambling	—	†	2.4	3.5	†	1.6
Dice	—	18.6	17.0	17.4	5.1	7.3 [b]
Other ways	—	28.3	22.0	25.2	14.0	16.0 [b]
Internet Poker	—	—	—	†	2.7	—
Any Gambling Activity of 10 (95% CI)	—	53.8 (48.2-59.3)	51.0 (45.2-56.7)	50.7 (44.8-56.6)	35.2 (28.2-42.9)	34.7 (30.3-39.5) [b]
5+ Gambling Activities of 10 (95% CI)	—	5.6 (3.6-8.5)	5.2 (3.0-9.0)	4.0 (2.3-6.9)	2.7 (1.0-7.0)	†
NORTH REGION	(599)	(746)	(728)	(421)	(359)	(1022)
Cards	30.1	24.2	38.8	38.0	22.0	20.8
Bingo	17.8	12.2	14.7	12.5	11.3	6.6 [b]
Sports Pools	19.8	17.0	19.0	19.6	11.3	14.3
Sports Lottery Tickets	9.4	8.0	8.6	8.7	7.0	3.6 [b]
Other Lottery Tickets	25.5	27.8	25.9	23.7	20.2	16.0 [b]
Video Gambling or Slot Machines	10.5	8.1	13.5	5.6	†	†
Casino in Ontario	3.1	†	†	†	†	†
Any Internet Gambling	—	2.7	2.5	4.7	†	2.7
Dice	—	9.0	16.8	9.6	6.5	5.7
Other ways	—	27.1	24.6	22.9	17.5	17.6
Internet Poker	—	—	—	5.0	†	—
Any Gambling Activity of 10 (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) [b]
5+ Gambling Activities of 10 (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)
WEST REGION	(718)	(1259)	(1437)	(1323)	(1422)	(1245)
Cards	26.4	22.8	34.1	30.6	21.7	15.5 [b]
Bingo	11.7	8.9	9.5	7.5	6.9	5.8 [b]
Sports Pools	21.1	20.4	16.7	17.6	15.4	14.4 [b]
Sports Lottery Tickets	9.4	6.9	8.5	6.5	5.3	3.9 [b]
Other Lottery Tickets	22.1	22.2	20.6	20.7	16.6	13.0 [b]
Video Gambling or Slot Machines	6.9	5.3	5.0	3.7	2.4	† [b]
Casino in Ontario	†	1.2	1.0	†	†	†
Any Internet Gambling	—	2.4	1.9	3.4	2.8	†
Dice	—	11.5	14.6	10.8	6.8	†
Other ways	—	26.2	24.1	23.4	20.2	17.3 [b]
Internet Poker	—	—	—	3.5	2.9	—
Any Gambling Activity of 10 (95% CI)	—	56.1 (53.2-59.0)	57.0 (53.8-60.2)	54.3 (50.6-58.0)	43.4 (40.0-46.9)	39.4 (34.0-45.1) [b]
5+ Gambling Activities of 10 (95% CI)	—	5.8 (4.4-7.6)	6.9 (5.5-8.5)	5.2 (3.9-7.0)	3.0 (2.2-4.3)	2.6 (1.5-4.6)

(Continued…)

	2001	2003	2005	2007	2009	2011
EAST REGION	(477)	(911)	(1336)	(1174)	(2653)	(1928)
Cards	25.7	26.6	30.8	26.3	20.4	15.2 [b]
Bingo	11.1	11.6	7.0	7.9	7.0	4.4 [b]
Sports Pools	24.3	22.9	19.0	14.4	12.2	13.8 [b]
Sports Lottery Tickets	9.1	8.5	5.4	5.1	3.9	3.8 [b]
Other Lottery Tickets	23.3	23.0	16.2	17.3	14.5	12.4 [b]
Video Gambling or Slot Machines	6.6	7.5	7.4	6.5	6.0	3.1
Casino in Ontario	†	2.5	†	1.6	2.2	†
Any Internet Gambling	—	2.9	†	2.1	3.1	2.2
Dice	—	12.1	13.1	8.1	5.7	4.4 [b]
Other ways	—	27.8	23.5	24.3	19.6	18.8 [b]
Internet Poker	—	—	—	2.2	2.7	—
Any Gambling Activity of 10 (95% CI)	—	60.5 (56.1-64.7)	57.6 (53.2-61.9)	52.4 (48.4-56.4)	43.9 (40.0-47.9)	38.4 (35.3-41.6) [b]
5+ Gambling Activities of 10 (95% CI)	—	6.8 (4.6-10.0)	4.2 (2.5-7.1)	4.1 (2.7-6.1)	3.0 (1.7-5.3)	2.9 (1.6-4.9)

Notes: (1) * excludes betting on Internet Poker, which was removed from the survey in 2011 (2) N=number of students surveyed; (3) based on a random half sample in each year; (4) CI=confidence interval; (5) † indicates estimate suppressed due to unreliability; (6) percentages are reports of engaging in the activity at least once in the past 12 months; (7) [a] 2011 vs. 2009 significant difference, p<.01; (8) [b] 2011 vs. 2001 (or 2003) significant difference, p<.01.

