BLUNT TALK:

HARMS ASSOCIATED WITH EARLY AND FREQUENT MARIJUANA USE AMONG BC YOUTH





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Founded in 1977, McCreary Centre Society is a non-governmental not-for-profit organization committed to improving the health of BC youth through research, evaluation, and youth engagement projects.

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KEY FINDINGS

There is a growing body of evidence that shows regular cannabis use initiated early in life can result in behavioural and cognitive impairments, including poor academic performance and deficits in attention, information processing, and memory. Although the effects on brain chemistry cannot be tested using data from the BC AHS, this study provides correlations between marijuana use and other aspects of youth health. The data appears to support findings from other studies, and suggests that BC youth who decide to try marijuana should wait until they are older to first try it, and that they should use it infrequently.

- In the space of a decade, the percentage of young people aged 12–19 who had tried marijuana in BC decreased from over a third (37%) to around a quarter (26%). Among youth who did try it, more were waiting until they were at least 15 years old to do so.
- Despite the decrease in the percentage of students who had ever tried marijuana, among marijuana users the percentage who had used it on 20 or more days in the past month remained stable between 2008 and 2013.
- Youth who tried marijuana at an earlier age were more likely to have used marijuana recently and frequently. For example, among 16- to 18-year-olds, 34% who started using marijuana at age 12 had used it on 20 or more days in the past month, compared to 6% of those who started using it when they were 15.

- Among 16- to 18-year-olds, the younger youth were when they first tried marijuana, the less likely they were to report positive overall or mental health or to have positive plans for the future; and the more likely they were to have tried substances such as cocaine, hallucinogens, and amphetamines, and to report they had an alcohol or other drug addiction.
- The progression from first use to regular cannabis use appeared to be as rapid as tobacco progression, and more rapid than that of alcohol. Among students who first tried alcohol in the past year, 4% drank on six or more days in the past month and less than 1% drank on 20 or more days. In contrast, 11% of youth who first tried marijuana recently used it on six or more days in the past month and 3% on 20 or more days.
- Youth who had been using marijuana for more than a year were more likely than those who were newer to the substance to have used it in the past month and to have used it frequently. For example, youth who first tried it more than a year ago were almost seven times as likely to have used marijuana on 20 or more days in the past month.
- Among youth who used marijuana, those who used it on 20 or more days reported the poorest health picture. However, among youth who had tried marijuana exclusively (i.e., had not tried alcohol or other substances), those who used it on three or more days in the past month were twice as likely as those who used it on fewer days to report negative consequences of their use (54%* vs. 27%).

- Seven percent of youth who used marijuana exclusively felt they needed help for their use in the past year, which was comparable to the rate for youth who used other substances as well as marijuana. Youth who started using marijuana when they were 12 or younger were the most likely to feel they needed help for their use, whereas those who waited until they were at least 15 were the least likely.
- Predictors of early and frequent marijuana use included stressful life circumstances (including sexual abuse, dating violence, and going to bed hungry), a history of risk-taking behaviours, mental health challenges, and having no positive future plans.
- Challenges in youth's lives could be linked to their reasons for using marijuana. For example, youth with depression and those who were bullied were more likely than their peers to use marijuana because they felt sad.
- The percentage of youth who had driven after using marijuana decreased from 2008 to 2013. Youth who had ever driven after using marijuana were twice as likely to have been recently injured in a motor vehicle accident as those who had never driven under the influence of marijuana. The longer youth had been using marijuana and the more frequent their recent use, the more likely they were to have driven under its influence.

- Youth most commonly got their marijuana from a youth outside their family. However, youth who were using marijuana frequently were more likely to get it from an adult and less likely to get it from a youth. Also, youth who reported getting their marijuana from an adult inside their family were less likely to feel connected to their family.
- The data clearly showed that youth who started using marijuana early or were using frequently were at greater risk for some negative health outcomes at the time they took the survey. As the survey methodology does not follow the same youth over time, it is not known if using at lower rates or starting later in adolescence would also be associated with negative health outcomes later in life.
- Among youth who used marijuana, a number of protective factors were identified which reduced the risk of early and frequent use, even among youth who were experiencing one or more of the risk factors for such use. These included having family support, positive relationships at school, feeling connected to community, and engaging in meaningful extracurricular activities.

INTRODUCTION

BACKGROUND

This report uses data from the BC Adolescent Health Survey (BC AHS). The BC AHS is a voluntary and anonymous survey administered to students in Grades 7–12 in mainstream public schools across the province. The survey has been conducted every five years since 1992.

The report is based on the responses of almost 30,000 students in Grades 7–12 who completed the 2013 BC AHS. Trends over time are considered in relation to the 2003 and 2008 BC AHS results.

For the 2013 provincial and regional results and details of the survey methodology, visit www.mcs. bc.ca.

"

I'd just like to say that marijuana should be decriminalized because getting arrested for a plant is just stupid."

ABOUT MARIJUANA USE

Despite an election promise by Prime Minister Justin Trudeau to legalize access to marijuana for adults, it is currently against Canadian law to possess, sell, give away, or grow marijuana unless legal permission has been obtained from Health Canada.

Statistics Canada data collected between 2007 and 2012 suggests that 90% of youth aged 12 to 17 years old who were accused of a drug-related offence were accused of an offence involving cannabis and 81% were accused of cannabis possession. Although few received a custodial sentence, having a criminal record can affect future employment, travel plans, and educational opportunities.

At the time the 2013 BC AHS was conducted, there was growing pressure on the federal government to legalize the use of marijuana and many media stories highlighted support for this from sources as varied as health professionals and law enforcement.



In June 2013 (a month after the BC AHS data collection was completed), the Marijuana for Medical Purposes Regulations (MMPR) came into force allowing Canadians with a medical need to access marijuana under certain conditions. This replaced previous legislation which had restricted the prescription of medical marijuana to end of life care and for debilitating symptoms from a medical condition.

Many young people who completed the BC AHS added comments on the survey which reflected their support for the legalization of marijuana. Although a minority wrote about dependence and addiction problems, most of those who wrote about their marijuana use commented on their perceptions of the positive aspects and stated that they did not believe there were negative health risks associated with marijuana use.

These comments were concerning as other studies have found that the risk of problem substance use is higher among people who start to use marijuana at a young age. Also, some studies have linked youth marijuana use to mental illnesses, particularly psychosis, while others have found that youth with a family history of psychosis may be more vulnerable to negative effects from their use of marijuana. (See www.heretohelp.ca for more information about research in Canada.)

In 2015, the Canadian Centre on Substance Abuse published a report entitled *The effects of Cannabis use during adolescence* (available at www.ccsa.ca) which cites growing evidence that regular use of marijuana during adolescence interferes with the function and development of the endocannabinoid brain system. This can negatively affect not only mental health but also cognitive functioning, and specifically memory, as well as learning, coordination, appetite, pain, mood, pleasure, and motivation.

To date, research on marijuana use among youth in BC has been limited. This report seeks to identify at what levels of use there is an increase in health-related harms, considers risk factors for potentially problematic use, and looks at self-reported consequences of use.

TERMS USED IN THIS REPORT

Cannabis is the scientific name for the hemp or marijuana plant, whose leaves, flowers, and resin can have mind-altering and possibly medicinal effects when smoked or consumed.

Marijuana is a commonly used term for cannabis leaves and flowers.

Extreme stress or extreme despair is used to describe when youth felt such levels of stress or despair that they were unable to function properly.

Frequent use refers to using marijuana on 20 or more days in the past month. **On most days** is also used to refer to using marijuana on 20 or more days.

Recent use refers to using marijuana in the past month.

Polysubstance use refers to ever using marijuana and another substance (e.g., alcohol and/or another drug such as cocaine or hallucinogens).

Protective factors are experiences or other aspects in a young person's life that can reduce the chances they will have problems associated with marijuana use.

Risk factors are experiences or other aspects in a young person's life that can increase the chances they will have problems associated with marijuana use.

ANALYSES IN THIS REPORT

When percentages are compared in the text, they are always statistically significant. However, graphs and charts show frequencies that are not necessarily statistically significant at every point. Where this is not obvious, it is indicated in the text below the graph.

Where an asterisk (*) appears beside a percentage, the percentage should be interpreted with caution as it has a high standard error but is still within a releasable range.

A number of analyses in this report consider whether there are negative associations among youth who started to use marijuana at an early age, compared to those who first used when they were older. For some of these analyses, we focused on youth aged 16 to 18. This allowed us to compare the experiences and trajectories of those who had started using marijuana at very young ages with those who waited until they were older.

The data from the survey was weighted to ensure it was representative of youth in Grades 7–12 in each of the 16 regions of the province.

All comparisons and associations based on the 2013 BC AHS data that are reported in this study have been tested and are statistically significant at p < .01. This means there is up to a 1% likelihood that the results presented occurred by chance. Comparisons to previous years' BC AHS results are considered statistically significant at p < .05. This means there is up to a 5% likelihood that these results occurred by chance.

LIMITATIONS

As with any survey, the BC AHS has limitations. It was not designed as a marijuana-specific survey so may have missed some useful information about marijuana use among this age group. For example, although the survey asked youth about the number of days on which they used marijuana in the past month, there was no question about how much marijuana they used each day or how they ingested it.

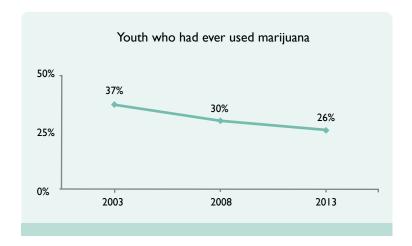
The survey was administered in mainstream public schools across BC. This means that the results are not reflective of all young people in the province, and particularly may have missed youth who were absent from school as a result of problematic marijuana use.

The survey relies on self-reported cross-sectional data and takes youth's responses at face value. We were unable to consider brain development or how early or frequent use might affect young people into adulthood.

Correlations which are reported do not assume causation or indicate the direction of a relationship. There may be other factors involved. For example, the report shows a link between marijuana use and mental health challenges but it is unknown if mental health challenges led youth to use marijuana, marijuana use led to mental health challenges, or if there were other variables involved.

MARIJUANA USE AMONG BC YOUTH

Results of the 2013 BC Adolescent Health Survey offered many causes for optimism including improvements in injury rates, injury prevention behaviours, and nutritional intake, as well as reductions in the percentage of youth engaging in risky sexual behaviours. There were also decreases in the percentages of students using tobacco, alcohol, marijuana, and other substances such as hallucinogens and amphetamines.



I experimented, tried marijuana/weed and have only done it about 4 times but don't see myself doing it ever again."

I do marijuana once a year (family tradition)."

In the space of a decade the percentage of young people who had ever tried marijuana decreased from over a third to around a quarter.

In 2003 and 2008, there was no gender difference in marijuana use, but in 2013 females were slightly less likely than males to have tried it.

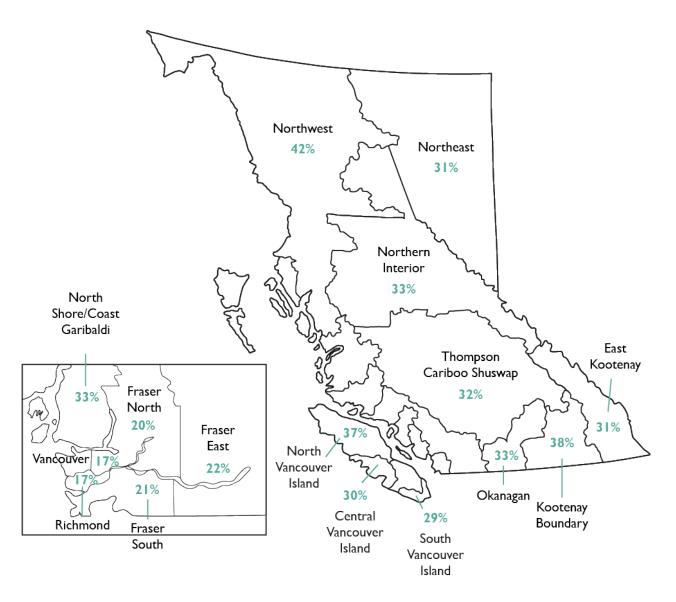
As might be expected, older youth were more likely to have tried marijuana than younger ones. For example, 3% of youth aged 12 or younger had tried marijuana, compared to 29% of 15-year-olds and 42% of 18-year-olds.

REGIONAL DIFFERENCES

Youth attending schools in urban areas of BC were less likely to have tried marijuana than those in rural areas (24% vs. 35%). There were also some Health Authority differences with youth in Vancouver Coastal and Fraser less likely to have tried marijuana than their peers in the Interior, North, and Vancouver Island (21-22% vs. 31-35%).

Among the 16 Health Service Delivery Areas (HSDAs), the percentages of youth who had tried marijuana ranged from 17% in Richmond and Vancouver to 42% of youth living in the Northwest.

YOUTH WHO HAD TRIED MARIJUANA



Note: Not all differences between HSDAs were statistically significant. (Health Service Delivery Areas Map from BC Stats)

When each Health Authority region was looked at individually, there was no difference in the percentage of youth who had tried marijuana across the Fraser. However:

- In Vancouver Coastal, youth in the North Shore/Coast Garibaldi were more likely to have tried marijuana than youth in Richmond or Vancouver.
- In the Interior, youth in Kootenay Boundary were more likely to have tried marijuana than those in Thompson Cariboo Shuswap or East Kootenay but equally likely to have tried it as youth in the Okanagan.
- In the North, youth in Northwest were more likely to have tried marijuana than those in other parts of the North.
- In Vancouver Island, youth in North Vancouver Island were more likely to have used marijuana than those in Central or South Vancouver Island.

CULTURAL DIFFERENCES

Youth who identified as East Asian, South Asian, and Southeast Asian were less likely than other youth to have tried marijuana. For example, 10% of youth who identified as East Asian had tried it, compared to 32% of youth who identified as European.

Students born in Canada were twice as likely as those born abroad to have tried marijuana (28% vs. 14%), although students who had arrived in Canada as refugees had tried marijuana at a rate similar to that of Canadian-born youth.



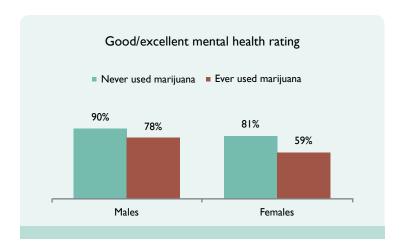
YOUTH WHO HAD NOT TRIED MARIJUANA

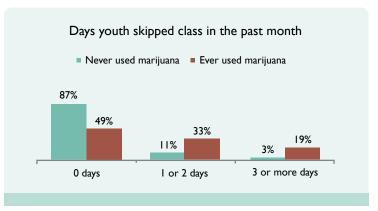
This report is focused on youth who used marijuana to consider what type or level of use might be associated with potential harms. However, it is important to note that almost three quarters of youth who completed the survey had never tried it.

In comparison to those who had used marijuana, youth who had never tried it were more likely to rate their mental health as good or excellent (85% vs. 69% who had used marijuana), and specifically were more likely to rate their mental health as excellent (45% vs. 27%).

Youth who had never tried marijuana reported better school attendance. Thirteen percent of these youth had skipped class in the past month, compared to around half (51%) of youth who had used marijuana.

Female students who had never used marijuana were more likely to report having three or more close friends in their school or neighbourhood (82% vs. 78% who had used marijuana). There was no such relation for males. However, for both males and females there was a link between marijuana use and their friends' attitudes, as youth who had never used marijuana were nearly five times more likely to report that their friends would be upset with them if they used it (73% vs. 15% who had tried marijuana).





Note: Percentages do not equal 100% due to rounding.



I am a fit kid, I eat healthy, I have a nice family. I'm trying to change so I'm nice to everybody. I used to get in trouble but I never did drugs."

AGE OF FIRST USE

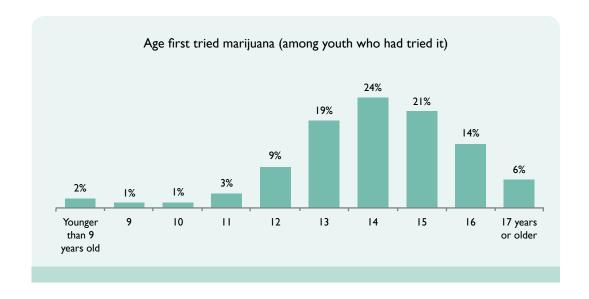
All reported percentages in this section are among youth who had tried marijuana, unless otherwise stated.

Among BC youth who had tried marijuana, the most common age for males and females to do so was 14 years (24%).

In comparison to previous years, youth were more likely to wait until they were at least 15 years old to first try marijuana (41% in 2013 vs. 33% in 2008 and 28% in 2003).

Two percent of students had tried marijuana before their ninth birthday, which was a decrease to the 2003 rate after an increase to 3% in 2008. As in 2008, males were more likely than females to have tried marijuana at the very youngest ages. In 2003 and 2008, males and females were equally likely to wait until age 15 to first use marijuana. However, in 2013, females were more likely to do so (43% vs. 39% of males).

As noted earlier, there were some geographical differences in ever trying marijuana and these were reflected in the age that youth started using. Youth in urban regions were more likely than their peers in rural regions to wait until they were at least 15 years old to first try marijuana (42% vs. 34%), and youth in Vancouver Coastal and Fraser were more likely than those in other parts of the province to wait until this age (46-48% vs. 33-35%).



At the HSDA level, the percentage of youth who waited until 15 or older to first try marijuana ranged from around 30% in North Vancouver Island, Northwest, and Northeast to over 50% in Fraser North and Richmond.

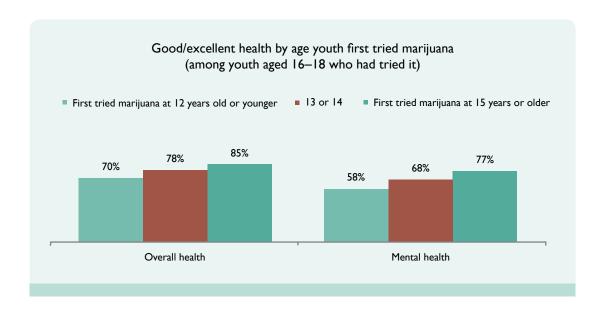
The last time I used marijuana was when I was 10 years old."

HARMS ASSOCIATED WITH AGE OF **FIRST USE**

To explore any harms associated with the age that youth first tried marijuana, we looked at youth aged 16 to 18 to compare the experiences of those who first tried marijuana at age 12 or younger, at 13 or 14, and at 15 or older.

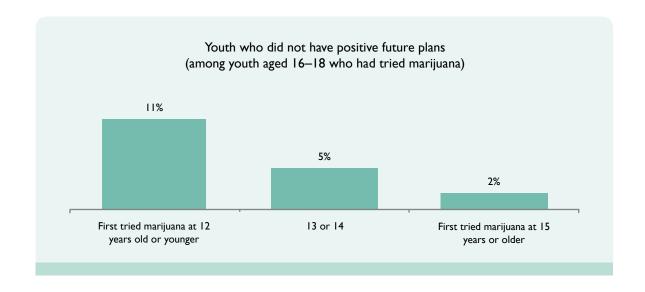
Among 16- to 18-year-olds, the younger youth were when they first tried marijuana, the less likely they were to report positive overall health or to have slept for eight or more hours the night before taking the survey.

- I am not big on drugs but I have done weed. I do understand I can get addicted but that would not be very likely."
- I'm really high right now. Legalize pot plz."



The longer youth waited to try marijuana, the more likely they were to report positive mental health. Also, 7% of youth aged 16 to 18 who first tried marijuana at 15 years or older had attempted suicide in the past year, compared to 10% of those who first tried it at 13 or 14, and 16% who first tried marijuana at age 12 or younger. A similar pattern was seen in relation to youth reporting self-harm in the past year, as well as extreme stress and despair in the past month.

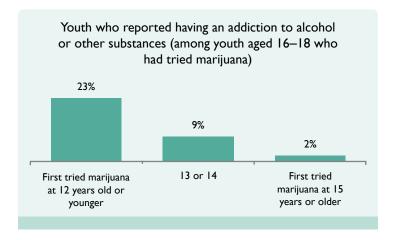
Earlier users of marijuana were less positive about their future plans. For example, 74% of youth aged 16 to 18 who first tried marijuana at age 12 or younger planned to continue to post-secondary education, compared to 84% who first used it at 13 or 14, and 89% who waited until they were at least 15 years old. Students who tried marijuana at an earlier age were also more likely to envision a negative future, such as being homeless or in prison.

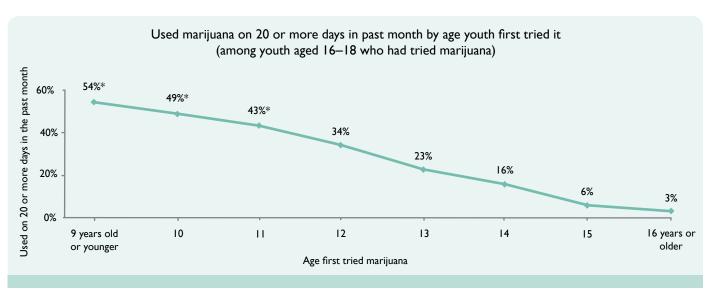


Youth who tried marijuana at an earlier age were more likely to have used it recently and frequently. For example, among male youth aged 16 to 18 who had tried marijuana, 6% of those who waited until age 15 to try it had used it on 20 or more days in the past month, compared to 26% of those who first tried it at 13 or 14, and 44% who first used it at age 12 or younger. A similar relation was seen for females: 2% of those who waited until 15 had used marijuana on 20 or more days in the past month, compared to 11% who first tried it at 13 or 14, and 33% who first used it at 12 or younger.

The earlier youth used marijuana the more likely they were to have tried other substances such as cocaine, hallucinogens, and amphetamines. About a quarter (24%) of youth aged 16 to 18 who first tried marijuana at age 15 or older had also tried substances such as these, compared to 56% of those who tried marijuana at 13 or 14, and 76% who tried it before the age of 13.

Students who tried marijuana at an earlier age were more likely to report having an alcohol or drug addiction and to report needing help for their substance use. For example, 21% of 16- to 18-year-olds who used marijuana before age 13 needed help for their marijuana use, compared to 11% who first used it at 13 or 14, and 5% who first tried it at age 15 or older.





Note: Not all differences between data points were statistically significant.

^{*}The percentage should be interpreted with caution as the standard error was relatively high but still within a releasable range.

PROFILE OF YOUTH AGED 12 OR YOUNGER WHO USED **MARIJUANA**

To look at the effects of early use in comparison to later use, we have focused on youth aged 16 to 18. The results show negative associations for these older youth who started to use marijuana before the age of 13. Here we look at the health picture of youth who were aged 12 or younger when they took the survey.

Among youth aged 12 or younger who had tried marijuana:

80% rated their overall health as good or excellent (vs. 93% who were aged 12 or younger and had not used marijuana).

40%* had a health condition or disability (vs. 19%).

45%* had suffered a serious injury in the past year (vs. 23%).

24% had experienced a concussion in the past year (vs. 11%).

62%* rated their mental health as good or excellent (vs. 92%).

27%* had seriously considered suicide (vs. 5%), and 17%* had made a suicide attempt in the past year (vs. 3%).

22% had a family member ever attempt suicide (vs. 5%), and 32% had a friend do so (vs. 10%).

26% had been physically abused (vs. 7%), and 28% had been sexually abused (vs. 2%).

53%* had an adult in their family to talk to if they had a problem (vs. 85%).

75% had missed school in the past month (vs. 47%).

10% were very connected to school (vs. 43%).

31%* had friends who would disapprove of them using marijuana (vs. 87%).

76% had tried alcohol (vs. 5%).



I used marijuana for 2 years every day after an encounter with a pedophile at age 12."

^{*}The percentage should be interpreted with caution as the standard error was relatively high but still within a releasable range.

RECENT MARIJUANA USE

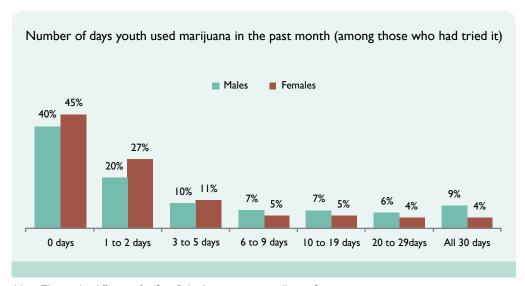
All reported percentages in this section are among youth who had tried marijuana, unless otherwise stated.

PAST MONTH USE

Despite the decrease from past survey years in the percentage of students who had ever used marijuana, youth who had tried it reported similar rates of past month use as their peers over the past decade (58% had used it in the past month in 2013). Also, 12% of youth in 2013 and 2008 reported using it on 20 or more days in the past month.

Consistent with the gender difference seen in previous survey years, males were more likely than females to have used marijuana in the past month (60% vs. 55%), and to have used it on six or more days.

Youth aged 14 and younger were as likely as older youth to have used marijuana in the past month. However, they were less likely to have used it frequently. For example, they were half as likely as 18-year-olds to have used marijuana on 20 or more days in the past month (7% vs. 14%), and were more likely to have used it on one or two days (29% of youth aged 14 and under vs. 20% of 18-year-olds).



Note: The gender difference for '3 to 5 days' was not statistically significant.

Youth in urban areas were as likely as those in rural areas to have used marijuana in the past month. However, youth in rural locations were more likely to have used it every day (9% vs. 6% of urban youth).

Regionally, there were a few differences in past month marijuana use. Percentages ranged from 46% in the Northeast to over 60% in the Okanagan and North Shore/Coast Garibaldi. Rates of using marijuana on 20 or more days ranged from under 10% in Vancouver, Fraser North, Fraser East, and the Northeast to over 15% in the Northwest and Thompson Cariboo Shuswap. At the Health Authority level, rates of using marijuana on 20 or more days ranged from 9% in Fraser to 15% in the Interior.

- I don't know why I use marijuana. I have to smoke a lot to get high and it's a waste of time and money."
- Religion has been a major outlet and the best one I have found in my life and has recently helped me stop daily use of marijuana."

LAST SATURDAY USE

Asking about substance use on a specific recent day can help to increase the accuracy of survey respondents' recall. Although it may not be a typical day for them, such a snapshot can provide useful and accurate information about recent behaviour.

When asked about their substance use on the Saturday before taking the survey, almost one in three youth (32%) who had tried marijuana reported using it that day. Males were more likely than females to have done so (37% vs. 27%).

Youth in urban and rural areas were equally likely to have used marijuana the previous Saturday. At the Health Authority level, rates ranged from 30% among youth in Fraser to 35% among youth in the Interior.

YOUTH WHO USED MARIJUANA AND/ OR ALCOHOL RECENTLY

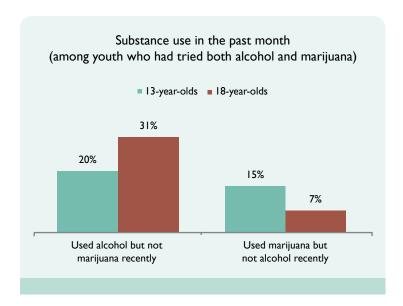
Among youth who had tried both alcohol and marijuana, 9% used marijuana exclusively in the past month, with a higher percentage among males than females (11% vs. 7%). In contrast, females were more likely to have used alcohol exclusively in the past month (30% vs. 23% of males). Half of youth (50%) used both substances in the past month, while 15% used neither (among those who had tried both alcohol and marijuana).

Younger youth were more likely than older ones to have used marijuana exclusively in the past month, whereas youth aged 16 to 18 were generally more likely to have used only alcohol. There were no age differences in relation to using both substances recently.

Youth who used marijuana exclusively in the past month had a poorer health picture than those who used alcohol exclusively (among those who had tried both substances), and a similar health picture to those who used both alcohol and marijuana. For example, in comparison to youth who used alcohol exclusively, youth who used marijuana exclusively were less likely to rate their overall health as good or excellent (77% vs. 84%), to take part in weekly sports with a coach (44% vs. 55%) or weekly informal sports (57% vs. 66%), and to have engaged in moderate to vigorous exercise on at least three days in the past week (67% vs. 75%).

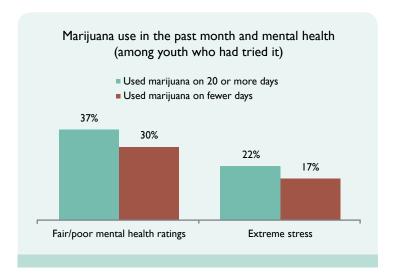
RECENT USE IN RELATION TO OVERALL & MENTAL HEALTH

Among youth who had tried marijuana, those who used it in the past month were at greater risk of reporting poor or fair overall health (as opposed to good or excellent) than youth who did not use it recently (23% vs. 16%). Also, 15% who had used marijuana in the past month reported feeling extreme despair during that time (vs. 11% who did not use it in the past month).



- I wasn't doing so well before, tried marijuana but knew it was bad and stopped. Got my life together."
- I am very physically active, and I believe my marijuana consumption doesn't interfere with my exercise in the least."

Youth who used marijuana on 20 or more days in the past month were the most likely to report poor or fair health, and to feel so stressed during that month that they could not function properly.



Students are increasingly finding themselves under a lot of pressure from school, teachers, parents, and colleges. As a result we experience sleep deprivation, anxiety, depression, and excessive levels of stress. Different students deal with this in different ways: procrastination, binge eating, caffeine, alcohol, marijuana, excessive sleeping, and self-harm."

RECENT USE IN RELATION TO SELF-HARM & SUICIDE ATTEMPTS

Using marijuana on three or more days in the past month was associated with higher rates of suicide attempts in the past year (16% attempted suicide vs. 10% who did not use it in the past month), with similar rates for those using it on 20 or more days and those using on 3 to 19 days.

When it came to self-harm, youth who used marijuana on 3 to 19 days were more likely than those who did not use it in the past month to have deliberately hurt themselves without trying to kill themselves (31–33% vs. 24%). However, youth who used it on 20 or more days were no more likely to have self-harmed than youth who did not use marijuana in the past month.

Youth's comments on the survey suggested that those who were using marijuana on most days were using it to self-medicate, which may have contributed to reduced rates of self-harm.

- You did not ask how drugs/alcohol have affected me in a positive way. i.e., I'm not suicidal anymore because of pot."
- I have smoked weed 76 times in the past 30 days... It helps me relieve stress, manage anger, it acts as my anti-depressant AND anxiety reliever, it calms me down, helps me make it through the day."
- I heavily use marijuana. It helps me find new ways of coping in life and it has helped me realize that I do not need to commit suicide."

ESTABLISHING HARMFUL LEVELS OF RECENT USE

As seen with mental health, there was no consistent pattern for what level of use was associated with other potential health risks. For example, using marijuana on 10 or more days in the past month was linked to eating disordered behaviours such as binge eating, and using on six or more days was associated with a greater likelihood of experiencing a concussion. However, with every risk we looked at, youth who used marijuana on most days were more likely to report harms.

Also, when harms were noted among youth using on six or more days, for example, these were not always seen when youth who used on 20 or more days were removed from the analyses, indicating that youth who were using on the most days were driving the results. For these reasons, and to reflect findings from other studies that have found harms associated with daily or almost daily use, the next section focuses on harms associated with using marijuana on 20 or more days in the past month, among youth who had tried it.

HARMS ASSOCIATED WITH FREQUENT **USE IN THE PAST MONTH**

SLEEP

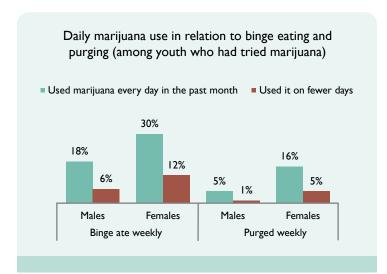
Using marijuana on 20 or more days was associated with not getting enough sleep. For example, 12% of youth who used marijuana every day reported sleeping less than five hours the previous night, compared to 7% of youth who used marijuana on fewer days.

BODY WEIGHT. BODY IMAGE. & EATING BEHAVIOURS

Studies have shown that users of marijuana tend to have lower body mass indices (BMI) than nonusers. Among males who had tried marijuana, those who used it on 20 or more days in the past month were more likely to be underweight according to their BMI than those who used it on fewer days (4% vs. 1%). This association was not seen for females.

- I smoke marijuana every day and I am dependent on it."
- I need weed to sleep."
 - I don't feel good about my appearance at all... I get called names, and get bullied. My stomach is chubby and that makes me feel really bad about myself because I try to be perfect (pretty, long hair, skinny, cute clothes, perfect life)... I have thought about cutting but I couldn't do that, I am considering marijuana."

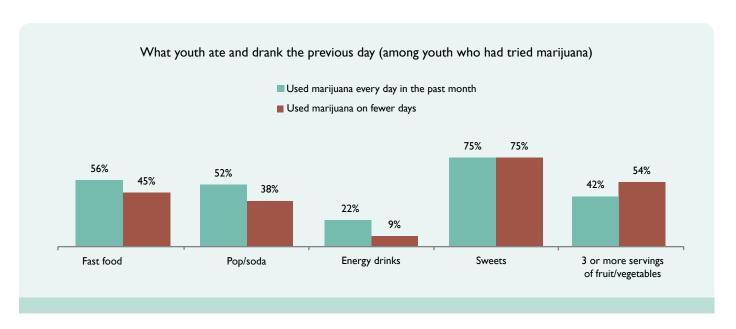
I get bullied because of my weight. My friends want me to do weed and I'm curious."



Males and females who used marijuana on 20 or more days were more likely than those who used it on fewer days to binge eat at least weekly during the past year (19% vs. 9%) and to purge weekly (7% vs. 3%). Similar patterns were seen for youth who used marijuana every day in the past month.

NUTRITION

Studies have shown that marijuana use can stimulate appetite. Using marijuana on most days in the past month was associated with the highest rates of unhealthy eating and drinking. For example, youth who used marijuana every day (including the previous day) were more likely than those who used it on fewer days to have had fast food (e.g., burgers, pizza, fries, chips), pop/soda, and energy drinks the previous day. They were also less likely to have eaten fruit and vegetables. There was no relation between using marijuana and eating sweets (e.g., cookies, candy, chocolate) the previous day.



SCHOOL & COMMUNITY

Recent marijuana use was associated with skipping class. Also, the greater number of days youth used it in the past month, the greater their likelihood of skipping class during that time frame. For example, 74% of youth who used marijuana on 20 or more days reported skipping class, compared to 61% who used it on 6 to 19 days. Youth who used marijuana on 20 or more days were also more likely to have missed three or more days of class because of illness (19% vs. 12% of youth who used marijuana on fewer days).

The more days on which youth used marijuana, the more likely they were to feel disconnected from school. For example, 29% of youth who used marijuana on fewer than 20 days reported the lowest level of school connectedness, compared to 45% who used it on 20 to 29 days, and 55% who used it every day.

Using marijuana on most days was also associated with lower levels of community connectedness. For example, 37% of youth who used this substance on 20 or more days did not feel connected to their community, compared to 29% who used marijuana on 6 to 19 days, and 23% who did not use it in the past month.

INJURIES & INJURY PREVENTION

For the most part, youth who used marijuana in the past month reported comparable rates of serious injuries in the past year as those who had not used it recently. One exception was that youth who used this substance every day in the past month were more likely to have a serious injury than those who did not use it at all (42% vs. 34%). Daily users of marijuana were also more likely to have three or more injuries than youth who used marijuana on fewer than three days in the past month (10% vs. 5%).

Among youth who had been seriously injured, those who used marijuana on 20 or more days were more likely than youth who used it on fewer days to report that their serious injury happened while skateboarding or roller blading (10% vs. 4%) or fighting with others (12% vs. 3%), and were less likely to have been playing or training for sports or other recreational activities when their injury happened (25% vs. 54%).

Youth who used marijuana on most days were also more likely to have experienced a concussion in the past year (31% who used it on 20 or more days had a concussion vs. 24% who used it on fewer days).

In general, youth who used marijuana on a greater number of days were less likely to engage in injury-prevention behaviour in the past year. For example, youth who used marijuana on 20 or more days were twice as likely to report never wearing a helmet when snowboarding or skiing as youth who used marijuana on fewer days.

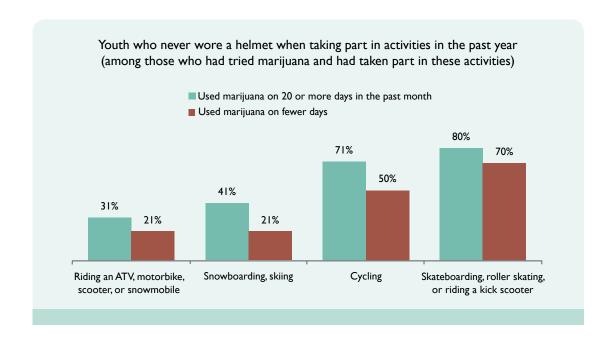
Further, among youth who never wore a helmet, those who used marijuana on 20 or more days were more likely to have experienced a concussion in the past year than those who used marijuana on fewer days (42% vs. 28%).

When it came to vehicle safety, youth who used marijuana on 20 or more days were more likely than other youth to never wear a seat belt (5% vs. 1%) and were less likely to always wear one (56% vs. 67%).

OTHER SUBSTANCE USE

There was a link between recent marijuana use and the use of other substances. For example, the more days on which youth used marijuana in the past month, the more likely they were to engage in heavy sessional drinking during that time (i.e., consuming five or more drinks of alcohol within a couple of hours). Also, a greater number of days of using marijuana was associated with a higher likelihood of ever using substances such as hallucinogens, cocaine, or prescription pills without a doctor's consent.

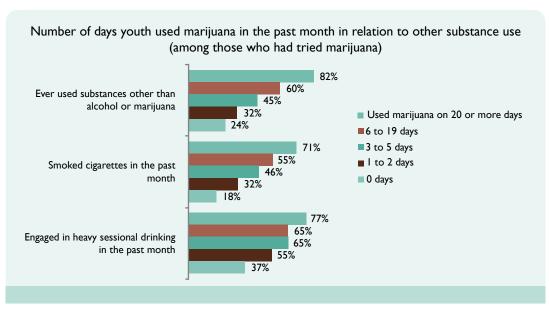
Youth who used marijuana on 20 or more days were at greatest risk of engaging in heavy sessional drinking and of ever using other substances. These patterns were generally consistent for youth of all ages.



Similar findings were seen for smoking tobacco in the past month, where a greater number of days of using marijuana was associated with an increased risk of smoking cigarettes. Also, 30% of youth who used marijuana every day reported smoking cigarettes daily (compared to 13% who used marijuana on 20 to 29 days, 5% who used it on 3 to 5 days, and 2% who did not use marijuana in the past month).

The more days on which youth used marijuana, the greater their likelihood of needing help for their use of alcohol and other substances, and youth who used marijuana on all 30 days were at greatest risk. For example, 16% of youth who used marijuana every day in the past month felt they needed help for their alcohol use, compared to 10% who used marijuana on 20 to 29 days, and 5% who used it on fewer than three days in the past month.

- You didn't ask about how much we use drugs like E, acid, coke. Only asked about Weed and Booze."
- I mix cough syrup with marijuana. It gives me a really detached feeling. Like I am watching my life at the theatre."
- I only use alcohol and weed. That's it."



Note: Heavy sessional drinking refers to consuming five or more drinks of alcohol within a couple of hours.

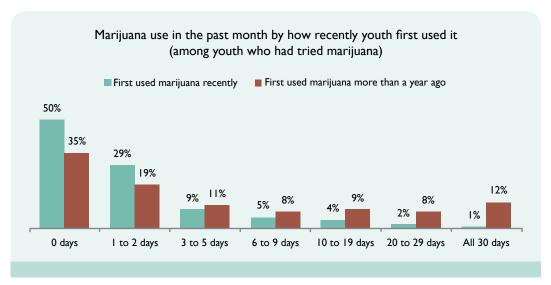
YOUTH WHO FIRST USED MARIJUANA WITHIN THE PASTYEAR

In this section we compare youth who had first tried marijuana within the past year with those who had first tried it over a year ago. For example, youth who were 18 years old when they completed the survey and first used marijuana at age 17 or 18 would be considered to have started within the past year. Eighteen-year-olds who started using it at 16 or younger would be considered to have started more than a year ago.

Among youth who had tried marijuana, 51% (54% of males vs. 48% of females) had been using it for more than a year. There were few regional differences in the percentage of youth who first used marijuana in the past year, with a range in rates from 42% in the Northwest to 54% in Vancouver and Fraser East.

Young people who had been using marijuana for more than a year were more likely than those who were newer to the substance to have used it in the past month and to have used it frequently. For example, 20% of youth who first used it more than a year ago had used marijuana on 20 or more days in the past month, compared to 3% who first used it within the past year. They were also twice as likely to have used it on the Saturday before taking the survey (42% vs. 21%).

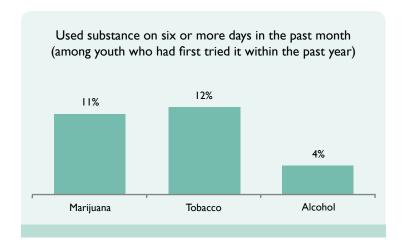
Youth who had been using marijuana for more than a year were also more likely to have tried alcohol and other substances, such as cocaine, hallucinogens, and amphetamines (54% vs. 23%).

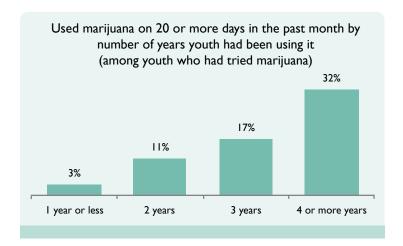


Note: The gender difference for '3 to 5 days' was not statistically significant.

OTHER SUBSTANCE USE IN RELATION TO HOW RECENTLY YOUTH FIRST USED MARIJUANA (AMONG YOUTH WHO HAD TRIED MARIJUANA)

LIFETIME RATES	YOUTH WHO FIRST USED MARIJUANA IN THE PAST YEAR	YOUTH WHO FIRST USED MARIJUANA MORE THAN A YEAR AGO
Alcohol	91%	97%
Prescription pills without a doctor's consent	13%	27%
Mushrooms	7%	31%
Hallucinogens	5%	21%
Ecstasy/MDMA	5%	26%
Inhalants	3%	7%
Cocaine	2%	15%
Steroids without a doctor's consent	1%	4%
Heroin	1%	4%
Crystal meth	1%	4%
Ketamine, GHB	1%	7%
Amphetamines	1%	7%





Other research has found that the progression from first to regular cannabis use can be as rapid as tobacco progression and more rapid than that of alcohol. This appeared to be the case for students in BC, including those who experienced challenges in their lives (such as a mental health condition or history of abuse).

Among students who first tried alcohol within the past year, 1% drank on 10 or more days in the past month. In contrast, 7% who had first tried marijuana and 8% who had first tried tobacco within the past year used these substances that often.

The longer youth had been using marijuana, the more likely they were to use it regularly. For example, youth who had been using marijuana for four or more years were around three times as likely as those who had been using it for two years to have had it on most days in the past month.



PREDICTORS OF EARLY OR FREQUENT USE

All analyses in this section are among youth who had tried marijuana.

In this section we consider some experiences and challenges that might make youth more vulnerable to using marijuana frequently (i.e., on 20 or more days in the past month) or at an earlier age.

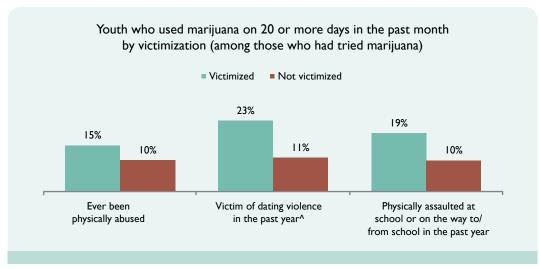
YOUTH MORE LIKELY TO USE MARIJUANA FREQUENTLY

STRESSFUL LIFE EVENTS OR CIRCUMSTANCES

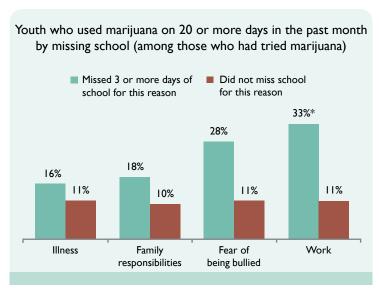
Youth who lived in challenging circumstances or had experienced stressful life events were more likely to have been using marijuana frequently. For example, youth who came to Canada as refugees were more likely than their Canadian-born peers to have used marijuana on 20 or more days in the past month (47%* vs. 12%). Youth who went to bed hungry often or always because there was not enough money for food at home were also more likely to have used marijuana this frequently (35% vs. 11%).

Experiences of discrimination were also linked to frequent use. For example, youth who experienced discrimination based on their race or ethnicity were more likely than those who did not experience this type of discrimination to have used marijuana on 20 or more days (15% vs. 11%). Similar patterns were found for youth who felt they had been discriminated against for being seen as different (15% vs. 10%) and because of how much money they or their family had (19% vs. 10%).

Youth with other victimization experiences were also more likely to use marijuana frequently in the past month. For example, those who had been sexually abused were more likely to use marijuana on 20 or more days in the past month (15% vs. 10% who had not been abused).



[^] Among those in a dating relationship in the past year.



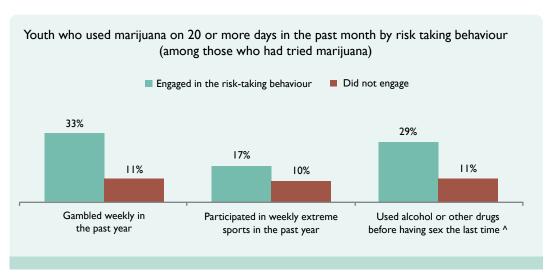
*The percentage should be interpreted with caution as the standard error was relatively high but still within a releasable range.

Students who had missed three or more days of school in the past month because they were afraid of being bullied, due to family responsibilities, illness, or work were more likely than those who did not miss school for these reasons to have used marijuana on 20 or more days that month.

RISK TAKING

Participation in extreme sports (such as back country skiing or BMX racing), gambling, breaking seat belt and helmet laws, and risky sexual behaviour were all associated with frequent marijuana use.

Youth who had been in conflict with the law and stayed in a custody centre were more likely than those without this experience to have used marijuana on 20 or more days in the past month (35% vs. 11%).



[^] Among those who ever had sex.

TOBACCO USE

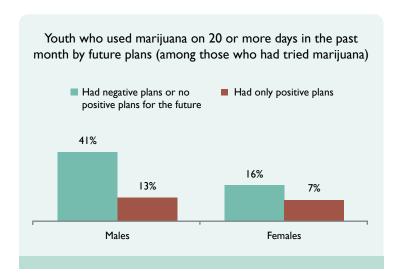
Among youth who had tried marijuana and tobacco, 25% of youth who first smoked tobacco at age 12 or younger used marijuana on 20 or more days in the past month. This compared to 16% of those who first tried tobacco at 13 or 14 years of age and 11% of those who waited until at least 15 to first try tobacco.

FUTURE PLANS

Youth who saw themselves in negative circumstances in five years' time (being in prison, dead, or homeless) or did not envision themselves in positive circumstances (e.g., no plans of having a job, attending school, or of being engaged in their community) were more likely to have used marijuana on 20 or more days in the past month (29% vs. 10%).

MENTAL HEALTH

Youth with mental health challenges were more likely to have used marijuana on most days in the past month. For example, 19% of students with ADHD/ADD used it on 20 or more days compared to 10% of those without this condition.



I've studied numerous times when I am high but it doesn't affect my grades and I still plan to go to university."

Marijuana makes me happier."

life."

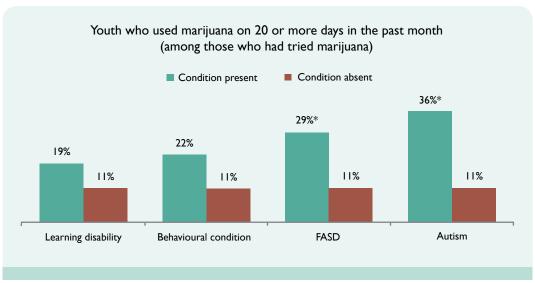
When I smoke marijuana, I feel like I can focus on what I want and I don't feel overwhelmed or pressured. All my worries go up in smoke:) It truly has shown a new light to my life, and I truly believe if it wasn't such a part of my life, I would not be where I am. First time in my life I'm really proud to be me, and first time in my life I

do not wish to be someone else. Saved my

Youth with other conditions were also more likely than their peers without these conditions to have used marijuana frequently in the past month, including youth with autism or Asperger's, a learning disability, FASD, and a behavioural condition.

Youth who knew someone who had attempted suicide were more likely to have used marijuana on 20 or more days in the past month (13% vs. 10% of those who did not have a family member or friend who had attempted suicide).

Finally, 13% of those who generally considered themselves to have poor or fair mental health had used marijuana on 20 or more days in the past month, compared to 10% who rated their mental health as good or excellent.



^{*}The percentage should be interpreted with caution as the standard error was relatively high but still within a releasable range.

WORK

Males who worked at a paid job in the past year were more likely to have used marijuana on 20 or more days in the past month (18% vs. 13% of males who were not employed). Further, among both males and females who worked, those who had been working 21 or more hours a week were more likely than their peers who worked fewer hours to have used marijuana frequently (23% vs. 11%).

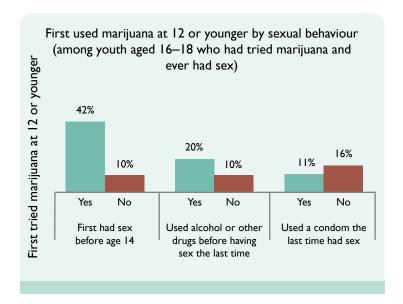
YOUTH MORE LIKELY TO USE **MARIJUANA AT AN EARLY AGE**

Among youth aged 16 to 18 who had tried marijuana, I in 10 first used marijuana before the age of 13. Males were more likely than females to have started at an early age (12% vs. 8%).

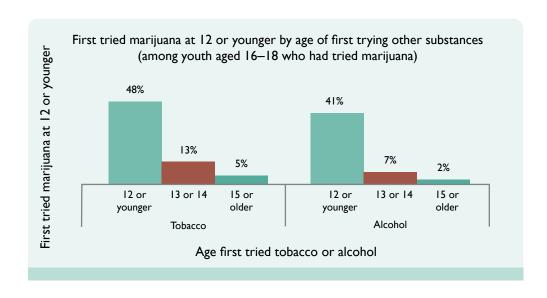
Many of the same predictors of frequent use were associated with early use. Among 16- to 18-yearolds who had tried marijuana:

- 37%* of refugees had used marijuana before age 13 (vs. 11% of Canadian-born youth).
- 39%* of youth who went to bed hungry often or always reported first using marijuana at age 12 or younger (vs. 10% of youth who did not experience this level of poverty).
- 18% of lesbian, gay, and bisexual youth first used it before age 13 (vs. 9% of their straight peers).
- 16% who had a family member who had attempted suicide first tried marijuana before the age of 13 (vs. 8% without this experience).

- Youth with physical disabilities were more likely to have first tried marijuana at age 12 or younger than their peers without such disabilities (35%* vs. 10%). However, youth with sensory disabilities and those with longterm or chronic medical conditions were no more likely to have tried marijuana at an earlier age.
- Youth with a mental health condition were more likely than those without such a condition to have first used marijuana before the age of 13, including youth with depression (16% vs. 9% of youth without this condition), PTSD (33% vs. 10%), anxiety disorder or panic attacks (15% vs. 9%), and ADHD (17% vs. 9%). Similar findings were seen for those with other conditions including FASD (37%* vs. 10%) and autism or Asperger's (43%* vs. 10%).
- Male and female youth who had experienced victimization were more likely than their peers without these experiences to have first tried marijuana at a younger age. These included youth who had been physically abused (18% first used marijuana at 12 or younger vs. 8% of youth who had not been physically abused), sexually abused (17% vs. 9%), those who experienced dating violence (25% vs. 10%; among youth in a dating relationship in the past year), and youth who had been physically assaulted in the past year (22% vs. 9%).



- Youth who engaged in risk taking behaviours, such as gambling, extreme sports on a weekly basis, breaking seat belt and helmet laws, and risky sexual behaviour were more likely to first try marijuana at a younger age.
- 32%* of youth who had stayed in a custody centre first tried marijuana before the age of 13 (vs. 10% who had never been in custody).
- Earlier users of alcohol and tobacco were more likely to have tried marijuana at an earlier age.



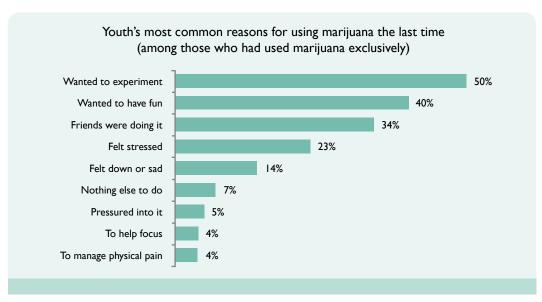
YOUTH'S REASONS FOR USING **MARIJUANA**

Youth were asked about their reasons for using substances the last time they had done so. To identify the reasons some youth used marijuana, all analyses in this section are among the 2% of males and 1% of females who had tried marijuana exclusively (i.e., had not used alcohol or other substances), unless otherwise specified. This ensures that the reasons given were specifically for marijuana use.

Among youth who had used marijuana exclusively, their most common reason for using it was to experiment. Other common reasons were to have fun and because their friends were doing it. Also, almost a quarter of youth used marijuana because of stress. There were no gender differences except females were more likely than males to report using marijuana because they felt down or sad (21% vs. 10%).

My community is very boring, kids around here lose interest in activity and continue to use drugs and alcohol. If there were to be more focus on youth activity in [our community] I can guarantee that the depression, inactivity and drug use would go down significantly. To whoever is reading this I hope my message gets passed on."

Instead of just having a space to ask if we've 'experimented' or not, you should include a section asking us what we think of it-if we'd do it again."



Note: Youth could choose more than one response.

There were no significant differences among youth of different ages, or between youth living in urban and rural areas in their reasons for using marijuana.

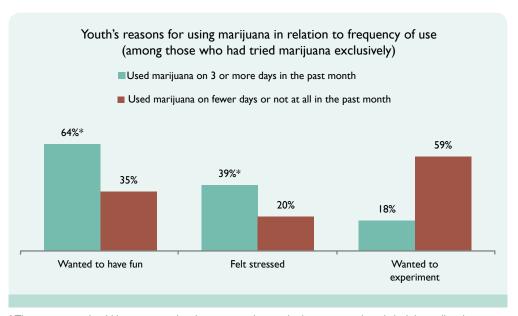
Youth who used marijuana on at least three days in the past month were more likely than their peers who used it on fewer days to identify feeling stressed and wanting to have fun as their reasons for using it, and were less likely to have used marijuana because they wanted to experiment.

HEALTH CONDITIONS

Youth who had a mental health condition were more likely than their peers without such a condition to have used marijuana because of stress (47%* vs. 20%) and because they felt down or sad (39%* vs. 10%). Almost half of male and female youth (47%*) who specifically reported having depression indicated using marijuana because they felt sad.



I've only ever done it just to try it, it's not my thing. So don't judge me. Peer pressure is a bad thing. But I won't do it again."



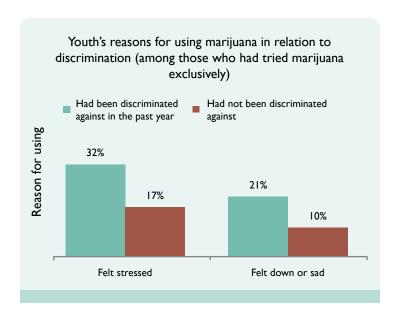
^{*}The percentage should be interpreted with caution as the standard error was relatively high but still within a releasable range.

VICTIMIZATION

Youth who had been victimized were more likely than their peers who had not been victimized to have used marijuana for certain reasons. For example, youth who had been bullied in person in the past year were more likely to have used marijuana because of stress (28% vs. 16% who had not been bullied) and sadness (18% vs. 9%). Similar patterns were found for youth who had been discriminated against.

LENGTH OF USE

There were some differences in reasons between those who had first started using within the past year and those who had first tried marijuana over a year ago. For example, youth who had first used marijuana within the past year were more likely to have last used it because they were experimenting or wanting to try it (57% vs. 30% of those who first used marijuana more than a year ago), and males who had first used it recently were more likely to have done so because their friends were doing it (37% vs. 23% of males who first tried it more than a year ago).



Youth who had tried marijuana and another substance (e.g., alcohol and/or another drug) were more likely than those who had used marijuana exclusively to report having used substances the last time to have fun (76% vs. 40%), because of stress (30% vs. 23%), due to sadness (22% vs. 14%), because there was nothing else to do (14% vs. 7%), and to manage physical pain (8% vs. 4%). Youth who used marijuana exclusively were more likely than polysubstance users to report experimentation as their reason for having used substances the last time (50% vs. 26%).

SPECIFIC CONSEQUENCES OF **MARIJUANA USE**

The BC AHS asked youth about specific consequences they might have experienced as a result of their substance use in the past year. This section focuses on youth who had used marijuana exclusively to ensure that the consequences they reported were only a result of marijuana use and not the use of another substance.

Among youth who had used marijuana exclusively, 33% reported that their use resulted in at least one negative consequence, and 7% had experienced three or more.

Females were more likely than males to report negative consequences (45%* vs. 27%) and specifically to report doing something they could not remember (24%* vs. 9%). There were no significant differences based on youth's current age, the age they first tried marijuana, or on whether youth started using marijuana more recently or over a year ago.

Youth who used marijuana on three or more days were more likely than those who used it on fewer days or not at all in the past month to report negative consequences (54%* vs. 27%).

Youth who had a mental health condition (such as depression or an eating disorder) were more likely than their peers without such a condition to report negative consequences of their marijuana use (54%* vs. 30%).

MOST COMMONLY REPORTED CONSEQUENCES OF MARIJUANA USE IN THE PAST YEAR (AMONG YOUTH WHO HAD USED MARIJUANA EXCLUSIVELY)

Was told I did something I couldn't remember	14%
Passed out	10%
Lost friends or broke up with boyfriend or girlfriend	8%
School work or grades changed	8%
Argued with family members	7%

Note: Youth could choose more than one response.

IMPAIRED DRIVING

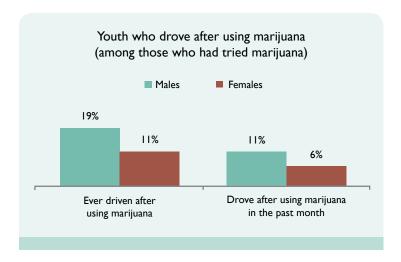
Fifteen percent of youth who had tried marijuana reported they had driven after using marijuana, which was a decrease from 20% in 2008. Nine percent of youth had done so in the past month.

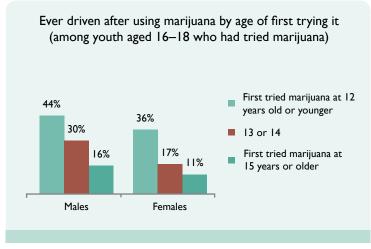
Driving under the influence of marijuana or other substances is associated with a greater risk of being involved in a motor vehicle accident. Among youth who had tried marijuana, 3% of those who drove after using it reported their most recent serious injury occurred in a vehicle. This was twice the rate reported by those who had never driven under the influence of marijuana. There was no gender difference and also no difference between 2013 and 2008 in the percentage of vehicle injuries reported by those who had driven after marijuana use.

As would be expected, older youth were more likely to drive after using marijuana. For example, among students who had tried marijuana, 15% of 17- and 18-year-olds had driven under the influence in the past month, compared to 3% of youth aged 14 or younger. Also, 24% of youth with a novice licence had driven after using marijuana in the past month, compared to 6% with a learner's licence and 3% with no licence.

Youth living in urban and rural regions were equally likely to have driven under the influence of marijuana. However, youth in the Interior were more likely than their peers in other regions of the province to have done so (20% vs. 12–15%).

Youth who had used marijuana at an earlier age were more likely to have driven after marijuana use. Among youth aged 16 to 18 who had tried marijuana, 41% of those who first used it at age 12 or younger had ever driven under its influence, compared to 24% who first used it at age 13 or 14, and 13% who waited until they were 15 or older to first try marijuana.





Note: The difference between males and females who used marijuana at 12 or younger was not statistically significant.

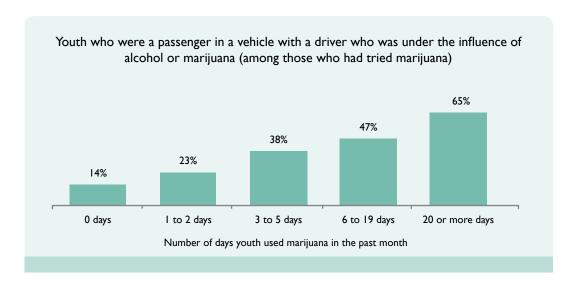
The longer youth had been using marijuana, the more likely they were to have driven under its influence in the past month. For example, 14% of students who first used marijuana more than a year ago had driven after using marijuana in the past month, compared to 3% of those who first used marijuana within the past year.

As might be expected, the greater number of days on which youth used marijuana in the past month, the more likely they were to have driven under its influence. For example, 37% of youth who used this substance every day reported driving under the influence of marijuana, compared to 29% who used it on 20 to 29 days and 20% who used it on 10 to 19 days.

Youth who used marijuana on most days in the past month were also more likely to drive while under the influence of alcohol during that time frame (11% who used marijuana on 20 or more days reported driving under the influence of alcohol vs. 2% of youth who used marijuana on fewer days).

Using marijuana on a greater number of days was also associated with being a passenger in a vehicle driven by someone who had been using marijuana or drinking alcohol. This pattern was consistent for youth of all ages.

Youth who were polysubstance users were more likely than those who had used marijuana exclusively to have driven after marijuana use. Three percent of youth who had used marijuana exclusively had driven under the influence, compared to 9% of those who had used both marijuana and alcohol, and 20% of those who had used both marijuana and another substance (such as cocaine and amphetamines).



YOUTH WHO FELT THEY NEEDED **HELP FOR THEIR MARIJUANA USE**

All analyses in this section are among youth who had tried marijuana.

Seven percent of youth who used marijuana exclusively felt they needed help for their use in the past year, which was comparable to the rate for youth who used other substances as well as marijuana.

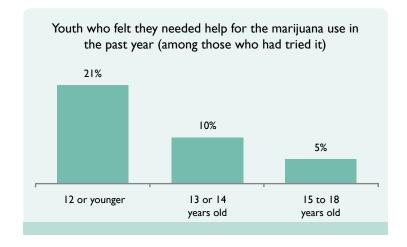
Among youth who had tried marijuana, there was no gender difference in the percentage who felt they needed help for their use but there was an age difference. Youth aged 14 and younger were more likely than those aged 15 to 18 to feel they needed help for their use in the past year (14% vs. 9%).

Youth who started using marijuana more than a year ago were over twice as likely as those who first tried this substance in the past year to feel they needed help for their marijuana use (13% vs. 6%). Also, youth who started using it when they were 12 or younger were the most likely to feel they needed help for their use, whereas those who waited until they were at least 15 were the least likely. There was a similar pattern when focusing only among youth who were currently 16 to 18 years old.

In general, the more days on which youth used marijuana in the past month, the greater their likelihood of needing help for their use. For example, 9% of youth who used marijuana on three to five days needed help for their marijuana use, compared to 17% who used it on six to nine days. Those who used marijuana on 20 or more days were the most likely to report needing help for their use (36%), with comparable rates across age.

Other youth who were more likely to feel they needed help for their use included those who:

- Had experienced negative consequences of their marijuana use.
- Anticipated a bleak future for themselves (i.e., being in prison, homeless, or dead in five
- Skipped class on three or more days in the past month (18% vs. 7% who did not skip class).
- Missed out on needed mental health services in the past year (14% vs. 8% who did not miss out on these needed services).



SOURCE OF MARIJUANA

Source of marijuana refers to whom youth got their marijuana from the last time they used it. One of the response options on the survey was 'an adult outside your family.' It is unknown what the youth's relationship with that adult was, and may have included a doctor who provided a prescription for use.

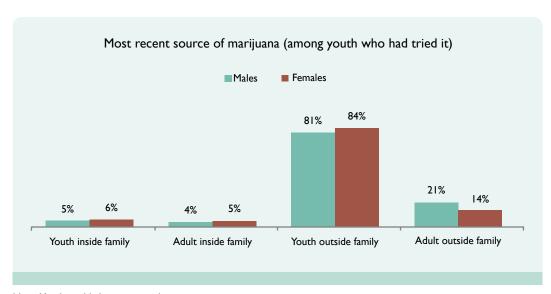
All analyses in this section are among youth who had

tried marijuana.

I live in a dangerous area (shootings, most people are doing drugs). My dad and older brother smoke weed, boyfriend is a stoner. I am exposed to weed daily."

When asked about their most recent source of marijuana, 82% of youth reported getting it from a youth outside their family. The next most common source was a non-familial adult (17%). Males were more likely than females to get their marijuana from an adult outside the family, whereas females were more likely to get it from the other sources.

As youth got older they were less likely to get their marijuana from a youth in their family and were more likely to get it from an adult outside their family. For example, 22% of 18-year-olds got their marijuana from an adult outside their family, compared to 16% of youth aged 16 or younger.



Note: Youth could choose more than one response.

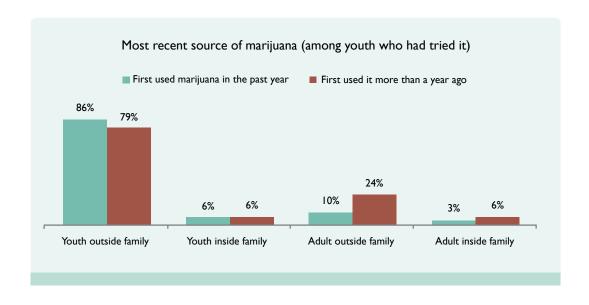
Youth who started using marijuana within the past year were more likely than those who had been using it longer to get their marijuana from a youth outside the family and were less likely to get it from an adult (either in or out of their family).

There was no relation between where youth got their marijuana and the number of friends they had. However, students who got their marijuana from an adult outside their family were less likely than other youth to report that their friends would be upset with them if they used marijuana (11% vs. 16%), and students who got their marijuana from a youth inside their family were more likely to have friends who would disapprove of their marijuana use (22% vs. 15%).

REGIONAL DIFFERENCES

There were no differences in sources of marijuana between those living in urban and rural parts of the province. However, there were some regional differences. Youth living in the North were more likely than those in the other regions to get their marijuana from a youth inside their family (9% vs. 4-6% elsewhere), and less likely to get it from a youth outside their family (74% vs. 82–86% elsewhere).

The picture in each of the 16 HSDAs reflected the overall provincial picture, with students most likely to get their marijuana from a youth outside of their family. However, the percentages who did so ranged from around 70% in Northwest and Northern Interior to over 85% in Vancouver, Fraser North, and South Vancouver Island. Similarly, an adult outside the family was the second most common source of marijuana everywhere, with percentages ranging from 12–13% in South Vancouver Island and Vancouver to 26% in Northwest.



VULNERABLE YOUTH

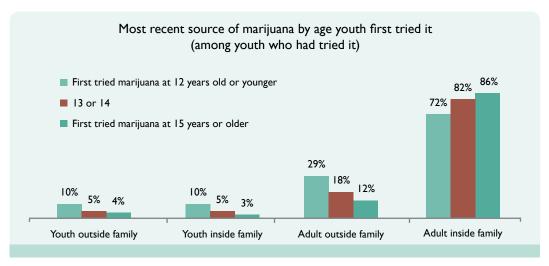
Among youth who had tried marijuana, those who reported having a health condition or disability (e.g., a physical disability, mental health condition, or learning disability) were less likely than their peers to get their marijuana from a youth outside their family (80% vs. 83%), and were more likely to get it from a youth inside their family (7% vs. 5%), an adult inside their family (7% vs. 4%), and an adult outside their family (19% vs. 16%). Specifically, youth with a physical disability were more than twice as likely as their peers to get their marijuana from an adult outside the family (37%* vs. 17% without a physical disability).

Youth who had been in government care were less likely than their peers without care experience to get marijuana from a youth outside their family (75% vs. 83%), and were more likely to get it from a youth in their family (11% vs. 5%), an adult in their family (12% vs. 4%), or an adult outside their family (26% vs. 17%).

There were few differences between Canadianborn youth and those born abroad. However, among youth born abroad, those who had lived in Canada under five years were less likely to report getting their marijuana from a youth outside their family than those who had lived in Canada longer (75% vs. 83%).

RISKY MARIJUANA USERS

Youth who were using marijuana frequently were more likely to get it from an adult and less likely to get it from a youth. For example, 13% of students who had used marijuana on 20 or more days in the past month got it from an adult in their family (vs. 4% who used it on fewer than 20 days), and 49% got it from an adult outside their family (vs. 14%).



Note: For 'Youth inside family,' the difference between first using marijuana at age 13-14 and at 15 or older was not statistically significant.

Youth who started using marijuana at a younger age were more likely to get it from a source within their family and an adult outside their family, and were less likely than those who started using it later to get it from a youth outside their family.

HARMS ASSOCIATED WITH SOURCE OF **MARIJUANA**

Among students who had used marijuana, those who got it from an adult (inside or outside their family) were less likely to feel safe in their neighbourhood (e.g., 62% always felt safe there during the day vs. 67% who got it from a youth).

Among female students, those who got their marijuana from an adult outside their family were over twice as likely to report having been forced into sexual activity by an adult (10% vs. 4% who did not recently get marijuana from an adult outside the family), and were less likely to report there was an adult inside their family they could turn to for help with a problem (49% vs. 57%).

Youth who reported getting their marijuana from an adult inside their family were less likely to feel connected to their family. For example, they were less likely to feel that their family paid attention to them (50% vs. 65%), their family had fun together (44% vs. 55%), or that their family understood them (33% vs. 46%).

Finally, youth who got their most recent marijuana from a youth outside their family were more likely to report that they used substances the last time because their friends were doing it (40% vs. 29% who got their marijuana from another source).



PROTECTIVE FACTORS LINKED TO LESS HARMFUL USE

In this section we considered what might be present in youth's lives that delayed their first use of marijuana and reduced the likelihood they had used it on a daily or almost daily basis.

All reported percentages are among youth who had used marijuana, unless otherwise stated.

FAMILY SUPPORT

Youth who felt connected to their family (i.e., felt people in their family understood them, they had fun with their family, and their family paid attention to them) were more likely to delay using marijuana. For example, 67% of youth aged 16–18 who felt most connected to their family waited until they were 15 years old to first try marijuana, compared to 48% who felt least connected to their family.

Youth who reported the highest levels of family connectedness were also less likely to have used marijuana on 20 or more days in the past month (7% vs. 15% who felt least connected). Also, those who sought help from someone in their family when they had a problem and found the support helpful were less likely to have needed help for their marijuana use in the past year (9% vs. 15% who did not find their family member helpful).

Among 16- to 18-year-olds, those who had an adult in their family they could talk to if they had a problem were more likely to have waited until they were 15 years old to first try marijuana (59% vs. 53% without such an adult), as were students whose parents knew what they were doing in their spare time or ate dinner with them.

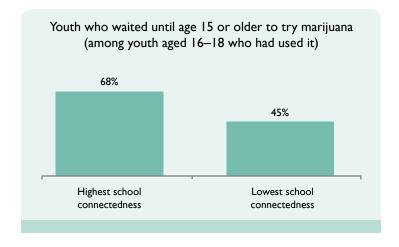
Students whose parents knew what they were doing in their spare time were also less likely to have used marijuana at all in the past month and to have used it on 20 or more days in the past month (8% vs. 20% whose parents rarely or never knew). Youth whose parents ate their evening meal with them most of the time were also less likely to have used marijuana on most days in the past month (9% vs. 17% whose parents never or rarely ate an evening meal with them).

POSITIVE SCHOOL EXPERIENCES

Among youth aged 16-18, those who reported the highest levels of school connectedness were more likely to have waited until they were at least 15 years old before first trying marijuana compared to those who were the least connected to school.

Also, among youth who used marijuana, those with the highest levels of school connectedness were less likely to have used marijuana in the past month, and to have used it frequently (5% used it on 20 or more days vs. 18% with the lowest school connectedness).

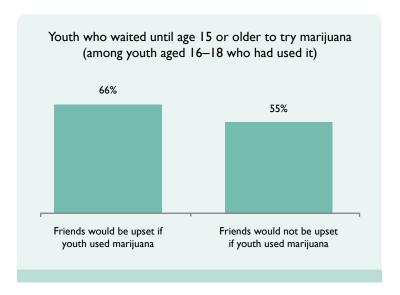
Feeling safe at school was linked to delayed and less frequent marijuana use. For example, among 16- to 18-year-olds who had tried marijuana, 64% of students who felt safe at school waited until they were at least 15 years old to use it, compared to 32% of students who did not feel safe at school. Youth sought help from a variety of school staff members during the past year. When youth who had used marijuana found that support to be helpful, it was linked to lower levels of recent marijuana use. For example, those who asked a teacher for help and found their teacher helpful were less likely to have used marijuana in the past month (54% vs. 65% who did not find their teacher helpful) or to have used it on most days. Similarly, students who sought help from other school staff and found them helpful were less likely to have used marijuana on 20 or more days in the past month (13% vs. 21% who did not find other school staff helpful).



PEER RELATIONSHIPS

Friends can play an important role in supporting young people's healthy choices. Youth who reported having at least one close friend in their school or neighbourhood were less likely than those without a close friend to have used marijuana on 20 or more days in the past month (11% vs. 19%).

Regardless of the number of friends they had, youth who had friends who would be upset if they used marijuana were less likely than those whose friends would not be upset to report having first tried it at an early age, to have used it in the past month (33% vs. 62%), and to have used it on 20 or more days in the past month (4% vs. 13%).



COMMUNITY CONNECTEDNESS & SAFETY

Youth who felt they were a part of their community were less likely to have first tried marijuana at an early age or to use marijuana frequently. For example, 8% of students who felt quite a bit or very much connected to their community used marijuana on 20 or more days in the past month, compared to 17% who felt less connected.

Among youth aged 16–18, those who felt connected to their community were more likely to have waited until they were at least 15 years old to first try marijuana (63% vs. 49% of youth who felt no or little connection to their community).

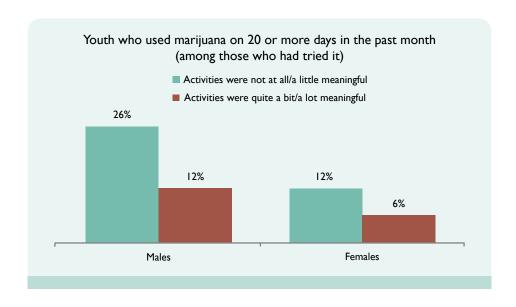
Also, youth who always felt safe in their neighbourhood were less likely than those who never felt safe to have used marijuana on most days in the past month (12% vs. 30%).

PARTICIPATION IN EXTRACURRICULAR **ACTIVITIES**

Participation in at least one extracurricular activity on a weekly basis—such as sports, dance, volunteering, or music—was associated with less frequent marijuana use. For example, 10% of youth who participated in a weekly activity reported using marijuana on 20 or more days in the past month, compared to 16% of students who did not take part weekly.

Males who played informal sports on a weekly basis were less likely to have used marijuana on 20 or more days in the past month (14% vs. 23% who never participated in informal sports), and both males and females were less likely to have used marijuana this frequently if they took part in weekly organized sports (males: 10% vs. 23%; females: 4% vs. 10%).

It was also important that youth felt engaged and valued within their extracurricular activities. Among 16- to 18-year-olds who had tried marijuana, youth who felt their extracurricular activities were meaningful to them were more likely to have waited until they were at least 15 to first try marijuana (59% vs. 49% who felt their activities were less meaningful), as were those who felt their ideas were listened to and valued (60% vs. 49%). Similarly, males and females who were meaningfully engaged in activities were less likely to have used marijuana on most days in the past month compared to those who did not feel their activities were meaningful.



SELF-CONFIDENCE AND OPTIMISM

Youth who felt good about themselves and felt as competent as their peers were less likely to have used marijuana at all in the past month. Further, males who felt good about themselves were less likely to have used marijuana on 20 or more days in the past month (14% vs. 21% of males who did not feel good about themselves).

Youth who felt hopeful about the future were also less likely to have used marijuana on most days in the past month. For example, those who anticipated only positive circumstances for themselves in five years, such as having a job or being engaged in their community, were less likely to have used marijuana on 20 or more days than youth who anticipated bleaker circumstances, such as being in prison, homeless, or dead (10% vs. 29%).

THE INTERSECTION OF RISK AND **PROTECTIVE FACTORS**

This report has identified a number of risk and protective factors associated with an increased or decreased likelihood that youth used marijuana at an early age or were using it frequently. However, there were youth who reported having a number of the identified risk factors in their lives who did not use marijuana early or frequently.

To further understand the relation between risk and protective factors, we looked at three risk factors associated with early and frequent marijuana use (having been physically abused, having a close friend or family member who attempted suicide, and having a mental or emotional health condition) and four protective factors which were associated with a decreased likelihood of potentially harmful marijuana use (having positive family relationships, high school connectedness, high community connectedness, and having friends who would disapprove of marijuana use).

Among youth who had tried marijuana and had two or more risk factors, those who also had two or more protective factors were less likely to have started using marijuana at 12 or younger (14% vs. 25% of those who had none of the protective factors). Similarly, they were a third as likely to have used on 20 or more days in the past month.

Further, among those who had tried marijuana, no youth who had all four protective factors reported using marijuana on 20 or more days in the past month or having started using marijuana at 12 or younger, even if they had all three of the risk factors present in their lives.

FINAL WORD

This report has shown that BC youth use marijuana for many reasons. However, it has also shown that early and frequent use is associated with a number of health challenges, and other research suggests that it may lead to additional difficulties in adulthood.

The report identifies clear risk factors for early and frequent use, and protective factors that may support youth who do use marijuana to wait longer, and to use at less harmful levels. It also shows that in comparison to previous years, youth are generally waiting until they are older to first use marijuana and are less likely to drive while under its influence.

With new Prime Minister Justin Trudeau promising to legalize marijuana, and Vancouver in particular experiencing a huge rise in medical marijuana dispensaries, some of which openly admit to selling marijuana to people who would not qualify under current regulations, monitoring trends in marijuana use among youth is important. It will also be important to provide services and supports to youth who identify needing help for marijuana dependence.

This study has reported correlations of marijuana use among youth aged 12 to 19. The upcoming legalization of marijuana will allow for further studies to determine any longer term effects of use among this age group and to further explore the roles of risk and protective factors in relation to potentially harmful use.

The 2018 BC Adolescent Health Survey results promise to inform the debate about marijuana use. Whatever those results show, the data gathered over the past decade makes it clear that parents, schools, and other adult allies need to talk to young people about marijuana use. Creating a safe space where youth can ask questions, express concerns, and receive reliable information about any potential benefits and harms that they may experience will allow them to make informed choices.

HELPFUL RESOURCES

CANNABIS USE AND YOUTH: A PARENT'S GUIDE: www.heretohelp.bc.ca/sites/ default/files/cannabis-use-and-youth-a-parents-guide.pdf

PARENTING: THE DRUG QUESTION: www.uvic.ca/research/centres/carbc/assets/ docs/hs-parents-list.pdf

ALCOHOL AND DRUG INFORMATION & REFERRAL SERVICE: 211 within Regional Districts of Squamish-Lillooet, the Fraser Valley, and Metro Vancouver; I-800-663-1441 elsewhere in BC.

APPENDIX I: MARIJUANA USE BY GENDER, AGE, & HEALTH AUTHORITY

EVER USED MARIJUANA

ВС	13 OR YOUNGER	14	15	16	17	18 OR OLDER	ALL AGES
MALES							
2003	13%	28%	41%	49%	55%	62%	38%
2008	9%	21%	31%	43%	49%	52%	31%
2013	5%	16%	30% ^a	37%	46% ^a	43%	26%
FEMALES							
2003	14%	31%	41%	50%	55%	52%	37%
2008	8%	20%	29%	41%	48%	46%	29%
2013	5%	19% ^a	27% ^a	34%	41%	39% ^C	25%
NORTHERN	13 OR YOUNGER	14	15	16	17	18 OR OLDER	ALL AGES
MALES							
2003	21%	38%	52%	60%	61%	69%	47%
2003 2008	21%	38%	52% 39%	60% 52%	61% 59%	69% 66%*	47% 39%
2008	15%	29%	39%	52%	59%	66%*	39%
2008 2013	15%	29%	39%	52%	59%	66%*	39%
2008 2013 FEMALES	15% 12% ^{a,c}	29% 27% ^{a,c}	39% 43% ^{a,b}	52% 41%	59% 53% d	66%* 56% * d	39% 35%

EVER USED MARIJUANA

INTERIOR	13 OR YOUNGER	14	15	16	17	18 OR OLDER	ALL AGES
MALES							
2003	19%	39%	48%	64%	71%	74%	47%
2008	13%	26%	38%	52%	56%	63%	38%
2013	7%	20%	35% ^a	47% ^a	50% ^a	55% ^a	32%
FEMALES							
2003	19%	38%	49%	62%	66%	70%	47%
2008	13%	28%	42%	51%	60%	63%	38%
2013	9% a	29% a	37% ^a	45% ^a	53% a,c	54% * a,c	34%
VANCOUVER	I3 OR					I8 OR	ALL
ISLAND	YOUNGER	14	15	16	17	OLDER	AGES
MALES MALES	YOUNGER	14	15	16	17	OLDER	AGES
	YOUNGER 15%	38%	56%	57%	65%	OLDER 76%	AGES 47%
MALES							
MALES 2003	15%	38%	56%	57%	65%	76%	47%
MALES 2003 2008	15% 14%	38% 26%	56% 41%	57% 53%	65% 56%	76 % 55%	47% 38%
MALES 2003 2008 2013	15% 14%	38% 26%	56% 41%	57% 53%	65% 56%	76 % 55%	47% 38%
MALES 2003 2008 2013 FEMALES	15% 14% 8% ^C	38% 26% 20%	56% 41% 38% ^a	57% 53% 45% ^C	65% 56% 49% ^a	76% 55% 44%	47% 38% 31%

EVER USED MARIJUANA

VANCOUVER COASTAL	13 OR YOUNGER	14	15	16	17	18 OR OLDER	ALL AGES
MALES							
2003	11%	20%	32%	40%	49%	53%	31%
2008	5%	15%	22%	33%	38%	40%	22%
2013	4% ^a	13% ^a	25% ^a	34% ^{a,b}	44% ^{a,b}	35% ^a	24% ^a
FEMALES							
2003	10%	23%	32%	40%	45%	37%	29%
2008	3%	13%	18%	27%	37%	33%	20%
2013	3% ^a	15% ^a	20% ^a	26% ^a	35% ^a	30% d	19% ^a
FRASER	13 OR YOUNGER	14	15	16	17	18 OR OLDER	ALL AGES
MALES							
2003	9%	21%	34%	40%	45%	55% *	31%
2008	7%	17%	28%	38%	47%	50%	27%
2008	7% 3% ^C	17% 12% ^C	28% 25% ^{a,c}	38%	47% 42% ^d	50% 41% ^d	27% 22%
2013							
2013 FEMALES	3% ^C	12% ^C	25% ^{a,c}	31% ^C	_{42%} d	41% ^d	22%

Note: Not all differences between ages were statistically significant.

* Interpret with caution as the standard error was relatively high but still within a releasable range.

a Difference between 2013 and 2008 was not statistically significant.

b Difference between 2013 and 2003 was not statistically significant.

C Difference between 2008 and 2003 was not statistically significant.

There were no statistically significant differences between survey years.

APPENDIX 2: EARLY & RECENT USE BY REGION

	OR YOUNG	AT AGE 12 ER (AMONG GED 12–19)		ARIJUANA MONTH		20 OR MORE AST MONTH
	MALES	FEMALES	MALES	FEMALES	MALES	FEMALES
NORTHWEST	24%	27% †	60%	60% †	21%	10%
NORTHEAST	29% *	17% †	43% *	49% * [†]	13%	NR [†]
NOTHERN INTERIOR	25%	24% †	64%	50%	19%	11%
THOMPSON CARIBOO SHUSWAP	23%	18% [†]	61%	57% †	21%	14% [†]
OKANAGAN	22%	16% [†]	63%	65% [†]	17%	11%
KOOTENAY BOUNDARY	27%	19% †	63%	50%	20%	7%
EAST KOOTENAY	20%	21% †	65%	55% †	17%	10% †
NORTH VANCOUVER ISLAND	27%	17%	59%	53% †	14%	7%
CENTRAL VANCOUVER ISLAND	25%	19% †	62%	55% †	20%	9%
SOUTH VANCOUVER ISLAND	19%	16% [†]	62%	54% †	15%	6%
NORTH SHORE/ COAST GARIBALDI	19%	11%	67%	63% †	18%	8%
VANCOUVER	11%	_{7%} †	56%	52% †	10%	NR
RICHMOND	13%	NR †	67%	51%*	18%	NR
FRASER NORTH	14%	7%	51%	52% †	13%	3%
FRASER SOUTH	14%	8%	63%	53%	15%	4%
FRASER EAST	15%	15% †	54%	55% †	9%	72% [†]

Note: All analyses are among youth who tried marijuana.

Note: Differences between HSDAs were not tested for statistical significance.

Difference between males and females was not statistically significant. These differences were tested at p < .05 because the data is at the HSDA level. * Interpret with caution as the standard error was relatively high but still within a releasable range.

NR: Not releasable due to risk of deductive disclosure.

ADDITIONAL MCCREARY RESOURCES

McCreary produces a range of resources aimed at youth and community audiences. These can be found at www.mcs.bc.ca and include the following:



HOW MANY IS TOO MANY FOR **BCYOUTH? ALCOHOL USE AND** ASSOCIATED HARMS (2015)

How Many Is Too Many for BC Youth? is a report focusing on alcohol use among BC youth, and specifically what was found to constitute more harmful levels of drinking, as well as risks and protective factors.



UNTANGLING THE WEB: ONLINE SAFETY AND SEXTING AMONG BC YOUTH (2016)

Untangling the web considers risk and protective factors for safer use of technology among BC youth.



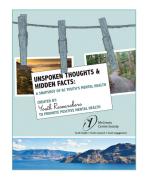
A STEP FORWARD: TURNING YOUTH HEALTH RESEARCH INTO **COMMUNITY ACTION (2016)**

A Step Forward describes youth's responses to the findings of the BC AHS and showcases the projects youth created to address local health issues in eight BC communities.



Untangling is a graphic novel series that follows four high school students dealing with challenges online. The series was created by a student at the Digital Media Academy (DMA) at Argyle Secondary School.Visit www.mcs.bc.ca/2013 AHS Reports to download the series.

Students at the DMA also created a film which highlights key findings from the report. To watch the film, visit www. youtube.com/user/McCrearyCentre. Posters and a workshop manual are also available for anyone who wants to share the results.



UNSPOKEN THOUGHTS AND HIDDEN FACTS: A SNAPSHOT OF BC YOUTH'S MENTAL HEALTH (2016)

This report was written by 28 young people who share a common interest in promoting positive mental health by increasing awareness and understanding of youth mental health.

A poster series was created by the DMA to share findings from the report and can be downloaded at www.mcs.bc.ca/2013 AHS Reports.





YOUTH ACTION GRANTS

Youth Action Grants (YAG) of up to \$500 are provided to BC youth (ages 12-19) from school districts that participated in the 2013 BC AHS to deliver a project to improve youth health in their school or community. YAGs are a project of McCreary's Youth Advisory & Action Council (YAC). Visit http://mcs.bc.ca/ahs_youth_resources for more information.



YOUTH RESEARCH ACADEMY

The Youth Research Academy trains youth to design, deliver, analyze, and disseminate research projects of interest to youth with government care experience and service providers. The Academy is open to youth ages 16-24 in and from care. For more information about the Academy, or to hire the Academy for your research or evaluation project, visit www.mcs.bc.ca.

