

Illicit Substance Use Among Canadian Youth: Trends Between 2002 and 2008

David Hammond, PhD,¹ Rashid Ahmed, MSc,² Wiworn Sae Yang, BSc,¹ Robin Brukhalter, MMath,³ Scott Leatherdale, PhD⁴

ABSTRACT

Background: Substance use among youth is associated with a range of immediate and long-term health risks. The current study sought to characterize early patterns of illicit drug use among Canadian youth.

Methods: Nationally representative surveys were conducted in 2002 (n=11,757), 2004 (n=16,705), 2006 (n=27,030), and 2008 (n=24,752) with students in grades 7 to 9 as part of Health Canada's Youth Smoking Survey (YSS). In 2008, students in grades 10-12 were also included in the survey (n=20,673).

Results: In 2008, approximately 21% of youth in grades 7-9 reported drinking at least once a month in the past year, 26% reported previous tobacco use, 17% reported trying cannabis, while 13% reported trying another substance, including glue, non-medical use of prescription drugs, hallucinogens, and amphetamines. Compared to 2006, the number of youth in grades 7-9 who reported ever trying glue decreased significantly in 2008, whereas those who reported ever trying MDMA and non-medical use of prescription drugs had increased. Males were significantly more likely to report use for most but not all substances across survey years.

Conclusions: A considerable portion of Canadians aged 13 to 15 reported experimenting with illegal substances. The findings provide the most comprehensive national trends in substance use among young Canadians.

Key words: Drug use; substance use; tobacco use; alcohol use; cannabis use; youth; youth smoking survey

La traduction du résumé se trouve à la fin de l'article.

Can J Public Health 2011;102(1):7-12.

The prevalence of substance use among Canadian adults has increased over the past decade.¹ Cannabis is the most widely used illicit drug in Canada: approximately 45% of Canadians over 15 years old report having used cannabis at least once in their lifetime and 14% report use in the past year. Approximately one in six Canadians also report having used at least one of hallucinogens, cocaine, amphetamines and ecstasy; however, fewer than one percent report using these drugs in the past year.^{1,2} At present, substance use in Canada is highest among men and young adults.^{1,3}

Patterns of adult substance use are typically established during adolescence and early drug use among youth serves as a useful indicator of future trends among adults.^{4,5} In the late 1970s, approximately one third of Ontario students reported past-year use of any illicit drug.⁶ Prevalence of use declined during the 1980s, followed by dramatic increases in the mid-1990s. For example, the prevalence of cocaine and cannabis use among Ontario youth almost tripled between 1993 and 2003, with similar trends in other provinces.^{6,7} More recently, the use of cannabis and substances such as alcohol, tobacco, and hallucinogens appears to have declined among youth.^{6,8} One of the few national drug-use studies conducted among Canadian youth found that the prevalence of cannabis use, amphetamines, heroin, cocaine, LSD, steroids, and solvent use showed either no change or modest decreases among students in grades 9 and 10 between 1998 and 2006.⁹

One challenge in detecting trends in adolescent substance use is the scarcity of national data that allow for comparisons across

provinces and regions. Outside of Ontario, few provinces routinely monitor patterns of substance use, particularly among those under 15 years of age. Patterns of use among younger adolescents are particularly important given that early initiation is a strong predictor of subsequent substance abuse and health risk.^{4,5} Therefore, it is unclear to what extent the recent declines reported among Ontario adolescents and older youth reflect national trends for younger populations. The objective of the current study was to characterize patterns of use for 11 substances among Canadians aged 13 to 15. The study also sought to examine differences by gender, as well as regional differences in substance use.

Author Affiliations

1. Department of Health Studies & Gerontology, University of Waterloo, Waterloo, ON
2. Department of Statistics & Actuarial Science, University of Waterloo, Waterloo, ON
3. Propel Centre for Population Health Impact, University of Waterloo, Waterloo, ON
4. Cancer Care Ontario, Toronto, ON

Correspondence: David Hammond, Department of Health Studies & Gerontology, University of Waterloo, 200 University Avenue West, Waterloo, ON N2L 3G1, Tel: 519-888-4567, ext.36462, Fax: 519-886-6424, E-mail: dhammond@uwaterloo.ca

Acknowledgements: The 2006-2007 Youth Smoking Survey is a product of a pan-Canadian capacity-building project that includes Canadian tobacco control researchers from all provinces and provides training opportunities for university students at all levels. Production of this paper has been made possible through a financial contribution from Health Canada. The views expressed herein do not necessarily represent the views of Health Canada. This work was also supported by the Propel Centre for Population Health Impact and the Interdisciplinary Capacity Enhancement Program at the University of Waterloo. Dr. Leatherdale is a Cancer Care Ontario Research Chair in Population Studies.

Conflict of Interest: None to declare.

Table 1. Sample Characteristics for Youth Smoking Survey 2002, 2004, 2006 and 2008*

	2002 % (n)	2004 % (n)	2006 % (n)	2008 (gr. 7-9) % (n)	2008 (gr. 10-12) % (n)
Sample Size	11,757	16,705	27,030	24,752	20,673
Gender					
Female	48.6 (5712)	48.5 (8101)	49.0 (13,219)	49.0 (12,126)	48.2 (9963)
Male	51.4 (6045)	51.5 (8604)	51.0 (13,761)	51.0 (12,626)	51.8 (10,710)
Grade					
Grade 7	34.7 (4079)	33.7 (5629)	32.4 (8765)	32.4 (8021)	34.9 (7219)
Grade 8	33.0 (3880)	33.2 (5538)	33.6 (9085)	33.2 (8228)	34.1 (7041)
Grade 9	32.3 (3798)	33.1 (5538)	34.0 (9179)	34.4 (8503)	31.0 (6413)
Region					
Atlantic	7.8 (921)	7.5 (1254)	6.9 (1868)	6.7 (1660)	7.23 (1495)
Quebec	24.0 (2823)	23.9 (3999)	24.5 (6614)	24.1 (5953)	14.0 (2896)
Ontario	37.5 (4406)	38.6 (6448)	38.9 (10,522)	38.7 (9584)	43.2 (8939)
Prairies	18.1 (2127)	18.2 (3035)	17.5 (4731)	18.1 (4470)	19.9 (4114)
British Columbia	12.6 (1481)	11.8 (1970)	12.2 (3295)	12.5 (3085)	15.6 (3229)

* Weighted data

Table 2. Proportion of “Ever” Drug Use Among Grades 7-9 Students†

	2002 (n=11,757)			2004 (n=16,705)			2006 (n=27,030)			2008 (n=24,752)		
	Male	Female	Total	Male	Female	Total	Male	Female	Total	Male	Female	Total
Alcohol	57.1	51.7	54.5	65.6*	60.0*	62.9**	62.2	56.0	59.1*	–	–	–
Tobacco	30.8	32.2	31.5	25.8	26.7	26.2	26.7	24.6	25.7	27.6	23.5	25.6
Cannabis	19.5	16.8	18.2	17.5	16.0	16.7	18.4	15.3	16.9	19.6	14.3	17.0
Any “other” drug	12.0	11.2	11.6	12.9	14.1	13.5	13.0	12.3	12.7	13.1	12.7	12.9
Hallucinogens	4.4	3.4	3.9	3.2	3.3	3.3	4.7*	3.0	3.9	5.7	3.8	4.8
Amphetamines	2.1	2.3	2.2	2.2	3.1	2.7	3.2	2.7	3.0	3.7	3.2	3.5
Cocaine	2.0	2.2	2.1	2.1	2.9	2.5	2.6	2.0*	2.3	3.3	2.3	2.8
MDMA	1.3	1.3	1.3	2.0	2.7	2.3	3.4*	2.9	3.2	4.5	4.0	4.2
Heroin	0.8	1.0	0.9	1.0	0.9	0.9	1.6	1.2	1.4*	2.5	1.0	1.8
Glue	6.1	5.6	5.9	7.4	7.6	7.5	6.7	5.8*	6.3	5.0*	4.5**	4.7***
Prescription drugs	3.2	2.7	3.0	3.5	4.3	3.9	3.9	4.8	4.3	6.6***	6.8**	6.7***
Steroids	0.9	0.6	0.7	1.8	0.8	1.3	1.9	0.9	1.4	2.3	0.8	1.6

† Asterisks denote difference with previous survey year: ***p<0.001, ** p<0.01, *p<0.05
Note: Alcohol “ever use” data for 2008 was unreportable due to question change

– Unreportable

METHODS

Participants

The Youth Smoking Survey (YSS) was conducted with Canadian respondents in grades 5 to 9 inclusive in 2002 (n=19,018), 2004 (n=29,243), and with grades 5 to 12 in 2006 (n=71,003) and grades 6 to 12 in 2008 (n=51,922). The current data include youth in grades 7 to 9 who responded to the substance use section of the 2002 (n=11,757), 2004 (n=16,705), and 2006 (n=27,030) surveys. For the 2008 survey, the data include youth in grades 7-9 (n=24,752) and grades 10-12 (n=20,673) who responded to the substance use section.

Design

Data were collected as part of the YSS, conducted on behalf of Health Canada in 2002, 2004, 2006 and 2008. The target population for the YSS consisted of all young Canadian residents in grades 5-9 (grades 5-12 in 2006 and grades 6-12 in 2008), inclusive of public and private schools, in 10 Canadian provinces. Youth residing in the Yukon, Nunavut and the Northwest Territories were not included, nor were youth living in institutions or on First Nation Reserves. Youth attending special schools and schools on military bases were also excluded from the target population.

The YSS 2002 used a sampling design consisting of a two-stage stratified clustered design with schools as primary sampling units and classes as secondary sampling units. All of the students in the selected classes were surveyed. The sample design featured three levels of stratification: province, grade level, and census metropolitan area. The sample of schools was selected systematically with probability proportional to school size. The selection of the sec-

ondary sampling units (classes) was conducted by field staff who randomly selected one class in the desired grade per school. The final 2002 YSS sample included 1,070 classes in 982 schools situated in 327 school boards. Data were collected between October and December 2002.

In YSS 2004-05, the sampling of schools was conducted in two stages. At stage 1, school boards were sampled within each province using a stratified sampling design. The school boards were ranked based on their adult smoking rates and each board was assigned to one of the two strata (low vs. high smoking rate) so that approximately half the total student enrolment in any province was assigned to each stratum. From the selected school boards, schools were then sampled. Schools were stratified into two strata, the senior stratum (senior elementary or high school grades) and the junior stratum (junior elementary grades).

The YSS 2006-07 and 2008-09 used a stratified multistage sampling design. Stratification was first based on 15-19 year old smoking rate by health region (low or high) and then school type (elementary or secondary). Four school strata were created for each provincial sampling frame by crossing the two health region strata (low or high) with two school type strata (elementary or secondary). In the YSS 2008-09, at the health-region level, a third stratum, Greater Toronto Area, was created for Ontario to acknowledge the size of the GTA. As a result, Ontario has six strata instead of the four for each of the other provinces. Schools were randomly selected within each stratum in each province with probabilities proportional to the total enrolment in their boards in YSS 2006-07 and based on simple random sampling in YSS 2008-09. Private schools were selected randomly from the list of private schools in each province. The number of private schools selected was pro-

Table 3. Prevalence of “Ever” Drug Use by Region in 2008 (n=24,752)†

	BC (Change from 2006)	Prairies (Change from 2006)	Ontario (Change from 2006)	Quebec (Change from 2006)	Atlantic (Change from 2006)
Tobacco	25.3% (-1.9%)	23.7% (+0.9%)	16.4% (-2.3%)	42.0% (+3.5%)	25.7% (+1.2%)
Cannabis	27.3% (+4.2%)	12.8% (+1.9%)	12.1% (-0.9%)	23.4% (-1.1%)	14.2% (-0.2%)
Any “other” drug	19.3% (+3.3%)	10.5% (-0.5%)	9.3% (+0.01%)	17.3% (+0.04%)	12.9% (-0.2%)
Hallucinogens	9.9% (+4.2%)**	4.0% (+0.7%)	2.8% (+0.4%)	6.3% (+0.5%)	3.5% (-)
Amphetamines	–	1.5% (+0.5%)	1.2% (-0.2%)	8.9% (+0.9%)	2.6% (+0.6%)
Cocaine	4.2% (+2.3%)***	2.1% (+0.4%)	1.9% (-0.1%)	4.4% (+0.8%)	2.5% (+0.4%)
MDMA	5.6% (+2.1%)*	3.6% (+1.3%)	2.1% (+0.2%)	7.4% (+1.6%)	3.7% (+1.1%)
Heroin	–	1.5% (+0.4%)	1.1% (+0.2%)	2.4% (-0.1%)	1.9% (+0.3%)
Glue	7.7% (-0.5%)	4.6% (-2.3%)	4.2% (-1.3%)	3.9% (-1.4%)	5.7% (-2.7%)**
Prescription drugs	9.9% (+3.8%)**	5.8% (+2.0%)*	4.9% (+1.9%)**	8.5% (+2.9%)**	7.4% (+1.9%)*
Steroids	–	1.1% (-0.4%)	1.2% (-)	1.9% (-)	1.9% (+0.3%)

† Significant within province over the time between 2006 and 2008: *** $p \leq 0.001$, ** $p \leq 0.01$, * $p \leq 0.05$ – Unreportable

portional to the number of students enrolled in private schools compared to the total in public schools. All students in grades 5-12 in YSS 2006-07 and grades 6-12 in YSS 2008-09 of selected schools were eligible for participation in the survey.

Detailed information on the sample design, methods and survey rates is available from Statistics Canada.^{10,11} For the YSS 2006-07, detailed information is available from the YSS website (www.yss.uwaterloo.ca).

Measures

The YSS collected information on age, gender, smoking behaviour, as well as alcohol and non-medical drug use. Tobacco use was defined based on how the respondents answered, “Have you ever tried cigarette smoking, even just a few puffs?” Alcohol use was assessed by asking respondents, “Have you ever had a drink of alcohol; that is, more than just a sip?” Those who answered “yes” were asked, “Have you ever had five drinks or more of alcohol on one occasion?” In the YSS 2008-09, alcohol use was assessed by asking the respondents, “In the last 12 months, how often did you have a drink of alcohol that was more than just a sip?” Respondents were also asked whether they “have ever used or tried” each of the following substances: Cannabis (a joint, pot, weed, hash); Amphetamines, such as speed, ice, or meth; MDMA (Ecstasy, E, X); Hallucinogens (LSD, PCP, acid, magic mushrooms, mesc); Heroin (smack, H, junk, crank); Cocaine (coke, crack, blow, snow); Steroids (testosterone, growth hormones, Dianabol, juice, roids); glue, gasoline or other products (solvents); and prescription drugs to get high and not for medical purposes. Similar to alcohol use, in the YSS 2008-09, cannabis use was assessed by asking how often the respondents used cannabis in the past 12 months. Although the tobacco questions were asked of all YSS respondents, only those in Grades 7-9 were asked the remaining substance-related questions. As a result, the current findings only include students in Grades 7 to 9. In the YSS 2008-09, the substance-related questions also included Grades 10-12 students; thus, Grades 10-12 were included in the analyses for the year 2008.

Analyses

All analyses, with the exception of the regression analyses, were conducted using SAS statistical software, Version 9.1. The regression analyses were conducted using Stata Version 10.1. Descriptive analyses (e.g., proportions by age and gender) were calculated to determine prevalence estimates. Survey weights were used to adjust for non-response between provinces and groups, thereby minimizing any bias in the analyses caused by differential response rates across regions or groups.¹⁰ Any estimate for which the numerator was less

than 30 is not reported. Regression analyses were performed to test significant differences over time and between genders.

RESULTS

Sample characteristics are provided in Table 1. Table 2 shows the prevalence of use for 11 substances reported in the 2002, 2004, 2006 and 2008 surveys. Alcohol was the most commonly reported substance, with a significant increase between 2002 and 2004 (+8.4%, $p < 0.01$), but stabilized in 2006. The prevalence of alcohol use was not reported in 2008 because the data were not comparable to previous years due to changes to the question wording. However, comparisons between 2006 and 2008 were possible with regards to proportion of students who reported having at least one drink per month in the previous year. For 2008, 20.6% of Grades 7-9 students surveyed reported having at least one drink per month in the previous year; this showed no significant change from 2006 (21.2%). Proportions of males and females who reported at least one drink per month were 22.1% and 19.2%, respectively; again, showing no significant changes from 2006 (22.6% and 19.5%, respectively).

Approximately one quarter of respondents reported ever using tobacco in 2008; there have been no significant differences since 2002. The proportion of respondents reporting cannabis use also remained stable between 2004 and 2008, with a modest non-significant decrease between 2002 and 2004. Excluding alcohol, tobacco and cannabis, approximately 13% of Canadian youth reported ever trying at least one “other” drug in 2008. Significant decreases between 2006 and 2008 were only observed for glue (-1.6%, $p < 0.001$), whereas the proportion of youth reporting ever use of MDMA (+1.0%, $p = 0.025$) and non-medical use of prescription drugs (+2.4%, $p < 0.001$) significantly increased in 2008.

Gender differences

In 2008, males were significantly more likely than females to report tobacco ($p < 0.001$), cannabis ($p < 0.001$), hallucinogens ($p < 0.001$), cocaine ($p = 0.004$), heroin ($p < 0.001$) and steroid use ($p < 0.001$). Changes between 2006 and 2008 were generally consistent across genders. Males were more likely than females to report alcohol use in past month in 2008, and males were significantly more likely to report “ever” drinking alcohol in each of the previous surveys except 2002, where no significant differences were observed between males and females. Gender differences were generally stable across survey years.

Differences across geographic regions

Significant differences were observed across geographic regions in the prevalence of each substance. Table 3 shows prevalence esti-

Table 4. Prevalence of “Ever” Drug Use Among Grades 7-12 in 2008 (n=45,425)†

	Grade 7		Grade 8		Grade 9		Grade 10		Grade 11		Grade 12	
	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male	Female
Tobacco	17.4	12.6	27.4***	23.6***	37.3***	33.9***	43.6***	40.5***	49.1*	48.8***	56.6*	53.7*
Cannabis	7.5	4.1	18.5***	12.5***	30.9***	24.9***	38.2***	33.1***	51.5***	48.6***	57.5*	49.0
Any “other” drug	9.5	6.6	13.7**	11.8***	15.6	18.8***	21.1***	20.2	27.6***	26.3***	33.4***	24.9
Hallucinogens	2.3	1.4	5.6***	3.1**	8.8*	6.5***	12.8***	9.7***	19.6***	13.9***	24.4***	14.1
Amphetamines	2.0	1.7	4.4***	3.2**	4.6	4.6	7.2***	5.6	6.5	5.0	4.5	2.8*
Cocaine	1.3	–	4.4***	2.5***	4.0	3.4	6.2***	4.7*	7.7	4.9	12.2**	8.1*
MDMA	1.3	1.1	5.0***	3.3***	6.7	7.0***	9.4***	9.9**	15.2***	15.2***	15.6	14.1
Heroin	1.1	–	3.3**	1.3**	3.0	1.2	4.2*	1.5	2.6***	1.2	3.2	1.3
Glue	4.2	2.5	5.6	4.7**	5.1	5.9	5.2	4.1***	4.2	4.2	4.4	2.1**
Prescription drugs	4.9	3.5	7.5**	6.7***	7.3	9.7**	10.3**	12.0*	11.1	12.1	16.6***	13.5
Steroids	1.5	–	2.7	0.8	2.7	0.9	5.5***	0.9	3.5**	1.2	4.9	–**

†Asterisks denote differences within genders with previous year/grade: *** p≤0.001, ** p≤0.01, * p≤0.05 – Unreportable

mates within each region in 2006 and 2008. Comparison between 2006 and 2008 for alcohol use was only possible for proportion of students reporting drinking at least once a month in the previous years (not shown in Table 3). In 2008, those who reported drinking at least once a month in the previous year was highest in Quebec at 28.5%, followed by BC at 26.0%, Atlantic at 18.5%, Ontario at 16.6% and lowest in the Prairies at 15.7%. Quebec also had the highest reported use of tobacco at 42.0% while Ontario had the lowest at 16.4%. BC had the highest reported use of cannabis at 27.3% while Ontario had the lowest at 12.1%. BC youth also reported the highest use of all “other drugs.”

Current estimates of “ever” drug use among Grades 7-12

Table 4 shows changes in the prevalence of ever drug use between Grades 7-12 in 2008. Drug use increased significantly at each grade for tobacco, cannabis and “other drugs” among males and females with very few exceptions. However, the opposite pattern was observed for glue, which had the highest prevalence of use in Grade 8 for males and Grade 9 for females, with declines in later grades. Amphetamine use also peaked in Grade 10 for males and females. Figure 1 illustrates changes for tobacco, cannabis, alcohol and “other drugs” across grades.

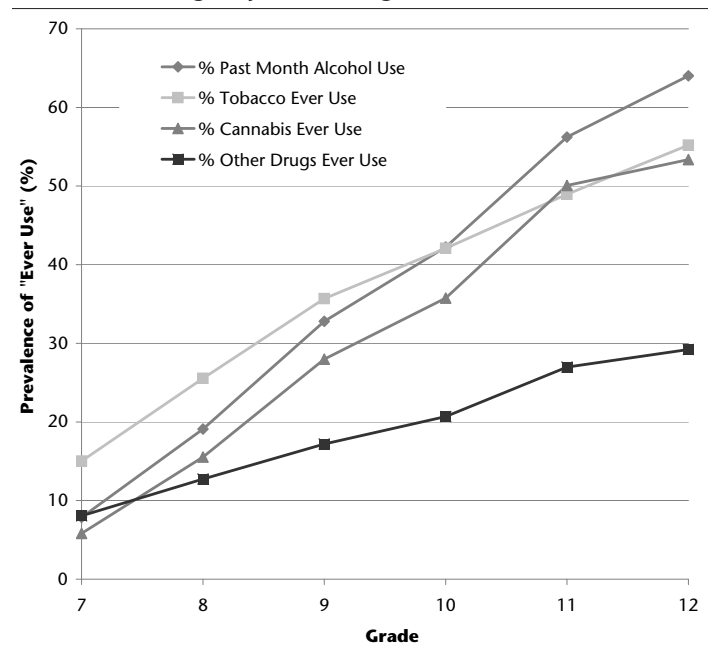
DISCUSSION

Main findings of this study

The findings indicate that a substantial proportion of Canadian youth in Grades 7 to 12 reported using an illicit substance. As expected, alcohol, tobacco and cannabis continue to be the most commonly used drugs. However, approximately 13% of Canadian youth in Grades 7 to 9 reported using at least one illicit drug other than alcohol, tobacco and cannabis in 2008.

Self-reported rates of illicit substances remained stable between 2006 and 2008, and showed little change since 2002 for most substances. The only significant changes in 2008 were a decrease in the use of glue among Grades 7-9 students and an increase in the use of MDMA and non-medicinal use of prescription drugs. Indeed, non-medicinal use of prescription drugs has more than doubled since 2002. These results are consistent with reports in the rise of non-medicinal use of Oxycontin – a highly addictive painkiller containing the opiate oxycodone.^{6,12} In contrast, rates of “ever using” tobacco and cannabis fell from 2002 to 2004 (non-significant changes) but remained stable in 2006 and 2008. The decrease in tobacco use reflects a steady and substantial decline in smoking among youth, particularly in provinces such as British Columbia,

Figure 1. Use of tobacco, alcohol, cannabis and “other drugs” by education grade, 2008 (n=45,425)*



* “Other drugs” include ever use of at least one of the following: hallucinogens, amphetamines, cocaine, MDMA, heroin, glue, prescription drugs or steroids.

which has achieved historical lows in recent years.¹³ Ever use of alcohol decreased significantly from 2004 to 2006. Comparison of the prevalence of alcohol use at least once in the past month between 2006 and 2008 indicated that the rate of alcohol use has stabilized. Data collected in Canada since 2004 suggest that illicit substance use has decreased among youth, at least among Ontario students where data are available.⁶ For example, use of cigarettes and LSD among Ontario students was recently found to be at an all-time low, while only non-medical use of Oxycontin showed an increase between 2004 and 2006 but stabilized in 2008. As expected, substance use increased with grade, with the notable exceptions of glue and amphetamines.

The data also highlight considerable differences across regions in the prevalence of drug use among youth. In particular, Quebec youth were significantly more likely to report having used alcohol and tobacco while BC youth were significantly more likely to report having used cannabis and any “other” drug. These findings are generally consistent with regional patterns of use among adults, which indicate higher rates of substance use among adults in Quebec, Alberta and British Columbia, and lower rates in the Atlantic

provinces.¹ In addition, the significantly lower rates of tobacco use among Ontario youth are consistent with the lower rates among adults.¹³ Potential reasons for the regional differences in substance use include different provincial access laws for substances such as alcohol and cigarettes. For example, the legal drinking age is lower in Quebec, Alberta and Manitoba – provinces with higher rates of alcohol use. Youth education and prevention initiatives are also mainly implemented at the provincial level and may vary across regions. Differences in youth substance use may also reflect regional differences in economic conditions and the availability of illicit substances.

The prevalence of lifetime substance use among Canadian youth appears to be generally similar to patterns among youth in the US and Europe. Lifetime prevalence of illicit substances other than marijuana were similar among US youth in 2006 (12.2%) and 2008 (11.2%). Use of tobacco, ecstasy and cocaine were similar, although slightly lower among US 8th graders in 2006 and 2008, with the exception of cocaine. Likewise, US 8th graders reported a similar but declining use of cannabis between 2006 (15.7%) and 2008 (14.6%), down from peak levels in the late 1990s.¹⁴ Cannabis use in Canada, on the other hand, remained relatively stable between 2006 and 2008. Furthermore, alcohol use among US youth appears to be significantly lower than in Canada, although heading in the same direction. Thirty-nine percent of US 8th graders reported ever trying alcohol use in 2008 – a 2% decrease from 2006. This compares to 21% of Canadian youth in the same year who reported having at least one drink once a month in the past year – unchanged from 2006. European youth also report similar levels of lifetime prevalence for cannabis and other illicit drug use as those for Canadian youth, although far higher levels of alcohol use: close to 90% of youth aged 15 to 16 reported trying alcohol in two thirds of the European countries surveyed in 2007.¹⁵ It should be noted, however, that the average across European countries obscures substantial differences in substance use between countries. For example, approximately 46% of Czech students reported trying cannabis, compared to 4% in Armenia.

The current findings indicate that males are consistently more likely than females to report trying illicit substances. The current findings are generally consistent with adult drug use pattern where adult males consistently report greater rates of substance use than adult females.

Limitations

This study has several limitations common to survey research, including the threat of bias from non-response and attrition. To address these threats, the data were weighted to help account for non-response and potential sample bias. The data are also subject to self-report bias, which may be significant in surveys of substance use among younger youth. Although confidential self-completed surveys help to minimize self-report bias, the actual prevalence rates may be somewhat higher or lower than those reported in the current paper. Despite the large sample size of the study, changes in low-frequency drugs between survey waves should be interpreted with caution. In addition, this national survey does not include important subpopulations of youth in which substance use may be more common, including youth who do not attend school and those living in northern communities or on Aboriginal reserves. Finally, the current survey does not provide information on con-

sumption amounts or frequency of substance use. Differences between “ever” and “regular” use can be significant: for example, although 26% of Ontario secondary students reported trying cannabis, only 2.5% reported daily use in the week prior to the survey.⁶ Without accurate data of the frequency of use, it is difficult to estimate the social and economic harms from substance use, and to predict future risk. Furthermore, change in the question wording for alcohol use in YSS 2008-09 did not allow a direct comparison of alcohol ever use with the previous survey years. Although rates of drinking once a month were reported for 2006 and 2008, they may not accurately reflect the change in the pattern of ever use.

CONCLUSIONS

The current findings suggest that a considerable proportion of Canadians between the ages of 12 and 15 are experimenting with substances: trying different drugs – particularly alcohol, tobacco and cannabis – appears to be a relatively common experience for many Canadian youth. This suggests that the goal of abstinence may be somewhat unrealistic for drug prevention programs, at least on a population level. Although abstinence should remain an important objective, interventions might also consider strategies that acknowledge experimentation and target the progression of use.

REFERENCES

1. Adlaf EM, Begin P, Sawka E. Canadian Addiction Survey (CAS): A national survey of Canadians' use of alcohol and other drugs: Prevalence of use and related harms: Detailed report. Ottawa, ON: Canadian Centre on Substance Abuse, 2005.
2. Tjepkema M. Use of cannabis and other illicit drugs. *Health Reports* 2004;15:43-47.
3. Adlaf EM, Demers A, Gliksman L. Canadian Campus Survey 2004. Toronto, ON: Centre for Addiction and Mental Health, 2005. Available at: http://www.camh.net/Research/Areas_of_research/Population_Life_Course_Studies/CCS_2004_report.pdf (Accessed April 9, 2008).
4. Anthony JC, Petronis KR. Early-onset drug use and risk of later drug problems. *Drug Alcohol Depend* 1995;40:9-15.
5. DeWit DJ, Adlaf EM, Offord DR, Ogborne AC. Age at first alcohol use: A risk factor for the development of alcohol disorders. *Am J Psychiatry* 2000;157:745-50.
6. Adlaf EM, Paglia-Boak A. Drug use among Ontario students 1977-2009: Detailed OSDUS Findings. Toronto, ON: Centre for Addiction and Mental Health, 2009.
7. Poulin C, Elliott D. Alcohol, tobacco and cannabis use among Nova Scotia adolescents: Implications for prevention and harm reduction. *CMAJ* 1997;156:1387-93.
8. Haans D, Hottom TI. Alcohol and drug use in early adolescence. *Health Reports* 2004;15:9-14.
9. Boyce W. Healthy Setting for Young People in Canada: Health Behaviour in School-aged Children Survey. Public Health Agency of Canada, 2008. Available at: <http://www.phac-aspc.gc.ca/dca-dea/yjc/pdf/youth-jeunes-eng.pdf> (Accessed March 24, 2010).
10. Statistics Canada. Microdata User Guide - Youth Smoking Survey 2002. 2004. Available at: <http://www.statcan.ca/cgi-bin/imdb/p2SV.pl?Function=getSurvey&SDDS=4401&lang=en&db=IMDB&dbg=f&adm=8&dis=2#2> (Accessed April 9, 2008).
11. Health Canada. 2002 Youth Smoking Survey - Technical Report. 2005. Available at: http://hc-sc.gc.ca/hl-vs/pubs/tobac-tabac/yss-etj-2002/index_e.html (Accessed April 9, 2008).
12. Government of Newfoundland and Labrador. Oxycontin Task Force Final Report. 2004. Available at: <http://www.health.gov.nl.ca/health/publications/oxyfinal/OxyContinFinalReport.pdf> (Accessed April 9, 2008).
13. Health Canada. Canadian Tobacco Use Monitoring Survey (CTUMS) 2006. 2007. Available at: http://www.hc-sc.gc.ca/hl-vs/tobac-tabac/research-recherche/stat/ctums-esutc_2006_e.html (Accessed April 9, 2008).
14. Johnston LD, O'Malley PM, Bachman JG, Schulenberg JE. Monitoring the Future Study: Trends in lifetime prevalence of use of various drugs for eighth, tenth, and twelfth graders. Ann Arbor, MI: University of Michigan News Service, 2008. Available at: <http://www.monitoringthefuture.org/data/08data.html#2008data-drugs> (Accessed March 24, 2010).
15. Hibell B, Guttormsson U, Ahlström S, Bjarnason T, Balakireva O, Kokkevi A, Kraus L. The ESPAD report: Alcohol and other drug use among students in 35

European countries. 2009. Available at: http://www.espad.org/documents/Espad/ESPAD_reports/The_2007_ESPAD_report.pdf (Accessed March 24, 2010).

Received: May 5, 2010

Accepted: August 20, 2010

RÉSUMÉ

Contexte : L'usage de substances chez les jeunes est lié à un éventail de risques immédiats et à long terme pour la santé. Cette étude a pour objectif de caractériser les trajectoires précoces de consommation de drogues illicites chez les jeunes Canadiens.

Méthode : Des sondages auprès d'échantillons nationaux représentatifs ont été menés en 2002 (n=11 757), 2004 (n=16 705), 2006 (n=27 030) et 2008 (n=24 752) auprès d'élèves de la 7^e à la 9^e année dans le cadre de l'Enquête sur le tabagisme chez les jeunes de Santé Canada. En 2008, des élèves de la 10^e à la 12^e année ont été inclus dans l'enquête (n=20 673).

Résultats : En 2008, environ 21 % des jeunes de la 7^e à la 9^e année ont déclaré avoir bu de l'alcool au moins une fois par mois au cours de la

dernière année, 26 % ont fait usage de produits du tabac, 17 % ont essayé du cannabis, tandis que 13 % ont déclaré avoir fait l'essai d'une autre substance (colle, médicaments prescrits à des fins non thérapeutiques, hallucinogènes, amphétamines). Comparativement à 2006, le nombre de jeunes de la 7^e à la 9^e année qui avaient déjà essayé la colle a décliné de façon significative en 2008, tandis que la consommation de médicaments prescrits à des fins non thérapeutiques a augmenté. Les garçons étaient significativement plus nombreux à déclarer avoir consommé la plupart de ces substances, mais pas toutes, au cours des années d'enquêtes.

Conclusions : Une proportion considérable de jeunes Canadiens âgés de 13 à 15 ans a déclaré avoir fait l'expérience de substances illicites. Ces résultats représentent la description la plus complète des tendances nationales en ce qui a trait à l'usage de substances chez les jeunes Canadiens.

Mots clés : consommateurs de substances à des fins non thérapeutiques; tabac; consommation d'alcool; consommation de marijuana; adolescent; enquêtes de santé



CPHA ACSP

CANADA'S PUBLIC HEALTH LEADER
LE LEADER CANADIEN EN SANTÉ PUBLIQUE

Depuis 1910, l'Association canadienne de santé publique est le leader canadien en santé publique. L'ACSP :

- encourage la participation des citoyens à l'élaboration des politiques et des programmes de santé publique;
- rassemble divers particuliers et organismes, qui peuvent ainsi s'exprimer à l'unisson sur les enjeux de la santé publique au Canada et dans le monde; et
- se fait le maître d'œuvre d'un accès universel et équitable aux conditions fondamentales pour atteindre l'objectif de la santé pour tous.

Les membres de l'ACSP sont sa force et lui donnent sa crédibilité, ses orientations et son pouvoir. Pour continuer à être le porte-parole de la santé publique, l'ACSP a besoin de votre savoir-faire et de votre appui.

**Unissez votre voix aux nôtres.
Joignez-vous à l'ACSP dès aujourd'hui.**

Téléphonez-nous en composant le (613) 725-3769, poste 118,
envoyez-nous un courriel à l'adresse membership@cpha.ca
ou visitez-nous en ligne sur le site <http://www.cpha.ca/fr/about/membership.aspx>