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EXECUTIVE SUMMARY

In the fall of 2002, the Alberta Alcohol and Drug Abuse Commission (AADAC) undertook The Alberta Youth Experience Survey 2002 to establish a benchmark of current substance use and gambling activity among Alberta youth. The survey also examined key risk and protective factors correlated with use or participation. The results are summarized in this report.

Prevalence of Use

- Alberta youth exhibit the same general substance use/gambling participation patterns occurring across North America.
- *The Alberta Youth Experience Survey 2002* found alcohol, at 56.3%, to be the most frequently used substance by Alberta adolescents in grades 7-12 at least once over the last 12 months.
- The next most used substances were cannabis (marijuana or hash) at 27.6%, and cigarettes at 16.2%.
- Adolescent alcohol use in Alberta (56.3%) is lower than in Ontario (65.5%) and higher than Nova Scotia (51.7%).
- Youth use of alcohol in Alberta increases by grade (17.6% in grade 7 to 81.2% in grade 12).
- 13% of youth who drank reported signs of abusing alcohol.
- Alberta has the lowest youth smoking rate at 16.2% compared to Ontario at 23.6% and Nova Scotia at 23.2%.
- 7.8% of Alberta youth report use of chewing tobacco compared to 4.8% in Nova Scotia.
- Cannabis is by far the most used illicit drug among Alberta youth (27.6%), followed by mescaline/magic mushrooms (10.4%), inhalants (5.6%) and club drugs such as ecstasy and crystal meth (5.3%).
- Cannabis use by Alberta teenagers (27.6%) is lower than Ontario (29.8%) and Nova Scotia (37%).
- Use of Cannabis by Alberta adolescents at least once in the last 12 months increases from 11.8% in grades 7-9 to 41.9% in grades 10-12.
- The vast majority of young Albertans reported they did not use any illicit

substances in the last 12 months (from 72.4% non-use of Cannabis to 98.8% non-use of steroids).

- Most (over 92%) of Alberta youth reported never having experimented with or used cocaine, crack, hallucinogens, inhalants, uppers, downers, club drugs, steroids, and heroin or opium.
- Alberta usage rates of illicit drugs are lower in most cases than in Ontario and Nova Scotia.
- 41.2% of Alberta youth reported they have gambled at least once over the last 12 months.
- The most frequent youth gambling activities are scratch tabs (30.8%), playing cards for money (23%) and betting on sports events with a friend (21.1%)
- 3.8% of youth display gambling problems and an additional 5.7% display hazardous gambling patterns.

Risk and Protective Factors

- The prevalence of use of alcohol, tobacco and illicit drugs by Alberta youth has been shown to increase as the number of risk factors increase.
- The five most important risk factors for harmful use of substances and gambling by Alberta youth are age of user, peer risk behaviour, family history of substance abuse, family discord and poor connections to school life.
- The more protective factors a young Albertan has, the less likely is the abuse of substances and gambling problems.
- The five most important protective factors for harmful use of substances and gambling by Alberta youth are parental monitoring, good social skills, availability of and participation in pro-social activities and good school marks.

INTRODUCTION

The Alberta Alcohol and Drug Abuse Commission (AADAC) is frequently asked, "Are alcohol, drug and gambling problems among Alberta youth getting better or worse?" This is an important question; as adolescent drinking, other drug use, smoking and, more recently, gambling have been persistent public concerns for at least four decades in Canada (Adlaf, Ivis, & Smart, 1997).

Adolescent substance use and abuse has been identified as a barrier to high school completion (Alberta Learning, 2001), a factor in school conduct problems (American Academy of Pediatrics, 1995), a cause of premature loss of life and disability (Kinney, 2000; Inaba & Cohen, 2000), and related to a host of other social ills including crime, mental and physical disabilities, and family dysfunction (Hawkins, Catalano, Morrison, O'Donnell, Abbott, & Day, 1992).



Major alcohol and drug surveillance studies in Canada and the United States have shown declines in substance use during the 1980s, followed by increases in the 1990s (Adlaf, Ivis, & Smart, 1997; Johnston, O'Malley, & Bachman, 2001). The use and abuse of new drugs have appeared while the use and abuse of others have declined. The nature of progression in use from softer to harder drugs also appears to have changed (Golub & Johnson, 2001). Most recently, long term monitoring surveys show that both increases and decreases in drug use occur at the same time; some drugs increase in popularity while others decline and still others show no change (Adlaf et al., 1997; Johnston et al., 2001).

Due to its more recent history, research examining the problem consequences of gambling among adolescents is far less extensive and our knowledge less certain.

To begin to answer the question of what specifically is happening with youth substance use and gambling in Alberta, AADAC commissioned a major study in the fall of 2002. This initial *Alberta Youth Experience Survey 2002* establishes a benchmark of current, relevant Alberta information. Future editions of the survey will allow AADAC to complete the answer to the question posed, with valid trend data.



SURVEY APPROACH

The vision for the survey was "seeing adolescents as they are; anticipating the adults they may become." And what was needed was, to use the language of economists, leading indicators instead of lagging indicators; and information on these indicators needed to be collected over time. Trends in substance use and gambling can change quickly and can vary from place to place. It was critical that Alberta put in place a system to accurately measure these changes and to be able to respond to new and ongoing challenges. It was also important that the survey was based upon similar research conducted in other North American locations in order to make comparisons with other jurisdictions.

Beyond determining the current extent of use of alcohol, tobacco, other drugs and gambling behaviour (ATODG) among young Albertans, a critical second purpose of *The Alberta Youth Experience Survey 2002* was to focus attention on what, if anything, could be done to prevent certain problems or trends from developing, or to intervene when they appeared. The survey design not only needed to collect the basic use or prevalence information, but also needed to outline the key risk and protective factors associated with substance and gambling use and abuse.

Consistent with the research literature, the approach chosen sought to identify risk and protective factors in five distinct areas:

- Individual
- Peer
- Family
- School
- Community

It is known that if an individual has a problem, the problem affects and is influenced by peers, family, school and community. It is rare to find a particular problem without finding a community, peer grouping or family having the same problem. Conversely, practical experience and research strongly indicate that healthy kids are surrounded by healthy friends, go to healthy schools and live in healthy families and communities.

In reviewing the literature, some risk and protective factors were shown to be predictive of substance use or abuse but most factors have not been proven to be direct causes of negative or positive behaviours. They instead, have "associations" or "correlations" with those behaviours. Factors that correlate with current or later problems form the pool from which insights and potential solutions can be found.

The Alberta Youth Experience Survey 2002, therefore, sought to answer the following questions about ATODG:

- What proportion of Alberta youth use ATODG?
- What proportion of Alberta youth use ATODG frequently?
- What proportion of Alberta youth use ATODG in ways that are harmful?
- Do these results differ by region, gender, grade and other important factors?
- What proportion of Alberta youth have higher and lower levels of risk?
- What proportion of Alberta youth have higher and lower levels of protection?
- What is the relationship between risk and protective factors and ATODG?

METHODOLOGY

Thirty-nine school divisions were randomly selected to participate in the survey involving eighty-nine schools throughout the province. 3,394 students in grades 7-12 were asked about their involvement with alcohol, tobacco, other drugs, and gambling in the last 12 months. Information was collected and analysed in a large number of detailed areas; the predominant broad categories were by grade, gender, Aboriginal/non-Aboriginal status, region and community size. The regions surveyed were based on the April, 2000 Regional Health Authority boundaries. The Calgary and Edmonton regions were large enough to sample separately and the remaining regions were grouped into North, Central, and South. Community size was grouped into:

- Large cities - population of 250,000 - 999,999
- Mid-sized cities - population of 50,000 - 249,999
- Small cities - population of 20,000 - 49,999
- Towns - population of 2,500 - 19,999, and
- Rural areas - population less than 2,500.

The questionnaire was also designed so that the results could be compared with other jurisdictions in Canada. Ontario has been conducting regular surveys of their youth population since 1968 (Drug Use Among Ontario Students 1977-2001). Nova Scotia completed a major review of alcohol, drug, and tobacco use in 2002 and has been tracking the uses of various substances since 1991 (Nova Scotia Student Drug Use 2002)

An Advisory Committee was established in February, 2002 to advise AADAC on all aspects of the proposed survey. This committee had representation from Alberta Learning, Aboriginal Affairs and Northern Development, Children's Services, Gaming, Health and Wellness, Solicitor General, the Information and Privacy Office of Government Services, the Alberta School Boards Association, the College of Alberta School Superintendents, a school board member and a retired school principal.

The project plan was submitted to the Community Research Ethics Board of Alberta for review and approved providing that "active consent" was used i.e., parents had to give written permission for their child to participate in the survey. As well, each student had the right to decline to be involved on the day the survey was administered.

It is important to note that without the support and active involvement of the 39 school jurisdictions who consented to participate in *The Alberta Youth Experience Survey 2002*, the study would not have been possible (please see page 35 for a list of the participating school jurisdictions). The Alberta youth who took part in the survey, and their parents who gave consent, are also to be thanked for their interest and cooperation in this important undertaking.

In addition to this **Summary Report** of *The Alberta Youth Experience Survey 2002*, the following reports are available from the Alberta Alcohol and Drug Abuse Commission, 6th floor, 10909 Jasper Avenue, Edmonton, Alberta, T5J 3M9.

- A detailed **Technical Report** covering the methodology for the study; analysis of all of the information collected, including frequencies of use and abuse; a comprehensive review of the risk and protective factors, and measurements indicating associations of factors.
- An **Overview of Risk and Protective Factors Report**, summarizing the major findings of related studies throughout Canada and the United States.
- **Follow-up Reports** highlighting various topical aspects of the survey.

PREVALENCE OF SUBSTANCE USE AND GAMBLING ACTIVITY

Survey results are typically reported as a percentage of participation in an activity, rather than non-participation. For example, a survey would report 21% of Albertans own SUVs, not 79% of Albertans do not own SUVs. This common practice familiar to the public is followed in this summary report.

However, it is vitally important when looking at substance use/gambling participation data to keep the converse in mind. It is AADAC best practice to always present the substance non-use or gambling non-participation rate to individual youth and their families. For instance, although the current daily or occasional smoking rate for Alberta teenagers is cited as 16.2% smoke, this also means 83.8% of young Albertans do not smoke (i.e., so, join the majority!)

The following six Figures provide an overview of the overall prevalence results of *The Alberta Youth Experience Survey 2002* using participation rates.



FIGURE 1:
Percentage of Youth Substance Use and Gambling Activity in Alberta by Grades

	Overall	Grades 7 - 9	Grades 10 -12 (< 20 years)
Used Alcohol			
Alcohol	56.3	35.8	75.4
Used Tobacco			
Smoked cigarettes	16.2	7.2	24.6
Chewing tobacco or snuff	7.8	4.3	11.0
Used Cannabis			
Cannabis (marijuana or hash)	27.6	11.8	41.9
Used Other Drugs			
Magic mushrooms or mescaline	10.4	5.0	15.3
Inhalants	5.6	6.8	4.6
Club drugs (ecstasy or crystal meth)	5.3	2.7	7.6
Uppers without a prescription	4.0	2.1	5.6
Hallucinogens	3.9	1.6	6.1
Cocaine	2.9	0.5	5.1
Crack	2.8	0.8	4.7
Downers without a prescription	2.3	1.7	2.9
Heroin or opium	1.4	1.1	1.7
Steroids	1.2	0.7	1.6
Participated in Gambling Activities			
Scratch tabs	30.8	25.9	35.4
Cards for money	23.0	18.5	27.1
Bet on sporting events with a friend	21.1	18.2	23.7
Bingo	9.5	11.8	7.3
Any other lottery	6.7	5.7	7.6
Sports Select lottery	3.7	1.9	5.4
Video lottery terminals (VLTs)	3.3	1.4	5.1
Bet on sporting events on-line	3.2	3.2	3.3

Figure 2:
Percent of Selected Past Year Substance Use, Gambling Activity and Harmful Use or Abuse in Alberta, by Gender

	Overall	Males	Females
Used Alcohol			
Alcohol	56.3	59.7	53.6
Used Tobacco			
Smoked cigarettes	16.2	13.1	18.2
Chewing tobacco or snuff	7.8	14.6	2.5
Used Cannabis			
Cannabis (marijuana or hash)	27.6	29.9	25.9
Participated in gambling			
One or more gambling activity	41.2	53.4	32.1
Prevalence of harmful use or abuse			
Alcohol Abuse (hazardous or harmful use)	13.0	16.8	10.1
Two or three indicators of cannabis dependence	5.8	6.3	5.2
Gambling Abuse (hazardous or problem gambling)	9.5	15.4	5.1

Figure 3:
Percent of Selected Past Year Substance Use, Gambling Activity and Harmful Use or Abuse in Alberta, by Aboriginal or Non-Aboriginal Background*

	Overall	Aboriginal	Non-Aboriginal
Used Alcohol			
Alcohol	56.3	65.2	56.1
Used Tobacco			
Smoked cigarettes	16.2	36.6	15.6
Chewing tobacco or snuff	7.8	32.0	7.0
Used Cannabis			
Cannabis (marijuana or hash)	27.6	52.1	26.8
Participated in gambling			
One or more gambling activity	41.2	41.4	34.4
Prevalence of harmful use or abuse			
Alcohol Abuse (hazardous or harmful use)	13.0	34.5	12.3
Two or three indicators of cannabis dependence	5.8	20.7	5.1
Gambling Abuse (hazardous or problem gambling)	9.5	14.4	9.4

* The survey did not include Aboriginal youth in on-reserve schools under federal jurisdiction. Caution is required in interpreting these results as the demographic profile of Aboriginal and non-Aboriginal youth differs.

Figure 4:
Percent of Selected Past Year Substance Use, Gambling Activity and Harmful Use or Abuse in Alberta, by Community Size*

	Overall	Large Cities	Mid-sized Cities	Small Cities	Towns	Rural areas
Used Alcohol						
Alcohol	56.3	60.2	51.2	68.7	58.9	51.1
Used Tobacco						
Smoked cigarettes	16.2	18.2	12.1	17.4	17.5	15.2
Chewing tobacco or snuff	7.8	6.4	10.2	5.3	5.5	9.9
Used Cannabis						
Cannabis (marijuana or hash)	27.6	32.4	25.2	26.9	26.2	19.6
Participated in gambling						
One or more gambling activity	41.2	44.5	36.2	52.7	42.3	37.3
Prevalence of harmful use or abuse						
Alcohol Abuse (hazardous or harmful use)	13.0	14.8	11.7	9.8	12.5	10.8
Two or three indicators of cannabis dependence	5.8	7.1	4.2	7.3	5.6	4.0
Gambling Abuse (hazardous or problem gambling)	9.5	12.6	6.4	15.8	9.1	6.1

* Caution is required in interpreting this table as students in communities of different sizes have different demographic profiles. As well, the percentage of small cities respondents in the sample is small.

Figure 5:
Percent of Selected Past Year Substance Use, Gambling Activity and Harmful Use or Abuse in Alberta, by Region

	Overall	North Region	Edmonton Region	Central Region	Calgary Region	South Region
Used Alcohol						
Alcohol	56.3	55.9	54.7	62.2	57.0	44.5
Used Tobacco						
Smoked cigarettes	16.2	17.2	15.2	20.0	16.4	12.0
Chewing tobacco or snuff	7.8	5.0	6.3	12.6	8.8	7.5
Used Cannabis						
Cannabis (marijuana or hash)	27.6	23.2	31.1	27.5	30.9	17.3
Participated in gambling						
One or more gambling activity	41.2	39.7	36.8	42.7	46.3	38.9
Prevalence of harmful use or abuse						
Alcohol Abuse (hazardous or harmful use)	13.0	11.2	14.3	13.6	13.9	9.5
Two or three indicators of cannabis dependence	5.8	5.1	5.4	6.3	6.7	3.7
Gambling Abuse (hazardous or problem gambling)	9.5	8.5	9.1	8.3	12.2	6.8

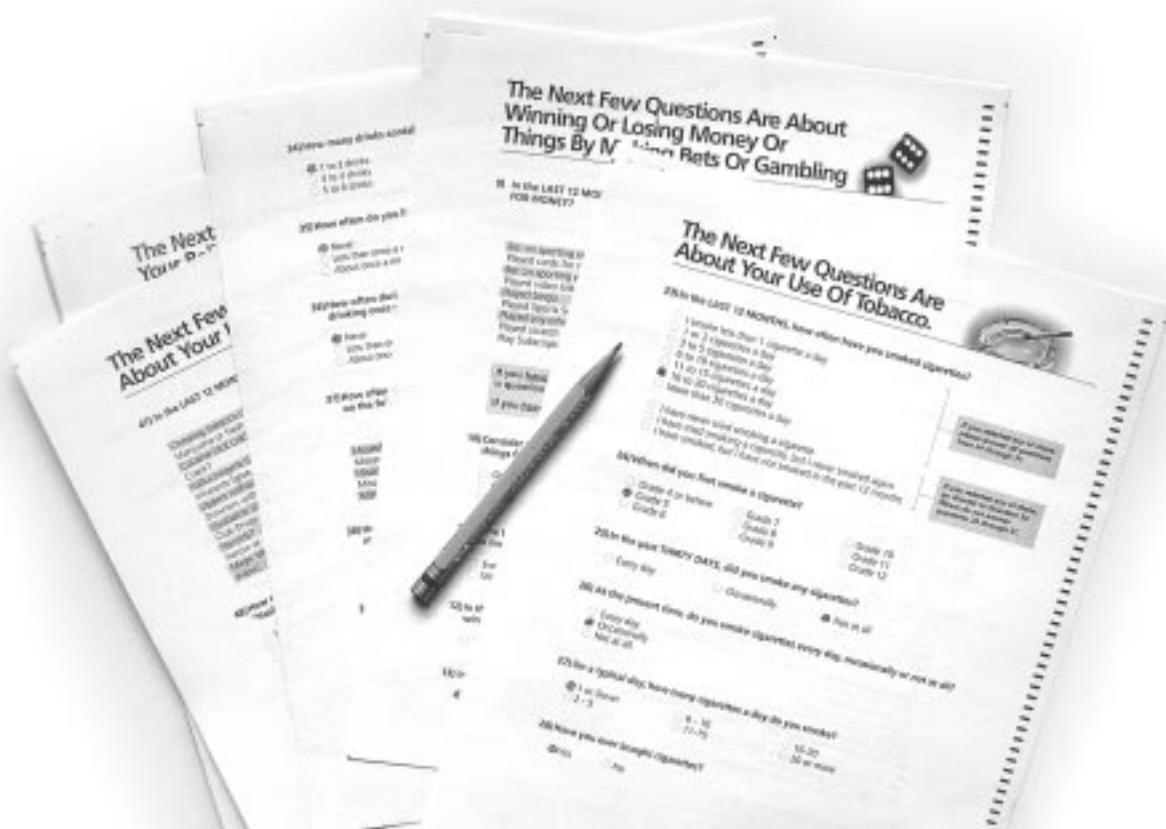


Figure 6:
Percent of Selected Past Year Substance Use, Gambling Activity and Harmful Use or Abuse in Alberta, Ontario and Nova Scotia, by Province

	Alberta, 2002	Ontario, 2001	Nova Scotia, 2002
Used Alcohol			
Alcohol	56.3	65.6	51.7
Used Tobacco			
Smoked cigarettes	16.2	23.6	23.2
Chewing tobacco or snuff	7.8	NA	4.8
Used Cannabis			
Cannabis (marijuana or hash)	27.6	29.8	36.5
Used Other Drugs			
Magic mushrooms or mescaline	10.4	11.4	12.2
Inhalants	5.6	5.7	4.9
Club drugs (ecstasy or crystal meth)	5.3	6.0	4.4
Uppers without a prescription	4.0	6.4	9.3
Hallucinogens	3.9	4.5	5.5
Cocaine	2.9	4.3	3.9
Crack	2.8	2.0	NA
Downers without a prescription	2.3	3.9	4.7
Heroin or opium	1.4	1.0	1.6
Steroids	1.2	NA	2.7
Participated in Gambling Activities			
Scratch tabs	30.8	NA	42.6
Cards for money	23.0	25.7	32.2
Bet on sporting events with a friend	21.1	22.3	28.4
Bingo	9.5	11.9	22.6
Other lottery	6.7	24.5	16.2
Sports Select lottery	3.7	10.3	9.6
Video lottery terminals (VLTs)	3.3	7.7	7.4
Bet on sporting events on-line	3.2	NA	NA
Prevalence of harmful use or abuse			
Alcohol Abuse (hazardous or harmful use)	13.0	9.1	NA
Two or three indicators of cannabis dependence	5.8	7.0	NA
Gambling Abuse (hazardous or problem gambling)	9.5	11.0	NA

We would once again reiterate that best practice in substance prevention recommends reporting non-use/non participation rates. All of the previous summary charts would also then be presented in reversed form. Figure 7 below, for example, outlines what one converse summary would show.

Figure 7:
Percentage of youth who *have not* drunk alcohol, *not smoked* cigarettes, *not used* chewing tobacco or snuff, *not used* other drugs and who *have not* participated in gambling activities in the last 12 months

	Overall	Grades 7-9	Grades 10-12 (<i>< 20 years</i>)
Percent of youth who have not used substances			
Alcohol	43.7	64.2	24.6
Cannabis (marijuana or hash)	72.4	88.2	58.1
Smoked cigarettes	83.8	92.8	75.4
Magic mushrooms or mescaline	89.6	95.0	84.7
Chewing tobacco or snuff	92.2	95.7	89.0
Inhalants	94.4	93.2	95.4
Club drugs (ecstasy or crystal meth)	94.7	97.3	92.4
Uppers without prescription	96.0	97.9	94.4
Hallucinogens	96.1	98.4	93.9
Cocaine	97.1	99.5	94.9
Crack	97.2	99.2	95.3
Downers without a prescription	97.7	98.3	97.1
Heroin or opium	98.6	98.9	98.3
Steroids	98.8	99.3	98.4
Percent of youth who have not participated in gambling activities			
Scratch tabs	69.2	74.1	64.6
Cards for money	77.0	81.5	72.9
Bet on sporting events with a friend	78.9	81.8	76.3
Bingo	90.5	88.2	92.7
Other lottery	93.3	94.3	92.4
Sports Select lottery	96.7	98.1	94.6
Video lottery terminals (VLTs)	96.7	98.6	94.9
Sporting events on-line	96.8	96.8	96.7

ALCOHOL

Prevalence of Use

- The survey found alcohol to be the most frequently used substance at least once by Alberta adolescents over the last 12 months (56.3%).
- The 56.3% of Alberta youth who were current drinkers compares to 65.5% in Ontario and 51.7% in Nova Scotia
- The percentage of youth who were current drinkers increased as they progressed in grade levels.
 - 17.6% of grade 7 youth and 37.3% of grade 8 youth were current drinkers.
 - 52.4% of grade 9 youth were current drinkers.

- There is a notable transition at grade 10, where 70.7% of youth were current drinkers.
- 73.3% of grade 11 youth and 81.2% of grade 12 youth were current drinkers.
- More males (59.7%) than females (53.6%) were current drinkers.
- A higher percentage of Aboriginal youth (65.2%) than non-Aboriginal youth (53.1%) were current drinkers.
- The lowest percentage of youth current drinkers was from Southern Alberta (44.5%).
- A lower percentage of youth from rural areas (51.1%) were current drinkers compared to towns and most cities.

Figures 8 and 9 illustrate frequency of alcohol use by category during the past 12 months by grade level.

Figure 8:
Frequency of Alcohol Use for Grades 7, 8 and 9

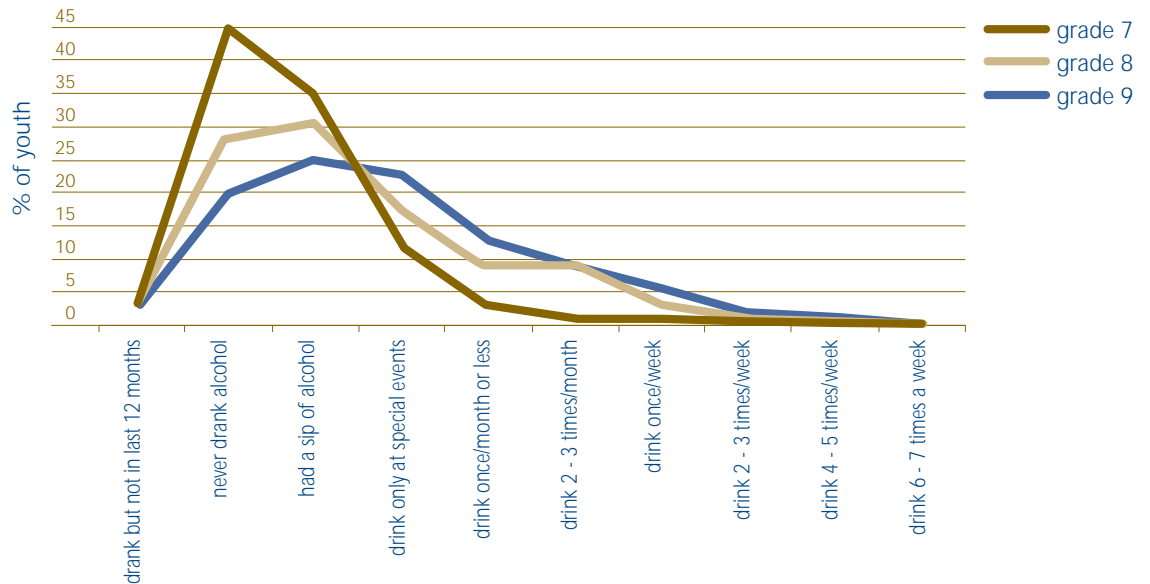
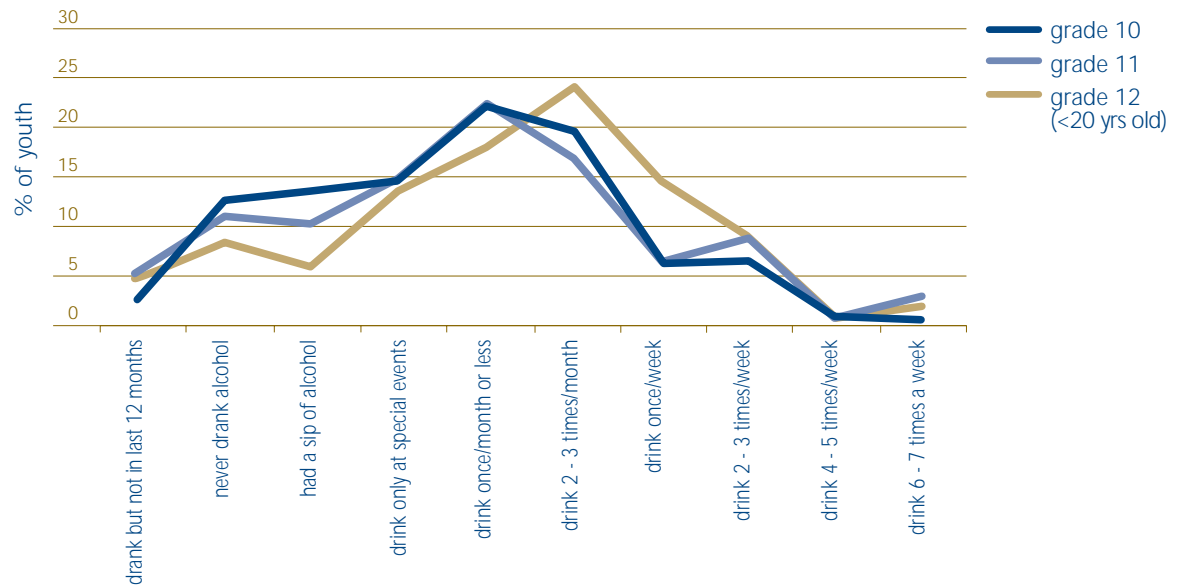


Figure 9:
Frequency of Alcohol Use for Grades 10, 11 and 12



Alcohol Abuse

The following findings reflect the application of the Alcohol Use Disorder Identification Test (AUDIT) scale to the survey results:

- 87% of youth in Alberta did not report signs of harmful alcohol use.
- Conversely, 13% of youth who drank in the last year reported signs of hazardous or harmful alcohol use.
- Youth in grades 11 and 12 in Alberta were more likely to report signs of abusing alcohol (23.9% of grade 11 youth and 24.2% of grade 12 youth).
- The pattern of increased consumption and potential abuse at the grade 10 level and beyond in North America is well documented in the research literature.
- A higher percentage of males than females (16.8% and 10.1% respectively) reported signs of abuse.
- A higher percentage of Aboriginal than non-Aboriginal youth (34.5% and 12.3% respectively) reported signs of abuse.
- Youth in larger cities were more likely (14.8%) to report signs of alcohol abuse than youth in rural areas (10.8%).
- The percentage of youth who reported signs of abusing alcohol in Edmonton (14.3%), Calgary (13.9%) and Central regions (13.6%) was higher than youth from the South (9.5%) and North regions (11.2%).
- Studies indicate a relationship with heavy drinking episodes (binge drinking) and an increased risk of dependency, increased risk of injury and health problems.

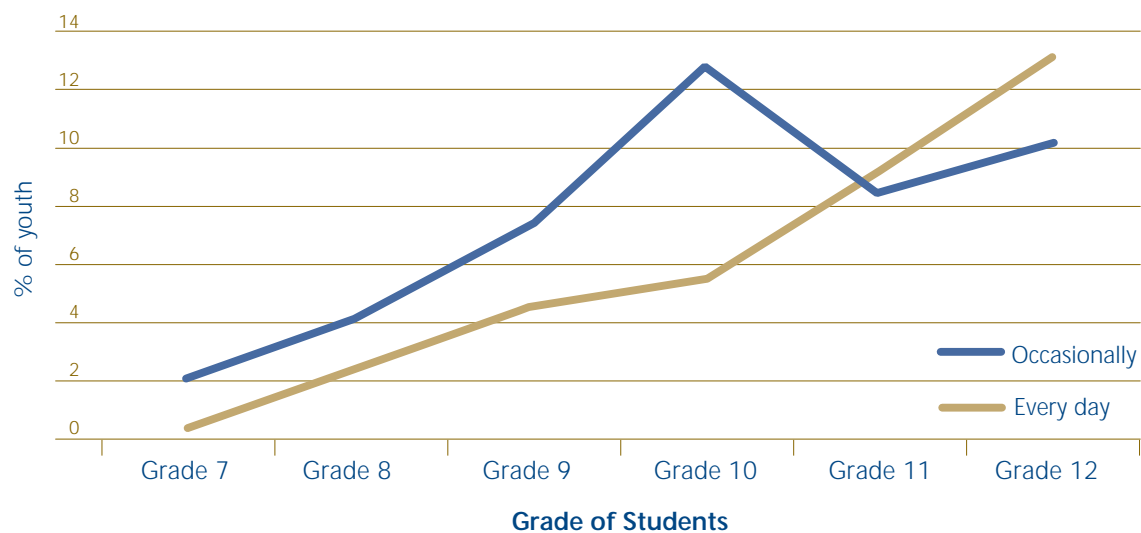
TOBACCO

Prevalence of Use

- In Alberta the percentage of youth from grades 7-12 who have not smoked in the past 12 months is 83.8%;
 - 16.2% of young Albertans continue to smoke daily or occasionally.
 - In Ontario the percentage of youth who smoke cigarettes is 23.6%.
 - Youth smoking in Nova Scotia at 23.2% is almost identical to Ontario.
- As shown in Figure 10, the percentage of Alberta youth who have never smoked is 98% for grade 7 but declines to 41% by grade 12.

- Nearly 30% of grade 12 youth reported they have smoked in the past 12 months.
 - Of these, 13.3% reported smoking cigarettes every day.
- More adolescent females (18.2%) than males smoke (13.1%).
- More than twice the number of Aboriginal youth from grades 7 to 12 reported they have smoked in the past 12 months compared to non-Aboriginal youth (36.6% and 15.6%, respectively).
- Other provinces that have done multiple studies over time have generally noticed a gradual decline in the numbers of young people smoking. In Ontario, however, the percentage of youth who smoked peaked in 1999 but decreased significantly in 2002. In Nova Scotia, there has been a slight decline over the past four years.

Figure 10:
Percent of Alberta Youth by Grade Who Reported Smoking a Cigarette Every Day or Occasionally



With regard to the use of chewing tobacco in Alberta:

- 7.8% of Alberta youth used chewing tobacco, higher than Nova Scotia (4.8%), the only other Canadian school survey measuring chewing tobacco use.
- 14.6% of Alberta male youth reported using chewing tobacco in the past 12 months, compared to 2.5% of female youth in the province.
- Grade 11 youth reported the highest percentage of use of chewing tobacco or snuff (14.7%) followed by grade 12 youth (10.4%) and grade 10 youth (7.9%).
- 32% of Aboriginal youth reported having used chewing tobacco compared to 7% of non-Aboriginal youth.
- Central Alberta (12.6%) and Calgary (8.8%) show the highest youth use of chewing tobacco.

ILLCIT DRUGS

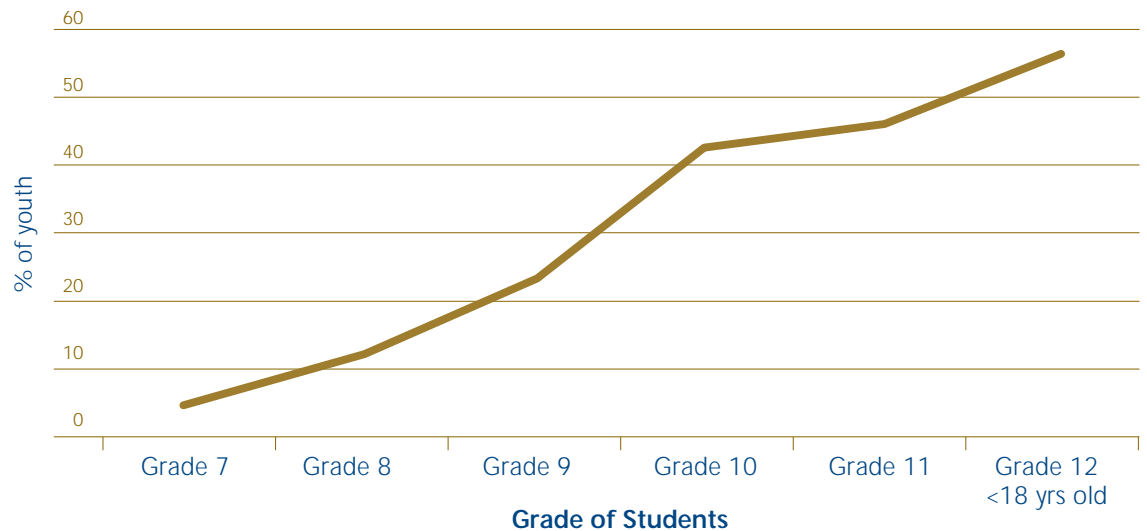
The survey asked youth about use of a number of common illicit drugs in the past 12 months.

- With the exception of cannabis (marijuana or hash) at 27.6%, the usage of most illicit drugs by Alberta youth was relatively low.
- The next most used illicit drugs at least once over the past 12 months were magic mushrooms or mescaline (10.4%), inhalants (5.6%) and club drugs (ecstasy or crystal meth) (5.3%).
- Non-usage of other illicit drugs by Alberta youth typically fell in the 95% - 99% range.
- Use of cannabis and other drugs by Alberta youth exhibit the same general trends occurring across North America.

Prevalence of Cannabis Use

- Cannabis is the second most used substance among youth in Alberta (27.6%) behind alcohol (56.3%).
- More Alberta youth used cannabis than cigarettes (16.2%). This pattern is common in other areas in Canada.
- Alberta adolescent use of cannabis at 27.6% is lowest compared to 29.8% of Ontario youth reporting use and 36.5% in Nova Scotia.
- 29.9% of males and 25.9% of females reported having used cannabis during the past year.
- The highest percentage of youth having used or tried cannabis was in the Edmonton (31.1%) and Calgary regions (30.9%). The lowest reported level of use was in Southern Alberta (17.3%).
- 32.4% of youth in larger Alberta cities had used cannabis compared to 19.6% of youth in rural areas.
- Twice as many Aboriginal youth (52.1%) had used cannabis compared to non-Aboriginal youth (26.8%).
- As shown in Figure 11, there was a notable difference in lifetime cannabis use by grade.
 - Grades 7 and 8 had the lowest percentage who have ever used cannabis and Grades 10 to 12 had the highest percentage.
 - There was a substantial jump in the percentage of users from grade 8 (10%) to grade 9 (20.5%) and from grade 9 to grade 10 (41%).
 - Grade 12 usage at least once in their life jumps to 58% by grade 12.

Figure 11:
Percentage of Youth by Grade in Alberta Who Have Used Cannabis in Their Lifetime



Indicators of Cannabis Dependence

Based on the Indicators of Cannabis Dependence scale:

- 83.9% of youth reported no signs of dependence.
- 10.3% reported one of three possible signs.
- 5.8% of Alberta youth reported two or three signs of dependence.

Prevalence of Other Drug Use

- For grade 10-12 youth in Alberta, the most popular other drugs were magic mushrooms or mescaline (15.3%) followed by club drugs like ecstasy or crystal meth (7.6%) and hallucinogens (6.1%).
- In Ontario and Nova Scotia, the use of these drugs was similar when the senior grades were compared.
- Use of magic mushrooms or mescaline increases from 5.0% in grades 7-9 to 15.3% in grades 10-12.
- Most senior youth reporting using magic mushrooms or mescaline drugs had tried these drugs fewer than four times.
- The vast majority (over 92%) of Alberta youth reported never having used cocaine, crack, hallucinogens, inhalants, uppers, downers, club drugs, steroids, and heroin or opium.

- There were some other notable differences by grade when youth were asked if they ever used particular drugs over the past 12 months. Inhalants are a good example. Unlike other drugs, inhalants are more prevalent in the younger grades and tend to drop off as youth get older.
 - 6.8% of grade 7-9 youth in Alberta reported having used inhalants compared to 4.6% of grade 10-12 respondents.
 - In Ontario, the question was divided into "glue" and "solvents." The percentage of youth using glue was highest in grade 8 (5.7%) and those using solvents was highest in grade 7 (9.7%).
- 2.7% of grade 7-9 youth have used club drugs in Alberta but this rises to 7.6% in grades 10-12.
- Use of club drugs by Alberta youth (5.3%) was higher than in Nova Scotia (4.4%) but lower than Ontario (6.0%).
- Cocaine use among Alberta youth is low when taken as a whole (2.9%). However, this number increases in the higher grades.
 - 0.5% of grade 7-9 youth reported using cocaine at least once rising to 5.1% of grade 10-12 youth.
- Cocaine use by youth was higher in Ontario (4.3%) and Nova Scotia (3.9%).

GAMBLING

Adolescent gambling prevalence and the extent of youth problem gambling are only now beginning to be monitored and measured. There is not the same amount of comparable research available on gambling behaviour when compared to alcohol, tobacco, and other drugs.

Prevalence of Participation

- 41.2% of Alberta youth reported they have gambled in the last 12 months.
- Male youth participation in gambling is higher than female (53.4% vs. 32.1%).
- Aboriginal youth participation is higher than non-Aboriginal (41.4% vs. 34.4%).
- Youth gambling activity is highest in the Calgary region (46.3%) and the Central region (42.7%).
- For three gambling activities, youth reported participation greater than 20%: scratch tabs (30.8%), playing cards for money (23.0%) and betting on sporting events with a friend (21.1%).
- Gambling participation by Alberta youth followed similar trends in other provinces, however:
 - VLT play in Alberta at 3.3%, significantly lower than Ontario (7.7%) and Nova Scotia (7.4%), and
 - playing Sport Select is lower in Alberta (3.7%) compared to Ontario (10.3%) and Nova Scotia (9.6%).
- Most of the gambling activity among youth appears to be "socially acceptable" in many people's views.

Problem Gambling

The South Oaks Gambling Screen Revised For Adolescents (SOGS-RA) was used to assess hazardous or problem gambling behaviour. As shown in Figure 12:

- 5.7% of those surveyed are classified as hazardous gamblers.
- 3.8% of those surveyed are classified as problem gamblers.

Figure 12:
Percentage of Youth Classified at Different Levels of Hazardous or Problem Gambling.

Classification Level of Hazardous or Problem Gambling	%
Non-Gamblers - no gambling behaviour	58.8
Non-Problem Gamblers - Gamble with 0 or 1 of 12 possible problems reported	31.7
Hazardous Gamblers - gamble frequently with one problem OR gamble less frequently with two or more problems	5.7
Problem Gamblers - gamble daily OR gamble weekly with 2 or more problems	3.8

- When the Problem Gamblers group was further analyzed, the data indicated that there were notably higher percentages of youth who were:
 - male.
 - in higher grades.
 - Aboriginal.
 - from larger cities, and
 - from the Calgary region as compared to other regions.

RISK AND PROTECTIVE FACTORS

As noted earlier, *The Alberta Youth Experience Survey 2002* had two main objectives: one was to determine prevalence of use and abuse of alcohol, tobacco, other drugs, and the degree of participation in gambling activity; and secondly, to investigate key risk and protective factors for Alberta youth.

Many questions can be asked when considering this important second area. For example:

- "Does a particular pattern of alcohol use have a relationship with certain risk or protective factors?"
- "What risk factors are the strongest when looking at drug use?"
- "What are the patterns associated between risk factors and gambling?"
- "What protective factors appear to have a positive influence on young people's behaviour as it relates to attitudes towards substance use and gambling?"

- "How many risk or protective factors are involved with the majority of our youth today?"
- "What are the most important or influential risk and protective factors as they relate to The Alberta Youth Experience Survey 2002?"

The Technical Report describes in detail the statistical analysis that was completed with regard to key risk and protective factors.

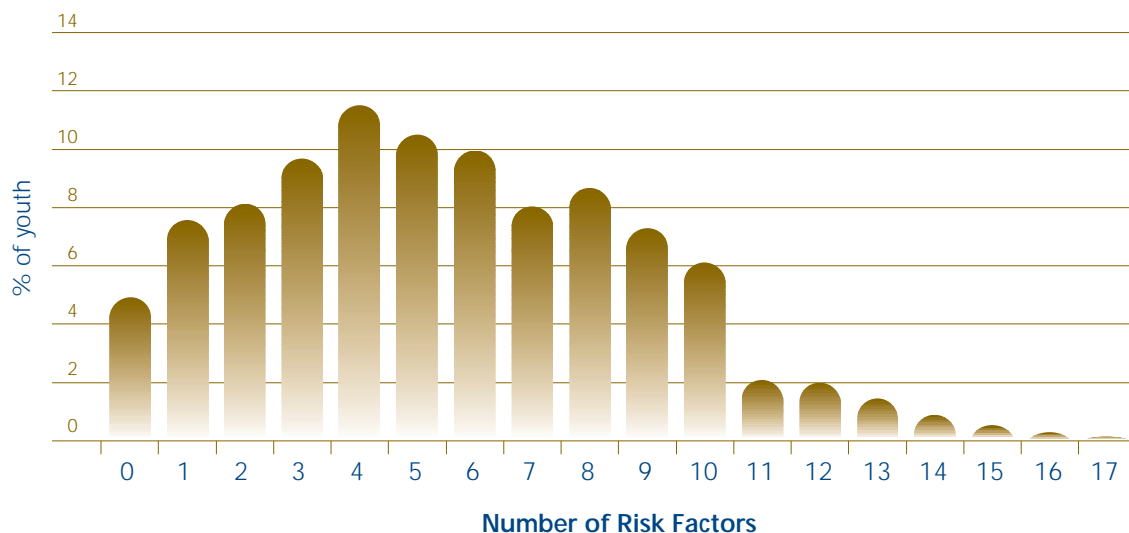
RISK FACTORS

The research literature indicates there are some 250 factors which can be associated with risk of use and abuse of alcohol, drugs, tobacco, and gambling. Nineteen key risk factors were studied in depth in this survey, grouped into five domains or life dimensions as noted in Figure 13.

Figure 13: Domains and Risk Factors

Domain	Risk Factors
Individual	<ul style="list-style-type: none"> ● Age ● Grade at first start <ul style="list-style-type: none"> ● alcohol ● tobacco ● cannabis ● gambling ● Ease of access to <ul style="list-style-type: none"> ● alcohol ● cigarettes ● cannabis
	● Peer risk behaviour
Family	<ul style="list-style-type: none"> ● Bonding and support <ul style="list-style-type: none"> ● with Mother ● with Father ● Family history of substance abuse ● Family smoking behaviour ● Parent approval of substance use ● Family discord
	● Disconnection from school
	● Poor grades
	● Early signs of leaving school
School	● Neighbourhood disorganization
Community	

Figure 14:
Total Number of Risk Factors Reported by Students



Total Number of Risk Factors

As shown in Figure 14, most Alberta youth reported the presence of a number of risk factors.

- 88.1% of youth reported between one and ten risk factors.
- The largest grouping of youth reported between three and six risk factors.
- 5% reported no risk factors.
- 7.1% reported more than ten risk factors.
- None of the youth reported more than 17 risk factors.

Cumulative Effects

Analysis was conducted to assess the cumulative effects of risk factors on past year use/participation for alcohol, tobacco, cannabis, magic mushrooms or mescaline, and the three predominant gambling activities.

Figure 15 shows that:

- Use of alcohol, tobacco, cannabis and magic mushrooms or mescaline increases with the number of risk factors that youth are exposed to.
- While use increases with the presence of risk factors, the majority of youth who have many risk factors present do not use substances.

Figure 16 shows the same pattern with regard to gambling activities.

Figure 15:
Cumulative Effects of Risk Factors on Substance Use in the Past 12 Months

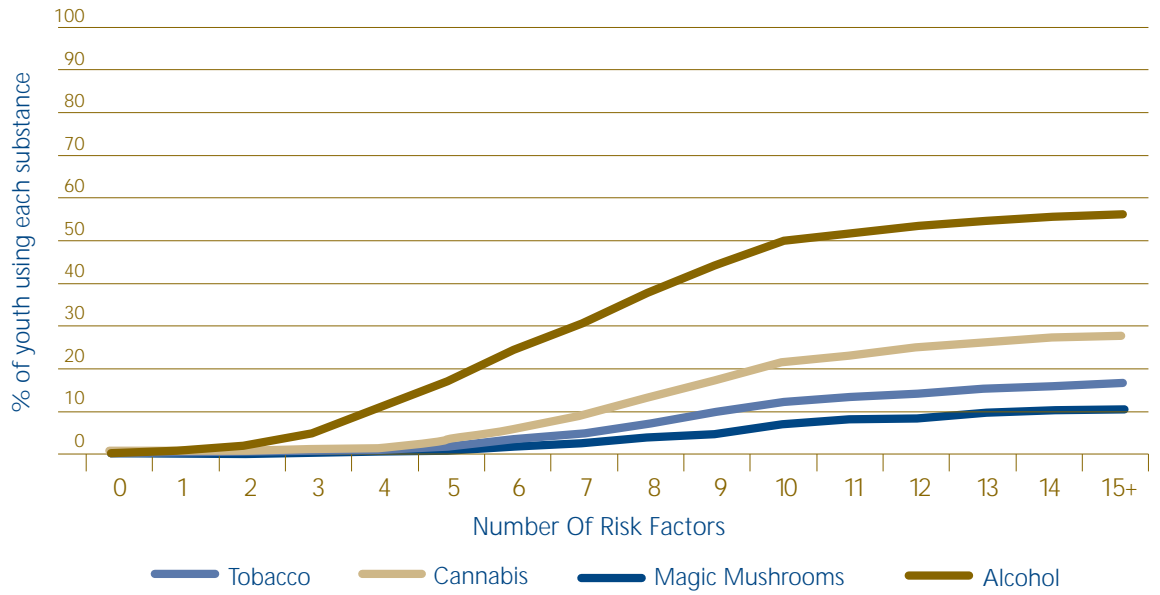
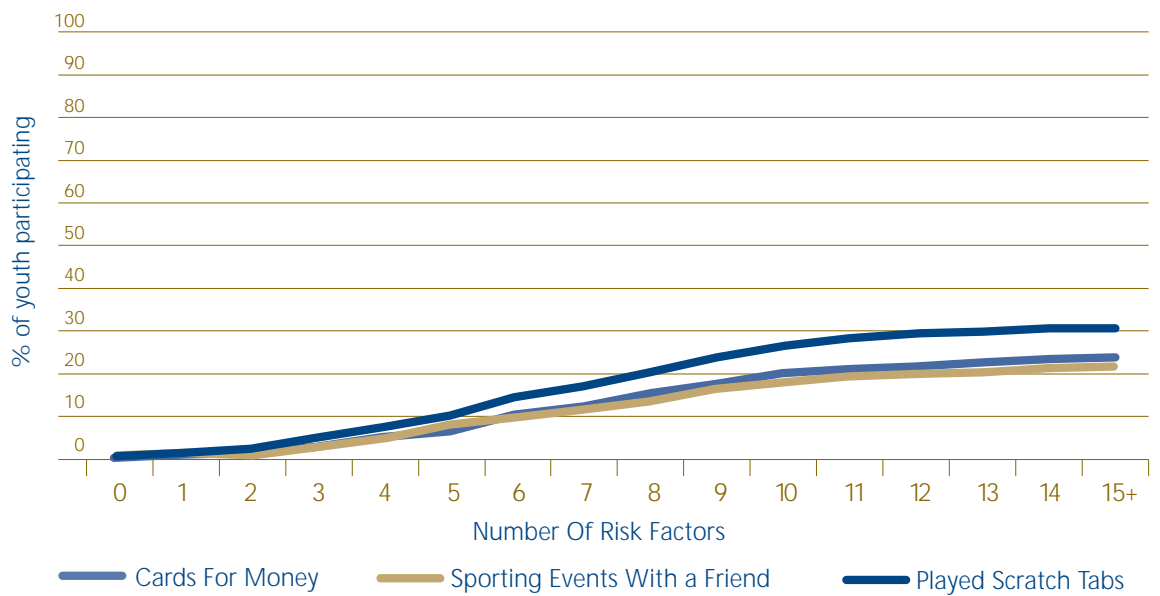


Figure 16:
Cumulative Effects of Risk Factors on Gambling in the Past 12 Months



Correlations of Frequency of Use/Participation and Risk Factors

The risk factors that are related to the frequency of substance use or participation in gambling are also related to harmful consequences and dependence. Rather than report all of the correlations for both use and abuse, this section covers only the correlations between risk factors and frequency of use/participation. The Technical Report includes further detail.

Moderate and high correlations between risk factors and frequency of use measures for alcohol, tobacco, cannabis and magic mushroom or mescaline are summarized in figure 17.

- Peer risk behaviour was a factor in all areas and had a particularly strong correlation with alcohol and cannabis use when considered in isolation from other factors. It is important to note here that other research indicates that parents have a strong influence on their children's choice of peers.
 - Age of the user, parental approval, poor school marks, school disconnection, ease of access to substances and grade at first start were also significant risk factors.
- With regard to gambling behaviour:
- The strength of the relationships between frequency of gambling in the three main gambling activities and risk factors, was low compared to the relationships between alcohol, tobacco, cannabis and magic mushroom or mescaline use and risk factors.

Figure 17:
Summary of Correlations Between Risk Factors and Frequency of Use Measures

	High	Moderate
Alcohol use	● Peer risk behaviour	<ul style="list-style-type: none"> ● Age ● Parent approval of use ● School marks ● School disconnection ● Ease of access to alcohol, cigarettes and cannabis
Tobacco use		<ul style="list-style-type: none"> ● Grade at first start - cannabis ● Peer risk behaviour
Cannabis use	● Peer risk behaviour	<ul style="list-style-type: none"> ● Ease of access to cigarettes and cannabis
Magic mushroom or mescaline use		<ul style="list-style-type: none"> ● Grade at first start - cannabis ● Peer risk behaviour

The Most Important Risk Factors for Harmful Use (Abuse) or Dependence

A series of specialized statistical analyses including Multiple Regression, were completed to determine the most influential risk factors for harmful use or dependence.

Figure 18 outlines the most important risk factors listed in order of influence for each category.

Figure 18:
The Top Five Risk Factors for Harmful Use or Dependence

Risk factor	Hazardous and harmful alcohol use (AUDIT)	Frequency of tobacco use	Indicators of potential cannabis dependence	Hazardous and problem gambling (SOGS-RA)
Age	●	●	●	●
Peer risk behaviour	●	●		●
History of family substance abuse	●		●	●
Family discord		●	●	
School disconnection	●			●
Grade at first use of cigarettes		●	●	
Low father's support		●		
Low mother's support	●			
Signs of leaving school early				●
Grade at first use of cannabis			●	

- Three important observations can be made with regard to the association between key risk factors and potentially serious problems:
 - Age of the user is the most common risk factor in all areas. As youth get older, they are exposed to more risk factors and use/participation is higher.

- Peer risk behaviour and family history of substance abuse are the next most common risk factors identified.
- Family discord, school disconnection and early use of cigarettes also present serious risks for youth.

PROTECTIVE FACTORS

Protective factors are aspects of living that have positive effects on people. In this study, protective factors are associated with positively influencing youth in terms of how they may use alcohol, drugs, and tobacco as well as how they may participate in gambling activities.

As with the case of risk factors, selected protective factors were analyzed using five domains of youth's lives.

Figure 19 outlines the eight protective factors which were investigated in the survey.

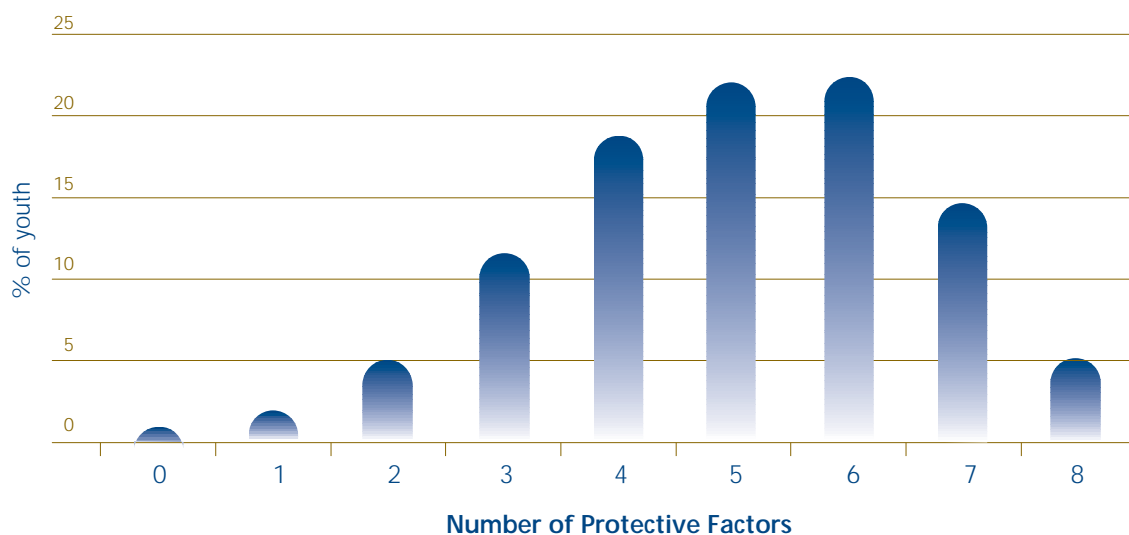
Figure 19: Domains and Protective Factors

Domain	Protective Factors
Individual	● Social skills
	● Participation in pro-social activities
Peer	● Peer influence on decision making
Family	● Parental monitoring
School	● School connection
	● High grades (80-100%)
Community	● Positive adults in neighbourhood
	● Availability of pro-social activities

Total Number of Protective Factors

The following figure shows that the majority of youth have a significant number of protective factors working in their favour.

Figure 20:
Total Number of Protective Factors Reported by Youth



- Less than one percent of the youth reported having no protective factors.
- 18% reported having one to three protective factors.
- 62.2% indicated having four to six protective factors.
- 19.2% reported having seven to eight protective factors.

Cumulative Effects

Figure 21 demonstrates that as the number of protective factors decreases frequency of use of alcohol, tobacco, cannabis and magic mushrooms or mescaline increases.

Figure 21:
Cumulative Effects of Protective Factors on Substance Use in the Last 12 Months

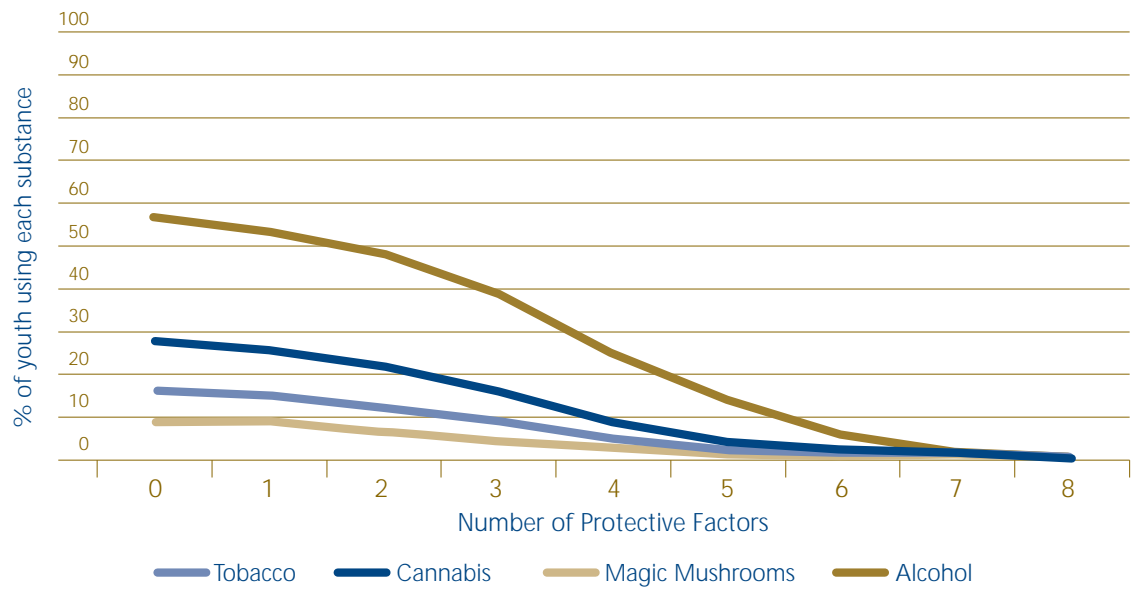
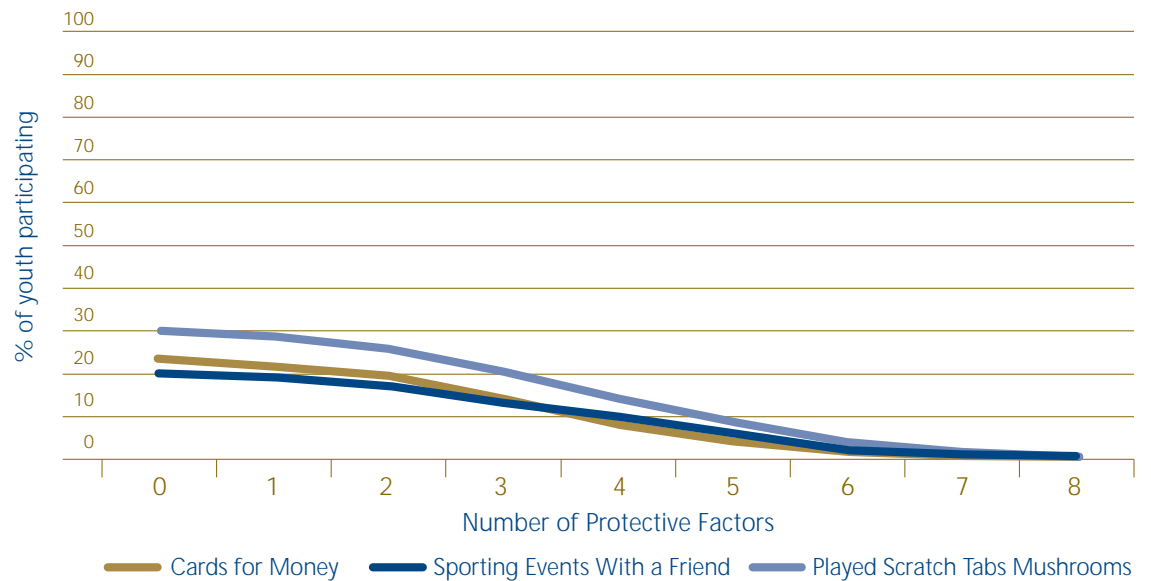


Figure 22 shows that the same pattern applies to gambling activities although not as strongly. The more protective factors involved, the less frequency of the three predominant types of gambling activities.

Figure 22:
Cumulative Effects of Protective Factors on Gambling Participation in the Last 12 Months



- As the number of protective factors increases, the cumulative percentage of youth who used alcohol, tobacco, cannabis and magic mushrooms and participated in the three gambling activities in the last 12 months decreases.
- Even among those who report fewer protective factors, a substantial proportion of youth do not drink, smoke, use drugs or gamble.

Correlation of Frequency of Use/Participation and Protective Factors

The protective factors that are related to the frequency of use or participation are also related to harmful consequences and dependence. Rather than report all of the correlations for both use and abuse, this section covers only the correlations between protective factors and frequency of use/participation. The Technical Report includes further detail.

Moderate and high correlations between protective factors and frequency of use measures for alcohol, tobacco, cannabis and magic mushrooms or mescaline are summarized in Figure 23.

Figure 23:
Summary of Correlations Between Protective Factors and Frequency of Use Measures

	High	Moderate
Alcohol use	● Social skills	● Parental monitoring ● School connection ● School marks
Tobacco use		● Social skills ● Parental monitoring
Cannabis use		● Social skills ● Parental monitoring
Magic mushroom or mescaline use		● Parental monitoring

- All of the protective factors were significantly correlated with each measure of use/abuse.
- Social skills and parental monitoring had the strongest protective relationships with each of the use/abuse measures.
- School connection and good school marks were also very significant.

With regard to gambling:

- Social skills and parental monitoring also had the strongest relationships with frequency of participation in gambling activities.

The Most Important Protective Factors for Harmful Use (Abuse) or Dependence

Figure 24 summarizes the most important protective factors against potential abuse for each of the areas in order of influence.

Figure 24:
The Top Five Protective Factors and Harmful Use or Dependence

Protective factor	Hazardous and harmful alcohol use (AUDIT)	Frequency of tobacco use	Indicators of potential cannabis dependence	Hazardous and problem gambling (SOGS-RA)
Parental monitoring	●	●	●	●
Social skills	●	●	●	●
Availability of pro-social activities		●	●	●
Participation in pro-social activities	●	●		●
Good school marks	●		●	
Connection to school		●		●
Positive adults in neighbourhood			●	
Peer influence on decision-making	●			

- Three important observations can be made regarding the association between key protective factors and potentially serious problems:
 - Parental monitoring and social skills were most important in all four areas of potential abuse, harm, or dependency. In other words, good parental monitoring and developed social skills are crucial in helping protect against potential dependency.
 - Availability of, and participation in, pro-social activities emerged as very important factors.
 - Good school marks and connection to school were also in the top factors.

SUMMARY OF KEY RISK AND PROTECTIVE FACTORS

To summarize, the top five risk factors for harmful use are: the older the adolescent, the degree of peer risk behaviour, extent of family history of substance abuse, extent of poor family functioning and disconnection from school. The five key protective factors are good parental monitoring, good social skills, the availability of and participation in pro-social activities and good school marks. Additional notable factors are also listed in order in Figure 25.

Figure 25:
Summary of Key Risk and Protective Factors for Substance and Gambling Abuse Listed in Order of Influence

Risk Factors	Protective Factors
Age	Parental monitoring
Peer risk behaviour	Social skills
Family history of substance abuse	Participation in pro-social activities
Family discord	Availability of pro-social activities
School disconnection	School marks
Poor father's support	School connection
Grade at first use of cigarettes	Positive adults in neighbourhoods
Grade at first use of cannabis	Peer influence on decision making
Signs of leaving school early	
Poor mother's support	



CONCLUSION

The Alberta Youth Experience Survey 2002 provides valuable baseline information about the use of alcohol, tobacco, and other drugs by Alberta youth and participation in gambling activity. The survey identifies the proportion of youth who have dependency risks as a result of patterns of alcohol, tobacco, and drug use as well as gambling behaviour. The project also, importantly, identifies the major risk and protective factors associated with youth involvement in these areas.

The survey shows that current Alberta adolescent substance use and gambling participation follows typical North American patterns but is lower, in most cases, than in the other Canadian jurisdictions of Ontario and Nova Scotia. The research confirms that friends, family and an individual's school and community are key factors influencing substance and gambling abuse for Alberta youth.

Young Albertans and their families can gain much needed useful insights from this survey. AADAC, other government departments, schools, and community agencies and organizations associated with Alberta youth, need to examine the findings of this study and reaffirm or redesign programming responses in support of Alberta's children. The potential benefits for our kids are limitless.



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PARTICIPATING SCHOOL JURISDICTIONS

AADAC acknowledges the support of the following school jurisdictions in completing *The Alberta Youth Experience Survey 2002*. Without the support of these boards, their staff and students, the study would not have been possible.

Aspen View Regional Division No. 19

Black Gold Regional Division No. 18

Buffalo Trail Public Schools Regional Division No. 28

Calgary Roman Catholic Separate School District No. 1

Calgary School District No. 19

Chinook's Edge School Division No. 73

Christ the Redeemer Catholic Separate Regional Division No. 3

Clearview School Division No. 71

East Central Alberta Catholic Separate Schools Regional Division No. 16

Edmonton School District No. 7

Elk Island Catholic Separate Regional Division No. 41

Elk Island Public Schools Regional Division No. 14

Foothills School Division No. 38

Fort McMurray Roman Catholic Separate School District No. 32

Fort Vermilion School Division No. 52

Golden Hills School Division No. 75

Grande Prairie Roman Catholic Separate School District No. 28

Grande Yellowhead Regional Division No. 35

Grasslands Regional Division No. 6

Greater Southern Public Francophone Education Region No. 4

Greater St. Albert Catholic Regional Division No. 29

High Prairie School Division No. 48

Holy Family Catholic Regional Division No. 37

Horizon School Division No. 67

Lethbridge School District No. 51

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Northland School Division No. 61

Palliser Regional Division No. 26

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Prairie Rose Regional Division No. 8

Red Deer Catholic Regional Division No. 39

Red Deer School District No. 104

Rocky View School Division No. 41

St. Albert Protestant Separate School District No. 6

Westwind School Division No. 74

Wolf Creek School Division No. 72