GOVERNMENT OF BERMUDA
Ministry of Justice
Department for National Drug Control

NATIONAL SCHOOL SURVEY 2011


Report of the
Survey of Middle and Senior School Students
on Alcohol, Tobacco, Other Drugs, and Health

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Report of the

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FOREWORD

"Drugs are tearing apart our societies, spawning crime, spreading diseases such as AIDS, and killing our youth and our future"

~ Kofi Annan (2003)

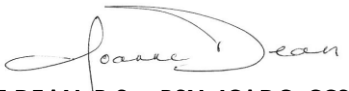
This report exemplifies the third implementation of a school survey among middle and high school students in Bermuda. You will find that the report paints a clear picture of the nature and magnitude of alcohol, tobacco, and other drugs (ATODs) use among Bermuda's youth. It further provides information on the levels of protection and risk experienced by young people, as well as antisocial behaviours with which they may be involved.

Substance abuse has impacted our Island extensively. In 2007, the Government of Bermuda made a conscious decision about its approach to substance abuse with the launch of the first Framework for the National Drug Control Policies and Master Plan 2007-2011. The Master Plan supports a balanced approach between demand reduction efforts and supply reduction efforts and views substance misuse and abuse as a public health challenge. As a result, various action items related to drug prevention among young people were embedded in the National Drug Control Master Plan aimed at "stopping use before it starts". The Department for National Drug Control (DNDC) understands that the effectiveness of policies and programmes, aimed at "stopping use before it starts", depends on the quality of information available from national surveys and reporting systems.

This report is one of the first steps in making us more aware of the current patterns of drug consumption amongst youth and involvement of young people in antisocial behaviours. The data has been obtained from students within public, private, and home schools and is presented with narrative overviews about each topic which includes tables and charts. The data is intended for the use by media, addiction researchers, teachers, prevention specialist, law enforcement officials, policy makers, and others, to enhance existing efforts and to identify possible gaps in addressing alcohol, drug misuse, and anti-social behaviours affecting our young people.

Bermuda's youth must receive clear and concise messages that no use of alcohol, tobacco, or other drugs is acceptable. This requires a total community effort. Drugs have become a deeply ingrained part of our daily lives and prevention cannot occur unless there is change in our social attitudes toward alcohol and drug misuse. As the leader in efforts to reduce alcohol abuse and drug misuse, the DNDC will continue to build networks to enhance coordination and cooperation among schools, treatment agencies, law enforcement, and others involved in addressing the problems caused by substance abuse in Bermuda as well as to develop data sources that can guide effective programming and service development.

The DNDC Team would like to take this opportunity to thank all those persons who contributed to the success of this third National School Survey.



JOANNE DEAN, B.Sc., BSN, ICADC, CCS
Director
Department for National Drug Control
March, 2012

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NOTES, SYMBOLS, AND ABBREVIATIONS

Readers should note that all prevalence proportions presented in the accompanying tables are rounded to one decimal place. A point (.) is used to indicate decimals. Zero (0) means a magnitude of zero or less than half the unit employed. Where the figure is 0.0% appears it does not mean that no one has used the drug, rather it means that in this category no respondent reported use. Details and percentages in tables do not necessarily add to totals on account of rounding. The data contained in this report are themselves subject to future revision. Other symbols and abbreviations used are as follows:

-	Not Applicable
%	Percent
ATOD	Alcohol, Tobacco, and Other Drugs
CASA	National Center on Addiction and Substance Abuse
CDC	Centers for Disease Control and Prevention
CICAD	Inter-American Drug Abuse Control Commission
CSAP	Centre for Substance Abuse Prevention
DNDC	Department for National Drug Control
n	Number of Survey Respondents
NIDA	National Institute on Drug Abuse
NIH	National Institute of Health
NSDUH	National Survey on Drug Use and Health
OAS	Organisation of American States
r	Pearson's Correlation Coefficient
RPFs	Risk and Protective Factors
SAMHSA	Substance Abuse and Mental Health Services Administration
SPSS	Statistical Package for the Social Sciences
UNODC	United Nationals Office on Drugs and Crime
US	United States (of America)

EXECUTIVE SUMMARY

About the Survey

The National School Survey 2011of Middle and Senior Schools on Alcohol, Tobacco, Other Drugs (ATODs) and Health, was a collaborative effort between the Department for National Drug Control and the Department of Education. The survey was implemented to study changes in the use of licit and illicit substances; monitor trends in the prevalence and frequency of drug use; examine the prevalence and frequency of antisocial behaviours; assess sexual health knowledge and behavoiurs; determine changes in the level of risk associated with ATOD use, delinquency, and other problem behaviours in adolescents; and discover the levels of protective factors that help guard against those behaviours.

The survey questionnaire comprised two sections: 1) ATOD Consumption and 2) Risk and Protective Factors. Section 1 of the questionnaire was adopted from the Inter-American Drug Abuse Control Commission (CICAD) School Survey questionnaire, while section 2 of the questionnaire was adopted from the Communities That Care Youth Survey, which was developed by the Centre for Substance Abuse Prevention (CSAP) of the US Department of Health and Human Services. Questions related to sexual health and energy drink consumption were also added.

Survey implementation occurred the week of October 10th – 14th, 2011, during one class period (approximately 50 minutes).

Demographic Profile of Survey Respondents

The target population comprised all students in grade levels M2 through S4 (10-18 years), attending public, private, and home schools on the Island. In total 3,182 students (53% females, 46% males) completed the self-administered questionnaire. Majority of respondents were Black (62.7%), and English was the primary language spoken (95.9%).

Alcohol, Tobacco, and Other Drug Use

Overall, 76% (2,418) of all survey respondents have reported use of at least one drug in their lifetime. Students recorded the highest lifetime prevalence-of-use for energy drinks (65.5%), alcohol (54.9%), marijuana (21.2%), inhalants (12.1%), and cigarettes (10.7%). Other lifetime prevalence ranges from a low of 0.4% for heroin to a high of 3.9% for cannabis resin. Current alcohol use for all survey respondents ranges from a low of 3% among M2 students to a high of 41% among S4 students. Current use of marijuana ranges from a low of 1.3% among M3 students to a high of 14.4% among S4 students; while for cigarettes, current use ranges from a

low of 0.3% for M2 students to a high of 5.5% for S4 students. Inhalant current use ranges from a low of 0.6% for S3 students to a high of 3.8% for M3 students. Gender differences were apparent as males were more likely to use cigarettes and marijuana for both lifetime (11.1% and 23.5%) and current (2.5% and 10%) use periods; while alcohol and inhalant use were more prevalent among females for both lifetime (57.3% and 13.1%) and current (19.8% and 2.8%) use periods.

The majority (1,266) of lifetime users of alcohol, approximately 3 out of every 4, have reported recent use of alcohol (use in the past 12 months). Current users of alcohol reported that they most often drink at "*other social events*" (6.9%), "*a friend's house*" (4.7%), or at "*home*" (3%). Almost half (294) of the current users of alcohol have reported that they usually get it from "*friends*" (9.2% of all survey respondents). While for lifetime users of marijuana, 14.6% reported using marijuana in the past 12 months, with 6 out of every 10 indicated they usually get it from friends. The majority of current marijuana users reported that they most often use it "*at a friend's house*" (2.6%), "*at home*" (1.8%), or at "*the corner/block*" (1.3%).

When it came to the use of prescription drugs, overall lifetime prevalence of tranquilizers (without medical prescription) was reported at 0.8% and stimulants at 1.7%; while current use was indicated at 0.4% for both tranquilizers and stimulants.

Energy drink consumption was remarkably high among respondents. Overall, lifetime use was reported at 65.5% and current use at 31.7%. Most students (1,018 or 48.8%) who reported that they have used energy drinks in their lifetime indicated that they used these drinks "*before or after sporting events*" (32%) and at least "*once per month*" (30.7%). One-quarter (25.8%) or 1 in every 4 of these students has consumed a mixture of energy drinks with alcohol.

In the assessment of age of onset of ATOD use, average age of initiation of drug use ranges from a low of 9.3 years for inhalants to a high of 13.8 years for hashish. Alcohol use began around 12.1 years, cigarette use at 12.5 years, and marijuana use at 13.4 years, on average. Students in earlier grades, like M2, began use of inhalants and cigarettes much earlier than students in later grades. Males indicated first use of inhalant as early as 9 years old and use of hallucinogens as late as 14.3 years; whereas females began use of inhalants as early as 9.6 years old and use of hashish as late as 14.3 years.

Of all drugs evaluated, marijuana seemed to be the easiest drug to obtain (40.3%), in contrast to ecstasy (19.3%) and crack (19.5%), the drugs most "*impossible to obtain*". About one-fifth (16.9%) of all survey respondents reported that they were offered to buy or consume marijuana in the last 30 days. When students were asked about their curiosity to try an illicit drug, 16.1% said they were curious to try an illegal drug; while 6.5% reported they would seize the opportunity to try an illicit drug if presented.

When assessed on a range of perceptions of health risks, the majority of students (92%) perceived "*smoking cigarettes frequently*" to be the most harmful behaviour when compared to alcohol or marijuana use; whereas "*smoking marijuana sometimes*" is perceived to be harmful by 76.7% of survey respondents.

Risk and Protective Factor Profile

A range of percentile scores[1] were observed across the 13 protective factor[2] scales ranging from 41 to 84, with an average score of 70. The three lowest proportions were for: *Community Opportunities for Prosocial Involvement (41)*, *Religiousity (43)*, and *Belief in Moral Order (44)*. Students reported the three highest overall proportions for: *School Opportunities for Prosocial Involvement (84)*, *Family Rewards for Prosocial Involvement (84)*, and *School Rewards for Prosocial Involvement (83)*.

The range of percentile scores on the 25 risk factor[3] scales was 7 to 72, with an average score of 26. The three highest proportions on the risk factor scales were: *Sensation Seeking (72)*, *Transitions and Mobility (60)*, *Friends' Use of Drugs (54)*, and *Family History of Antisocial Behaviour (54)*. The three lowest proportions of risk factor scales were: *Parental Attitudes Favourable toward ATOD (7)*, *Gang Involvement (8)*, *Favourable Attitudes toward Antisocial Behaviour (8)*, *and Poor Family Management (8)*, and *Low Perceived Risks of Drug Use (8)*.

Outcome Measures

In addition to protective and risk factors, students were assessed on a variety of outcome measures, such as depression, carrying a handgun, and other antisocial behaviours. Scores on the *Depression* scale range from a low of 30% among M2 students to 39% among S2 and S4 students. Across all grades, "*Attacking Someone with Intent to Seriously Harm*" was reported at 21%, making it the most prevalent of the 11 behaviours; and "*Being Suspended from School*", the second most prevalent antisocial behaviour at 16%. Students reported low levels of participation in "*Taking a Handgun to School*", "*Carrying a Handgun*", and "*Selling Illegal Drugs*".

Relationships with ATOD Use

A few relationships were explored about the perception of health risks with alcohol and marijuana and the use of these drugs. Students' perception of the risk of consuming alcohol was associated with his or her use of alcohol. For example, of the 1,426 students who indicated that drinking alcohol frequently is "*very harmful*", 42.6% consumed alcohol in their lifetime, and 78.1% of students who perceived it to be "*slightly harmful*" have, in fact, consumed alcohol. Overall, 55.3% of students who indicated some degree of harm still consumed alcoholic beverages in their lifetime. The same relationship exists between perception of harm and current use, although a

[1] Percentile scores range from 0 to 100. For example, a score of 75 indicates that 75% of respondents reported a lower score and 25% reported a higher score. It is better to have lower risk factor scale scores and higher protective factor scale scores.

[2] Characteristics that are known to decrease the likelihood that a student will engage in problem behaviours (substance abuse, depression and anxiety, delinquency, teen pregnancy, school dropout, or violence). They encompass family, social, psychological and behavioural characteristics.

[3] Characteristics in the community, family, school, peer, and individual's environments that are known to increase the likelihood of a student engaging in problem behaviours.

smaller proportion (31.3%) of current users who indicated "*very harmful*", still consumed alcohol. Overall, 45.5% of all current users of alcohol who perceived some level of harm still used alcohol in the past 30 days.

When it came to marijuana use an inverse relationship was observed; as students perceived "*smoking marijuana sometimes*" or "*frequently*" to be harmful, their use of it tended to decrease. Of the 1,201 students who indicated that "*smoking marijuana sometimes*" is "*very harmful*", 93.1% have never used marijuana. Overall, 83.2% of students who indicated some degree of harm have not used marijuana in their lifetime. Similarly, 63.1% of current users who viewed "*smoking marijuana sometimes*" to not be very harmful, have indicated use in the past month; while 66.7% who perceived the risk to be "*very harmful*" did not use marijuana in the preceding 30 days.

Another relationship explored was between consumption of alcohol and sexual activity. Of the 1,747 students who indicated lifetime consumption of alcoholic beverages, 46.3% have had sexual intercourse, while the majority (87.2%) of the students who never consumed alcohol, also had never engaged in sexual activity. A strong positive relationship ($r = 0.408$) exists between lifetime consumption of alcohol and students engaging in sexual behaviours indicating that as students consumed more alcohol, they tended to be more engaged in sexual activities.

Implication for Prevention Programmes

While the results indicate that substance use continues to be a public health issue among young Bermudians, they also reflect an overall decline in consumption over the past four years (*see Appendix D*). Recommendations for programmes addressing various stages of use, and normative education, have been suggested to foster a holistic approach to drug prevention. Persons working with young people are encouraged to implement, evaluate, and monitor programmes for effectiveness. One of the goals for Prevention in the 2007-2011 National Drug Control Master Plan was to provide research-based prevention programmes to foster positive, healthy lifestyles among youth, equipping them to resist the use of alcohol, tobacco, and other drugs. It is clear that these efforts should continue.

CHAPTER 1

Introduction

1.1 Background

The National School Survey 2011of Middle and Seniors Schools on Alcohol, Tobacco, Other Drugs (ATODs) and Health, was a collaboration between the Department for National Drug Control and the Department of Education. The year 2011 marked the third round of a school-based survey among Bermuda's young people. The two previous surveys, administered in 2003 and 2007, were under the *Communities That Care* programme of the Center for Substance Abuse Prevention (CSAP) in the office of the United States Government's Substance Abuse and Mental Health Services Administration (SAMHSA). These previous surveys were executed with the assistance of Rothenbach Research and Consulting, LLC.

This needs-assessment tool, a combination of the school survey developed by the Inter-American Drug Abuse Control Commission (CICAD) and the Communities That Care Youth Survey, was designed to help communities plan and implement successful prevention programmes and targeted middle and senior school students within public, private, and home schools who were between 12 to 18 years old. This is the first time group home schools have been included.

The following report describes the administration and results of the survey in addition to recommendations for programme and policy formation and reform. The findings are presented in four separate sections: 1) ATOD prevalence of use, 2) risk and protective factors, 3) outcome measures, and 4) relationships with ATODs use.

1.1.1 The Use of School Surveys

There are many traditional methods (face-to-face or telephone interviews) and new technologies (web-based or computer assisted interviewing) used to survey populations. According to the United Nations Office on Drugs and Crime (UNODC), school surveys are the most efficient and frequently used method to collect information on alcohol, tobacco, and drug use prevalence[4].

Several benefits associated with this assessment method are usually provided. Firstly, given the current economic challenges facing our community, an advantage of school surveys is that they are cost-effective and relatively easy to conduct. Appropriate schools and classes are usually easily selected and students are available in the classroom during the school day. Instead of contacting randomly selected individuals, it is possible to reach a large number of students in one session.

Secondly, research shows that youths are less likely to disclose drug use at home than at school, whether in a household face-to-face interview or over the telephone.[5] Students also indicated that data collection in school is more confidential than answering a questionnaire or being interviewed at home, where parents may be present in the next room.

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[4] United Nationals Office on Drugs and Crime. (2003). ***Conducting School Surveys on Drug Abuse. Global Assessment Programme on Drug Abuse Toolkit Module 3.*** p. 5. http://www.unodc.org/documents/GAP/GAP%20Toolkit%20Module%203%20ENGLISH.pdf (accessed November 28, 2011).

[5] Ibid. p. 6.

Thirdly, an added benefit of school surveys is that the mode of data collection is relatively easy to standardise and control. If students trust school staff, teachers or other members of staff, such as school nurses, can administer the questionnaires to the students.[6]

The fact that students represent age groups in which the onset of different substance use is likely to occur, it is important to monitor the prevalence rates of such use over time. This provides additional support for the use of school surveys to study ATOD consumption.

Finally, the response rate in school surveys is usually high. This rate in most studies is equal to the number of students present in class on the day of data collection; refusals are uncommon in most surveys. It is therefore not uncommon for school surveys to have a response rate of over 90%, while other forms of epidemiological surveys often have a response rate of 70% or less.[7]

1.2 Objectives

The National School Survey 2011 serves many purposes. Among them is to study changes in the use of licit and illicit substances; monitor trends in the prevalence and frequency of drug use; examine the prevalence and frequency of antisocial behaviours; assess sexual health knowledge and behavoiurs; determine changes in the level of risk associated with ATOD use, delinquency, and other problem behaviours in adolescents; and discover the levels of protective factors that help guard against those behaviours. In recent years, Bermuda has experienced changes in public opinion toward alcohol, tobacco, and other drug use. Much of our current upheaval in attitudes is concentrated in today's youth.

The findings presented in this report are useful to the Department for National Drug Control, its stakeholders, and policymakers at all levels of government to: improve drug abuse prevention and intervention programmes, understand the risk and protective factors most in need of attention in the community, monitor progress toward national health goals, and encourage healthy drug-free lifestyles among Bermuda's youth.

1.3 New Survey Items

Since the administration of the 2007 school survey, three new peer-individual protective factor scales have been added: *Prosocial Involvement, Rewards for Prosocial Involvement, and Interaction with Prosocial Peers*. In addition, one statement on the *Gang Involvement* scale (*Think of your four best friends, how many of your best friends have been members of a gang?);* one statement related

[6] T. Bjarnason. (1995). Administration mode bias in a school survey on alcohol, tobacco and illicit drug use. ***Addiction, 90***(4), 555-560. p. 558.

[7] D. A. Dillman, G. Phelps, R. Tortora, K. Swift, J. Kohrell, J. Berck, & B. L. Messer. (2009). Response rate and measurement differences in mixed-mode surveys using mail, telephone, interactive voice response (IVR) and the Internet. ***Social Science Research, 38***, 1-18. p. 15.

to the *Low Academic Performance* scale *(Putting them all together, what were your grades like last year?)*; three statements on the *Antisocial Behaviour* Outcome Measure (*How many times in the year have you… stolen something worth more than $5, purposely damaged or destroyed property that did not belong to you, taken something from a store without paying for it*); as well as two new sections related to *Sexual Health* and consumption of *Energy Drinks*, were included. Items related to sexual health were added as a wide body of research indicates an association between ATOD consumption and risk of sexually transmitted infections. Additionally, energy drink consumption, with and without alcohol, is a new area of interest mainly because of the health implications associated with consuming high concentrations of caffeine. As such, no direct comparisons can be made between the results of these new items and previous survey data.

1.4 Survey Limitations

The National School Survey 2011 provides descriptive data on the what, who, where, and when of self reported behaviours in four major categories. The questions of why and how cannot be answered by this survey. By definition a school survey is a study of young people enrolled in the educational system of a particular country. There are, of course, some disadvantages associated with school surveys.

One of the most obvious relates to the target population. Previous surveys of the adult Bermuda population[8] demonstrated that when adults are asked about their alcohol and drug use, they tend to underestimate their consumption. There are many reasons for this; one of which is social desirability or the tendency of respondents to give answers that they think are either consistent with researchers' expectations or that will make them look better in the eyes of the researchers. By contrast, young people may overestimate their drinking habits, for example, if they feel that drinking is associated with adult behaviour or is expected by their friends. The risk of receiving inaccurate responses is probably higher if the data collection setting is less formal, that is, if the student thinks that classmates might be able to see their responses. There is strong evidence from many studies, however, that data collected through school surveys have a high level of reliability and validity. To minimise the effects of overestimation a very large population frame was utilised. Additionally, consumption questions were asked in a variety of ways as a means of confirming previous responses. As this survey was based on self-reported data, the results should therefore be interpreted with caution.

Furthermore, the data can only be generalised to the population that is defined in the representative sample: public, private, and group home school students in grades M2 to S4. Students who were absent on the day of survey administration, special education classes, and schools for students with behaviour issues are not represented. Also, youths who dropped out of school were not included. It is important to note that students outside the middle and senior school system can be expected to differ from students within the educational system, not only in terms of

[8] Department for National Drug Control (2010). ***National Household Survey 2009.*** Government of Bermuda.

prevalence rates of alcohol and drug use, but also in terms of social and economic status. Additionally, among those students absent from school and those who have dropped out of school, it is likely that a higher proportion of individuals would be taking drugs or drinking a lot of alcohol. Non-response to survey items may also present a limitation, as it could be a source of bias in the survey.

Since the *Communities That Cares Survey* was implemented in 2003, there have been new survey items added to the questionnaire. For example, in the 2007 *Communities That Cares Survey* there was a question related to "*age of first use*". This key indicator was included to provide researchers with a gauge of early initiation of substance use. In National School Survey 2011, new items related to prosocial involvement, antisocial behaviour, energy drinks, and sexual health were added (*see Section 1.3*). The addition of these items limits the ability to make comparisons with historical data.

There were apparent setbacks related with the administration of the survey. All participating schools were expected to administer the survey during the week of October 10th -14th, 2011; however, there were delays in survey implementation in two schools which resulted in survey implementation the following week. Literacy issues posed a challenge to a few students in completing the questionnaire on their own; and, therefore, teachers were permitted to verbally read the survey questions aloud. Students of one private middle school did not participate in the survey, as it was determined by the school's board that due to the nature of the survey questions consent would not be given.

Lastly, the survey results are presented as a proportion by grade level and overall. A determination, therefore, of causal links between ATOD use and antisocial behaviors or sub-group variations in substance use were not assessed. Additionally, no comparisons were made of poly drug use.

CHAPTER 2

Methodology

Survey Design

The survey was administered during the week of October 10th – 14th, 2011, to middle and senior school students in Bermuda. As noted in Section 1.4, two schools did not administer the survey during this week. More specifically, one school did not complete the consent process while, in the other, the majority of students were abroad on a field trip. These schools conducted the survey on October 17th and 21st, respectively. The survey design is briefly described in the sections below and in Figure 2.1.

2.1 Population Coverage

The survey targeted 3,794 students, enrolled in 29 schools (7 public schools, 6 private schools, and 16 home schools); in two school phases: (1) middle school grade levels M2 and M3 (excluding M1) and (2) senior school grade levels S1 to S4 (*see Appendix B*). According to the Department of Education, these were the operational schools for the 2011/2012 academic year. The 7 public schools comprise of 2 senior schools and 5 middle schools. This is the first time the National School Survey was conducted among home schools. Students' ages in the M2 to S4 grades correspond to approximately 12 to 18 years, although there were some students who were 10-11 years old and a few 19 year old students within these grades (*see Appendix A*).

The entire M2 to S4 student population was targeted for the survey since full coverage is known to eliminate sampling error and to provide data on all the students in the target population. In this way, a low margin of error was obtained, that is, ±1%, and high confidence. This is the range, or confidence interval, in which the average population opinion is expected to lie.

2.2 Data Collection

At the beginning of the planning process, early in 2011, the Ministry of Education was informed of the opportunity to collaborate on the National School Survey. Schools' principals and administrators were formally notified at the start of the 2011/2012 academic year, of the scheduled survey, the staff and time requirements of the schools; and were asked to inform the DNDC of their school's participation. Of the 29 schools on record, only 25 indicated their interest to be part of this initiative. The 4 schools which did not participate are home schools with few students whose parents did not consent to them participating in the survey. Also, one private school did not allow its M2 and M3 students to be surveyed, on the grounds that some of the questions were not suitable for this age group.

Data collection for the survey was carried out from Monday, October 10th – Friday, October 14th. Two schools administered the survey in the following week for reasons mentioned above. The paper and pencil method was utilised to capture the self-reported responses.

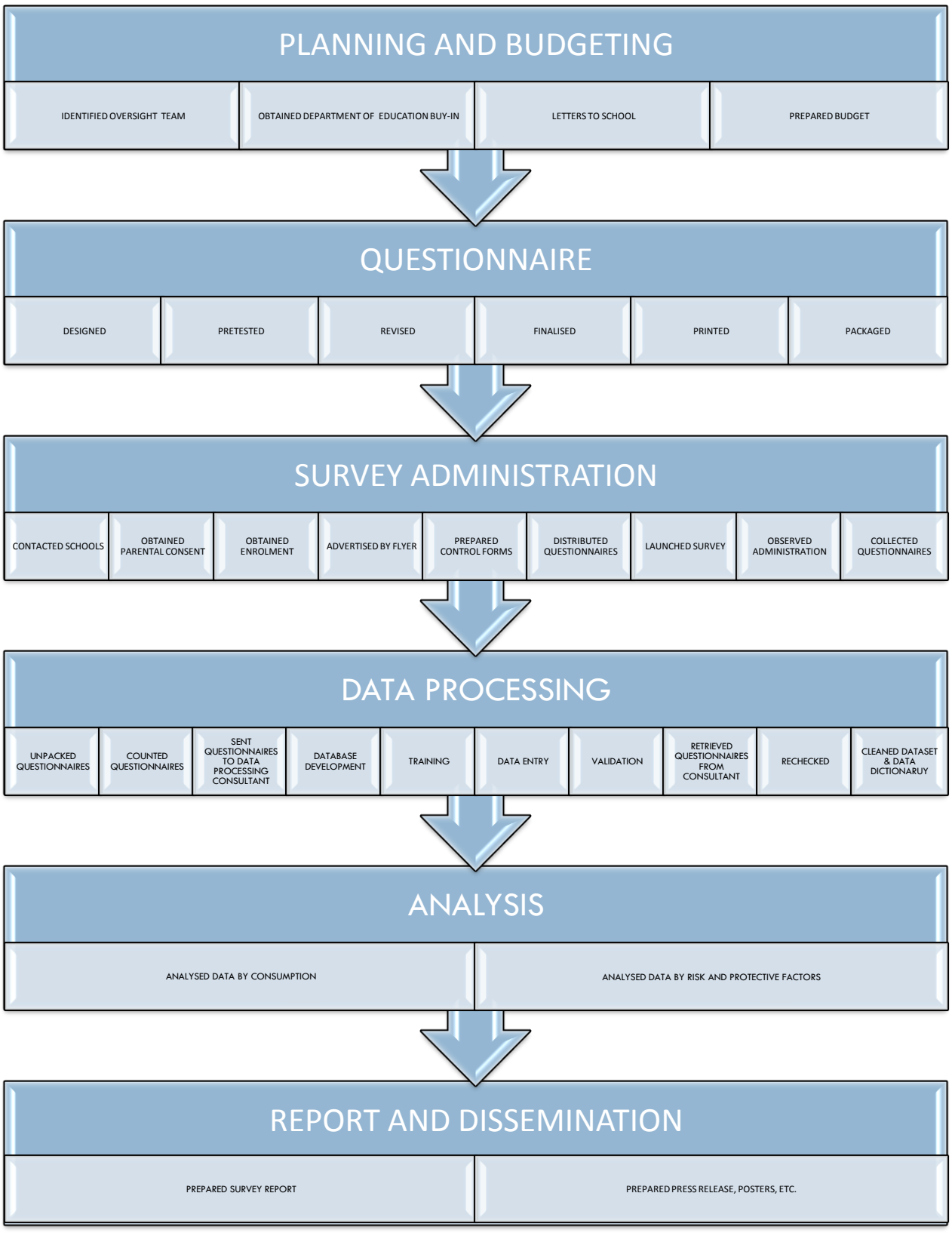

Figure 2.1. Survey design steps.

Supervision and Control

The project team for the survey consisted of staff from the Department for National Drug Control, who worked closely with an assigned contact person (school survey coordinator) from within each school. The DNDC was mainly responsible for planning the survey, printing the questionnaires, providing logistical assistance to school survey coordinators, analysing the survey results, and preparing the survey reports.

2.2.1 Questionnaire Design and Testing

Instrument

The questionnaire comprised of two sections (*see Appendix H*). Section 1 of the questionnaire was adopted from the Inter-American Drug Abuse Control Commission (CICAD) School Survey questionnaire, which is a standardised instrument commonly used among Organisation of American States (OAS) Members and Caribbean countries for their National School Surveys. This part of the questionnaires contained the basic demographic questions and questions that measure reported ATOD consumption.


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Section 2 of the questionnaire was adopted from the Communities That Care Youth Survey, which was developed by the Centre for Substance Abuse Prevention (CSAP) of the U.S. Department of Health and Human Services. This section contained questions measuring a variety of risk and protective factors (RPFs) by using groups of survey items or indicators, which are called scales. It should be noted that some of the risk factors are measured with more than one scale. For the purposes of this survey and for ease of understanding by the target population, the specific terminologies of the scales were not used in grouping the questions. There were four (4) main domains for each of the risk and protective factors: Community, Family, School, Peer-Individual, in addition to Outcome Measures. The domains, scales, and outcome measures are delineated in Table 2.1.

In addition, the questionnaire also contained questions which assess a number of outcomes measure such as depression and antisocial behaviours including fighting, getting suspended from school, and selling drugs.

As outlined in Section 1.3, additional items were added to the questionnaire in this round of the survey. An entire section with an additional six (6) questions was added to the questionnaire to measure energy drinks consumption.

All of the questionnaire items were pre-coded with the exception of two open-ended questions.

Table 2.1
Risk and Protective Factor Scales and Outcome Measures

Domains	Scales	
Community	**Risk Factors**	**Protective Factors**
	1. Low Neighbourhood Attachment	1. Opportunities for Prosocial Involvement
	2. Community Disorganisation	2. Rewards for Prosocial Involvement
	3. Transitions and Mobility	
	4. Perceived Availability of Drugs	
	5. Perceived Availability of Handguns	
	6. Laws and Norms Favourable to Drug Use	
	7. Laws and Norms Favourable to Handguns	
Family	1. Family History of Antisocial Behaviour	1. Attachment
	2. Poor Family Management	2. Opportunities for Prosocial Involvement
	3. Family Conflict	3. Rewards for Prosocial Involvement
	4. Parental Attitudes Favourable Toward ATOD Use	
	5. Parental Attitudes Favourable to Antisocial Behaviour	
School	1. Poor Academic Performance	1. Opportunities for Prosocial Involvement
	2. Lack of Commitment to School	2. Rewards for Prosocial Involvement
Peer-Individual	1. Rebelliousness	1. Rewards for Prosocial Involvement
	2. Gang Involvement	2. Interaction with Prosocial Peers
	3. Favourable Attitudes Toward ATOD Use	3. Belief in Moral Order
	4. Favourable Attitudes Toward Antisocial Behaviour	4. Prosocial Involvement
	5. Sensation Seeking	5. Religiousity
	6. Peer Rewards for Antisocial Involvement	6. Social Skills
	7. Friends' Use of Drugs	
	8. Friends' Delinquent Behaviour	
	9. Intention to Use	
	10. Early Initiation of Drug Use	
	11. Low Perceived Risks of Drug Use	
Outcome Measures	1. Depression	
	2. Antisocial Behaviours	

Pretest

Despite the use of standardised instruments, some of the questions had to be tailored to the Bermuda context. In addition, this survey not only sought to measure ATOD consumption but also associated risk and protective factors. The new concern was that the combined questions may result in a questionnaire that was too lengthy for the target population. As such a pretest of the questionnaire was deemed essential to the survey process to check for readability, order, timing, overall respondent well-being and reaction, understanding of instructions, skip pattern, response categories, meaning of words, and general format and layout.

This activity was conducted at the end of May and the beginning of June 2011 with students from four (4) schools: two (2) public senior schools (Cedarbridge Academy and The Berkeley Institute), one (1) public middle school (Dellwood), and one (1) private school (Somersfield Academy). These schools were selected using convenience sampling and were then contacted for the pretest. They were informed of this activity, its purpose, and that students were needed. In addition, schools were advised that participants were to be representative of the school's demographics. Students were either self selected or were selected by the school to participate. A total of 25 students participated in the pretest, representing both sexes, the main ethnic groups, and most of the grade levels (*see Appendix* C). Each student was rewarded with a gift-certificate for his or her participation.

There were five (5) sessions. Two sessions were conducted in the schools during a class period and three (3) sessions were held at the DNDC where students were invited to participate in the pretest after the close of school.

Average response time ranged from 23 to 41 minutes, with individual completion time ranging from 20 to 48 minutes. Results from the pretest were used to modify and finalise the questions which were used in the survey. Specifically, instructions were clarified, examples of certain drugs were included, some questions were reordered for better flow, and certain response categories were modified or added. In addition, the results were used to plan the amount of time required by the schools to dedicate to this activity.

2.2.2 Survey Administration

Consent

Students' participation in the survey was voluntary but subject to the consent of a parent or guardian. Permission for students to participate in the survey was obtained through a passive consent procedure (that is, a parent or guardian of each student signs and returns the consent form only if refusing to allow the child to participate; otherwise, permission is considered to be granted). This method was chosen over the active consent procedure as it was thought that survey participation rate would not be seriously affected in this way. A passive consent form was sent to the school's contact person to be given to each student. The form was accompanied by a letter to the parent or guardian explaining the purpose of the survey, the anonymity and confidentiality of their child's participation, that non-participation will have no effect on the child's grades, among other relevant information. Students had one week in which to return the form to the school. In total, 216 (5.7%) students did not receive consent to participate in the survey.

Pre-Administration

Enrolment numbers were obtained from each school in order to obtain an accurate count of the number of questionnaires to be printed. The questionnaires were packaged in envelopes and boxes, accompanied by relevant control forms and instructions for the survey Administrators. These were delivered to the schools prior to each school's scheduled survey administration date.

In addition, the schools were provided with a flyer about the survey. They were asked to place it on their notice boards to remind the students of the survey or to use any other suitable means for students' attention.

Administration

The survey was administered in the classroom solely under the supervision of the teacher and required approximately one class period (50 minutes) to complete. In some instances, the administration extended a little beyond the one class period, for which the schools were accommodating. Most schools administered the survey during the advisory, home room, or assembly hall period. Each school's contact person received an approximate number of questionnaires in envelopes to match their enrolment at that time. Each classroom teacher was then given an estimated number of questionnaires for the students in attendance on that day for that class period along with the *Instructions for Survey Administrators*.

The teachers reviewed the instructions with their students. The instructions informed the students that there were no right or wrong answers. The instructions also explained the skip patterns and one example of a question (on parents' marital status) that may have posed difficulty and the meaning of the associated response categories. Both the teacher and the written instructions on the front of the questionnaire assured students that the survey was anonymous and confidential. Students were then asked to complete the survey and reminded to place the completed questionnaire in the envelope, which can be sealed to preserve confidentiality.

Student cooperation was generally good. The general pattern of behaviour was for initial comments and levity on the topic of

the survey but then the majority of students worked seriously on completing the questionnaire.

Staff of the DNDC observed the administration of the survey in a number of schools during the week to answer any questions that might arise. In two instances where there were literacy problems, it was necessary for the teacher to read the questionnaire aloud with the students to ensure that the questions were understood.

The school's contact person gathered all the questionnaires as well as completed the control forms for resubmission to the DNDC.

Post Administration

The completed questionnaires were then uplifted by the DNDC. They were retrieved from the envelopes, counted, recorded, and prepared to be sent to the data entry Consultant (Profiles of Bermuda). All discrepancies in the count and the numbers indicated by the schools were queried and reconciled.

2.3 Data Quality

Response Rate

Of the target population, a total of 3,182 students responded to the survey, accounting for a response rate of 83.7% (*see Appendix B*). This represents an increase in the response rate by almost 7% from the 2007 round of the survey.

Of the 16 home schools, 3 did not participate in the survey. These schools were of the view that with their small population, confidentiality and anonymity cannot be guaranteed or students simply did not want to participate (*see Section 1.4*). In addition, there were non-responses due to parents who did not consent to their child's participation in the survey (5.7%), students being absent or away from school on the day of the survey (6.4%), or students returning blank questionnaires (4.2%).

Validation

Approximately 6% (191) of the questionnaires were validated. This allowed for any possible data entry errors to be corrected. In addition, checks were made for exaggeration and these were excluded from the data set; for example, number of days of drug use greater than 31 days. Another validation check was done to eliminate responses on patterns of drug use which were logically inconsistent; for instance, if a student reported that he or she had used a drug in the past 30 days but had never used this drug in his or her lifetime.

Missing Data

Imputations were not made for missing answers since it would be difficult to ascribe responses founded on self-report. Hence, missing data was treated as "not-stated" and comprised part of the total response.

2.4 Data Processing

Responses to the survey questions were captured directly onto the questionnaire by the respondents. Data entry was contracted to an outside consultant. Steps were taken to ensure confidentiality and reliability of the process and outcome. The process spanned approximately 11 weeks and was done one week subsequent to survey administration (1 week for recruitment, training, and setup of the date entry screen; 4 weeks for manual data entry; and 6 weeks for data validation, cleaning, and documentation of the data entry steps and anomalies). No coding of the questionnaire was required since the questionnaire was pre-coded. To guard against transcription errors, care was taken in entering the responses from the paper questionnaires, unto the computer. Microsoft Excel was used on individual computers for data entry, which was seamlessly integrated into SPSS for data processing. The captured data file was then cleaned and 6% (approximately 191) of the questionnaires validated.

The completed cleaned and validated dataset was provided to the DNDC in SPSS format. Staff then performed the data analyses for this report. This included the generation of appropriate tables and descriptive statistics for inclusion in this final report.

2.5 Data Analysis

Analyses were done by sections: ATOD Use; Risk and Protective Factors; Outcome Measures; and Relationships with ATOD Use. The results of the survey are presented in two ways: (1) for each surveyed grade level and (2) for the overall surveyed population. Measurement of each of these is elaborated in the respective sections. In some instances the results are also presented by the sex of the respondent (*see Chapter 3.1*) and by public and private school disaggregation (*see Appendix G*).

Since students in grades M2 through S4 participated in this survey, this includes the full range of grade levels in the schools surveyed. As such, the overall survey results can be interpreted as representing the attitudes and behaviours of the student population as a whole. It is important to keep in mind, however, that scores averaged across the full range of grade levels included in this report can mask problems within individual grades. In trying to make comparisons to normative data it is important to examine the data grade by grade in addition to looking at combined statistics for all grade levels. For many items there is typically a great deal of difference

between grades or sex. For example, 6th grade alcohol use is typically much lower than 12th grade alcohol use. Hence, only paying attention to the overall alcohol use statistic would mask these grade differences in alcohol usage.

Although in one instance the middle school students did not participate in the survey, the number of students in this grade cohort who in fact participated adequately represents this grade population. As such, some inferences can be made about the attitudes and behaviours of students in these grade levels across the population.

Frequencies of count (number) and percent were generated for all variables. Basic descriptive analyses were carried out for all variables under the ATOD section. Descriptive statistics, such as the mean, mode, and range, were also derived and used in the analysis.

For the risk and protective factor analysis, average scores (proportions) were computed for each scale used to measure the respective domain. Each of the risk and protective factor scores are measured on a scale of 0 to 100. A score of 50 is the normative average for this scale. A low score indicates the relative absence of the risk or protective factor. A high score indicates an elevated level of that risk or protective factor. Because risk factors are associated with an increased likelihood of alcohol and drug use, and other problem behaviours, lower scores on risk factors are desirable. Conversely, because protective factors are associated with a decreased likelihood of problem behaviours, a higher score on the protective factors is desirable. For ease of data interpretation and reporting, some variables required reverse coding and recoding. In regards to the risk and protective scales, new variables were created to allow for estimation of the level of protection or risk.

Relevant cross tabulations between and among certain selected variables were derived. Inferences were made about the strength of the relationships between ATOD use and a few selected variables by the use of simple linear correlation.

In addition to a complete profile of risk and protective factor levels, substance use, and other behaviour prevalence rates, analyses were also done by public vs. private school comparisons on ATOD use (*see Appendix G*). Summary results from the two previous rounds of the survey are also included in Appendices D and F of this survey report for trend analysis. Each school's results will also be analysed and compared to the national averages in separate reports by school. Normative comparisons of this type are one of the best ways of identifying the strengths a school can build on and weaknesses that must be addressed.

Previous rounds of the survey analysis used a weighting factor when reporting overall statistics based on the grade enrollment and the actual number of students surveyed in each grade. The purpose of this weighting is not to compensate for missing grades but rather to ensure that the proportion of each grade in the sample matches the proportions of enrolled students in those grades surveyed. This weighting factor was only applied to overall statistics and not to individual grade statistics. Analysis of previously collected data has shown that in schools where the grade levels are well represented the unweighted results are either the same or within a point or two of

the weighted results. In the interest of minimising the additional burden of data collection required from schools and preserving fast turnaround times for processing and reporting, overall statistics in this report are presented without grade weighting.

SPSS v.19 software was used for the analysis of survey data. Charts were created in Microsoft Excel and tables and text were prepared in Microsoft Word.

CHAPTER 3.1 RESULTS

Alcohol, Tobacco, and Other Drug Use

3.1.1 Introduction and Measurement

In this survey, drug consumption is measured by a set of 33 survey questions, similar to questions generally used to study drug consumption by middle and senior school students, regionally and internationally. Energy drinks consumption is measured by a set of 6 questions. (See *Appendix H*).

This section presents the results of the consumption of alcohol, tobacco, and other drugs (ATODs), as well as energy drinks. The findings on the use of other drugs – apart from marijuana – such as cocaine, ecstasy, crack, and other drugs can be used by prevention planners as on overall gauge of "hard" drug use. Also included in this section is the prevalence of use of drugs such as inhalants, tranquilizers, and stimulants. These results are presented for both lifetime and current use (last 30-days) of ATODs and energy drinks, disaggregated by sex and grade level of student, with relevant tables and charts included to illustrate the number and proportion of students who have reported use of these substances. Lifetime prevalence of use, that is, whether the student has ever used the drug, is a good measure of student experimentation. Past 30-days prevalence of use, that is, whether the student has used the drug within the last month is a good measure of current use. Current use is obtained from filtering students who have indicated lifetime use and who then have indicated recent use; and is reported as a proportion of all survey respondents. In addition, this section also examines age of first use. Further, this section shows the results of students' perception of harm in consuming ATODs and ease of obtaining these substances. In addition to the standard lifetime and current use prevalence of alcohol, perception of risk, and ease of availability, binge drinking behaviour is also measured.

TECHNICAL NOTE

What is Prevalence?

The terms prevalence refers to the proportion of a population who has used a drug over a particular time period. In this population survey of middle and senior school students, prevalence is measured by asking students to recall their use of drugs. Typically, the three most widely used recall periods are: lifetime (ever used a drug), last year (used a drug in the last twelve months), and last month (used a drug in the last 30 days).

Lifetime prevalence: the proportion of survey respondents who reported ever having used the named drug at the time they were surveyed; that is, at least once. A person who records lifetime prevalence may – or may not – be currently using the drug. Lifetime prevalence should not be interpreted as meaning that people have necessarily used a drug over a long period of time or that they will use the drug in the future.

Last year (past 12 months) prevalence: the proportion of survey respondents who reported using a named drug in the year prior to the survey. For this reason, last year prevalence is often referred to as **recent use**; and also classified as lifetime prevalence.

Last month (past 30 days) prevalence: the proportion of survey respondents who reported using a named drug in the 30-day period prior to the survey. Last month prevalence is often referred to as **current use**; and also classified as lifetime and recent prevalence. A proportion of those reporting current use may be occasional (or first-time) users who happen to have used in the period leading up to the survey – it should therefore be appreciated that current use is not synonymous with regular use.

Binge drinking: a report of five drinks or more in a row within the past two weeks.

3.1.2 Overall Prevalence

Students were asked to report if they "*have ever consumed any of these substances…*" and "*when was the first time you have tried…*". Their negative responses ("*no*" or "*never*") to these questions provide the number and proportion of students who reported that they have never used any of the drugs surveyed. Overall, 76% (2,418) of all survey respondents have reported use of at least one drug in their lifetime. This includes the use of tranquilizers and stimulants without medical prescriptions, as well as any "*other*" drug. On the other hand, about one-quarter (764 or 24%) of all survey respondents have never used or tried any drug in their lifetime. However, if energy drink consumption were to be included in the substances used or tried, then the proportion of students who never used or tried a substance dropped markedly to 8% (260).

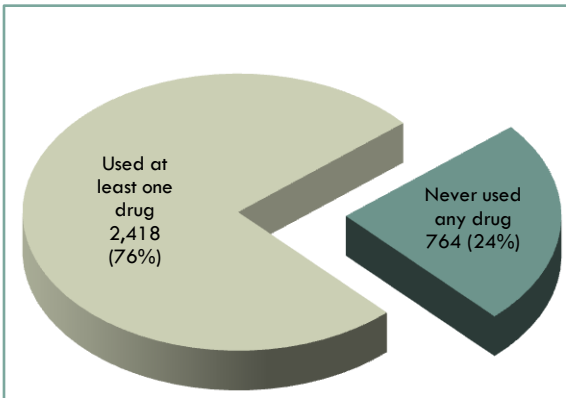

Figure 3.1.1. Drug use by survey respondents.

ATOD prevalence for all students M2 through S4 is presented in Figures 3.1.2 and 3.1.3 and the overall results columns of Tables 3.1.1 and 3.1.2. As these results show, students recorded the highest lifetime prevalence-of-use for energy drinks (65.5%), alcohol (54.9%), marijuana (21.2%), inhalants (12.1%), and cigarettes (10.7%). Other lifetime prevalence ranges from a low of 0.4% for heroin to a high of 3.9% for cannabis resin.

Students reported the highest current prevalence-of-use for energy drinks (31.7%), alcohol (19.5%), and marijuana (8.1%). Other current use prevalence ranges from a low of 0.2% for crack to a high of 2.6% for cigarettes.

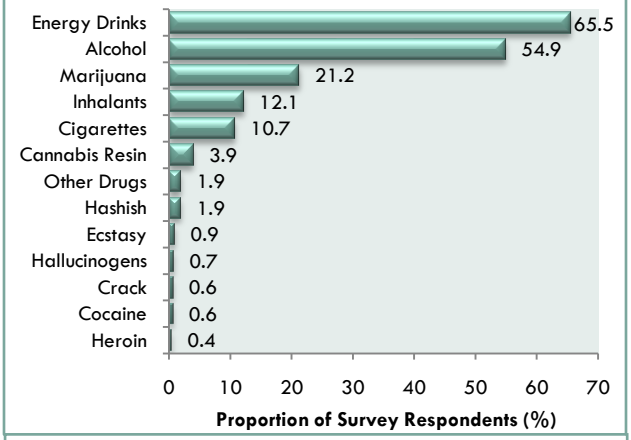

Figure 3.1.2. Lifetime use of ATODs and Energy Drinks for survey respondents.

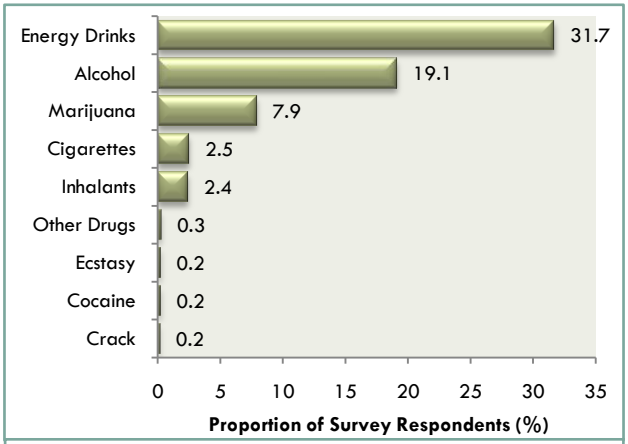

Figure 3.1.3. Current use of ATODs and Energy Drinks for survey respondents.

Lifetime Use

Table 3.1.1
Lifetime Use[9] of ATODs and Energy Drinks by Grade Level of Survey Respondents

Substance	Grade Level[10]														Overall (*n = 3,182*)	
	M2 (*n = 597*)		M3 (*n = 553*)		S1 (*n = 578*)		S2 (*n = 566*)		S3 (*n = 465*)		S4 (*n = 383*)		Not Stated (*n = 40*)			
	n	%	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Alcohol	146	24.5	226	40.9	304	52.6	387	68.4	356	76.6	306	79.9	22	55.0	1,747	54.9
Cannabis Resin	5	0.8	6	1.1	24	4.2	36	6.4	24	5.2	28	7.3	0	0.0	123	3.9
Cigarettes	20	3.2	36	6.5	52	9.0	80	14.1	76	16.3	69	18.0	7	17.5	339	10.7
Cocaine	2	0.3	3	0.5	4	0.7	1	0.2	3	0.6	5	1.3	0	0.0	18	0.6
Crack	3	0.5	5	0.9	2	0.3	4	0.7	2	0.4	3	0.8	0	0.0	19	0.6
Ecstasy	2	0.3	1	0.2	6	1.0	7	1.2	7	1.5	5	1.3	0	0.0	28	0.9
Energy Drinks	323	54.1	363	65.6	377	65.2	418	73.9	318	68.4	269	70.2	17	42.5	2,085	65.5
Hallucinogens	2	0.3	1	0.2	4	0.7	6	1.1	4	0.9	6	1.6	0	0.0	23	0.7
Hashish	2	0.3	0	0.0	11	1.9	17	3.0	16	3.4	14	3.7	0	0.0	60	1.9
Heroin	1	0.2	3	0.5	4	0.7	1	0.2	1	0.2	2	0.5	0	0.0	12	0.4
Inhalants	87	14.6	78	14.1	94	16.3	68	12.0	32	6.9	24	6.3	1	2.5	384	12.1
Marijuana	29	4.9	33	6.0	123	21.3	160	28.3	168	36.1	154	40.2	8	20.0	675	21.2
Other Drugs	9	1.5	14	2.5	8	1.4	13	2.3	9	1.9	9	2.3	0	0.0	62	1.9

[9] *Students responding to "ever" consuming the substance (asked of all survey respondents).*
[10] *Percentages are computed with the number as a proportion of grade level total.*

Current Use

Table 3.1.2
Current Use[11] of ATODs and Energy Drinks by Grade Level of Survey Respondents

Substance[12]	Grade Level[13]														Overall (n = 3,182)	
	M2 (n = 597)		M3 (n = 553)		S1 (n = 578)		S2 (n = 566)		S3 (n = 465)		S4 (n = 383)		Not Stated (n = 40)			
	n	%	n	%	n	%	n	%	%	n	%	n	%	%	n	%
Alcohol	18	3.0	36	6.5	92	15.9	149	26.3	149	32.0	157	41.0	8	20.0	609	19.1
Binge Drinking[14]	7	1.2	11	0.2	54	9.3	66	11.7	80	17.2	77	20.1	6	15.0	301	9.5
Cigarettes	2	0.3	9	1.6	10	1.7	21	3.7	16	3.4	21	5.5	2	5.0	81	2.5
Cocaine	1	0.2	2	0.4	2	0.3	1	0.2	0	0.0	1	0.3	0	0.0	7	0.2
Crack	1	0.2	0	0.0	1	0.2	0	0.0	0	0.0	1	0.3	0	0.0	3	0.1
Ecstasy	1	0.2	0	0.0	4	0.7	0	0.0	1	0.2	1	0.3	0	0.0	7	0.2
Energy Drinks	156	26.1	176	31.8	181	31.3	210	37.1	147	31.6	131	34.2	7	17.5	1,008	31.7
Inhalants	17	2.8	21	3.8	21	3.6	8	1.4	3	0.6	5	1.3	0	0.0	75	2.4
Marijuana	10	1.7	7	1.3	47	8.1	64	11.3	65	14.0	55	14.4	2	5.0	250	7.9
Other Drugs	2	0.3	1	0.2	1	0.2	4	0.7	0	0.0	0	0.0	0	0.0	8	0.3

[11] *Of students who responded to "ever" consuming the substance, and reported use in the past 12 months, who then have consumed it in the "past 30 days" (asked only of all lifetime and recent users but reported as a proportion of all survey respondents).*

[12] *Survey did not measure current use of cannabis resin, hallucinogens, hashish, and heroin.*

[13] *Percentages are computed with the current use number as a proportion of total grade level survey respondents for each substance.*

[14] *Computed for current use but reported as a proportion of all survey respondents.*

3.1.3 Lifetime and Current Prevalence by Grade Level of Respondent

ATOD prevalence for individual grade levels is presented in Tables 3.1.1, 3.1.2, and Figure 3.1.4. Typically, prevalence-of-use of most substances increases as students progress to higher grades. However, inhalant use provides an exception to this pattern, often peaking during the late middle school or early high school years. This may be because inhalants are relatively easy for younger students to obtain. Current alcohol use for all survey respondents ranges from a low of 3% among M2 students to a high of 41% among S4 students. Current use of marijuana ranges from a low of 1.3% among M3 students to a high of 14.3% among S4 students; while for cigarettes, current use ranges from a low of 0.5% for M2 students to a high of 14.4% for S4 students. Inhalant current use ranges from a low of 0.6% for S3 students to a high of 3.8% for M3 students.

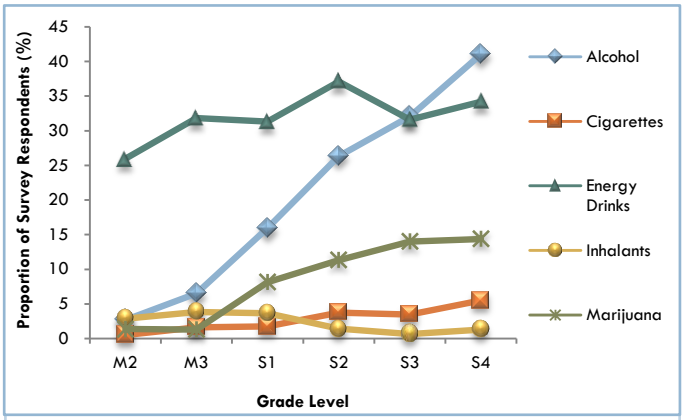

Figure 3.1.4. Current use of selected substances by grade level of survey respondents.

3.1.4 Lifetime and Current Prevalence by Sex of Respondent

- The results in Table 3.1.3 show that there were more reported male users of cigarettes and marijuana for both lifetime (11.1% and 23.5%) and current (2.5% and 10%) use periods.
- Alcohol and inhalant use were more prevalent among females for both lifetime (57.3% and 13.1%) and current (19.8% and 2.8%) use periods.

Table 3.1.3
Lifetime and Current Use of ATODs and Energy Drinks by Sex of Survey Respondents

Substance	Lifetime Use (%)				Current Use (%)			
	Male (*n = 1,463*)	Female (*n = 1,685*)	Not Stated (*n = 34*)	Total (*n = 3,182*)	Male (*n = 1,463*)	Female (*n = 1,685*)	Not Stated (*n = 34*)	Total (*n = 3,182*)
Alcohol	52.3	57.3	47.1	54.9	18.5	19.8	14.7	19.1
Cannabis Resin	6.2	1.9	2.9	3.9	-	-	-	-
Cigarettes	11.1	10.1	17.6	10.7	2.5	2.6	2.9	2.5
Cocaine	0.6	0.5	0.0	0.6	0.2	0.2	0.0	0.2
Crack	0.7	0.5	0.0	0.6	0.1	0.1	0.0	0.1
Ecstasy	1.2	0.6	0.0	0.9	0.3	0.2	0.0	0.2
Energy Drinks	65.4	65.9	50.0	65.5	36.0	28.0	29.4	31.7
Hallucinogens	1.0	0.5	0.0	0.7	-	-	-	-
Hashish	3.0	0.8	5.9	1.9	-	-	-	-
Heroin	0.5	0.2	0.0	0.4	-	-	-	-
Inhalants	10.9	13.1	8.8	12.1	1.8	2.8	2.9	2.4
Marijuana	23.5	19.3	17.6	21.2	10.0	6.1	5.9	7.9
Other Drugs	2.5	1.5	0.0	1.9	0.3	0.2	0.0	0.3

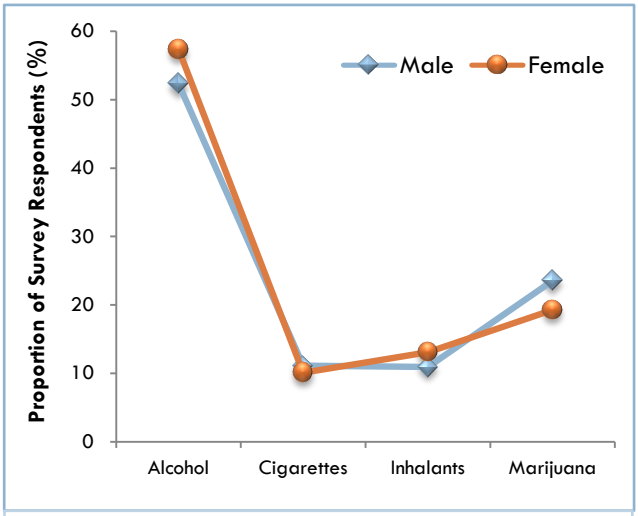

Figure 3.1.5. Lifetime use of selected substances by sex of respondent.

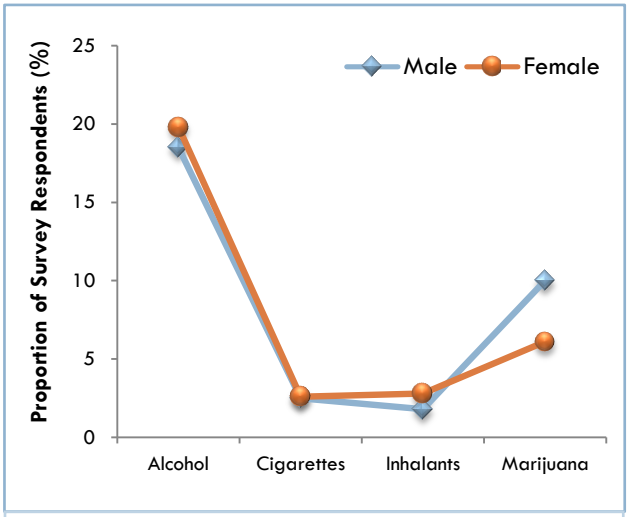

Figure 3.1.6. Current use of selected substances by sex of respondent.

3.1.5 Age of Onset

Using age-of-initiation data to coordinate the timing of prevention efforts can be an important tool for maximising programme effectiveness. For example, programmes delivered after the majority of potential drug users have already initiated the behaviour may have limited impact. Alternatively, very early intervention might prove less effective because it is not close enough to the critical initiation period.

Surveyed youths were asked to report how old they were when they used or tried these substances for the first time: alcohol, cigarettes, inhalants, marijuana, cannabis resin, cocaine, heroin, hallucinogens, hashish, crack, ecstasy, and other illicit drugs. Some of these drugs (alcohol, cigarettes, and marijuana) are generally considered to be the major gateway drugs, usually preceding the use of hard drugs.[15] The average age of onset is based only on the ages of first use of students who reported ever engaging in the behaviour, that is, lifetime users. Table 3.1.4 presents the average age of onset students reported within each grade level, Figure 3.1.7 shows this for all lifetime users for each substance, while Figure 3.1.8 shows the average age of onset for a few selected substances by grade level of survey respondent. These survey questions form part of the risk factor scale *Early Initiation of Drug Use*. On the other hand, Table 3.1.5 and Figure 3.1.9 show the average age of onset by sex of survey respondent.

[15] National Center on Addiction and Substance Abuse. (1994). National Study Shows "Gateway" Drugs Lead to Cocaine Use. In R. J. Hackett (Ed.), ***Columbia University Record, 20***(4). Columbia University, NY: Office of Public Information. http://www.columbia.edu/cu/record/archives/vol20/vol20_iss10/record2010.24.html (accessed January 25, 2012).

Table 3.1.4
Average Age of Onset by Grade Level of Survey Respondents

Substance	Grade Level						Average Age of Onset (Years)	Number of Lifetime Users
	M2	M3	S1	S2	S3	S4		
Alcohol	9.8	10.7	11.5	12.0	13.1	13.8	**12.1**	1,747
Cannabis Resin	7.3	10.3	11.9	13.0	13.8	14.8	**13.1**	123
Cigarettes	8.0	11.0	11.2	12.7	13.4	14.3	**12.5**	339
Cocaine	6.0	13.3	11.5	14.0	12.5	11.0	**11.4**	18
Crack	11.3	12.8	9.5	14.3	17.0	-	**12.7**	19
Ecstasy	13.2	13.0	12.4	12.6	15.0	16.0	**13.2**	28
Hallucinogens	11.5	11.0	13.3	12.4	14.7	15.0	**13.3**	23
Hashish	7.0	-	12.5	13.7	14.1	15.3	**13.8**	60
Heroin	5.0	14.0	12.5	-	-	-	**11.9**	12
Inhalants	8.8	9.0	9.1	9.8	10.7	10.6	**9.3**	384
Marijuana	10.6	11.6	12.2	13.1	14.2	14.8	**13.4**	675
Other Drugs	8.3	11.3	11.3	9.7	11.1	15.4	**11.0**	62

- Age of initiation of drug use ranges from a low of 9.3 years for inhalants to a high of 13.8 years for hashish.
- Alcohol use began around 12.1 years, cigarette use at 12.5 years, and marijuana use at 13.4 years.
- Students in earlier grades like M2 began use of inhalants and cigarettes much earlier than students in later grades.

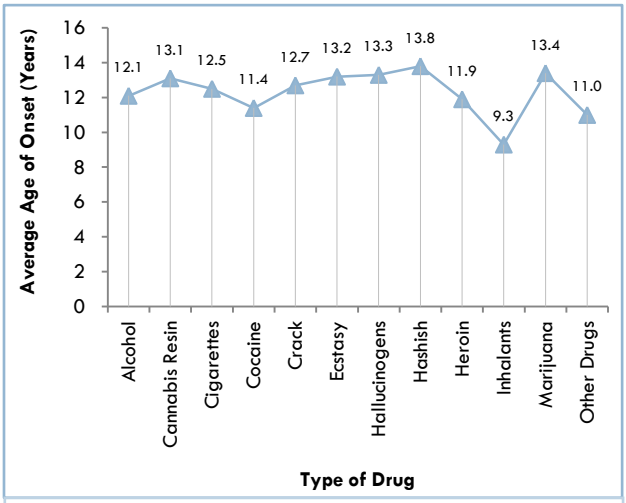

Figure 3.1.7. Average age of onset for all lifetime users by type of drug.

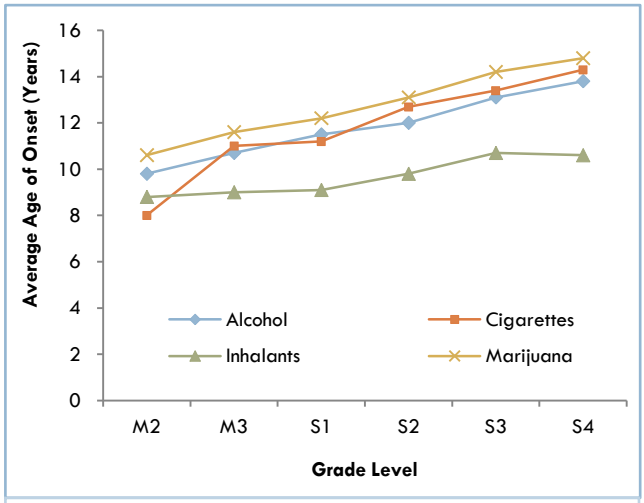

Figure 3.1.8. Average age of onset for all lifetime users of selected substances by grade level.

- Males indicated first use of inhalant as early as 9 years old and use of hallucinogens as late as 14.3 years
- Females began use of inhalants as early as 9.6 years old and use of hashish as late as 14.3 years.

Table 3.1.5
Average Age of Onset by Sex of Survey Respondents

Substance	Male	Female	Both Sexes
Alcohol	11.9	12.3	12.1
Cannabis Resin	13.1	13.0	13.1
Cigarettes	12.1	12.9	12.5
Cocaine	10.4	12.0	11.4
Crack	12.0	13.2	12.7
Ecstasy	13.6	12.7	13.2
Hallucinogens	14.3	12.0	13.3
Hashish	13.6	14.3	13.8
Heroin	13.0	11.0	11.9
Inhalants	9.0	9.6	9.3
Marijuana	13.0	13.9	13.4
Other Drugs	11.1	10.9	11.0

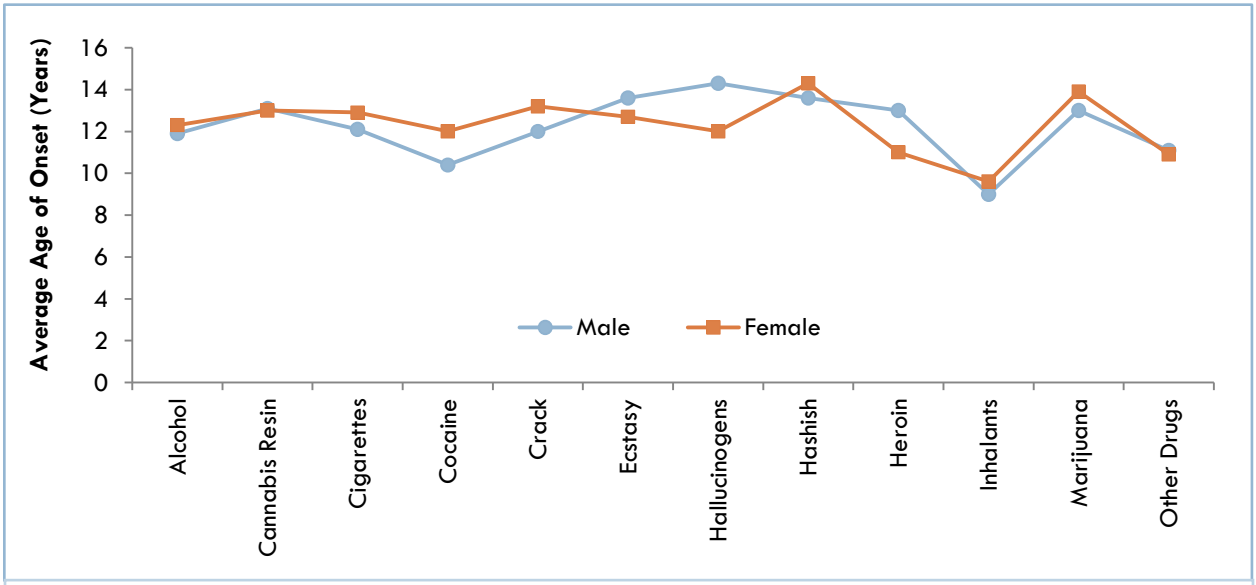

Figure 3.1.9. Average age of onset for all lifetime users by sex of respondent

3.1.6 Consumption by Type of Drug

Alcohol

Alcohol, including beer, wine, and hard liquor, is the drug most often used by adolescents today. Research and similar surveys in the past have shown the pervasiveness of alcohol in middle and high schools.[16] In comparison, the use of cigarettes, inhalants, or marijuana are less than half as prevalent as alcohol use. Given the national pattern, it is not surprising that alcohol is the most used drug among the surveyed age cohort in Bermuda. Furthermore, the high prevalence of alcohol consumption among adolescents raises the issue of binge drinking, which can be extremely dangerous, and is the pattern of alcohol use that is of greatest concern among researchers.[17] Several studies have shown that alcohol use by youths and young adults increases the risk of both fatal and nonfatal injuries and that binge drinking is related to higher probabilities of drinking and driving as well as injury due to intoxication.[18] This body of research has also shown that children who began alcohol use before age 15 are 5 times more likely to abuse alcohol by age 21. Other consequences include: risky sexual behaviours, poor school performance, and increased risk of suicide and homicide. As with alcohol use in general, binge drinking tends to become more pervasive as students grow older.

Lifetime and Current Use

- Lifetime prevalence of alcohol use ranges from a low of 24.5% for M2 students to a high of 79.9% for S4 students. Overall, over half (54.9%) of the survey respondents have reported using alcohol in their lifetime.
- Current (last 30-days) prevalence of alcohol use ranges from a low of 2.7% for M2 students to a high of 41% for S4 students. Overall, 19.1% of all survey respondents have used alcohol in the past 30 days.

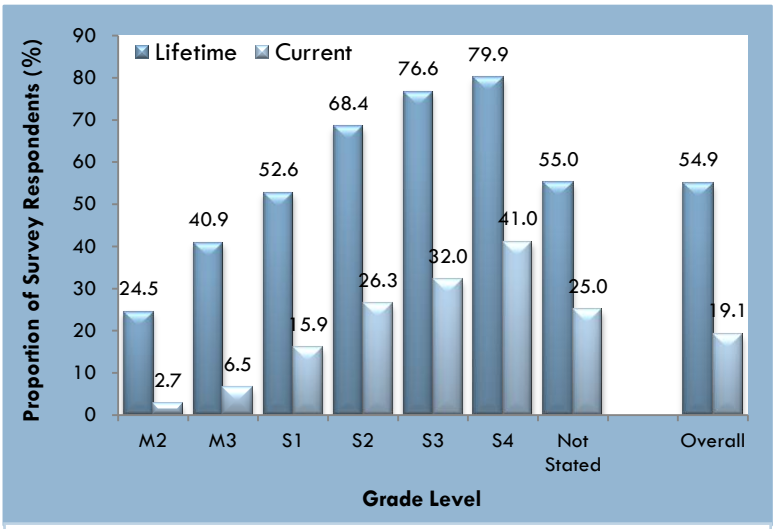

Figure 3.1.10. Lifetime and current use of alcohol by grade level of survey respondents.

[16] L. D. Johnston, P. M. O'Malley, J. G. Bachman, & J. E. Schulenberg. (2012). ***Monitoring the Future national results on adolescent drug use: Overview of key findings, 2011***. Ann Arbor: Institute for Social Research, The University of Michigan. http://monitoringthefuture.org/pubs/monographs/mtf-overview2011.pdf (accessed January 28, 2012).

[17] Ibid. p. 36.

[18] National Institute on Drug Abuse. (Unknown). ***Drugs of Abuse. Alcohol***. http://www.drugabuse.gov/category/drugs-abuse/alcohol (accessed January 28, 2012); Centers for Disease Control and Prevention. (2011). ***Alcohol and Public Health***. *Frequently Asked Questions.* Georgia: USA. http://www.cdc.gov/alcohol/faqs.htm#young (accessed January 28, 2012).

First Use

- Of the lifetime users, 998 initiated alcohol consumption "*more than a year ago*" (31.4% of all survey respondents), while 205 (consumed alcohol for the first time "*during the past 30 days*" (6.4% of all survey respondents).

Table 3.1.6
First Use of Alcohol for Survey Respondents

First Use	Number	Percent (n = 3,182)
Never	18	0.6
During the past 30 days	205	6.4
More than 1 month ago, less than 1 year	411	12.9
More than a year ago	998	31.4
Not Stated	115	3.6
Total	**1,747**	**54.9**

Recent Use

- The majority (1,266) of lifetime users of alcohol, approximately 3 out of every 4, have reported recent use of alcohol (use in the past 12 months). This corresponds to approximately 39.8% of all survey respondents who were recent users.

Table 3.1.7
Alcohol Use in the Past 12 Months for Survey Respondents

Annual Use	Number	Percent (n = 3,182)
Yes	1,266	39.8
No	335	10.5
Not Stated	146	4.6
Total	**1,747**	**54.9**

Heavy Drinking

- On at least one day in the past month, 274 current users of alcohol have reported that they had too much to drink and got drunk (8.6% of all survey respondents). Only 19 current users were drunk for more than half the month (0.6% of all survey respondents).

Table 3.1.8
Number of Days Current Users of Alcohol Drank too much and got Drunk

Days	Number	Percent (n = 3,182)
None	246	7.7
1 – 5 days	204	6.4
6 – 10 days	27	0.8
11 – 15 days	24	0.8
16+ days	19	0.6
Not Stated	89	2.8
Total	**609**	**19.1**

Location of Alcohol Use

- The majority of current users of alcohol reported that they most often drink at "*other social events*" (221), "*a friend's house*" (149), or at "*home*" (97). This corresponds to 6.9%, 4.7%, and 3% of all survey respondents, respectively. Very few of these students have reported drinking alcohol at "*sporting events*" (5) or at "*school*" (8).

Table 3.1.9
Location Where Current Users Most Often Drink Alcohol

Location	Number	Percent (n = 3,182)
At Home	97	3.0
At School	8	0.3
At the Corner/Block	41	1.3
At a Friend's House	149	4.7
At Sporting Events	5	0.2
At Other Social Events	221	6.9
Other	54	1.7
Not Stated	34	1.1
Total	**609**	**19.1**

Source of Alcohol

- Almost half (294) of the current users of alcohol have reported that they usually get it from "*friends*" (9.2% of all survey respondents). A significant number (110) or about 1 out of every 5 current users has reported the "*shop*" as the source of their alcohol consumed (3.5% of all survey respondents). Very few current users have obtained alcohol from a "*street vendor*" (4) (e.g., street pusher or drug dealer) or from a "*brother/sister*" (24).

Table 3.1.10
Source of Alcohol for Current Users

Source	Number	Percent (n = 3,182)
Friend	294	9.2
Parents	46	1.4
Brother/Sister	24	0.8
Other Relative(s)	32	1.0
Street Vendor	4	0.1
Shop	110	3.5
Other	46	1.4
Not Stated	53	1.7
Total	**609**	**19.1**

Frequency of Use

- With reference to use in the past 30 days, the majority of students consumed beer, Guinness, breezers, and/or wickets "*only in social events*" (230) or on the "*weekends*" (192) (*see Table 3.1.11*). This corresponds to 7.2% and 6% of all survey respondents, respectively. Very few (21) current users of alcohol consumed these beverages daily (0.7% of all survey respondents).

- On the other hand, 271 of current users reported that they have "*never*" consumed wine in the past 30 days (8.5% of all survey respondents); although the majority of students (117) who have consumed wine have done so "*only in social events*" (3.7% of all survey respondents).
- Likewise, a significant number of current users indicated that they have consumed hard liquor, such as rum, rum punch, vodka, and whiskey, "*only in social events*" (252) or on the "*weekends*" (183). Overall, this represents 7.9% and 5.8% of all survey respondents, respectively. Only 19 current users reported daily use of hard liquor (0.6% of all students).

Table 3.1.11
Frequency of Use by Type of Alcoholic Beverage for Current Users

Frequency of Use	Type of Alcoholic Beverage					
	Beer, Guinness, Breezers, Wickets		Wine		Hard Liquor (Rum, Vodka, etc.)	
	Number	Percent *(n = 3,182)*	Number	Percent *(n = 3,182)*	Number	Percent *(n = 3,182)*
Daily	21	0.7	11	0.3	19	0.6
Weekends	192	6.0	54	1.7	183	5.8
Some week days	62	1.9	49	1.5	44	1.4
Only in social events	230	7.2	117	3.7	252	7.9
Never	37	1.2	271	8.5	57	1.8
Not Stated	67	2.1	107	3.4	54	1.7
Total	**609**	**19.1**	**609**	**19.1**	**609**	**19.1**

Binge Drinking

- Across grades, current binge drinking prevalence rates range from a low of 1% for M2 students to a high of 20.1% for S4 students (see *Table 3.1.2*). Overall, 9.5% or about 1 out of every 10 survey respondents, have reported at least one episode of binge drinking in the past two weeks.

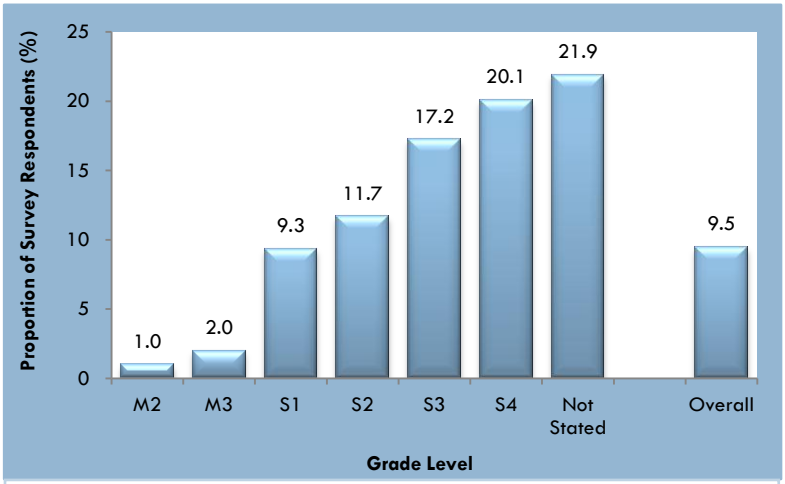

Figure 3.1.11. Binge drinking among current users of alcohol by grade level of user.

Tobacco

NIDA-reported research identified nicotine as the main addictive ingredient in cigarettes. Nicotine use has been found to activate reward pathways and increases dopamine (feel good hormone) levels.[19] However, other research indicates that smokers may continue smoking to keep high levels of dopamine in their body. Approximately, 90% of smokers start smoking by age 18. More than 6 million of smokers under the age of 18 are projected to die prematurely from smoking related reasons. Recent findings suggest that tobacco use among youths may be as a result of biological reasons experienced during this period of increased vulnerability and not merely psychosocial reasons such as peer pressure. Public health researchers claim that cigarette smoking is the leading cause of preventable deaths in the United States.[20] After alcohol, tobacco or cigarettes is the most commonly used drug among adolescents, but its consumption has been on the decline since the late 1970s even though there are periods when it remained steady.

Lifetime and Current Use

- Lifetime prevalence of cigarette use ranges from a low of 3.2% for M2 students to a high of 18% for S4 students. Overall, 10.7% (1 in 10) of all survey respondents have used cigarettes in their lifetime.
- Current prevalence of cigarette use among lifetime users ranges from a low of 0.3% for M2 students to a high of 5.5% for S4 students. Overall, 2.5% of all survey respondents have smoked cigarettes in the past 30 days.

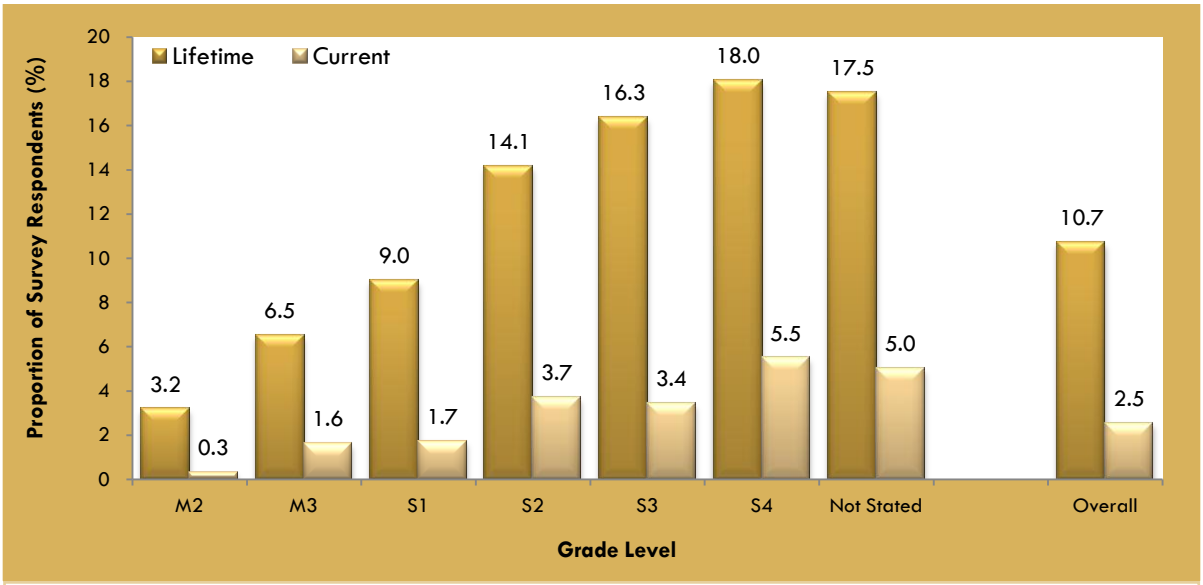

Figure 3.1.12. Lifetime and current use of cigarettes by grade level of survey respondents.

[19] National Institute on Drug Abuse. (2011). ***Topics in Brief: Tobacco Addiction.*** http://www.drugabuse.gov/publications/topics-in-brief/tobacco-addiction (accessed January 28, 2012).

[20] L. D. Johnston, et al. (2012). p. 38.

First Use

- Of the lifetime users, most (195) initiated cigarette smoking "*more than a year ago*" (6.1% of all survey respondents), while 20 students smoked cigarettes for the first time "*during the past 30 days*" (0.6% of all survey respondents).

Table 3.1.12
First Use of Cigarettes for Survey Respondents

First Use	Number	Percent (n = 3,182)
Never	8	0.3
During the past 30 days	20	0.6
More than 1 month ago, less than 1 year	93	2.9
More than a year ago	195	6.1
Not Stated	23	0.7
Total	**339**	**10.7**

Recent Use

- The majority (176) of lifetime users of cigarettes, approximately 1 out of every 2, has reported smoking cigarettes in the past 12 months. This corresponds to approximately 5.5% of all survey respondents who were recent users.

Table 3.1.13
Cigarette Use in the Past 12 Months for Survey Respondents

Annual Use	Number	Percent (n = 3,182)
Yes	176	5.5
No	128	4.0
Not Stated	35	1.1
Total	**339**	**10.7**

Cigarettes Smoked

- Almost 7 out of 10 (58) current users of cigarettes have indicated that they smoked "*1 to 5*" cigarettes per day in the past month (1.8% of all survey respondents). Only 2 students reported smoking 11 to 20 cigarettes per day in the past month, while 11 students smoked "*more than 20*" per day.

Table 3.1.14
Number of Cigarettes Smoked in a Day in the Past Month by Current Smokers

Cigarettes	Number	Percent (n = 3,182)
1 to 5	58	1.8
6 to 10	9	0.3
11 to 20	2	0.1
More than 20	11	0.3
Not Stated	1	0.0
Total	**81**	**2.5**

Location of Cigarette Smoking

- The majority of current cigarette users reported that they most often smoke at "*a friend's house*" (17) or "*at home*" (15). Overall, this represents 1% of all students. Very few of these students have reported smoking cigarettes at "*school*" (3).

Table 3.1.15
Location Where Current Users Most Often Smoke Cigarettes

Location	Number	Percent (n = 3,182)
At Home	15	0.5
At School	3	0.1
At the Corner/Block	14	0.4
At a Friend's House	17	0.5
At Other Social Events	14	0.4
Other	14	0.4
Not Stated	4	0.1
Total	**81**	**2.5**

Source of Cigarettes

- About 4 out of every 10 current users of cigarettes have reported that they usually get it from "*friends*" (33) or from the "*shop*" (31). Overall, this corresponds to 2% of all survey respondents. Very few current smokers have obtained cigarettes from a "*street vendor*" (2), siblings (2), or "*other relatives*" (2).

Table 3.1.16
Source of Cigarettes for Current Users

Source	Number	Percent (n = 3,182)
Friend	33	1.0
Parents	4	0.1
Brother/Sister	2	0.1
Other Relative(s)	2	0.1
Street Vendor	2	0.1
Shop	31	1.0
Other	3	0.1
Not Stated	4	0.1
Total	**81**	**2.5**

Other Drugs

Marijuana

While it is clear that in many countries of the world marijuana or cannabis use is not as popular as alcohol and tobacco it is usually the first illegal drug, and is the most widely used illegal drug, used by teens around the world.[21] The average age of first use in many Western countries is around 14-15 years old. The average age of use among developing countries seems to be a bit older. While it is true that boys are more likely to use marijuana, alcohol, and tobacco than girls, the gap is closing in many countries. Further, street youths are more likely to use marijuana and more heavily than "mainstream" youth. A review of addiction studies show that use of cannabis in youth is related to one or more of the following: truancy, low self-esteem, delinquent behaviours (stealing, vandalism, etc.), having delinquent friends, hanging out on the streets in boredom, and other behavioural/mental health issues.[22]

Lifetime and Current Use

- Lifetime prevalence of marijuana use ranges from a low of 4.2% for M2 students to a high of 40.2% for S4 students. Overall, 21.2% of all survey respondents (1 in every 5) have used marijuana in their lifetime.
- Current prevalence of marijuana use ranges from a low of 1.3% for M2 andM3 students to a high of 14.4% for S4 students. Overall, 7.9% of all survey respondents have used marijuana in the past 30 days.

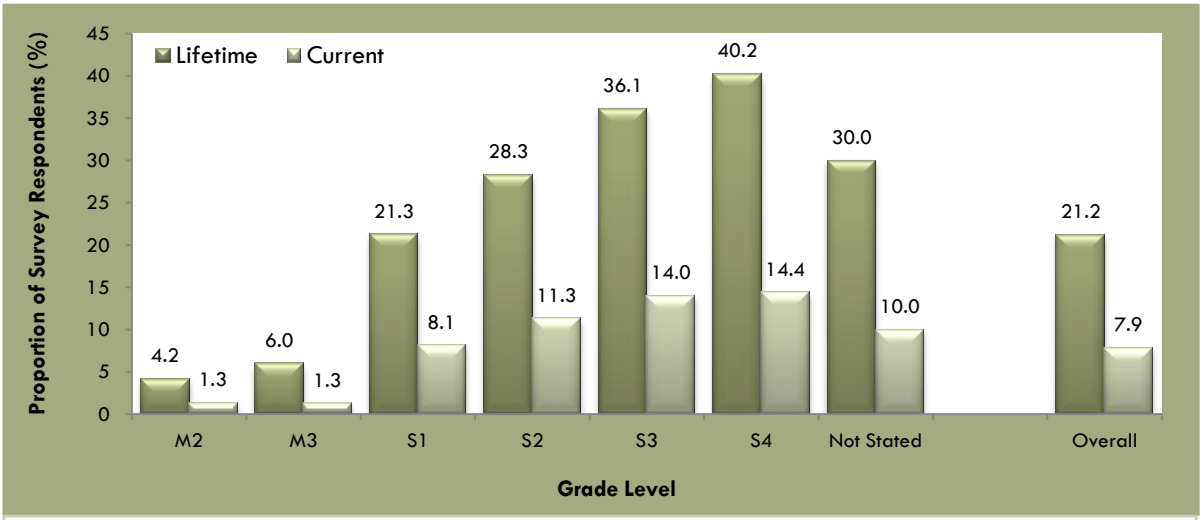

Figure 3.1.13. Lifetime and current use of marijuana by grade level of survey respondents.

[21] The Global Youth Network. (Unknown). ***Drug Trends. Cannabis: A Few Issues***. http://www.unodc.org/youthnet/en/youthnet_youth_drugs_trends_cannabis.html (accessed January 28, 2012).

[22] I. P. Spruit (Ed.). (2002). ***Cannabis 2002 Report***. p. 20. Ministry of Public Health of Belgium. http://www.cpha.ca/uploads/portals/substance/Cannabis_report_2002.pdf (accessed January 28, 2012).

First Use

- Of the lifetime users, most (397) tried marijuana for the first time "*more than a year ago*" (12.5% of all survey respondents), while 54 students have tried it for the first time "*during the past 30 days*" (1.7% of all survey respondents).

Table 3.1.17
First Use of Marijuana for Survey Respondents

First Use	Number	Percent (n = 3,182)
Never	53	1.7
During the past 30 days	54	1.7
More than 1 month ago, less than 1 year	140	4.4
More than a year ago	397	12.5
Not Stated	31	1.0
Total	**675**	**21.2**

Recent Use

- The majority (466) of lifetime users of marijuana, approximately 7 out of every 10, have reported using marijuana in the past 12 months. This corresponds to approximately 14.6% of all survey respondents who were recent users.

Table 3.1.18
Marijuana Use in the Past 12 Months for Survey Respondents

Annual Use	Number	Percent (n = 3,182)
Yes	466	14.6
No	107	3.4
Not Stated	102	3.2
Total	**675**	**21.2**

Frequency of Use

- The majority (130) of recent users have indicated using marijuana "*sometimes in the past 12 months*". This represents 4.1% of all survey respondents. Only 3% of all survey respondents reported using marijuana "*sometimes during the week*" or "*once daily*".

Table 3.1.19
Frequency of Marijuana Use for Recent Users

Frequency of Use	Number	Percent (n = 3,182)
Only once	94	3.0
Sometimes in the past 12 months	130	4.1
Sometimes during the month	82	2.6
Sometimes during the week	94	3.0
Daily	60	1.9
Not Stated	6	0.2
Total	**466**	**14.6**

Location of Use

- The majority of current marijuana users reported that they most often use it "*at a friend's house*" (84), "*at home*" (58), or at "*the corner/block*" (40). Overall, this represents 2.6%, 1.8%, and 1.3% of all students, respectively. Very few of these students have reported using marijuana at "*school*" (5).

Table 3.1.20
Location Where Current Users Most Often Use Marijuana

Location	Number	Percent (n = 3,182)
At Home	58	1.8
At School	5	0.2
At the Corner/Block	40	1.3
At a Friend's House	84	2.6
At Sporting Events	2	0.1
At Other Social Events	24	0.8
Other	29	0.9
Not Stated	8	0.3
Total	**250**	**7.9**

Source of Marijuana

- About 6 out of every 10 current marijuana users have reported that they usually get it from "*friends*" (164), while 34 students got marijuana from a "*street pusher*". Overall, this corresponds to 5.1% and 1.1% of all survey respondents, respectively. Very few current marijuana users have obtained the marijuana from "*parents*" (6) or siblings (2).

Table 3.1.21
Source of Marijuana for Current Users

Source	Number	Percent (n = 3,182)
Friend	164	5.1
Parents	6	0.2
Brother/Sister	2	0.1
Other Relative(s)	8	0.3
Street Pusher	34	1.1
Other	25	0.8
Not Stated	11	0.3
Total	**250**	**7.9**

Inhalants

Inhalants are household products which are either "sniffed" through the nose or "huffed" through the mouth, e.g., paint, glue, diesel fuel. The effects are similar to getting drunk on alcohol but some experience something like hallucinations.[23] They can give an almost immediate high. Children are more likely to be users than adults. Poor children, school drop-outs, street children, and disengaged youths are more susceptible to inhalant use. Inhalants are often the first substance used by many children and adolescents because they are often the easiest drugs for them to obtain and not as costly as other drugs. Various studies around the world have shown that less than 10% of the general youth population has used inhalants. Inhalants are the only substance used by young people where use typically peaks in pre-adolescence and goes down through the teen years. The health consequences of inhalant use can be substantial. Reported long-term use effects include organ damage (liver, kidney, bone marrow, heart) and, in the case of gasoline sniffing, lead poisoning. Risk of injury or death is great with inhalant abuse. While continued inhalant abuse is in itself a serious concern, young inhalant abusers are at risk for getting involved in other harmful substance use.

Lifetime and Current Use

- Lifetime prevalence of inhalant use ranges from a low of 6.3% for S4 students to a high of 16.3% for S1 students. Overall, 12.1% of all survey respondents have used inhalants in their lifetime.
- Current prevalence of inhalant use ranges from a low of 0.6% for S3 students to a high of 3.8% for M2 students. Overall, current inhalant use is prevalent among 2.4% of all survey respondents.

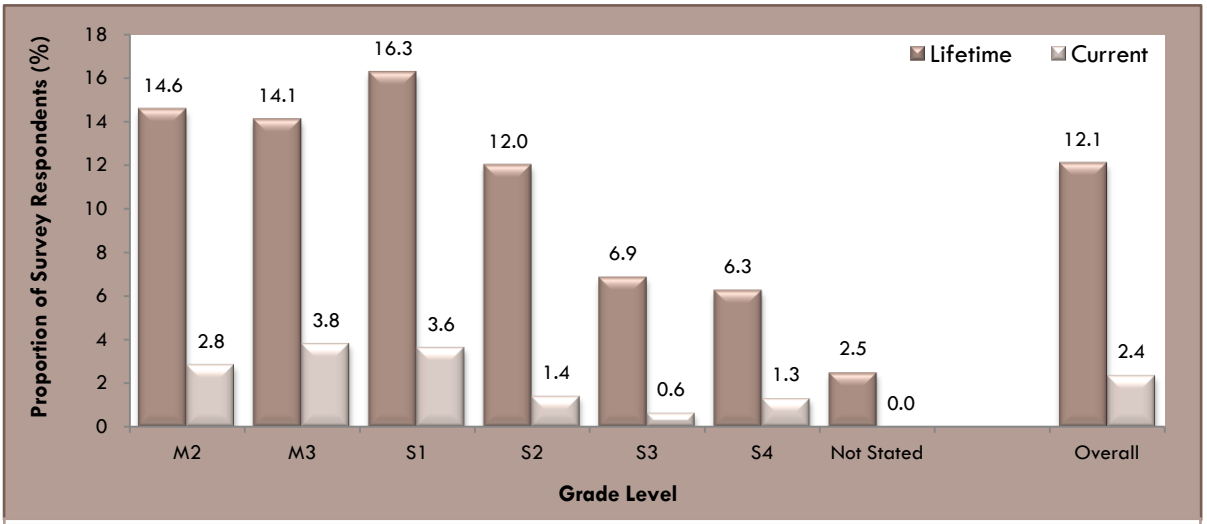

Figure 3.1.14. Lifetime and current use of inhalants by grade level of survey respondents.

[23] World Health Organization. (1999). ***Volatile solvents abuse: A global overview.*** Substance Abuse Department Geneva, Switzerland: World Health Organization. p. 54. http://www.unodc.org/pdf/youthnet/trends_five.pdf (accessed January 28, 2012).

First Use

- Of the lifetime users, most (206) tried inhalants for the first time "*more than a year ago*" (6.5% of all survey respondents), while 66 students have tried it for the first time "*in the past 30 days*" (2.1% of all survey respondents).

Table 3.1.22
First Use of Inhalants for Survey Respondents

First Use	Number	Percent (n = 3,182)
Never	55	1.7
In the past 30 days	66	2.1
More than 1 month ago, less than 1 year	42	1.3
More than a year ago	206	6.5
Not Stated	15	0.5
Total	**384**	**12.1**

Recent Use

- Unlike the other substances previously discussed, most lifetime inhalant users (166) were not recent users of this drug. Only 134 students or 4.2% of all survey respondents have reported using inhalants in the past 12 months.

Table 3.1.23
Inhalant Use in the Past 12 Months for Survey Respondents

First Use	Number	Percent (n = 3,182)
Yes	134	4.2
No	166	5.2
Not States	84	2.6
Total	**384**	**12.1**

Frequency of Use

- The majority (40) of recent users have indicated using inhalants "*sometimes in the past 12 months*". This represents 1.3% of all survey respondents. Only 0.3% of all survey respondents reported daily use of inhalants.

Table 3.1.24
Frequency of Inhalant Use for Recent Users

Frequency of Use	Number	Percent (n = 3,182)
Only once	35	1.1
Sometimes in the past 12 months	40	1.3
Sometimes during the month	20	0.6
Sometimes during the week	27	0.8
Daily	8	0.3
Not Stated	4	0.1
Total	**134**	**4.2**

Cocaine

- Lifetime prevalence of cocaine use ranges from a low of 0.2% for S2 students to a high of 1.3% for S4 students. Overall, 0.6% of all survey respondents have used cocaine in their lifetime.

- Current prevalence of cocaine use by survey respondents is low, ranging from a low of 0% for S3 students to a high of 0.4% for M3 students. Overall, only 0.2% of all survey respondents have used cocaine in the past 30 days.

Crack

- Lifetime prevalence of crack use ranges from a low of 0.3% for S1 students to a high of 0.9% for M3 students. Overall, 0.6% of all survey respondents have used crack in their lifetime.

- Current prevalence of crack use by survey respondents is low, ranging from a low of 0% for M3 and S3 students to a high of 0.3% for S1 and S4 students. Overall, only 0.2% of all survey respondents have used crack in the past 30 days.

Ecstasy

- Lifetime prevalence of ecstasy use ranges from a low of 0.2% for M3 students to a high of 1.5% for S3 students. Overall, 0.9% of all survey respondents have used ecstasy in their lifetime.

- Current prevalence of ecstasy use by survey respondents is low, ranging from a low of 0% for M3 and S2 students to a high of 0.7% for S1 students. Overall, only 0.2% of all survey respondents have used ecstasy in the past 30 days.

Other Drugs

- **Cannabis Resin:** Lifetime prevalence of cannabis resin use ranges from a low of 0.8% for M2 students to a high of 7.3% for S4 students. Overall, 3.9% of all survey respondents have used cannabis resin in their lifetime.

- **Hallucinogens:** Lifetime prevalence of hallucinogens use ranges from a low of 0.2% for M3 students to a high of 1.6% for S4 students. Overall, 0.7% of all survey respondents have used hallucinogens in their lifetime.

- **Hashish:** Lifetime prevalence of hashish use ranges from a low of 0% for M3 students to a high of 3.7% for S4 students. Overall, 1.9% of all survey respondents have used hashish in their lifetime.

- **Heroin:** Lifetime prevalence of heroin use ranges from a low of 0.2% for M2, S2, and S3 students to a high of 0.7% for S1 students. Overall, 0.4% of all survey respondents have used heroin in their lifetime.

- **Other:** Lifetime prevalence of "*other*" drug use (apart from those drugs previously mentioned) ranges from a low of 1.4% for S1 students to a high of 2.5% for M3 students. Overall, 1.9% of all survey respondents have report use of some "*other*" drug in their lifetime. Current prevalence of "*other*" drug use ranges from a low of 0% for S3 and S4 students to a high of 0.7% for S2 students. Overall, only 0.3% of all survey respondents have indicated use of some "*other*" drug in the past 30 days.

Prescription Drug Use

In recent years the nonmedical use of prescription drugs (controlled substances which cannot be legally bought or sold without a doctor's prescription) has emerged as a major public health issue. Studies on youth drug abuse prevalence data, have reported increases in the unauthorised use of prescription drugs.[24] This trend is particularly troubling given the adverse health consequences related to prescription drug abuse, which include addiction and physical dependence, and the possibility of overdose.

Despite these concerns, researchers are still in the early stages of developing measures to accurately assess the prevalence of prescription drug abuse. If anonymity is ensured, most students will honestly and accurately report their use of alcohol, tobacco, marijuana, and other easily recognised categories of illicit drugs. The measurement of prescription drug use, however, is more complex. There are many prescription medicines that are subject to abuse, making it impossible to present an exhaustive list. Also, respondents may have difficulty identifying the names of prescription drugs they have used, and may have difficulty distinguishing between prescription and over-the-counter medications.

With these challenges in mind, this round of the survey asked two sets of questions – one set specific to tranquilizer use (e.g., Valium, