

# Starting a conversation

An upstream approach to reducing potentially harmful  
substance use among BC youth



McCreary  
Centre Society



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harmful substance use among BC youth



Prepared for  
British Columbia Ministry of Health

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# Executive summary

This report considers ways that potentially harmful substance use among BC youth (aged 12–19) can be addressed by taking an upstream approach that focuses on building internal and external protective factors, rather than specifically on preventing the early or excessive use of psychoactive substances.

Data from the 2013 BC Adolescent Health Survey (2013 BC AHS) showed that some youth may be using substances as a coping mechanism to deal with negative experiences such as childhood trauma, social isolation and mental health challenges. However, these experiences also put them at increased risk for potentially harmful use (including using substances at an early age, using frequently, using heavily, experiencing negative consequences of their use, and recognizing they need help for their substance).

Overall, 38% of females and 22% of males had one or more risk factors for harmful substance use. The more risk factors youth had, the more likely they were to have engaged in use which put them at risk for current or future harms. Specifically, 66% of youth with one or two risk factors reported harmful use compared to 71% with three or four factors, and 81% with five or more risk factors.

Twenty internal and external protective factors were identified across five domains (family, school, community, peers and internal assets). These protective factors were associated with youth being less likely to use substances as a way to cope with challenging emotions and with reduced risky substance use. Youth with a greater number of protective factors were less likely to engage in potentially harmful substance use.

Youth identified as at risk for harmful substance use had fewer protective factors in their lives than their peers. However, if these youth lacked protective factors in one domain, they benefited from having assets in other areas. For example, males who were not connected to school but had individual assets such as a positive outlook about the future were still at reduced risk of reporting harmful use. Similarly, females who lacked friends with prosocial attitudes to substance use but had parents or caregivers who regularly monitored their free time were less likely to engage in harmful substance use.

As with other youth, the more types of support available to these youth within each domain and across domains the less likely they were to engage in harmful substance use. There were also some protective factors which appeared particularly effective.

Among males at increased risk of harmful substance use being connected to school was the strongest protective factor against risky use, but being in a non-abusive dating relationship (among those who were dating), and having a positive outlook about the future were also particularly important.

For females at increased risk of harmful substance use, having a positive outlook about the future and having friends with prosocial attitudes toward substance use were the two protective factors most strongly associated with reducing risky use. Having school staff whom they found helpful was also key.

The data also showed that even if youth had a history of harmful substance use, currently having internal and external protective factors reduced the likelihood of them continuing to use substances in a harmful way.

Focusing on supporting youth to develop these protective factors (rather than focusing on reducing their use of a specific substance) can also have additional benefits. Many of the identified protective factors were also associated with reduced gambling, sexual health risks, and other health risk behaviours among youth at risk for substance related harms.

Supporting findings from the BC AHS, a youth-led review of evidence-based programs suggested that those which emphasize building internal assets and fostering external protective factors may be more effective than interventions which focus solely on reducing use of a specific substance. Interventions which are age and gender appropriate, build healthy connections with peers and adults, develop critical thinking skills and healthy coping strategies, and take account of youth's previous substance use experience can be particularly effective.

It is hoped that the findings of this report will contribute to the conversation about effective ways to support young people to build internal resiliency and healthy external connections.

# Introduction

Adolescence is a time of experimentation, risk taking, and growing independence (Galla, 2017). It is a time when health promoting and health risk behaviours as well as basic thinking patterns that impact future health and well-being are established (Feinstein, Bynner, & Duckworth, 2006; Schlafer et al., 2014). For example, regular participation in physical activity during the teenage years increases the likelihood of being active throughout adulthood (Green, 2005). Similarly, early and regular substance use among youth has been associated with substance use challenges in adulthood (Newcomb, 1992).

Adolescence is also a critical period of brain development when previously established behaviours and attitudes can be challenged and replaced with healthier ones; and when peers, role models, and experiences can influence changes in behaviour (Steinberg, 2014). For example, relationships with family, school, peers, and community have been shown to impact whether youth engage in risky substance use (Snedker, Herling, & Walton, 2009).

Most youth in Canada are facing barriers to healthy development, as many are not meeting healthy nutrition or physical activity guidelines, and a significant proportion are engaging in other risky behaviours including binge drinking and regular or heavy marijuana use (Laxer et al., 2018).

Policy and program interventions aimed at reducing risk behaviours generally focus on a single behaviour, such as reducing alcohol use. However, health risk behaviours generally do not occur in isolation.

Focusing on eliminating or reducing a specific health risk behaviour, such as misuse of a single substance, may be less effective than interventions that focus on promoting protective factors and that take into account an individual's experiences of systemic and individualized trauma and discrimination (Smith, Poon, Woo Kinshella, & McCreary Centre Society, 2017). For example, BC interventions that have engaged justice-involved youth in positive community projects to reduce their risk of future criminal activity have been shown to reduce their substance use (Peled & Smith, 2010).

It is important to acknowledge that many youth will experiment with alcohol and other substances and will not experience harmful effects. For example, among BC youth who had used substances in the past year, around half reported they had not experienced any negative consequence of their use during that time (Smith et al., 2014). However, the remaining youth (48% of males and 54% of females) identified at least one acute or immediate negative consequence in the past year.



Also it is known that excessive and long-term use can be associated with increased likelihood of developing a chronic health condition such as heart disease or cancer later in life (Canadian Institute for Substance Use Research, n.d.).

This report seeks to explore the possibility that potentially harmful substance use among BC youth (aged 12–19) can be addressed by taking an upstream approach that focuses on enhancing internal and external protective factors. Adolescents' behaviours, including substance use, are influenced by individual factors as well as their social environment, including school, peer networks, family, and other relationships. It is important to understand how these influences can better support young people to avoid harmful substance use, and to think about ways schools and communities can be supported to foster healthy individuals and healthy relationships (Snedker et al., 2009).

This report includes an analysis of the 2013 BC Adolescent Health Survey (2013 BC AHS). It also includes literature which helped to guide the analysis, and a review of evidence-based programs and approaches that have been effective in reducing harmful substance use, conducted by McCreary's Youth Research Academy (YRA).



The YRA is a group of youth aged 16–24 with government care experience who, with the support of McCreary staff, develop, analyze, and disseminate research projects of interest to youth with care experience and service providers. Members of the YRA contributed to this project through their involvement on the project advisory committee, undertaking a review of programs to reduce harmful substance use, and providing their recommendations and reflections on the data.

## Literature review

A literature search was conducted to identify relevant academic and grey literature relating to reducing risks for harmful substance use and promoting protective factors which may be associated with less harmful use. The search included peer reviewed articles, government reports, program evaluation reports, conference proceedings, and newsletters. Community-based programs and databases were also explored.

## Analysis of 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 includes questions about a range of health risk and health promoting behaviours, including alcohol, marijuana, and other substance use. The survey has been conducted every five years since 1992. This report is based on the responses of almost 30,000 students aged 12–19 who completed the 2013 BC AHS.

All comparisons and associations that are reported here have been tested and are statistically significant at  $p < .05$ . This means there is up to a 5% likelihood the results occurred by chance.

When percentages are compared in the text, they are statistically significant. However, graphs and charts show frequencies that are not necessarily statistically significant at every point. Where this is not evident, it is indicated in the text below the graph. A percentage noted with an asterisk (\*) should be interpreted with caution as the standard error was relatively high but still within a releasable range.

More information about the methodology for this study is available upon request at [mccreary@mcs.bc.ca](mailto:mccreary@mcs.bc.ca). Provincial, regional and special topic reports using the 2013 BC AHS are available at [www.mcs.bc.ca](http://www.mcs.bc.ca).

Quotes from youth who completed the 2013 BC AHS and those who took part in workshops to provide feedback about the results are included in this report.

## Limitations

The BC AHS was administered in mainstream public schools. This means the results may not be reflective of all young people in the province, and particularly may not represent youth who were absent from school because of problematic substance use. Additionally, it was not designed specifically as a substance use survey so might have missed some useful information about protective factors which contribute to reducing risky substance use. For example, spirituality has been identified in other studies as a protective factor linked to reducing harmful substance use among youth, but was not addressed in the 2013 BC AHS.

Similarly, this report addresses building resiliency but is limited to analysis of items contained on the BC AHS. Leading resiliency expert Dr. Michael Ungar argues that health risk behaviours such as potentially harmful substance use can be addressed by the “*provision of nine sources of resilience: structure, consequences, parent-child connections, strong relationships with peers and adults, a powerful identity, a sense of control, a sense of belonging, spirituality and life purpose, fair and just treatment, and the safety and support children need to cope when problems overwhelm them.*” (Simcoe County District Education Board, 2015). Not all of these sources can be adequately captured through a survey and therefore not all were included in this study.

Additionally, as the BC AHS is a cross-sectional survey, the relations reported here are correlational and do not necessarily show causation. This means that although there is a relation between two reported variables, the direction of that relation cannot be known, and other factors may be involved which have not been assessed. For example, although there was an association between having a positive outlook about the future and a lower likelihood of potentially harmful substance use, it should not be concluded that a positive outlook in isolation causes less harmful substance use.

A limitation of this report is that it does not consider the role that cultural factors such as language, traditions, and connection to community can play in health and risk behaviours. For example, speaking an Aboriginal language and involvement in cultural activities have been linked with community connectedness and positive mental health for Indigenous youth (Tourand, Smith, Poon, Saewyc, & McCreary Centre Society, 2016). A report focused on culturally sensitive approaches to supporting Indigenous youth who may be at risk for harmful substance use will be available at [www.mcs.bc.ca](http://www.mcs.bc.ca) in 2019.



A brief summary of the key findings from this report is available at [www.mcs.bc.ca](http://www.mcs.bc.ca).



## Review of evidence-based programs

Members of the YRA conducted a search of programs that were designed to promote healthy coping skills among youth and which might reduce the risk of harmful substance use, as well as substance use prevention programs. The search was conducted using Google, academic databases including the SAMHSA Registry (<https://nrepp.samhsa.gov/AdvancedSearch.aspx>), and community sites such as the Canadian Best Practices Portal (<http://cbpp-pcpe.phac-aspc.gc.ca/interventions/search-interventions/>).

Over 60 programs were reviewed and 19 were selected for inclusion in this report. Inclusion criteria included programs which supported the development of healthy coping skills and protective factors associated with less harmful substance use, and did not necessarily focus on reducing harmful substance use. Programs from British Columbia and across Canada were sought, as well as those from countries such as the US, UK, and Australia. Not all programs which were reviewed had been rigorously evaluated. Programs which did not have evaluation data but showed potentially promising results were included if the YRA unanimously felt the programs could be used in BC.

## Terms used in the report

For the purposes of this report, psychoactive substance use includes alcohol, marijuana, and other substances such as cocaine, hallucinogens, and prescription pill misuse (tobacco is considered separately on p. 39).

The terms ‘potentially harmful substance use’ and ‘risky use’ are used throughout the report and refer to use that puts youth at increased risk of experiencing immediate or longer term associated harms. These levels of use were based on previous analysis of the BC AHS as well as other literature. For example, special topic reports on alcohol (Smith, Stewart, et al., 2015) and marijuana (Smith et al., 2016) using BC AHS data established that using alcohol on 10 or more days in the past month was associated with increased health risk and negative personal, educational, and social consequences, as was using marijuana on 20 or more days in the past month.



Image: Arnold C

<b>Potentially harmful or risky substance use refers to at least one of the following:</b>
Early alcohol use—First used alcohol at age 12 or younger.
Binge drinking last Saturday—Females who had three or more drinks of alcohol and males who had four or more drinks the Saturday before taking the survey.
Heavy sessional drinking in the past month—Had five or more drinks of alcohol within a couple of hours on at least one occasion in the past month.
Potentially harmful level of alcohol use—Used alcohol on 10 or more days in the past month, exceeding the low risk alcohol use guidelines.
Early marijuana use—First used marijuana at age 12 or younger.
Potentially harmful level of marijuana use—Used marijuana on 20 or more days in the past month.
Multiple use of substances other than alcohol or marijuana—Used substance such as cocaine, heroin, prescription pills without a doctor’s consent, etc., three or more times in their life.
Injection use—Ever injected substances.
Multiple consequences of substance use in the past year—Experienced three or more negative consequences of substance use in the past year such as passing out, having unwanted sex, doing things they could not remember.
<b>Other terms used in this report:</b>
Extreme poverty—Went to bed hungry often or always because there was not enough money for food at home.
Extreme despair—Felt so sad, discouraged, or hopeless in the past month that youth wondered if anything was worthwhile, to the point that they could not function properly.
Extreme stress—Felt so much stress, strain, or pressure in the past month that youth could not function properly.
Parental monitoring of free time—Parents/caregivers/guardians knew what youth in their care was doing in their free time.
Polysubstance use—For analysis of the BC AHS data, this refers to use of both alcohol and marijuana in the same time frame.
Positive outlook about the future—Youth saw themselves in a job, in school, having a home, having family, and/or engaged in their community in five years’ time and did not envision themselves in negative circumstances such as being in prison, homeless, or dead.
Positive peer environment—Youth were neither a victim nor perpetrator of bullying.
Prosocial peers—Youth had friends who would be upset with them if they got drunk or used marijuana.
Protective factors—Internal and external strengths and assets associated with an increased likelihood of positive health and decreased vulnerability to health risks.
Resiliency—Ability to survive and thrive in the face of adversity, including avoiding harmful substance use despite having identified risk factors for such use.
Risk factors—Characteristics associated with an increase in health risks.
Youth with a history of government care—Youth who received support from the BC Ministry of Children and Family Development or a Delegated Aboriginal Agency. It includes youth who had lived in a group home or foster placement or on a Youth Agreement (which is an alternative to government care).



# Youth psychoactive substance use

Most youth who use psychoactive substances use alcohol or marijuana and fewer use other substances (Health Canada, 2017). For example, in British Columbia (BC), 45% of youth aged 12–19 drank alcohol, 26% tried marijuana, and 17% tried other substances. Twelve percent of BC youth used both alcohol and marijuana in the month prior to taking the 2013 BC AHS and 6% of youth used both substances the previous Saturday (Smith et al., 2014).

Marijuana use among Canadian youth is higher than in any other country in the developed world (UNICEF Office of Research, 2013). Within Canada, BC and Ontario youth in Grades 7–12 are the most likely to have recently used marijuana (Young et al., 2011). A recent study (McCreary Centre Society, 2018) found that among youth aged 12–24, those in BC were twice as likely as youth in other places to feel that smoking marijuana was effective in lowering their stress (22% vs. 11%).

When risk factors for harmful substance use among youth were compared across different substances, findings suggest that the greater the number of risk factors, the higher the likelihood of youth using any substance. Also, the misuse of one substance was associated with misuse of other substances (Newcomb, 1992).

Social factors, such as perceived adult and peer use, were the strongest predictors of youth starting to use substances, and emotional distress was the strongest predictor of heavy use (Newcomb, 1992).

Risk factors for polysubstance use can differ from those for a single substance. For example, one study identified 13 different predictors of substance use, including depression, spending little time with family, and older age. However, only five of these factors were associated with polysubstance use, specifically antisocial traits, suicidal ideation, irritability, family substance use, and negative peer influence (Pumariega, Burakgazi, Unlu, Prajapati, & Dalkilic, 2014).

Although not all youth who engage in potentially harmful use report negative consequences, youth generally report more negative consequences of their substance use than do adults (Ulan, Davison, & Perron, 2013). For example, among those who used substances other than alcohol, 25% of youth aged 15–19, 21% of young adults aged 20–24, and 11% of individuals over age 25 reported substance-use related harms in areas such as physical health, relationships, home life, and education (Health Canada, 2017; Ulan, Davison & Perron (2013).

However, school age youth have lower rates of prescription pill misuse, chronic alcohol misuse and binge drinking than older age groups (Health Canada, 2017).

Gender differences seen among adult users of substances such as cannabis and ecstasy are less evident among youth. Also, female youth seek out substance use treatment at rates similar to their same age male peers, a finding not seen among adults (European Monitoring Centre for Drugs and Drug Addiction, 2005).

# Substance use as a coping mechanism

When attempting to ensure youth do not engage in harmful substance use, it is important to understand the reasons they use substances and the role that substances might play in their life. For example, while 60% of males and 69% of females who completed the 2013 BC AHS identified the reason for their most recent use as wanting to have fun, 16% of males and 25% of females used substances because they felt stressed, and 11% of males and 21% of females used because they were sad.

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*“I used to get drunk to stop feeling emotions.”*

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Some youth may be at greater risk of using substances as a way of coping with difficult emotions and other challenges. For example, youth who have been in government care are more likely to have experienced not only the trauma of entering care, but also to report higher rates of health conditions, a history of abuse, and unstable living situations—all of which are associated with risky substance use.

Data from the 2013 BC AHS also show that youth who reported using substances as a coping mechanism were more likely to use substances at an early age, to use at potentially harmful levels, to experience negative consequences, and to recognize they needed help for their substance use. It is therefore important to gain a better understanding of the challenges faced by these youth and to support them to find healthy and effective coping mechanisms.

## The role of trauma

Childhood trauma, such as experiencing sexual assault, has been shown to significantly increase the risk of a range of negative outcomes during adolescence. These include the development of alcohol and other substance use problems often in association with post-traumatic stress disorder (PTSD) and depression (Kilpatrick et al., 2003). Experiencing violence during adolescence, including in-person bullying and cyberbullying, have also been associated with harmful substance use and suicide attempts (Litwiller & Brausch, 2013; Vermeiren, Schwab-Stone, Deboutte, Leckman, & Ruchkin, 2003).

Findings from the 2013 BC AHS show that youth with a history of physical and/or sexual abuse or who were bullied (in person or online) were more likely than their peers without these experiences to report using alcohol and marijuana at potentially harmful levels, and to have used substances other than alcohol and marijuana (such as cocaine and hallucinogens) multiple times.

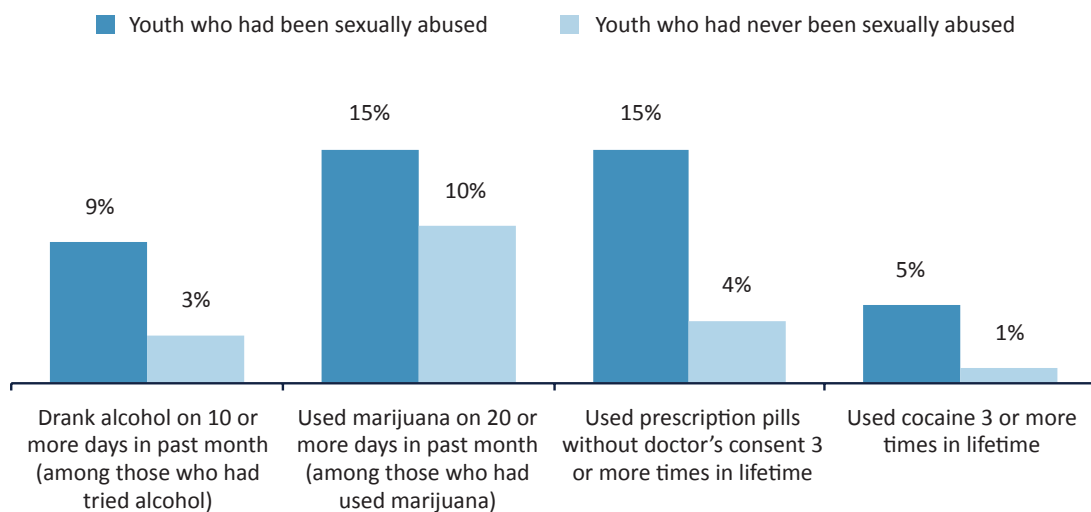
Youth with a history of abuse were also more likely to report that the reason they used substances was to help them cope.

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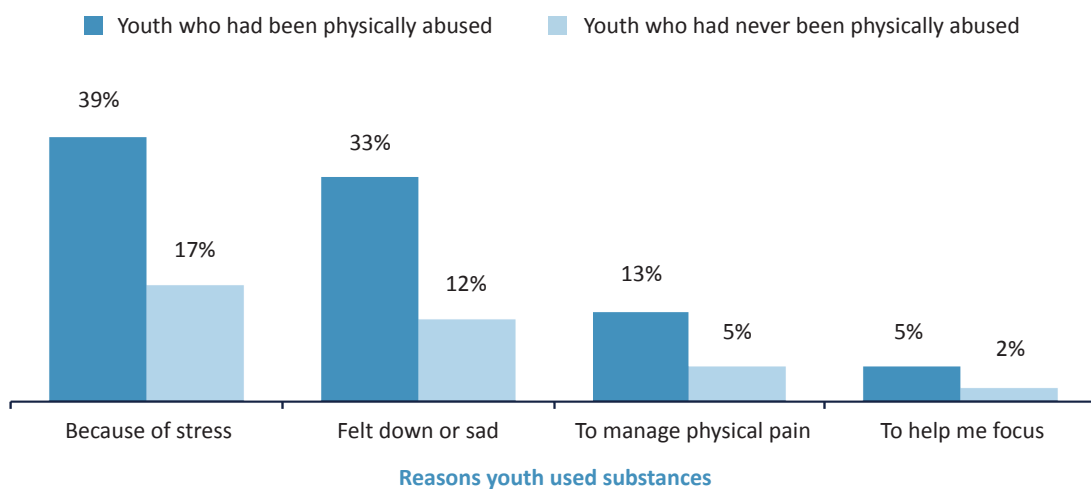
*“I used marijuana for 2 years every day—sexually assaulted at age 4, encounter with a pedophile at age 12.”*

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### Substance use and sexual abuse history



### Reasons youth used substances the last time in relation to physical abuse history (among those who had used substances)



“

*A lot of us have experienced trauma in our past so that is why we drink.*

”

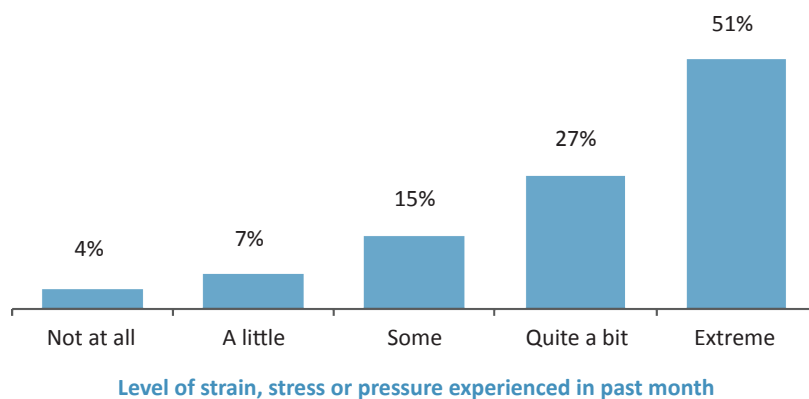


## Mental health conditions and other health challenges

There is an established link between youth experiencing mental health challenges and substance use (Feinstein, Ritcher, & Foster, 2012). Youth who reported on the 2013 BC AHS that they were experiencing high levels of stress were more likely to use substances to help them manage their stress compared to those who experienced lower stress levels. These youth were also more likely to use substances because they felt down or sad.

Youth who experienced extreme stress in the past month, to the point that they could not function properly, were more likely than those who experienced less stress to have used alcohol and marijuana at potentially harmful levels. They were also more likely to have used substances other than alcohol or marijuana, such as prescription pills without a doctor's consent (13% vs. 4%) and cocaine (4% vs. 1%), multiple times in their life. These youth were also more likely to report they needed help with their substance use (14% vs. 4%) and to experience three or more negative consequences of their use in the past year, such as passing out or doing something they could not remember (37% vs. 18%).

Used substances last time because of stress by current levels of stress (among youth who used substances)

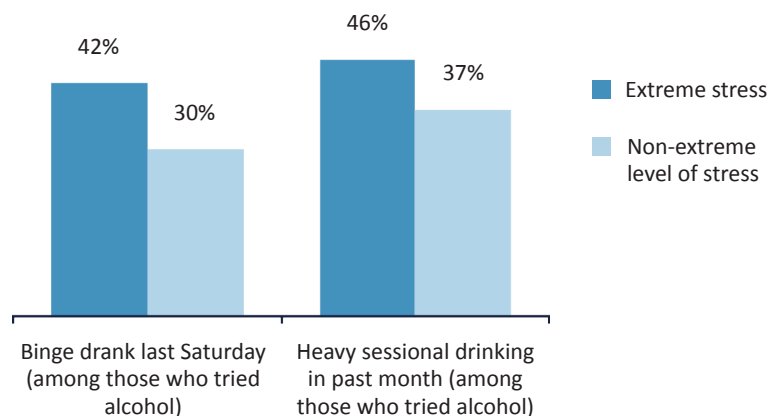


“

*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 :)...Saved my life.*

”

Substance use by level of stress in past month



Youth who reported extreme despair in the past month were also more likely than their peers to report risky substance use, including a greater likelihood of drinking alcohol on 10 or more days in the past month and of misusing prescription pills multiple times. Further, youth experiencing this level of despair were more likely than their peers to use substances to help them focus, manage physical pain, because they felt down or sad, and because of stress. They were also more likely to report negative consequences of their substance use and to report needing help for their use.

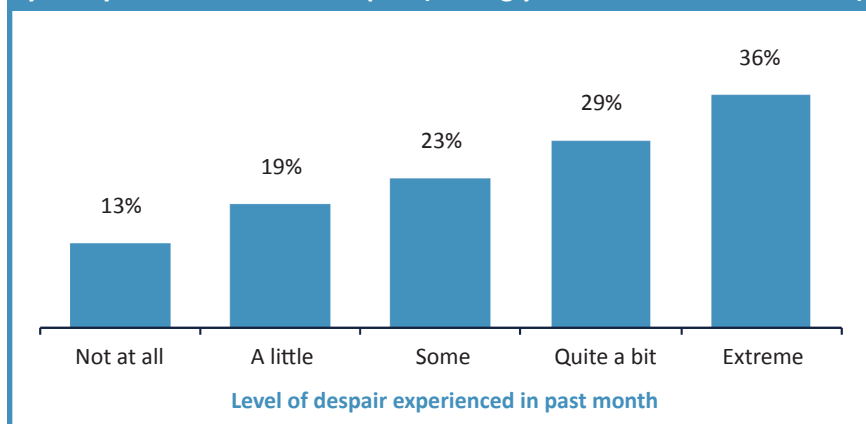
Youth who had self-harmed or attempted suicide in the past year and those who had missed out on needed mental health services were also more likely to engage in potentially harmful substance use and to report that they were using substances to manage their emotions. For example, youth who had self-harmed in the past year were more likely to have used substances to manage their stress, because they felt down or sad (38% vs. 10%), to manage physical pain (13% vs. 4%), and to help them focus (6% vs. 2%).

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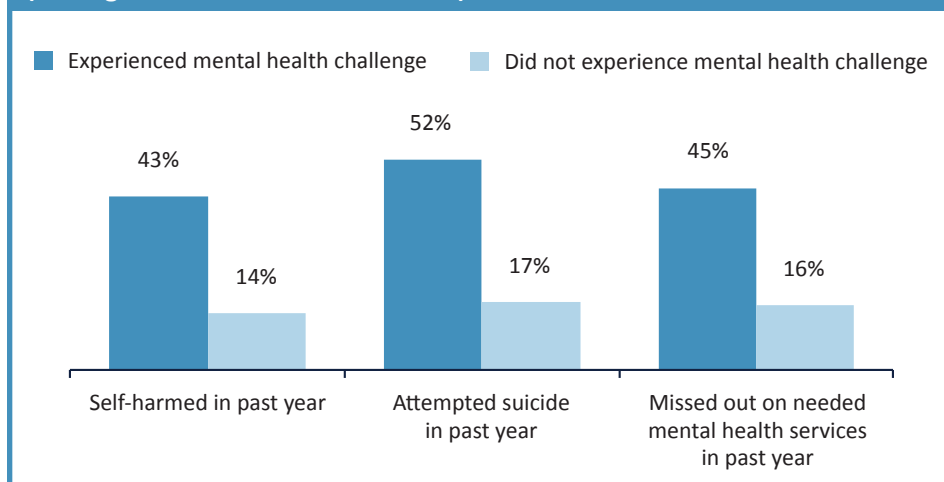
*“Ask how drugs/alcohol have affected me in a positive way. i.e., I’m not suicidal anymore because of pot.”*

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**Experienced multiple negative consequences of substance use in past year by current levels of despair (among youth who used substances)**



**Youth who used substances last time because they felt stressed (among those who used substances)**



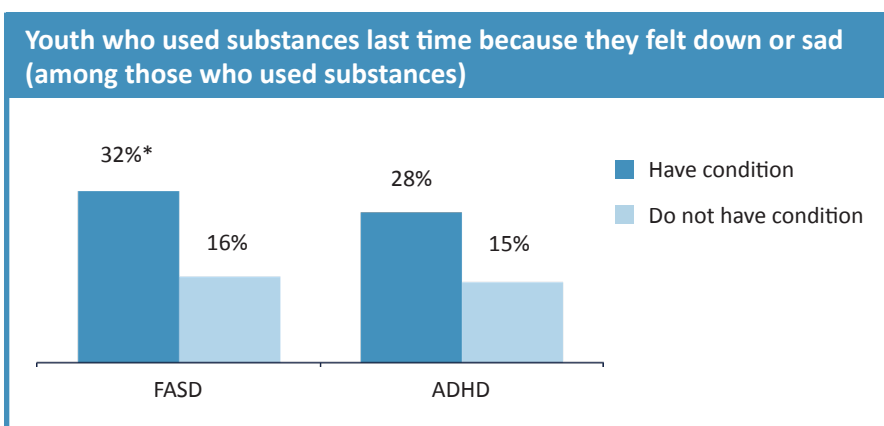
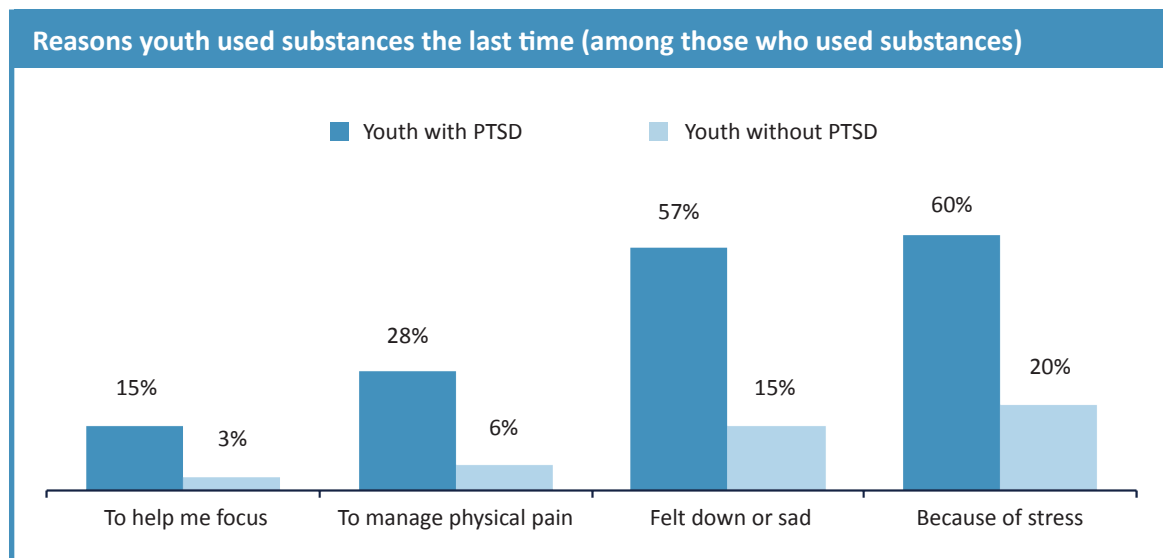
“

*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.*

”

Certain mental health conditions were associated with an increased likelihood of potentially harmful use. For example, a fifth (20%) of youth who reported they had PTSD who had tried marijuana had used it on 20 or more days in the past month, compared to 11% of their peers without PTSD. They were also four times as likely as their peers to have misused prescription pills, seven times as likely to have used cocaine, and 19 times as likely to have used heroin on multiple occasions. Youth with PTSD were also more likely to use substances to cope with their emotions, to report they needed help for their substance use, and to report multiple negative consequences of their use.

Young people with other conditions, such as ADHD or FASD, may also use substances to cope and to manage their symptoms. For example, these youth were more likely to indicate using substances the last time because they felt sad and to help them focus. In addition, youth with a physical health condition were more likely to use substances to help them manage physical pain.



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

## Extreme poverty

Adolescent substance use has been found to be more likely to occur in affluent neighbourhoods than in disadvantaged ones (Snedker et al., 2009). However, living in extreme poverty and growing up in households reliant on welfare benefits has also been associated with harmful substance use (Wu, Zerden, & Wu, 2016).

Among BC youth, those living in extreme poverty were at risk of potentially harmful substance use. For example, around a quarter (24%) of youth who went to bed hungry often or always because there was not enough money for food at home reported drinking alcohol on 10 or more days in the past month, compared to 4% of those not living in this level of poverty (among those who had tried alcohol), and 35% used marijuana on 20 or more days (vs. 11%; among those who had used marijuana). These youth were also at greater risk of using substances other than alcohol or marijuana multiple times; of using substances to cope with their emotions, to help them focus, and to manage physical pain; of experiencing direct negative consequences of their substance use; and of feeling they needed help for their use.

## Lack of positive social connections

Family relationships can sometimes have a negative effect on youth substance use, with familial substance use or substance use acceptance predicting youth's use (Ewing, Osilla, Pedersen, Hunter, Miles, & D'Amico, 2015; Newcomb, 1992; Pumariega et al., 2014). Low school connectedness has also been associated with higher rates of substance use (Bond et al., 2007).

Relationships with peers are also influential. For example, students who perceive their friends as using substances are more likely to use substances such as alcohol and marijuana (Deutsch, Chernyavskiy, Steinley, & Slutske, 2015; Branstetter, Low, & Furman, 2011). Engaging in bullying behaviours and being in an abusive dating relationship have also been found to increase substance use risk (Ferguson & Xie, 2012; Kim, Catalano, Haggerty, & Abbott, 2011; Lambe & Craig, 2017; Temple, & Freeman Jr., 2011).

Studies across several countries have shown that male and female youth likely engage in substance use to manage loneliness (Stickley, Koyanagi, Kaposov, Schwab-Stone, & Ruchkin, 2014), and this also appears to be the case in BC. Compared to youth with close friends, those who did not have close friends in their school or neighbourhood were more likely to use substances because they were feeling down or sad (24% vs. 16%) or because they were stressed (31% vs. 21%). A similar pattern was seen among youth who felt their family did not pay attention to them.



Image: Carson Lam

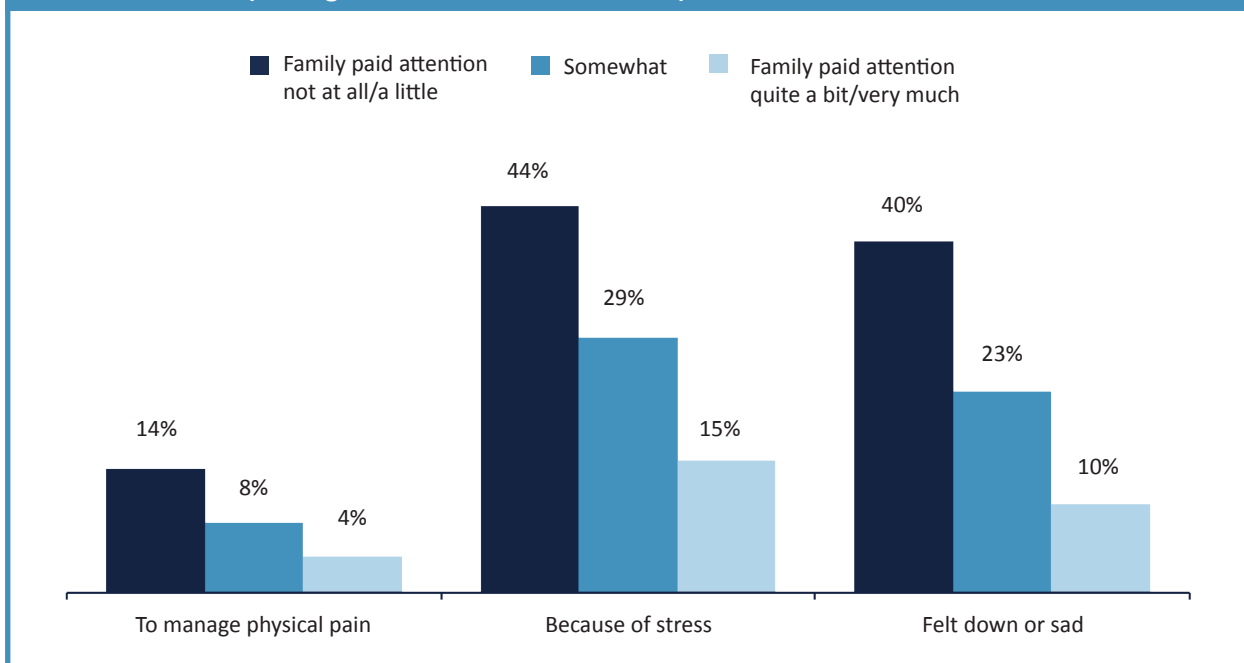
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*“When you are age 12 and 13 you’re transitioning to high school. You don’t have the same friends, and you’re going to see a jump [in alcohol use] there. It has to do with fitting in. I changed school to a huge school and all I wanted to do was fit in and I literally did anything I needed to, to fit in.”*

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See Appendix 2 for a full list of risk factors for potentially harmful substance use by age, gender and location.

### Reasons youth used substances the last time by how much they felt their family paid attention to them (among those who used substances)



## Risks of using substances as a coping mechanism

Youth in BC appear to be using substances to help them cope with trauma and other adverse life experiences. However, risky substance use is associated with a range of negative outcomes, including higher risk of suicide, injuries, poisoning, and the spread of infectious disease (Toumbourou et al., 2007). Also, a large portion of diseases and deaths in adulthood can be linked to the effects of chronic substance misuse which began in adolescence (Toumbourou et al., 2007).

Previous McCreary research with the BC AHS has shown that youth who started drinking alcohol at an earlier age or above Canadian Low Risk Guidelines report poorer health than those who waited longer to first try alcohol or those who

drank within the Guidelines (Smith, Stewart et al., 2015). For example, 16- to 18-year-olds who first drank at 12 or younger were more likely to have considered or attempted suicide and to have used substances other than alcohol, compared to those who had not used alcohol until they were at least 15 (Smith, Stewart, et al., 2015).

Similarly, frequent marijuana use was associated with greater risks of impaired driving, sleeping less than five hours a night, skipping school, low levels of community connectedness, and unhealthy eating (Smith et al., 2016).



# Role of protective factors

For this report, 20 protective factors which the literature suggests may reduce potentially harmful substance use among youth were considered (see chart below).

External factors				Internal factors
Supportive family	Connection to community	Supportive school environment	Healthy peer relationships	Individual strengths
Connected to family	Feel like part of community	Connected to school	Close friends	Good at something
	Extracurricular organized sports		Prosocial friends	Feel good about self
Supportive adult in family	Feel safe in neighbourhood			
Helpful family member	Engaged in meaningful activities	Helpful school staff	Non-abusive dating relationship	Feel as competent as others
	Engaged in volunteer activity			
Parental monitoring	Adult in community cares			Positive peer environment (free from bullying)



---

*"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."*

---

Individual, family, peer, school, and community factors all play a role in shaping young people's development and the likelihood they will engage in substance use (Danielson et al., 2010). It is therefore important to consider the role that each of these can play in supporting youth to find alternatives to risky substance use and to find healthy ways of coping with challenges in their lives.

Twenty internal and external protective factors were identified through the BC AHS which were associated with a lower likelihood of youth experiencing extreme stress and of using substances as a way to cope with their emotions (see p. 20 for full list).

These protective factors were also generally associated with reduced substance use, regardless of the type of substance. For example, when parents knew what youth were doing in their free time, or when youth had peers who would disapprove of their substance use, youth were less likely to use substances; and if they did use substances, they were less likely to need help for their use or to report negative consequences of their use.

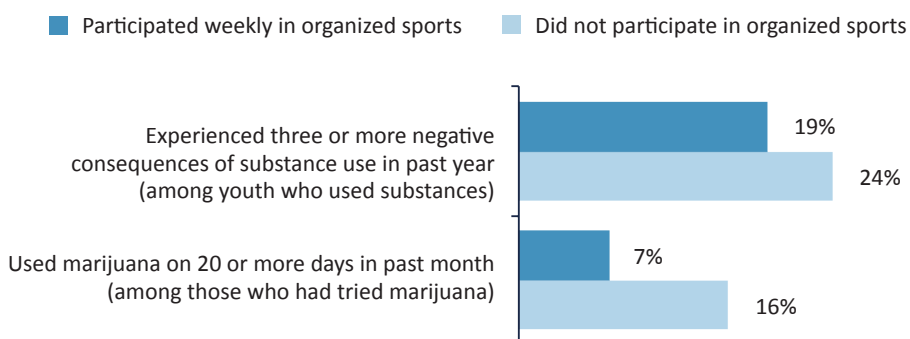
Having a supportive adult was also associated with lower rates of substance use (regardless of the substance). Further, among youth who used substances, those with a supportive adult were less likely to have experienced three or more negative consequences of their use in the past year (19% vs. 27% without this type of support) or to need help for their substance use (4% vs. 8%).

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*"I can't tell if I am addicted to alcohol or not. I want a counsellor but my parents think it's a joke."*

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#### Substance use by organized sports involvement



Positive relationships with others in the community were also related to less risky substance use. For example, youth who felt like a part of their community were less likely to report multiple negative consequences of substance use compared to youth who felt less connected (17% vs. 27%).

Youth who had used substances but were engaged in extracurricular activities they felt were meaningful were less likely to report potentially harmful substance use, such as first using marijuana before age 13 (14% vs. 23%), multiple negative consequences of their use in the past year (18% vs. 29%), and injection drug use (1% vs. 2%) compared to those who were less meaningfully engaged in their activities.

---

*“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.”*

---

**Presence of a supportive adult and rates of using substances on three or more occasions**

Substance	No supportive adult	Supportive adult
Prescription pills without doctor’s consent	9%	4%
Ecstasy/MDMA	4%	2%
Cocaine	3%	1%
Mushrooms	3%	2%
Hallucinogens	2%	1%
Ketamine, GHB	1%	<1%
Inhalants	2%	1%
Amphetamines	1%	<1%
Crystal meth	1%	<1%
Heroin	1%	<1%
Steroids without doctor’s prescription	1%	<1%



Playing organized sports (with a coach) may also be beneficial. For example, youth who engaged in weekly organized sports were less likely to have used marijuana on 20 or more days in the past month or to have experienced multiple negative consequences of their substance use in the past year. They were also half as likely to indicate needing help for their substance use (3% vs. 6% of youth who did not play weekly organized sports).

Youth with prosocial peers were also less likely to report risky substance use. For example, among youth who had drunk alcohol, those with friends who would be upset with them for getting drunk or using marijuana were less likely to report binge drinking the previous Saturday than youth whose

friends would not be upset for these reasons. Having prosocial peers was also associated with lower rates of heavy sessional drinking, of frequent alcohol and marijuana use, of experiencing multiple negative consequences from use, of needing help for substance use, and of injection drug use.

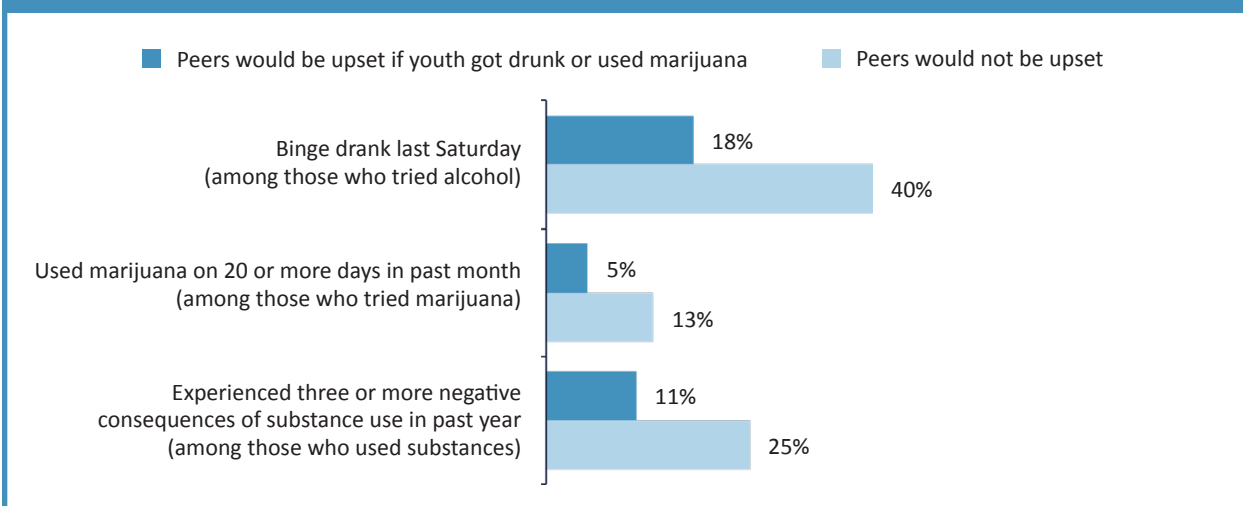
Youth with a positive outlook about their future were less likely to engage in all types of potentially harmful substance use. For example, they were less likely to use marijuana on 20 or more days in the past month (10% vs. 29% of youth with a less positive outlook; among those who had tried marijuana).

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*"I wasn't doing so well before, tried marijuana but knew it was bad and stopped. Got my life together."*

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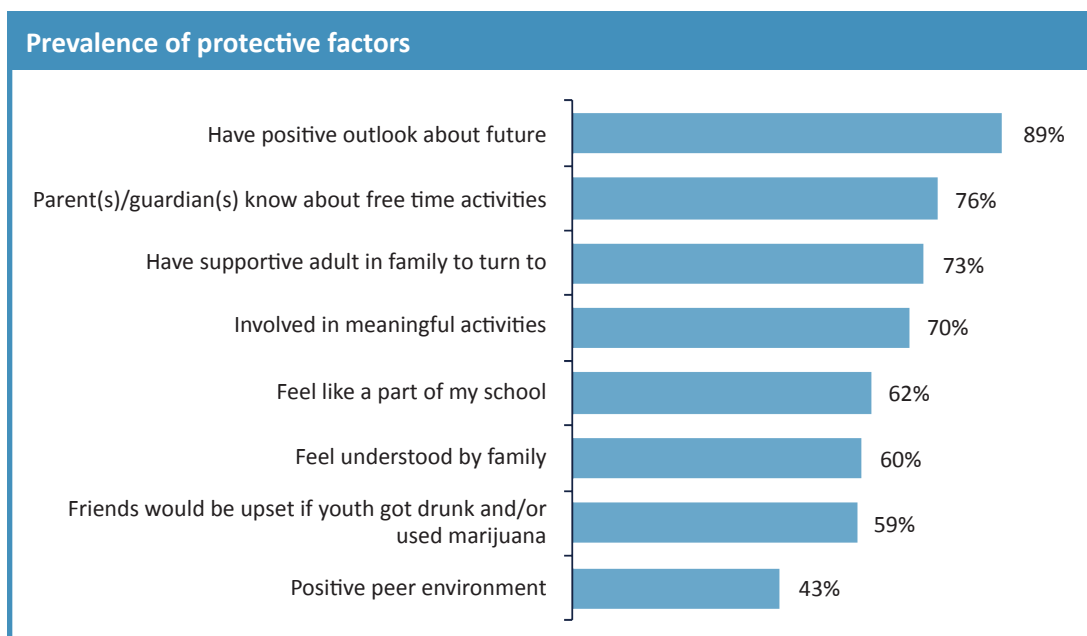
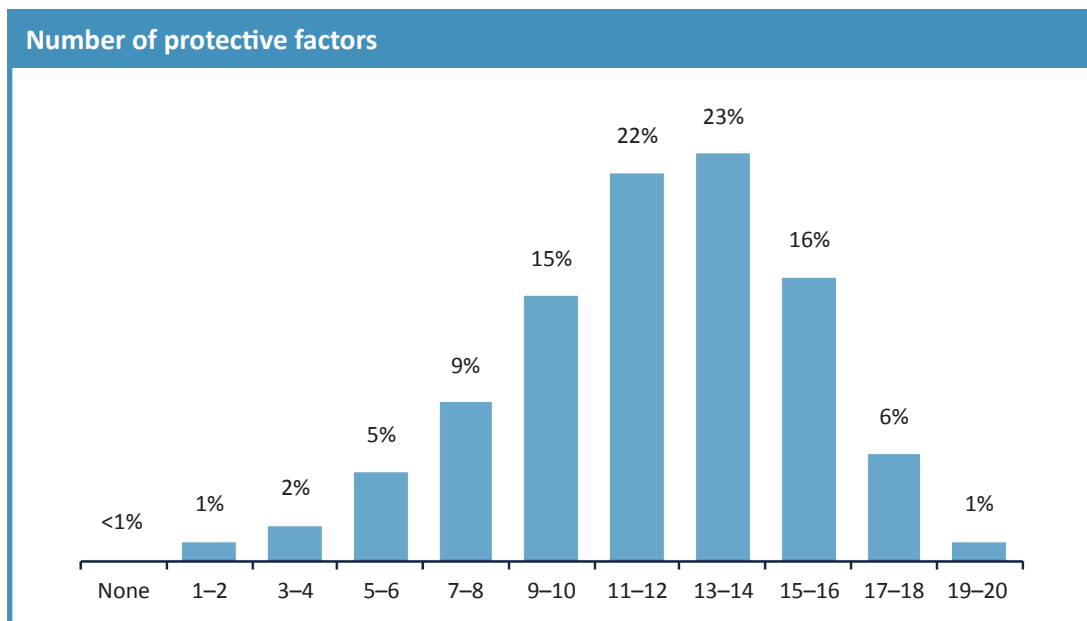
#### Substance use by whether youth have prosocial peers



# Prevalence of protective factors

The majority of youth who completed the 2013 BC AHS had at least some of these 20 protective factors to draw upon, while less than 1% indicated having none of them.

Some protective factors were more prevalent than others. For example, over 80% of youth reported a positive outlook about the future, whereas less than half identified they were in a peer environment which was free from bullying.



There were differences in the presence of these protective factors. For example, female youth were more likely than males to have prosocial peers, but were less likely to feel their family understood them and to experience a peer environment free from bullying. Youth in rural areas were more likely than those in urban areas to feel like a part of their community and feel that an adult in their community cared about them, but were less likely to have prosocial peers (see Appendix 1 for more details).

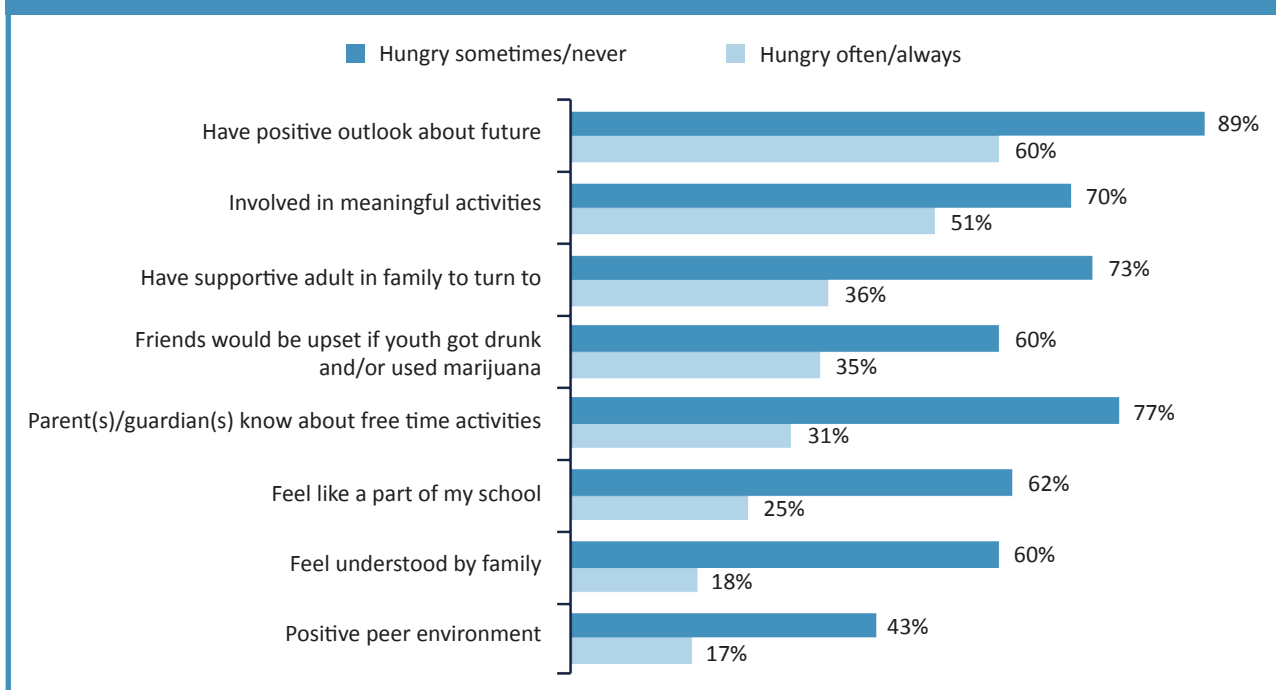
Youth at risk of potentially harmful substance use may be less likely to have protective factors in their lives. For example, youth who reported extreme levels of stress were less likely to have a supportive adult in their family they could turn to for help (42% vs. 76% who experienced less stress) or to be involved in activities they found meaningful (60% vs. 71%). They were also less likely to have a positive peer environment free from bullying (15% vs. 46% who experienced less

stress), parents who typically knew what they were doing in their free time (53% vs. 79%) and to feel quite a bit or very much understood by their family (25% vs. 64%).

Youth who had a history of government care were also less likely to have protective factors in their lives. For example, 55% of youth with care experience were meaningfully engaged in their activities (vs. 71% of those not in care) or had caregivers who knew what they were doing in their free time (vs. 77%). About half of these youth had friends who would be upset with them if they got drunk or used marijuana (49% vs. 60% of those not in care), and 48% felt like a part of their school (vs. 62%).

Similarly, youth who lived in extreme poverty were less likely to report the presence of protective factors than their peers who did not experience this level of poverty.

#### Prevalence of protective factors by going to bed hungry because there was not enough money for food at home.



## Multiple protective factors

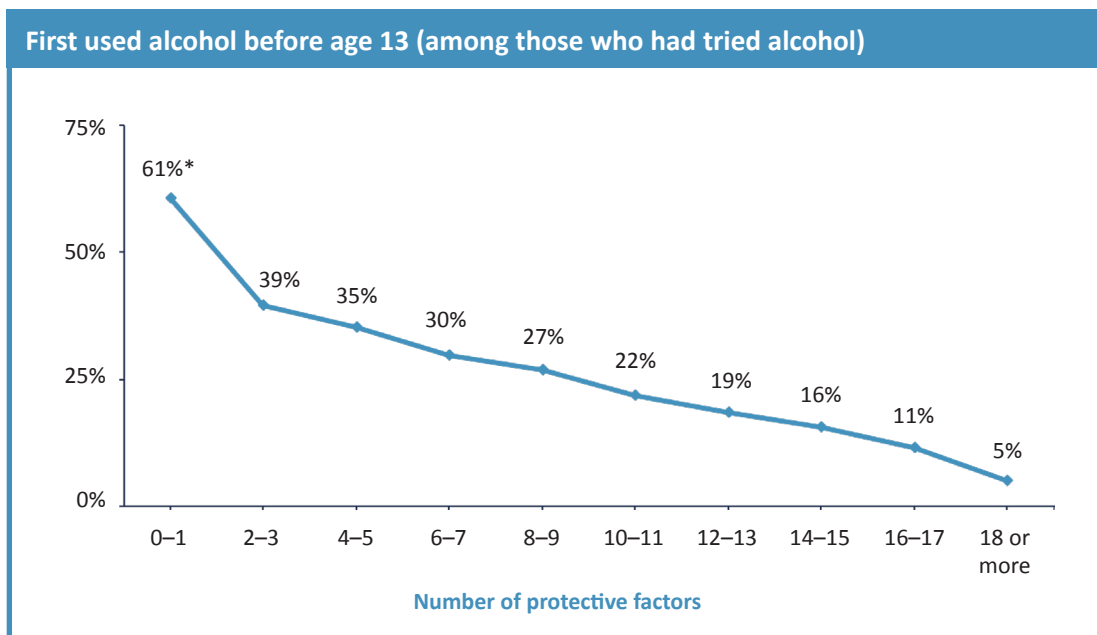
The 20 internal and external protective factors were considered together in relation to potentially harmful substance use.

In general, the more protective factors youth had, the less likely they were to engage in risky substance use. For example, youth with 6 or 7 protective factors were less likely to have experienced multiple consequences from their substance use in the past year compared to youth with fewer protective factors (31% vs. 57%\* with less than 2 protective factors), and youth with 12 or 13 protective factors were even less likely to have experienced multiple negative consequences (17%; among youth who had used substances).

The cumulative effect of protective factors was seen even among youth who generally had fewer protective factors and a greater number of risk factors, such as those who had been physically or sexually abused. For example, among youth

who had been abused and used substances, those with 7 or 8 protective factors were less likely to experience multiple negative consequences from their substance use compared to those with fewer than 5 protective factors (40% vs. 52%). Further, those with 13 or more protective factors were the least likely to experience multiple consequences from their use (22%; among youth who had been abused and used substances).

Similar associations were observed among youth who reported mental health challenges. For example, among youth who were extremely stressed, those with 9 or 10 protective factors were less likely to report needing help for their substance use in the past year compared to those with fewer than 5 protective factors (12% vs. 23%), while youth with 13 or more protective factors were the least likely to report needing help for their substance use (5%).



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

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

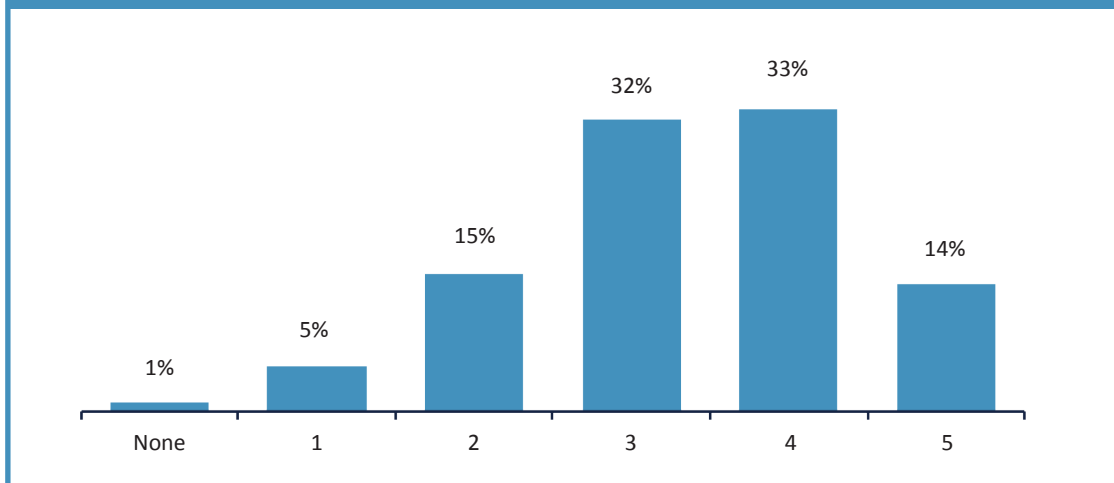
## Key family, school, community, peer and internal protective factors

In addition to the benefit of having multiple protective factors, analyses were conducted to identify which protective factor in each of the five domains (school, community, peers, family, and individual assets) was the most strongly associated with reduced harmful substance use.

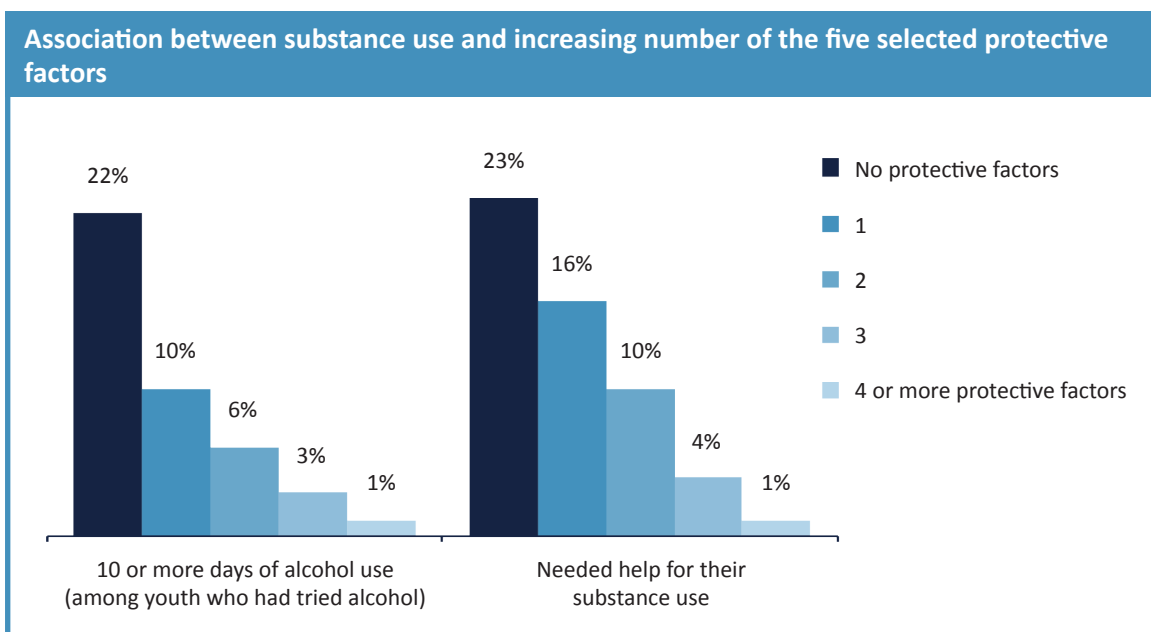
Although the other protective factors in each domain were also effective against risky substance use in isolation and in combination with other factors, the five which stood out were parental monitoring, school connectedness, feeling safe in their neighbourhood, having peers with prosocial attitudes about substance use, and having a positive outlook about the future. One percent of youth reported having none of these five protective factors, while 14% had all five (i.e., they had the strongest asset in each of the five domains).

Youth with a greater number of the five protective factors were less likely to engage in potentially harmful substance use. For example, among youth who had tried alcohol, 14% who had these five assets had engaged in binge drinking on the Saturday before completing the 2013 BC AHS, compared to 32% who had three assets, and 47% with one of these assets. Similarly, 4% of youth who had these five protective factors had experienced multiple negative consequences from their substance use in the past year, compared to 20% of youth with three assets, and 37% of those with only one asset (among youth who had used substances).

Prevalence of family, school, community, peer and internal protective factors† strongly associated with reduced risky substance use



† Protective factors—parental monitoring, school connectedness, feeling safe in neighbourhood, peers with prosocial attitudes to substance use and a positive outlook.



In comparison to their peers, youth at increased risk for substance related harms were less likely to have the strongest protective factor in each domain. However, having assets across different domains was still beneficial. For example, among youth who had been abused and used substances, those with two of the five identified protective factors were less likely than those with no protective factors to have binge drank on the Saturday before completing the survey (47% vs. 65%), and those with four or more of the protective factors were the least likely to have binge drank (21%).

Similarly, 19% of youth with a mental health condition who had four or more of these protective factors had experienced negative consequences of their substance use compared to 30% of youth with three protective factors and 45% of youth with one protective factor (among those who used substances).

# Supporting youth at risk of harmful substance use

This section focuses on youth at increased risk for substance related harms. It explores factors which can enhance resiliency, meaning an individual's ability to survive and thrive in the face of adversity, including their ability to avoid harmful substance use despite having a number of risk factors associated with problematic use (Larm, Hodgins, Tengström, & Larsson, 2010).

**Potentially harmful or risky substance use refers to engaging in at least one of the following:**

- First trying alcohol or marijuana at age 12 or younger
- Heavy sessional drinking in the past month
- Binge drinking on the Saturday before completing the survey
- 10 or more days of alcohol use in the past month
- 20 or more days of marijuana use in the past month
- Ever using a substance other than alcohol or marijuana three or more times
- Experiencing three or more negative consequences of substance use in the past year
- Injection drug use

(See p. 11 for a more detailed explanation.)

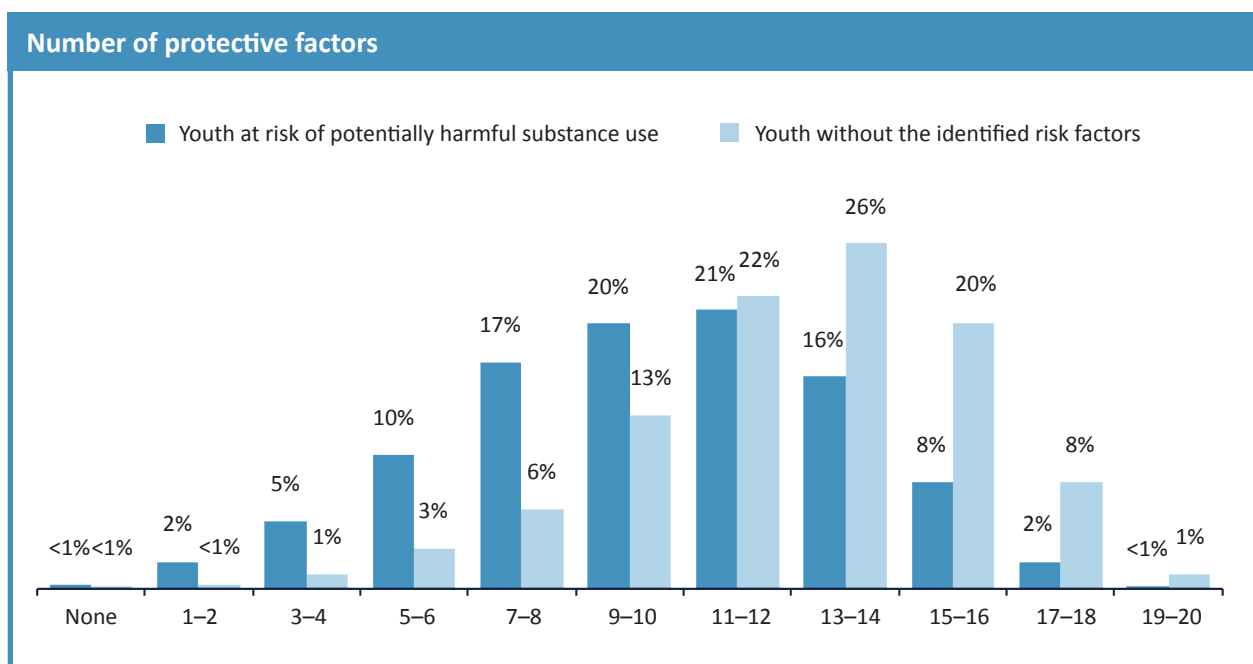
Earlier in this report we identified youth at increased risk for harmful substance use. These included youth who live in extreme poverty, have a history of government care, have been abused, have attempted suicide in the past year, have experienced extreme stress or despair in the past month, or have a mental health or other condition such as PTSD, FASD, ADHD, depression, or anxiety. In BC, 30% of youth (38% females vs. 22% males) reported at least one of these risk factors. A table showing the prevalence of each of these risk factors by gender, age and location is in Appendix 1.

The previous section showed the value of having multiple protective factors and the role that the five strongest family, school, community, peer and internal protective factors can play in reducing the likelihood of youth who use substances engaging in potentially problematic use. However, the data from the BC AHS also showed that the more risk factors youth experienced, the more likely they were to have engaged in potentially harmful substance use.

Specifically, among youth who had used substances, 65% of those with one or two risk factors reported harmful use compared to 71% with three or four factors, and 81% with five or more risk factors. However, nearly one third (31%) of youth considered at risk for potentially harmful substance use had not engaged in such use (among those who had tried substances).

Youth at risk of harmful substance use were less likely to have the strongest family, school, community, peer and internal protective factors. They also had fewer protective factors in general than youth who did not have the identified risk factors. For example, they were almost half as likely to have 13 or 14 protective factors whereas they were twice as likely to have only 1 or 2.

However, the more protective factors these youth had, the less likely they were to have engaged in risky substance use. For example, 79% of those who had 3 to 4 protective factors engaged in harmful substance use compared to 62% with 13 to 14 protective factors. It was therefore important to consider all the 20 internal and external protective factors identified on p. 20 to see which were the most effective for males and females identified as at increased risk for harmful substance use.



Note. The difference for 'None' was not statistically significant.



## Supportive family

### The four protective factors considered in this section were:

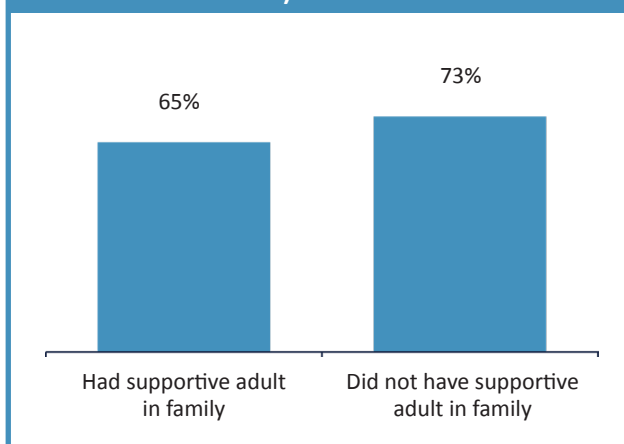
- Feeling connected to family (felt their family understood them, paid attention to them, and had fun together)
- Having a supportive adult in the family to turn to
- Having a family member who was helpful when approached for help
- Parental monitoring (parent/caregiver/guardian knew what youth was doing in free time)

Studies conducted with youth from a variety of backgrounds who were considered at-risk for challenges transitioning to adulthood have shown that connection to family or another close supportive adult can reduce substance use (Brown & Shillington, 2017; Ewing et al., 2015; Sullivan, Kung, & Farrell, 2004; Traube, James, Zhang, & Landsverk, 2012). For example, youth in the United States who were involved with the child welfare system but ultimately stayed with their family were less likely to engage in illicit substance use, regardless of the reason they had been referred to child welfare (Traube et al., 2012).

Youth who have experienced harms from substance use can also be supported to reduce their use through family engagement. For example, among youth arrested for a first-time substance use offence, family management including parental monitoring predicted lower rates of heavy alcohol consumption (Ewing et al., 2015).

2013 BC AHS findings were consistent with previous research in highlighting the importance of having a supportive family. Among youth at increased risk for problematic substance use, both males and females who felt connected to their family, had a supportive family member they could turn to, or had parents who monitored their free time were less likely to engage in risky use. Reporting that they found a family member helpful when they asked for help was also protective against risky use for females.

### Potentially harmful substance use and supportive adult relatives (among youth at increased risk who used substances)



Family protective factors can support youth who lack assets in other areas. For example, among females at increased risk for substance related harms, those who did not have friends with prosocial attitudes toward substance use but did have parents who regularly monitored their free time were less likely to engage in risky use (74% vs. 82% of those whose parents monitored them less often).

Similarly, when youth with mental health conditions were not strongly connected to school but were connected to family, they were less likely to engage in risky use (63% vs. 76% of those who were not strongly connected to school and to family).

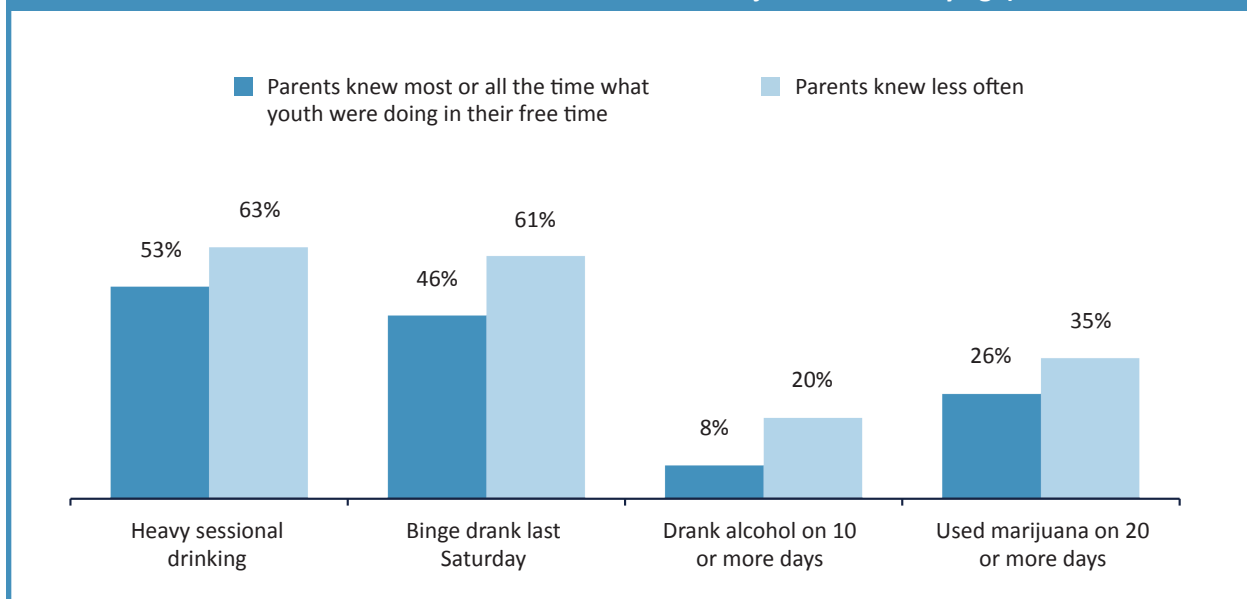
The more types of family support available to youth at increased risk of substance related harms, the less likely they were to engage in risky use. For example, 39% of youth who had more

than two of these family protective factors did not engage in risky use, compared to 29% who had one type of support.

When these supports were considered together, having parents who monitored youth's free time was the strongest family factor associated with not using at potentially harmful levels for males, and the joint strongest for females, along with having an adult in the family to turn to if they were having a serious problem.

When youth have already engaged in risky substance use, having assets may provide them with the tools to reduce future use. For example, among youth aged 16–18 who had used substances before their thirteenth birthday, those whose parents knew what they were doing in their free time were less likely to have engaged in potentially harmful alcohol or marijuana use in the past month.

**Substance use in the past month by parental monitoring (among 16- to 18-year-old youth at increased risk for harmful use who had used alcohol or marijuana at an early age)**



## Connection to community

### The six protective factors considered in this section were:

- Feeling like a part of the community
- Feeling safe in their neighbourhood
- Engaging in meaningful activities
- Volunteering in the community
- Participating in extracurricular organized sports (with a coach)
- Having an adult in the community who cares about the youth

The roles of community and neighbourhood begin to become more influential during adolescence as youth gain independence and spend more time in new and broader social environments (Snedker et al., 2009). A supportive community can be particularly important in protecting against harmful substance use for youth who have challenging family relationships and unhealthy peer relationships (Mayberry, Espelage, & Koenig, 2009). Having supportive adults in their community has also been found to reduce substance use among youth who have a history of adverse childhood experiences or are homeless (Brown & Shillington, 2017; Ferguson & Xie, 2012).

Engaging in extracurricular activities, such as organized sports, can be particularly beneficial for youth as it allows them to explore their identity and autonomy, interact with others, take on different social roles, develop social skills, and learn to manage their emotions (Bailey, 2005; Gordon & Caltabiano, 1996). Sports participation can also lead to social inclusion, social cohesion, re-engagement in school and community, and improved mental and physical health, and can reduce health risk behaviours such as substance use (Adams & Piekarz, 2015; Burton & Marshall, 2005; Griffiths & Armour, 2013; Sherry, 2010).

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*"I am in a secure environment and I don't feel the need to have to do drugs to fit in. Also, I am very busy with school and sports, I don't have the time or urge to experiment."*

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Participating in organized sports in BC has previously been associated with lower rates of using marijuana, amphetamines, inhalants, mushrooms, and hallucinogens although heavy involvement (four or more times a week) has been associated with risky alcohol use, including binge drinking (Smith, Stewart, Poon, Saewyc, & the McCreary Centre Society, 2011).

Results from the 2013 BC AHS showed that for youth at risk of potentially harmful substance use, participation in informal sports (such as biking or hiking) or extreme sports (such as back-country skiing) did not appear to impact their substance use. However, organized sports (such as playing on a soccer team) was protective for females regardless of how frequently they played (66% who participated in organized sports engaged in potentially harmful substance use vs. 70% who did not participate). Organized sports was protective against risky use for males only if it was the only type of extracurricular activity they participated in and they played at least four times a week (61% who participated in organized sports in this way used substances at potentially harmful levels vs. 71% who did not participate in this way).

Participating in volunteer activities on a weekly basis was protective only for females. However, males and females at risk for harmful substance use who felt their extracurricular activities were meaningful were less likely to engage in potentially harmful substance use compared to those who did not find their activities meaningful (66% vs. 73%).

Feeling safe in their neighbourhood was also protective against risky use for both males and females. However, whilst feeling like a part of their community and having a neighbourhood adult who cared about them were protective factors among the general population of BC youth, these did not appear to be protective among youth at risk for harmful substance use.

Despite the reduced effectiveness of some community assets among youth at risk for substance related harms, the more protective factors available to these youth, the less likely they were to engage in risky use. For example, 64% of females with three protective factors engaged in potentially harmful substance use compared to 73% with one protective factor.

When all the factors in the community domain were considered together, feeling safe in their neighbourhood was the strongest community protective factor for males, while being meaningfully engaged in activities and feeling safe in their neighbourhood were the strongest for females.



Image: aoiaio

## Supportive school environment

**The two protective factors considered in this section were:**

- Feeling connected to school (i.e., feeling like a part of the school, feeling like teachers care, feeling happy to be at school, feeling safe there, and feeling cared about and treated fairly by school staff)
- Having a school staff who was helpful when approached for help in the past year

Feeling connected to school and having supportive teachers have been shown to reduce harmful levels of substance use, particularly among males (Crosnoe, Erickson, & Dornbusch, 2002; Suldo, Mihalas, Powell, & French, 2008). Having adults at school who are caring and supportive has also been found to reduce polysubstance use among males (Shekhtmeyster, Sharkey, & You, 2011).

In BC, when youth at increased risk for substance related harms felt connected to school, they were less likely to report risky use. This was also the case if they had an adult at school whom they found helpful when they turned to them for support.

Youth who both felt connected to school and received helpful support from school staff were less likely to have engaged in risky substance use than those who reported only one of these protective factors (57% vs. 67%). When both these school factors were considered together, school connectedness was the more robust protective factor, particularly for males.

Being connected to school was also protective against recent potentially harmful use, among youth who had previously engaged in risky use. For example, when 16–18-year-olds who had first used alcohol or marijuana before their thirteenth birthday felt their teachers cared about them, they were less likely to engage in heavy sessional drinking (56% vs. 66%) or binge drinking (51% vs. 66%) in the past month, or to use alcohol on 10 or more days (12% vs. 25%) or marijuana on 20 or more days (29% vs. 42%\*) in the past month, compared to those who did not feel teachers cared.

## Healthy peer relationships

**The four protective factors considered in this section were:**

- Having close friends at school or in the community
- Having friends with prosocial attitudes toward substance use (i.e., friends who would be upset if the youth used marijuana or got drunk)
- Being in a non-abusive dating relationship (among those who were dating)
- Having a positive peer environment (free from bullying)

Studies have shown that youth, including those at risk for harmful substance use, who have close friends who would disapprove of substance use and who have positive aspirations for the future are less likely to use substances regularly than youth whose friends do not hold these attitudes (Mason, Mennis, Linker, Bares, & Zaharakis, 2014; van Dommelen-Gonzalez, Deardorff, Herd, & Minnis, 2015).

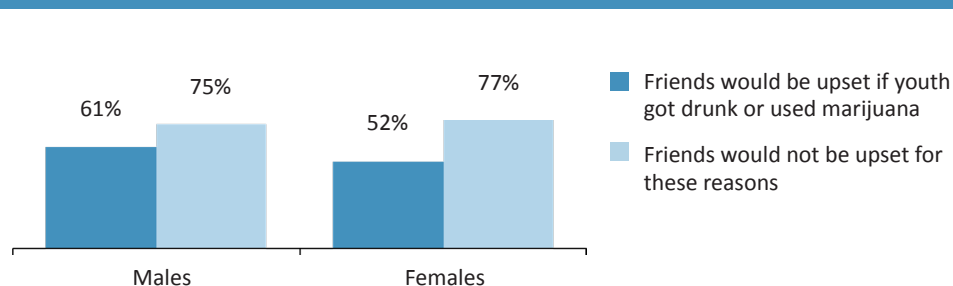
For youth such as those with a history of government care, being in a dating relationship that is non-violent and experiencing a positive peer environment which does not include being a victim or perpetrator of bullying have also been linked to reduced substance use (Smith, Peled, Poon, Stewart, Saewyc, & McCreary Centre Society, 2015).

Consistent with previous research, findings from the 2013 BC AHS indicated that youth at increased risk of substance related harms who were in a non-abusive dating relationship or who had friends who disapproved of substance use were less likely to engage in risky use.

Additionally, if females experienced both being in a non-abusive dating relationship and having prosocial peers, they were less likely to have used substances at potentially harmful levels than those who experienced only one of these protective factors (53% vs. 70%).

For males, having at least one close friend and a positive peer environment where they were not involved in bullying were also assets. Also, the more different types of healthy peer relationships they had, the lower the likelihood of using at potentially harmful levels. For example, 61% of males who had three or four of the peer protective factors engaged in risky use, compared to 74% of those with one or two peer protective factors.

**Potentially harmful substance use and having prosocial peers (among youth at increased risk of substance related harms who used substances)**



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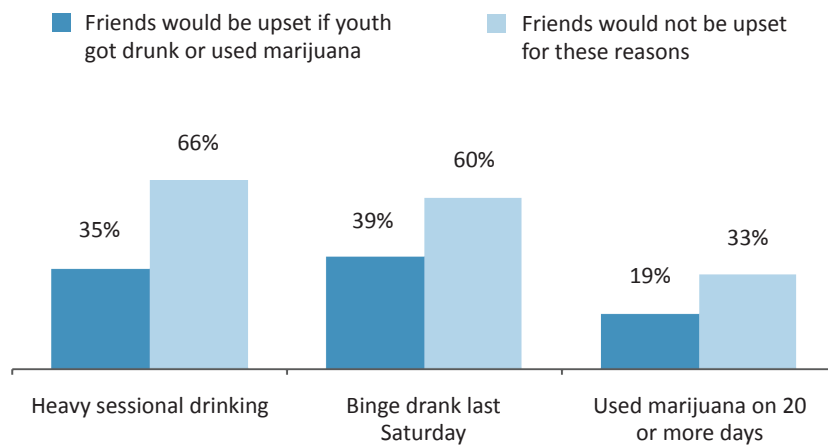
*“After experimenting with booze and once I took a closer look at my friends I realized I was in with the wrong crowd. Now I am a loner at school, my only true friend is my girlfriend. I have been 10 months sober, I never plan to touch any substance again.”*

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Some particularly important protective factors were found among youth dealing with specific risk factors and who lacked other key assets. For example, among youth who were experiencing extreme levels of stress, if they did not have a supportive adult in their family but did have prosocial peers, the likelihood they would engage in potentially harmful substance use was reduced.

Recent risky substance use was also reduced when those who had first used substances at an early age had peers in their lives who had prosocial attitudes towards substance use.

**Potentially harmful substance use in the past month by prosocial peers (among 16- to 18-year-old youth at increased risk of substance related harms who had used substances at an early age)**





## Individual strengths

**The four protective factors considered in this section were:**

- Feeling good about self
- Feeling as competent as peers
- Feeling good at something (having a skill)
- Having a positive outlook about the future

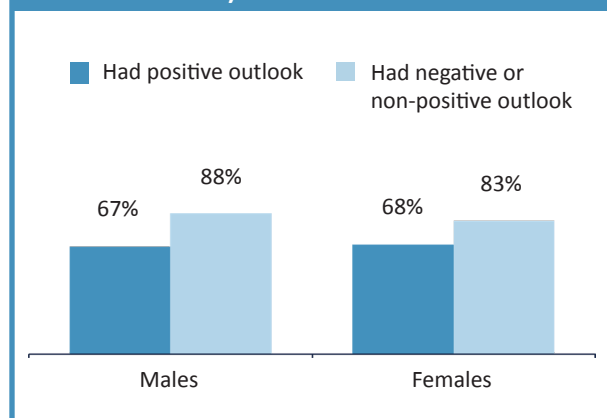
A systematic review covering 40 years of studies found that children who grew up in adverse circumstances but reported external protective factors in combination with internal characteristics were the most resilient to adverse outcomes later in life (Zolkoski, & Bullock, 2012). Such internal characteristics include sociability, adaptability, independence, optimism, intelligence, and self-regulation (Weiland et al, 2012; Zolkoski, & Bullock, 2012).

Also, attributes such as healthy self-esteem have been found to reduce the risk of high-school students engaging in substance use, particularly females (Lee, Seo, Torabi, Lohrmann, & Song, 2018; Shrier, Harris, Sternberg, & Beardslee, 2001). In addition, hopefulness or having positive plans for the future has been linked to reduced marijuana and other substance use (Barnett et al., 2013).

Youth at increased risk for substance related harms reporting that they were good at something was not linked to reduced risky substance use. However, all three of the other personal assets (feeling good about self, feeling as competent as their peers, and having a positive outlook) were protective against potentially harmful substance use among females, and having a positive outlook was protective among males.

When all individual assets were considered together, having a positive outlook about the future emerged as the strongest factor. Nevertheless, among females, having all three assets was more strongly protective against potentially harmful use than having only one.

**Potentially harmful substance use and positive outlook about the future (among youth at increased risk of substance related harms who used substances)**



## Having protective factors across domains

Having considered the role of family, school, community, peer and individual protective factors for youth at increased risk of substance related harms, this section looks across the domains to consider which of all the identified protective factors were the most strongly linked to a reduced likelihood of potentially harmful substance use.

Among males, being connected to school was the factor most strongly protective against potentially harmful use, but being in a non-abusive dating relationship (among those who were dating) and a positive outlook about the future were also particularly important.

For females, having a positive outlook about the future and having friends with prosocial attitudes towards substance use were most strongly associated with reducing the likelihood of risky substance use. Another factor that was strongly related to not using at potentially harmful levels was having school staff they found helpful when they asked for help.

In comparison to use of a single substance, polysubstance use during adolescence has been associated with increased risk for negative health outcomes into adulthood (Yarnell, Traube & Schrager, 2016). Among youth at risk for harmful substance use who completed the 2013 BC AHS, polysubstance use was lower among males and females if their parents monitored their free time, if they were involved in a non-violent dating relationship (among those who were dating), and if they had peers who would disapprove of their substance use. In addition, the risk of polysubstance use was reduced among males if they had a positive outlook about the future and felt connected to school.



Image: Leoboudv



# Value of protective factors beyond reducing harmful substance use

Having considered the health of youth at risk of potentially harmful substance use and the assets and supports which were most likely to be associated with these youth not engaging in risky use, it is important to consider if the protective factors which were most strongly linked with reduced harmful substance use also reduce other health risk behaviours and promote positive health for these youth.

## Tobacco

Tobacco is another psychoactive substance that can have serious health implications. Some factors associated with not using alcohol, marijuana, and other drugs (such as cocaine and heroin) at potentially harmful levels were also associated with not using tobacco frequently.

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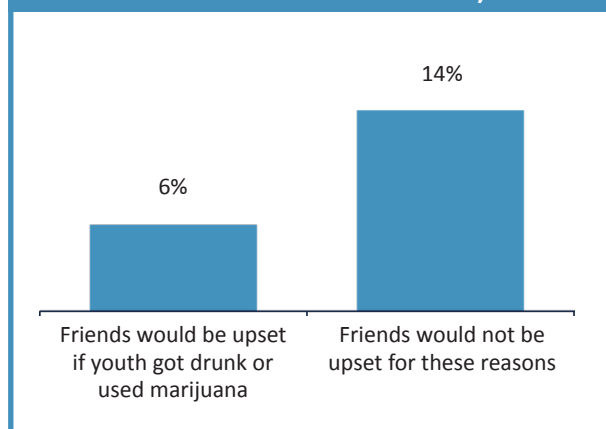
*"I was caught smoking and out at 4am. I got a lot of heck for it. After talking to my principal and my coach I found that sports made a better me. Had it not been for my soccer coach and my principal I would be dead or would be even deeper depressed or suicidal."*

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Among males at increased risk for harmful substance use, being connected to school, having a positive outlook about the future, having parents who monitored their free time, being in a non-abusive dating relationship (among those who dated), and having prosocial peers were protective against frequent tobacco use. For example, 17% who had a positive outlook about the future used tobacco on 20 or more days in the past month, compared to 36% who had a less positive view of the future.

Females who had friends who would disapprove of them getting drunk or using marijuana, and those who had a positive outlook about the future were less likely to have used tobacco on 20 or more days in the past month.

Used tobacco on 20 or more days in the past month (among females at risk of harmful substance use who had used tobacco)



## Sexual health

Using alcohol or other substances before having sex and having multiple sexual partners are both health risk behaviours. All the protective factors that were associated with reducing risky substance use were also associated with reducing the likelihood of having multiple sexual partners in the past year and for using substances before having sex the last time.

## Gambling

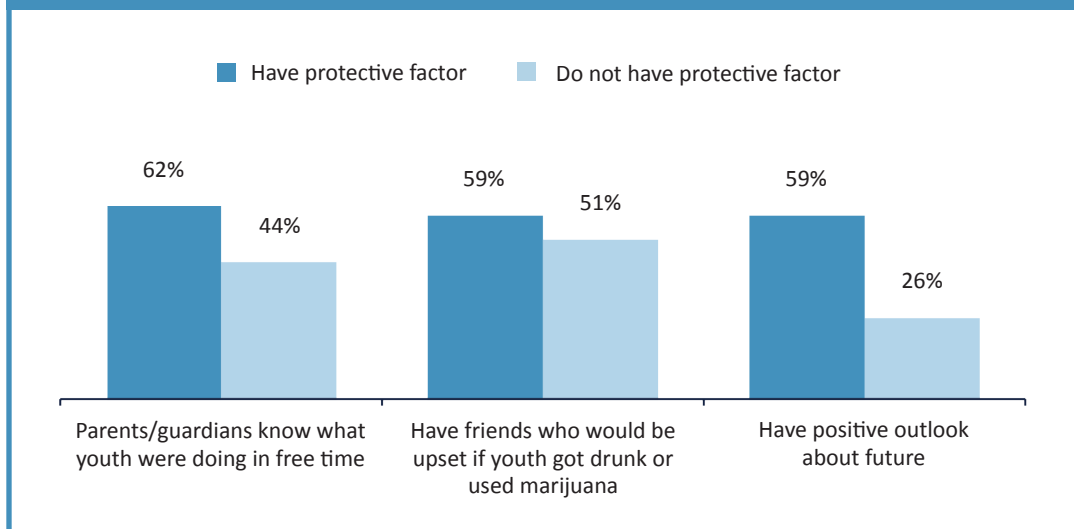
Among youth who had gambled in the past year, males and females at risk for harmful substance use who had a positive outlook about their future were less likely to gamble on a weekly basis. Additionally, feeling connected to school, being in a non-violent dating relationship (among those who dated), and having parents who monitored their spare time activities were associated with less frequent gambling among males.

## Positive health effects

In addition to reducing the likelihood of health risk behaviours, many of the protective factors which most strongly buffered against risky substance use increased the likelihood of positive outcomes among youth at risk for substance related harms. For example, as might be expected, being connected to school, having helpful school staff, and having a positive outlook about the future were related to having plans to finish high school and to having post-secondary aspirations. All the other factors that were associated with not engaging in potentially harmful substance use were also related to youth's educational aspirations.

Nearly all the factors that were associated with a lower likelihood of risky substance use were also associated with youth reporting positive mental health.

Good or excellent mental health (among youth at risk for harmful substance use)



# Review of evidence-based programs which reduce risky substance use

(prepared by McCreary Centre Society's Youth Research Academy)



Having established risk factors for potentially harmful substance use and the role that internal and external assets can play in reducing the likelihood of youth engaging in risky use, this section considers interventions that build protective factors in those areas.

Interventions that focus strictly on the development of individual assets (e.g., self-confidence) may not be effective in reducing risky behaviours among youth. However, approaches that integrate elements of this focus into programming that also fosters external assets (e.g., in the domains of family, school, community, and peers) may increase the effectiveness of those interventions (Melendez-Torres et al., 2016).

This section describes programs that appear to have been effective in developing strengths and reducing potentially harmful substance use among youth, or which members of the Youth Research Academy felt offered evidence that they could be effective in BC.

## Programs to increase family support

Programs that strengthen young people's healthy connections with their families and that improve communication between youth and their caregivers have been shown to be effective in reducing risky substance use (Ryan et al., 2011). Common components across these programs include teaching parenting techniques appropriate to youth's developmental stage, practicing good communication skills, and offering youth and parents

hands-on opportunities to learn individually and as a family. These strategies appear most effective for female youth, younger adolescents, and for those whose parents are highly involved in the program (Spoth, Redmond, & Shin, 2001; Toubourou, Gregg, Shortt, Hutchinson, & Slaviero, 2013).

The School Age Children and Youth (SACY) Substance Use Prevention Initiative is a program operating in the Vancouver School District which takes a comprehensive strengths-based approach to substance use (Buote, 2013). The program includes a parent engagement stream which provides parents with tools to engage with and support their youth. Activities have included workshops, capacity cafés, and individual support for parents. An evaluation found that the program was particularly successful in schools when this parent engagement stream was engaged, and when there was strong collaboration between the parent stream and youth stream.

The Iowa Strengthening Families Program was a family skills training program for Grade 6 students and their parents (Spoth et al., 2001). The program consisted of seven two-hour sessions each week. In the first hour of the session, youth and their families attended separate skills training workshops. Parent training sessions included skill building in the areas of developmental norms, disciplinary practices, child emotional regulation, and communication. Youth training sessions included similar age-appropriate modules as well as peer-relationship skills training. In the second hour of the session, youth and their families practiced the skills they had learned together and took part in activities designed to improve family

connection. An evaluation conducted with youth participants showed reductions in substance use at four-year follow up, including frequency of use as well as delayed onset of use among youth who took part in the sessions (Spath et al., 2001).

Two similar Canadian programs were Strengthening Families for the Future (SFF) and Strengthening Families for Parents and Youth (SFPY; Canadian Centre on Substance Abuse, 2012). These programs aimed to enhance family communication and to provide a non-punitive supportive setting for positive youth development.

SFF consisted of 14 weekly sessions for parents and youth aged 7–11, while SFPY consisted of nine weekly sessions for parents and youth aged 12–16. Sessions began with a family meal and were followed by separate facilitated sessions for parents and youth and a combined family session to practice the skills that were learned. Most of the sessions focused on communication

and healthy relationship building rather than addressing issues directly related to substance use. An evaluation of SFPY found improvements in youth's interpersonal skills and reductions in risky substance use, while parents in the program also showed improved parenting skills, including increased supervision and involvement with their children (Buhler, 2011).

These types of family programs have also been adapted for different cultures and to accommodate different needs. For example, Familias Unidas is a program for Hispanic youth and their families in Miami which aims to reduce health risk behaviours among youth through eight parent group sessions and four family sessions (Estrada et al., 2017). The sessions include learning and discussion modules in combination with role-play scenarios and have been shown to be effective in reducing a number of risky behaviours including substance use and sexual behaviours (Pantin et al., 2009).



An online 'E-health Familias Unidas' version is offered to families who cannot commit to in-person sessions and includes simulated parent group sessions, a telenovela series, interactive exercises, and online facilitated family sessions. Preliminary evaluation results showed reductions in past 90-day alcohol and marijuana use as well as improved parental monitoring among the E-health participants (Estrada et al., 2017).

Another U.S. program developed for Hispanic youth is Brief Strategic Family Therapy (BSFT), a 12-session family-based treatment approach for youth considered at risk of unhealthy behaviours. The approach included working with the whole family in a community setting. Each member of the family was engaged in therapy individually as well as collectively to learn new, healthier ways of

interacting with one another. An evaluation of the approach showed reductions in youth's substance abuse, behavioural issues, anti-social peer connections, and improvements in family functioning (Szapocznik, Schwartz, Muir, & Brown, 2012).

Finally, a school-based family intervention was conducted with Grade 7 students in Australia. Students completed a teacher-led curriculum while parents received education curriculum, attended a parent education evening, and reviewed school policies to practice parent engagement (Toumbourou et al., 2013). Reductions in substance use were seen among students whose parents were regularly engaged in the program, with the most significant results seen among females (Toumbourou et al., 2013).



### Youth Research Academy reflections

Offering families the opportunity to develop skills separately and in age-appropriate ways can give both youth and their caregivers the chance to learn skills in a safe and open environment before coming together to practice. Providing separate sessions for parents and youth can also help participants feel more comfortable to voice their thoughts and concerns honestly.

Family programs that focus on developing skills and improving family interactions in early adolescence makes sense. These youth may have only just started experimenting with substances, and these types of programs can help young teenagers learn skills for making decisions about substance use later in adolescence. Early adolescence is also a time when youth might be more open to building relationships with their parents, rather than in later adolescence when young people are more focused on developing independence.

Programs that include youth sharing a meal with their family can help to bring families together and can motivate youth to attend.

Having a trained facilitator to support families to learn to communicate together effectively can help to address any frustrations or misunderstandings along the way.

Incorporating multi-media programming relevant to the specific culture of participants can be an effective way to engage youth and meet them where they are at. Culturally-based programs that consider participants' interests and communication styles can help to open up conversation that might otherwise be difficult for families to have.

While offering a program online can increase accessibility for many families, the in-person format may still be a good option for families that don't have computers at home or for parents who aren't tech savvy.

Offering family programs in youth's own school would help to reduce barriers to attending for some families. However, the effectiveness of any family program relies on parent participation, and like all the family approaches, would likely be more effective for youth whose parents are actively involved in their lives. It may be less effective for youth whose parents are less engaged in their lives, such as youth in government care.



## Programs to promote a supportive school environment

School-based programs should focus on “nurturing student resilience in a world in which drugs are readily available and often promoted” (Reist & Asgari, 2018). Building capacity and competencies in this context enhances general well-being and positive youth development. It also provides youth with the means to engage in safer substance use.

iMinds is a program developed for use in BC schools which is designed to be implemented throughout the school curriculum (University of Victoria, n.d.). The program encourages students to be active learners; to think critically; and to develop an awareness of themselves, their relationships, and their environment. It encourages students to learn using a 5-i model: identifying, investigating, interpreting, imagining, and integrating. For example, they identify and reflect on their current knowledge of substances and substance use issues so that they can share their ideas with others.

The iMinds program also encourages students to consider the diversity of beliefs, attitudes, and behaviours related to substance use. Tools are available for teachers to facilitate students’ exploration of ideas and issues related to mental health and substance use, and to support them to build skills to manage their own health and wellness.

Positive Action is a school-based program in the U.S. that aims to increase students’ positive feelings, thoughts, and actions. The program has been adapted for students in Kindergarten through Grade 12 and engages students, teachers, counsellors, and families. The program focuses on self-concept, self care, and learning skills to get along with others (Lewis et al., 2012).

A review of the program undertaken with middle school students in Chicago found reductions in substance use among students who participated in the program. Findings also suggested that students who attend schools with Positive Action programs but who have not attended the program themselves are also positively influenced (Lewis et al., 2012).

The Healthy Schools Ethos program was implemented in schools across the U.S., UK, and Australia. The program aimed to create upstream prevention of substance use by improving students’ relationships with teachers and other students, feelings of security, social support, self-regard, and engagement. Results of a study of the program implemented with Grade 7 students in the UK showed benefits of participation including youth feeling empowered to change their school culture, improved relationships between students and teachers, students feeling safer at school, and improved student self-regard. There also appeared to be a trend suggesting decreased substance use in schools offering the program, although the findings were not statistically significant (Bonell et al., 2010).

Power To Be is a BC-based wilderness school for youth in Grades 8–10 for whom the mainstream school system is not a good fit. The goal of the program is to engage youth in the school curriculum and to build interpersonal and life skills through weekend trips and multi-day excursions that involve activities such as hiking, camping, surfing, and kayaking (Power To Be, 2018). No formal evaluation data has been collected but an evaluation of a similar wilderness adventure therapy program in Australia showed improvements in measures of behavioural and emotional functioning (Bowden, Neill, & Crisp, 2016).

A Nordic approach to harmful substance use prevention is to integrate learning about substance use across the curriculum and to embed a culture of dialogue within the school community. Students learn about topics such as substance use by forming a hypothesis, investigating that hypothesis, and creating “cognitive maps” of the factors affecting the issue they are investigating (Lilja, Giota, & Hamilton, 2007). This style of learning encourages students to work together and to get positive feedback from their teachers and peers. It can also be adapted to include input from local community members, health organizations, and police (Lilja et al., 2007).

Creating a positive, inclusive, and supportive school climate may be a particularly effective approach for youth at risk for substance related harms. For example, an evaluation of school-based interventions to improve outcomes for LGBTQ youth in Canada and the U.S. suggests that when LGBTQ youth feel safe and supported at school, they are less likely to experience health challenges such as suicidal thoughts and attempts, and harmful substance use. Heterosexual and non-heterosexual students who attended schools with Gay Straight Alliances (GSAs) and/or which had LGBTQ-inclusive policies reported better mental health outcomes and lower rates of substance use. They were also less likely to experience homophobic discrimination and bullying (Saewyc, Poon, Kovaleva, Tourand, & Smith, 2016).



### Youth Research Academy reflections

School based programs that teach youth how to think positively about themselves and others and that teach general life skills can help youth in all areas of their lives, and should be implemented from a young age. They are also useful for all youth, not just those who may be at risk of harmful substance use.

Building strong communication skills can help youth make healthy decisions when navigating peer relationships.

Offering programs as part of the school curriculum ensures that all youth in school can participate.

Programs that address behaviours that contribute to an unhealthy school environment (such as bullying and homophobia) can help make schools safer for all students.

While a school setting might improve the accessibility of programs, having an outside facilitator (such as a nurse or counsellor) rather than a teacher facilitating a program may help to create a safe and open environment in which students can discuss the issues in their lives.

The Nordic and iMinds approach of integrating learning about substance use into the general school curriculum might help to normalize conversations around substance use, making it more comfortable for youth to have discussions and ask questions. Taking into account local issues can also make the discussions and learning more relevant to youth.

It's important to offer young people a range of programs rather than a one-size-fits-all approach. This also applies to school and highlights the need for there to be a diversity of school environments available. For example, a program like Power To Be can expose youth to positive environments and activities they might not otherwise experience.

## Programs to enhance community connections

Community programs are one of the most effective interventions to reduce the likelihood of harms from substance use for youth; and they are most effective for youth who are using experimentally, for the first time, or not at all (Wong & Manning, 2017).

Aboriginal Next Steps is an example of a community program developed by McCreary Centre Society to engage Indigenous young people in youth-led projects to enhance protective factors. Indigenous youth aged 13–19 participated in the two-year project in ten communities across BC. There were three main phases to the program: In phase one, youth learned about youth health in their community and created a Claymation film to highlight the issues most important to them; in phase two, youth developed a project idea to address the issues they identified and completed a grant application to receive funding for the project; and in phase 3, youth completed the project over the course of a year and developed action plans for sustainability (Simon, 2010).

Youth who participated in the program reported increased knowledge of risk and protective factors, leadership skills, and connection to school and community. Evaluation results also showed reductions in substance use, criminal activity, suicidal ideation, and self-harm which youth attributed to their involvement in the program (Peled & Smith, 2010).

As noted earlier, Vancouver School Board's SACY program is a health initiative that involves students, teachers, parents, administrators, and community members. The program aims to reduce, delay, and/or prevent substance use by increasing youth's community connectedness. SACY employs capacity cafés, a unique activity that uses youth voices to educate adults. There are four main streams in SACY: a youth stream, curriculum and teacher training, a parent stream, and the SACY Teen Engagement Program Stream (STEP). STEP is a three-day program designed to increase a youth's connectedness to adults in the community as an alternative to school suspension. An evaluation of the program showed that it increased youth participants' knowledge of resources in the community, feelings of community engagement, and setting of personal limits for their alcohol use (Buote, 2013).

Community mentorship programs are one of the most common community interventions. Caring Adults 'R' Everywhere (C.A.R.E.) is a 12-week mentorship program that helped U.S. youth aging out of government care connect with caring adults in their lives. Goals of the program included strengthening resilience, enhancing prosocial development, and reducing initiation of health risk behaviours such as violence and substance use. Youth and adult mentors participated in structured group activities (e.g., cooking, budgeting), one-on-one sessions with a facilitator, and spent time together at least weekly in community settings (Greeson & Thompson, 2017).

A systematic review of natural mentor programs found that in addition to increasing youth's natural mentors, youth in these programs also showed improved resilience and prosocial skills, and reduced health risk behaviours (Thompson, Greeson, & Brunsink, 2016).



Big Brothers and Big Sisters mentorship programs are run in Canada and internationally and match a young person with a voluntary mentor. For example, a Big Brothers and Big Sisters of Ireland program matches youth aged 10–18 who have been identified as having poor social skills, low self-esteem, or who are living in poverty with a voluntary mentor with whom they meet weekly over the course of a year (Dolan et al., 2010). There are no formal training components, with the key element of the program being the development of a supportive relationship with a trusted adult. Evaluation results showed improvements in youth's sense of hope, feelings of support, approach to school, relationships with others, and reduced alcohol and cannabis use. Evaluations of other Big Brothers and Big Sisters programs have shown effects on substance use, including reduced early onset of substance use and initiating substance use with peers (Dolan et al., 2010).

The Positive Youth Development Collaborative (PYDC) is an afterschool program for ethnic minority middle and high school students in the U.S., aimed to increase decision-making skills and learning about youth's cultural heritage. The program was facilitated by a collaborative of local community organizations and included youth-led activities to build partnerships between youth and adults. Program components included learning about stress and stress-reduction strategies, learning effective decision-making, learning information about substances, identifying positive personal characteristics, and building social networks and resources.

Evaluation results showed participants reported reductions in past month use of alcohol, marijuana, and other drugs, as well as reductions in substance use a year after their involvement in the program (Melendez-Torres et al., 2016).



### Youth Research Academy reflections

The Next Steps workshop model encourages young people to get involved in their community to address the issues they see impacting themselves and their peers. There are many different factors that can contribute to youth choosing to engage in risky activities such as substance use, so teaching youth about protective factors and giving them the tools to promote healthy activities can help to address these factors in a positive way. It also gives youth the chance to spend time with peers in a positive environment and connects them with adults who support them. Arts-based activities offer Indigenous youth the opportunity to connect with their culture and to express themselves in creative ways. One challenge of a long-term program in rural and remote communities is the potential for turnover in adult support. This could lead to youth deciding to drop out of the program if an adult they felt connected to left the community.

Programs that connect young people to natural mentors within their community can be especially useful for youth who don't have supportive adults to turn to inside their family, and for older youth who may be more interested in developing relationships outside of their family. Mentorship programs can help youth to build resilience and the skills needed to stay away from harmful substance use.

Programs that connect youth to caring adults in the community can boost youth's confidence and help them to communicate with others more effectively. Allowing youth to join a program such as STEP as an alternative to being suspended or expelled from school connects youth to something positive at a time when they might be vulnerable to harmful substance use. The flexibility, non-judgmental attitudes, and individual-centered approach are great strengths of the SACY program and can help youth feel respected within the program.

Mentorship is especially helpful for youth who don't already have healthy adult role models. For example, youth whose parents are absent or experiencing substance use or mental health challenges of their own might particularly benefit from this type of program.

## Programs to increase positive peer relationships

Being connected to prosocial peers is protective against a range of negative health outcomes for youth. Programs which support youth to develop positive relationships with peers and those which engage youth in peer-to-peer learning may be effective in reducing youth's risky substance use and other health risk behaviours (Burton & Marshall, 2005).

Richmond Addiction Services Society's Peer 2 Peer program has been implemented in high schools across Richmond, BC. The program uses a peer mentorship model to engage Grade 10 students through relationship building, youth engagement, and evidence-based learning in relation to risky substance use. During the three-day training, the Grade 10 students develop a presentation to share what they learned with Grade 8 students. The program is designed to take into account the needs and interests of individual classes (Canadian Centre on Substance Abuse, 2012).

Another BC program called Seeds of Resilience was developed in Campbell River to better support youth going through significant changes, such as transitioning from middle school to high school. The program used a train-the-trainer model to engage Grade 10–12 students in supporting younger students to develop resiliency qualities such as belonging, emotional awareness, and self-efficacy (Canadian Centre on Substance Abuse, 2012). While a goal of the program is to reduce or prevent harmful substance use, the program does not focus on substance use, but rather teaches youth coping skills and self-awareness that empower healthy choices. Key community stakeholders helped to develop and implement the program, including high school students, Aboriginal Elders, and public health workers (Canadian Centre on Substance Abuse, 2012).

An evaluation of the initiative showed increased knowledge and use of community-based mental health and substance use services, increased sense of community belonging, and increased knowledge of health promotion and substance use reduction strategies (Beck, 2012).



### Youth Research Academy reflections

Having a peer mentor can provide youth with the opportunity to experience a healthy relationship and make healthy connections.

In programs that incorporate peer-to-peer learning, allowing students to develop the content and direction of the workshop can help students feel ownership over their own learning. Presentations developed by students may be most effective if they're interactive and focus on developing rapport and understanding with younger students. The relationship building aspect of programs such as this is also important, especially in short-term programs where the facilitator doesn't already know the participants.

The highly collaborative and community-integrated nature of the Seeds of Resilience are strengths of the program. Having peers and adults with a wider knowledge base is a good strategy for making young people feel comfortable while also providing them with the most accurate information. The inclusion of Aboriginal Elders helps to ensure the program is relevant to Indigenous youth. The program takes a strengths-based approach, and meaningfully engages youth and community members, which will help to make it relevant for all youth.



## Youth Research Academy final reflections and recommendations

The Youth Research Academy reviewed programs that aimed to reduce risk factors and build protective factors in youth, and developed the following themes and strategies they felt were important to consider when implementing programs to reduce potentially harmful substance use among youth in BC.

- ✓ Programs should be responsive to the youth they are targeting. Age, gender, and past substance use experience are factors that should be considered when implementing programs to increase protective factors and reduce potentially harmful substance.
- ✓ Capacity building—including learning healthy coping skills, refusal skills, and fostering personal strengths—should happen from a young age, before youth have used substances or are starting to experiment. Programs that engage young people’s families should also be targeted towards younger youth.
- ✓ Programs that target older youth who may already be engaged in harmful substance use should offer mental health supports or provide resources that youth can connect to if they are struggling.
- ✓ Programs that connect youth with positive peers and adults, and offer opportunities for youth-adult partnerships and engagement in decision making, may be particularly appealing to older youth.
- ✓ Programs that engage youth over a longer time period can support them to build meaningful relationships with adults and peers, and to build a wider network of support in the community.
- ✓ Peer-to-peer learning and train-the-trainer models may be particularly effective strategies in short-term programs as many youth can quickly build rapport and trust with other youth. Having relatable facilitators who engage youth as experts may also help to create a positive learning environment.
- ✓ Important factors that contribute to a positive learning environment include teaching critical thinking skills, presenting balanced and evidenced-based information, and creating a non-judgmental and safe environment.
- ✓ Youth need opportunities to build skills and to develop personal assets and strengths. Programs that provide youth these opportunities can help them to feel good about themselves, to connect to positive peers and adults, and to build skills they can use in other areas of their lives such as in school or work.
- ✓ Programs which do not directly address substance use, but which keep youth busy with positive activities may help to reduce the likelihood that they will engage in risky substance use. For example, arts-based programming can engage youth in skill-building and offer opportunities for youth to meet peers who have similar interests. Another benefit of arts-based programming is that it allows youth to express their emotions in ways that are healthy and constructive—something that can be particularly helpful for youth who don’t have other positive outlets.

# Discussion and recommendations

Substance use is a complex behaviour. For many young people in BC, experimenting with substances is a natural part of adolescence. Beyond experimentation, youth use substances for many reasons ranging from social ones (e.g., to have fun, to do what friends are doing) to functional ones (e.g., to cope with stress, anxiety, sadness, trauma). However, whilst many young people use substances in their teenage years without experiencing acute or lasting harms, some youth are particularly vulnerable to experiencing problems from their use. There have been several recent reports which highlight the role substances have played in the deaths of BC adolescents (e.g., BC Coroners Office, 2018), and have increased awareness of the harms that can occur later in life as a result of early, prolonged, and heavy use.

This report set out to contribute to the conversation about effective ways to support healthy adolescent development, and to support young people to build resiliency, which can assist them to make informed choices, develop healthy strategies to deal with the challenges in their life, and reduce the likelihood that they will engage in substance use in ways which cause them harm.

Resiliency goes beyond a youth's capacity to overcome challenges. It also includes the ability of families, school staff, neighbours, and other community members to successfully enable youth to access the supports and opportunities they need to thrive and to overcome the challenges and setbacks they encounter. Supporting youth to reduce potentially harmful substance use therefore involves having the resources not only to build capacity in youth themselves but also within their networks.

This report has identified a number of factors that appear to be associated with reduced risky substance use among youth, and which show the importance of the presence of healthy peer relationships and of the need for supportive adult figures in families, schools, and communities.

The factors considered in this report are by no means the only factors involved, and the findings should not be interpreted as providing evidence that a single protective factor or combination of protective factors are guaranteed to reduce harmful substance use or any other health risk behaviour. The findings suggest there are many potential avenues through which youth can be supported. Having assets across all the domains considered in this report might be ideal, but is not the reality for many young people in this province. It is therefore important to recognize that if we cannot build capacity in one area (e.g., if no engagement with family is possible or a youth is not attending school), having capacity in other domains is still beneficial.

It is also important to acknowledge the diversity of young people in the province and take a holistic approach, taking into account each youth's unique needs, strengths, and capacity, including consideration of different approaches based on age, gender, culture, geographical location, and other aspects of diversity.

For adults to support young people to develop a healthy relationship with substances and other potentially harmful behaviours, they also need support to increase their understanding of under-age substance use, and the harms and benefits that young people may experience from that use. Investing in schools and communities to develop and enhance their abilities to support youth in building resiliency is likely to be more effective in reducing potentially harmful substance use than any program or project focused exclusively on delaying or reducing substance use.

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*“Are we being educated about what different levels of stress feel like, how we can deal with it? Are we given tools to deal with it? No, we’re not. A lot of youth don’t know what it feels like to relax.”*

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Building capacity and strength among youth and those around them as an approach to addressing youth substance use is in line with BC’s 2017–2020 Mental Health and Substance Use Strategy (Province of British Columbia, 2017). The plan focuses on wellness, prevention, and early intervention. Specifically, the plan states:

*“Wellness means providing resources and programs to help children, youth, adults and families strengthen their social and emotional health and resilience and develop the skills they need to cope with the daily challenges of life and adverse experiences. It also means creating supportive environments where individual and community strengths are fostered, community action is strengthened, stigma is reduced and healthy choices are the easy choices.” (p. 13)*

Starting a conversation about how to better support youth to build resiliency is particularly timely given the changes to federal marijuana laws and the 2016 declaration of a public health emergency prompted by the rise in drug overdoses and deaths. These events and circumstances have prompted the BC Centre on Substance Use to release new guidelines for opioid treatment among youth, which suggest doctors carry out early screening of mental health and substance use disorders and provide families with information support and training (The Canadian Press, 2018).

Recent changes to the school curriculum and the successful integration of initiatives such as SOGI 123 also offer a timely opportunity to encourage greater dialogue about behaviours which impact health and develop critical thinking skills among students. However, these require investment in school board education, teacher training, and time and resources to ensure substance use discussions can be embedded across the curriculum and that the nuances associated with building resiliency are fully understood.

The findings of the current report suggest that in addition to the immediate response required to support youth struggling with opioid or other substance use challenges, a more upstream approach should be implemented whereby young people can develop and strengthen protective factors; and families, peers, school staff, and community members feel knowledgeable and skilled enough to support young people.

## Appendix 1: Distribution of protective factors by gender, age, and location

Protective factor	Gender		Age		Location	
	Males	Females	14 and younger	15 and older	Urban	Rural
<b>Supportive family</b>						
Highly connected to family	<b>21% ^</b>	19%	<b>23% ^</b>	17%	20%	19%
Supportive adult in family	<b>76% ^</b>	70%	<b>77% ^</b>	69%	72%	74%
Helpful family member (among those who asked for help)	<b>95% ^</b>	92%	<b>95% ^</b>	92%	93%	93%
Parental monitoring	76%	77%	<b>82% ^</b>	73%	76%	76%
<b>Connection to community</b>						
Feel like part of community	38%	<b>41% ^</b>	<b>45% ^</b>	35%	39%	<b>44% ^</b>
Engaged in extracurricular organized sports	<b>66% ^</b>	58%	<b>70% ^</b>	57%	62%	64%
Feel safe in neighbourhood	<b>92% ^</b>	90%	91%	92%	91%	<b>93% ^</b>
Engaged in meaningful activities	70%	70%	<b>73% ^</b>	68%	70%	70%
Engaged in volunteer activity weekly	16%	<b>24% ^</b>	13%	<b>25% ^</b>	<b>20% ^</b>	17%
Adult in community cares	59%	<b>63% ^</b>	61%	60%	60%	<b>70% ^</b>
<b>Supportive school environment</b>						
Highly connected to school	22%	<b>24% ^</b>	<b>30% ^</b>	18%	23%	22%
Helpful school staff (among those who asked for help)	<b>93% ^</b>	91%	<b>93% ^</b>	91%	92%	93%
<b>Healthy peer relationships</b>						
Close friends	97%	<b>97% ^</b>	<b>97% ^</b>	97%	97%	96%
Prosocial peers	55%	<b>64% ^</b>	<b>76% ^</b>	48%	<b>60% ^</b>	52%
Non-abusive dating relationship (among those in relationship)	94%	95%	<b>96% ^</b>	93%	<b>94% ^</b>	93%
Positive peer environment (free from bullying)	<b>49% ^</b>	37%	<b>44% ^</b>	42%	43%	41%
<b>Individual strengths</b>						
Good at something	<b>81% ^</b>	72%	<b>79% ^</b>	74%	76%	78%
Feel good about self	<b>89% ^</b>	71%	<b>83% ^</b>	79%	80%	81%
Feel as competent as others	<b>91% ^</b>	82%	<b>87% ^</b>	86%	86%	86%
Positive outlook about future	88%	<b>90% ^</b>	87%	<b>90% ^</b>	<b>89% ^</b>	87%

**Percentage in bold ^** indicates the group is more likely to have the protective factor. If no ^ appears for a particular factor, then there was no statistically significant difference between groups. For example, the percentage of rural youth who reported feeling connected to school was not statistically different from the percentage of urban youth who felt connected to school. However, students aged 14 and younger were more likely than those 15 and older to report feeling connected to school.

## Appendix 2: Distribution of risk factors by gender, age, and location

Risk factor	Gender		Age		Location	
	Males	Females	14 and younger	15 and older	Urban	Rural
Live in extreme poverty	1%	1%	1%	1%	1%	1%
History of government care	3%	3%	<b>4% ^</b>	3%	3%	<b>5% ^</b>
Been sexually abused	4%	<b>13% ^</b>	5%	<b>11% ^</b>	8%	<b>12% ^</b>
Attempted suicide in past year	3%	<b>9% ^</b>	6%	6%	6%	<b>8% ^</b>
Extreme stress in past month	5%	<b>13% ^</b>	6%	<b>12% ^</b>	9%	9%
Extreme despair in past month	4%	<b>10% ^</b>	6%	<b>8% ^</b>	7%	7%
Mental health condition	5%	<b>15% ^</b>	7%	<b>12% ^</b>	10%	11%
PTSD	1%	<b>1% ^</b>	1%	<b>1% ^</b>	1%	1%
ADHD	<b>7% ^</b>	4%	5%	6%	5%	<b>7% ^</b>
FASD	<1%	<1%	<1%	<1%	<1%	<b>1% ^</b>
Depression	5%	<b>13% ^</b>	7%	<b>11% ^</b>	9%	<b>11% ^</b>
Anxiety Disorder or Panic attacks	4%	<b>13% ^</b>	6%	<b>10% ^</b>	8%	9%

**Percentage in bold ^** indicates the group is more likely to have the risk factor. If no ^ appears for a particular factor, then there was no statistically significant difference between groups. For example, the percentage of rural youth with a mental health condition was not statistically different from the percentage of urban youth with such a condition. However, students aged 15 and older were more likely than those 14 and younger to have a mental health condition.



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