Qs: "How often in the last 12 months have you done each of the following: Played cards for money?; Played bingo for money?; Bet money on sports pools?; Bought sports lottery tickets (such as Sports Select or Proline)?; Bought any other lottery tickets including instant lottery (such as 6-49, scratch cards, pull-tabs)?; Bet money on video gambling machines, slot machines, or any other gambling machines?; Bet money at a casino in Ontario?; Bet money over the Internet (on any game)?; Played dice for money?; Bet money in other ways not listed above?"

Source: OSDUHS, Centre for Addiction and Mental Health

Table A3.6.2 Percentage of All Students Indicating a Gambling Problem (Reduced SOGS-RA), 1999–2011 (Grades 7–12)

		1999	2001	2003	2005	2007	2009	2011
	(N=)	(2148)	(2061)	(3464)	(4078)	(3388)	(4851)	(4816)
Total % (95% CI)		**6.8** (5.5-8.3)	**3.6** (2.5-5.1)	**3.7** (3.0-4.6)	**4.5** (3.5-5.9)	**2.3** (1.8-2.9)	**2.8** (2.0-3.9)	**1.7** [b] (1.2-2.5)
Sex	Males	**10.2** (8.3-12.5)	**6.0** (4.0-8.9)	**6.5** (5.2-8.2)	**7.2** (5.7-9.0)	**3.5** (2.7-4.6)	**4.3** (2.9-6.5)	**2.4** [b] (1.6-3.8)
	Females	**3.3** (2.0-5.2)	†	**1.2** (0.7-2.0)	**1.8** (1.1-3.0)	**1.1** (0.6-1.8)	**1.2** (0.8-1.9)	**1.0** [b] (0.5-1.8)
Grade	7	**3.8** (2.0-7.1)	†	†	†	†	†	†
	8	**5.6** (3.9-8.0)	†	†	**4.4** (2.5-7.4)	†	†	†
	9	**7.5** (4.8-11.5)	†	**2.8** (1.7-4.6)	**3.1** (1.6-5.6)	**2.8** (1.6-4.6)	†	†
	10	**8.5** (4.6-15.3)	**4.2** (2.3-7.5)	**4.3** (2.8-6.5)	**3.2** (1.9-5.1)	**1.2** (0.5-2.9)	**2.1** (1.3-3.6)	†
	11	**7.8** (5.0-11.9)	†	**4.2** (2.7-6.5)	**6.6** (4.8-9.0)	**4.1** (2.5-6.7)	**4.2** (1.2-13.4)	†
	12	**7.2** (4.2-12.2)	**3.6** (1.7-7.3)	**5.8** (3.9-8.5)	**6.1** (4.3-8.5)	**3.2** (2.0-5.0)	**4.5** (2.7-7.5)	**2.2** [b] (1.2-4.1)
Region	Toronto	**8.0** (5.1-12.4)	†	**3.6** (2.2-5.8)	**4.3** (2.9-6.3)	†	**3.8** (2.0-7.1)	**3.4** (1.9-6.0)
	North	**7.0** (4.0-11.9)	**4.6** (2.4-8.6)	**3.4** (2.0-5.7)	**2.5** (1.4-4.4)	**2.4** (1.3-4.2)	†	**1.7** [b] (1.0-3.0)
	West	**5.8** (4.0-8.4)	**3.3** (2.2-5.0)	**3.9** (2.9-5.4)	**4.4** (3.3-5.8)	**2.0** (1.4-2.9)	**1.8** (1.2-2.5)	†
	East	**7.4** (5.3-10.3)	**2.3** (1.2-4.0)	**3.6** (2.4-5.3)	**5.3** (3.1-8.9)	**2.4** (1.8-3.4)	**3.7** (2.0-6.7)	**1.7** [b] (0.9-3.2)

Notes: (1) "Gambling Problem" is defined as positive responses to 2 or more of the 6 items in the South Oaks Gambling Screen-Revised for Adolescents (SOGS-RA) (reduced scale); (2) N=total number of students surveyed; (3) based on a random half sample in each year; (4) CI=confidence interval; (5) † indicates estimate suppressed due to unreliability; (6) no significant differences, 2011 vs. 2009; (7) [b] 2011 vs. 1999 significant difference, $p<.01$.

Source: OSDUHS, Centre for Addiction and Mental Health

Table A3.6.3 Percentage of All Students Indicating a Video Gaming Problem (PVP Scale), 2007–2011 (Grades 7–12)

		2007 (N=2935)	2009 (N=4261)	2011 (N=4816)
Total % (95% CI)		**9.4** (8.2-10.8)	**10.3** (9.0-11.7)	**11.9** (9.4-14.9)
Sex	Males	**15.1** (13.1-17.3)	**16.0** (13.7-18.4)	**18.7** (14.5-23.6)
	Females	**3.1** (2.3-4.3)	**4.0** (2.7-5.7)	**5.1** (4.1-6.3)
Grade	7	**10.4** (6.9-15.3)	**8.3** (5.0-13.4)	**8.7** (6.3-11.8)
	8	**10.8** (7.9-14.8)	**10.9** (7.5-15.4)	**9.0** (6.4-12.5)
	9	**8.9** (6.4-12.2)	**11.2** (7.9-15.6)	**9.2** (6.3-13.1)
	10	**9.1** (6.7-12.4)	**11.4** (8.6-14.9)	**11.9** (8.6-16.2)
	11	**9.2** (6.7-12.7)	**9.7** (6.8-13.5)	**12.5** (9.3-16.5)
	12	**8.6** (6.4-11.4)	**10.0** (7.0-14.0)	**16.9** (9.1-29.1)
Region	Toronto	**13.0** (9.9-16.7)	**8.0** (5.7-11.1)	**14.6** (10.3-20.4)
	North	**7.6** (5.5-10.5)	**10.5** (7.7-14.1)	**7.4** (5.8-9.4)
	West	**8.7** (7.0-10.7)	**11.9** (9.8-14.4)	**12.3** (7.6-19.2)
	East	**8.7** (6.4-11.7)	**9.2** (6.9-12.0)	**10.7** (9.2-12.6)

Notes: (1) "Video Gaming Problem" is defined as positive responses to 5 or more of the 9 items 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 changes over time.
Source: OSDUHS, Centre for Addiction and Mental Health

Table A3.7.1: Co-Existing Problems: Percentage Reporting Elevated Psychological Distress, Antisocial Behaviour, Alcohol Problem, and a Drug Problem, 2003–2011 (Grades 7–12)

(N=)	**2003** (3464)	**2005** (4078)	**2007** (3388)	**2009** (4851)	**2011** (4816)
None of the 4 problems	52%	55%	54%	53%	55%
Psychological Distress only	18%	19%	18%	19%	22%
Alcohol Problem only	4%	3%	4%	6%	4%
Drug Problem only	3%	3%	2%	2%	2%
Antisocial Behaviour only	2%	2%	3%	1%	1%
Psychological Distress + Alcohol Problem	2%	2%	3%	3%	3%
Psychological Distress + Drug Problem	2%	2%	1%	2%	2%
Psychological Distress + Antisocial Behaviour	2%	2%	2%	1%	1%
Alcohol Problem + Drug Problem	2%	3%	2%	3%	3%
Alcohol Problem + Antisocial Behaviour	1%	1%	1%	1%	1%
Drug Problem + Antisocial Behaviour	1%	1%	1%	1%	†
Psychological Distress + Alcohol Problem + Drug Problem	2%	2%	2%	2%	2%
Psychological Distress + Alcohol Problem + Antisocial Behaviour	1%	1%	1%	0.5%	0.7%
Psychological Distress + Antisocial Behaviour + Drug Problem	1%	1%	1%	1%	†
Alcohol Problem + Drug Problem + Antisocial Behaviour	3%	2%	2%	2%	1%
All 4 Problems	3%	2%	3%	2%	2%

Notes: (1) Elevated Psychological Distress is indicated by a score of 3 or more on the GHQ12 screener (see Chapter 3.4); (2) Antisocial Behaviour is defined as reporting 3 or more of 9 antisocial behaviours (see Chapter 3.5); (3) Alcohol Problem refers to hazardous/harmful drinking and is indicated by a score of 8 or more on the AUDIT screener; (4) Drug Problem is indicated by a score of 2 or more on the CRAFFT-D screener; (5) N=total number of students surveyed; (6) based on a random half sample in each year; (7) no significant changes over time.

Source: OSDUHS, Centre for Addiction & Mental Health

Table A3.7.2: Percentage Reporting Three or All Four Co-Existing Problems*, 2003–2011 (Grades 7–12)

		(N=)	2003 (3464)	2005 (4078)	2007 (3388)	2009 (4851)	2011 (4816)
Total % (95% CI)			**10.0** (8.7-11.4)	**8.4** (7.2-9.8)	**9.0** (7.9-10.2)	**8.4** (7.3-9.7)	**6.9** [b] (5.8-8.1)
Sex	Males		**10.3** (8.5-12.4)	**8.7** (7.2-10.5)	**8.4** (7.0-10.0)	**8.7** (6.9-10.8)	**6.2** [b] (4.7-8.2)
	Females		**9.7** (7.9-11.8)	**8.0** (6.6-9.6)	**9.6** (8.2-11.3)	**8.2** (6.9-9.7)	**7.5** (6.2-9.0)
Grade	7		†	†	†	†	†
	8		†	**4.8** (2.6-8.6)	†	**2.6** (1.6-4.3)	†
	9		**8.5** (6.5-10.9)	**7.4** (5.4-10.0)	**9.6** (6.7-13.6)	**6.2** (4.0-9.4)	**4.0** [b] (2.7-5.9)
	10		**12.7** (9.4-17.1)	**10.6** (8.1-13.8)	**10.0** (7.9-12.7)	**9.2** (6.8-12.3)	**7.1** (4.8-10.4)
	11		**15.2** (11.6-19.6)	**12.5** (10.0-15.6)	**13.6** (10.3-17.6)	**12.2** (8.8-16.7)	**11.8** (8.7-15.8)
	12		**13.0** (9.9-16.8)	**12.6** (9.5-16.4)	**14.7** (11.5-18.6)	**15.5** (12.4-19.2)	**11.9** (8.6-16.3)
Region	Toronto		**9.8** (6.9-13.8)	**6.3** (4.3-9.0)	**5.4** (3.4-8.6)	**5.7** (3.5-9.3)	**5.2** (3.6-7.6)
	North		**10.5** (7.6-14.3)	**10.2** (7.4-13.8)	**13.9** (9.7-19.5)	**11.9** (8.9-15.6)	**10.5** (7.4-14.7)
	West		**10.2** (8.4-12.4)	**9.7** (7.6-12.4)	**9.5** (7.7-11.6)	**8.5** (6.9-10.4)	**6.6** (5.0-8.9)
	East		**9.6** (7.2-12.6)	**7.4** (5.7-9.6)	**9.2** (7.5-11.2)	**8.9** (6.9-11.5)	**7.4** (5.9-9.3)

Notes: (1) * among the following four problems: elevated psychological distress, antisocial behaviour; hazardous/harmful drinking, and a drug use problem; (2) N=total number of students surveyed; (3) based on a random half sample in each year; (4) entries in brackets are 95% confidence intervals; (5) † indicates estimate suppressed due to unreliability; (6) no significant differences, 2011 vs. 2009; (7) [b] 2011 vs. 2003 significant difference, $p<.01$.

Source: OSDUHS, Centre for Addiction and Mental Health

Selected OSDUHS Peer-Reviewed Publications

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*, 46-58.

Turner, N., Paglia-Boak, A., Ballon, B., Cheung, J., Adlaf, E., Henderson, J., et al. (2012). Prevalence of problematic video gaming among Ontario adolescents. *International Journal of Mental Health and Addiction*, 1-13. doi:10.1007/s11469-11012-19382-11465

Hamilton, H., Paglia-Boak, A., Wekerle, C., Danielson, A., & Mann, R. E. (2011). Psychological distress, service utilization, and prescribed medications among youth with and without histories of involvement with child protective services. *International Journal of Mental Health and Addictio*n, 9, 398-409.

Mann, R. E., Paglia-Boak, A., Adlaf, E. M., Beitchman, J., Wolfe, D., Wekerle, C., et al. (2011). Estimating the prevalence of anxiety and mood disorders in an adolescent general population: An evaluation of the GHQ12. *International Journal of Mental Health and Addiction, 9*, 410-420.

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*, 443-450.

Wong, B. Y. M., Faulkner, G., Buliung, R., & Irving, H. (2011). Mode shifting in school travel mode: Examining the prevalence and correlates of active school transport in Ontario, Canada. *BMC Public Health, 11*, 618.

Arbour-Nicitopoulos, K. P., Faulkner, G. E., Paglia-Boak, A., & Irving, H. M. (2010). Adolescents' attitudes toward wheelchair users: A provincial survey. *International Journal of Rehabilitation Research, 33*, 261-263.

Brands, B., Paglia-Boak, A., Sproule, B. A., & Adlaf, E. M. (2010). Nonmedical use and source of opioid analgesics among Ontario students. *Canadian Family Physician, 56*, 256-262.

Callaghan, R. C., Veldhuizen, S., & Ip, D. (2010). Contraband cigarette consumption among adolescent daily smokers in Ontario, Canada. *Tobacco Control*. doi:10.1136/tc.2010.037507

Mohapatra, S., Irving, H., Paglia-Boak, A., Wekerle, C., Adlaf, E., & Rehm, J. (2010). History of family involvement with child protective services as a risk factor for bullying in Ontario schools. *Child and Adolescent Mental Health, 15*, 157-163.

Adlaf, E. M., Hamilton, H. A., Wu, F., & Noh, S. (2009). Adolescent stigma towards drug addiction: Effects of age and drug use behaviour. *Addictive Behaviors, 34*, 360-364.

Faulkner, G., 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*, 312-318.

Hamilton, H. A., Noh, S., & Adlaf, E. M. (2009). Adolescent risk behaviours and psychological distress across immigrant generations. *Canadian Journal of Public Health, 100*, 221-225.

Hamilton, H. A., Noh, S., & Adlaf, E. M. (2009). Perceived financial status, health, and maladjustment in adolescence. *Social Science and Medicine, 68*, 1527-1534.

MacKay, S., Paglia-Boak, A., Henderson, J., Marton, P., & Adlaf, E. M. (2009). Epidemiology of firesetting in adolescents: Mental health and substance use correlates. *Journal of Child Psychology and Psychiatry, 50,* 1282-1290.

Zhang, B., Cartmill, C., & Ferrence, R. (2008). The role of spending money and drinking alcohol in adolescent smoking. *Addiction, 103*, 310-319.

Allison, K. R., Adlaf, E. M., Dwyer, J., Lysy, D., & Irving, H. (2007). The decline in physical activity among adolescent students: A cross-national comparison. *Canadian Journal of Public Health, 98*, 97-100.

Chaiton, M. O., & Zhang, B. (2007). Environment modifies the association between depression symptoms and smoking among adolescents. *Psychology of Addictive Behaviors, 21*, 420-424.

Faulkner, G., Adlaf, E. M., Irving, H., Allison, K. R., Dwyer, J., & Goodman, J. (2007). Participation in high school physical education – Ontario, Canada, 1999-2005. *MMWR, Jan 26*, 52-54.

Faulkner, G., Adlaf, E. M., Irving, H., Allison, K. R., Dwyer, J., & Goodman, J. (2007). The relationship between vigorous physical activity and juvenile delinquency: A mediating role for self-esteem? *Journal of Behavioral Medicine, 30*, 155-163.

Smart, R. G., Stoduto, G., Adlaf, E., Mann, R., & Sharpley, J. (2007). Road rage victimization among adolescents. *Journal of Adolescent Health, 41*, 277-282.

Adlaf, E. M., Paglia-Boak, A., & Brands, B. (2006). Use of OxyContin by adolescent students. *Canadian Medical Association Journal, 174*, 1303.

Adlaf, E. M., Paglia-Boak, A., & Ialomiteanu, A. (2006). Underage gambling in Ontario casinos. *Journal of Gambling Issues, 16.* doi:10.4309/jgi.2006.16.3

Morris, E. B., Zhang, B., & Bondy, S. J. (2006). Bullying and smoking: Examining the relationships in Ontario adolescents. *The Journal of School Health, 76*, 465-470.

Allison, K. R., Adlaf, E. M., Irving, H. M., Rondeau, J. L., Smith, T. F., Dwyer, J., & Goodman, J. (2005). Relationship of vigorous physical activity to psychological distress among adolescents. *Journal of Adolescent Health, 37*, 164-166.

Breslin, C. F., & Adlaf, E. M. (2005). Part-time work and adolescent binge drinking: The moderating effect of family and community context. *Journal of Studies on Alcohol, 66*, 784-794.

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*, 569-574.

Adlaf, E. M., Mann, R., & Paglia, A. (2003). Drinking, cannabis use and driving among Ontario students. *Canadian Medical Association Journal, 168*, 565-566.

Kairouz, S., & Adlaf, E. M. (2003). Schools, students and heavy drinking: A multilevel analysis. *Addiction Research and Theory, 1*, 427-439.

Paglia, A., & Adlaf, E. M. (2003). Secular trends in self-reported violent activity among Ontario students, 1983-2001. *Canadian Journal of Public Health, 94*, 212-217.

Waller, B. J., Cohen, J., Ferrence, R., Bull, S., & Adlaf, E. M. (2003). The early 1990s cigarette price decrease and trends in youth smoking in Ontario. *Canadian Journal of Public Health, 94*, 31-35.

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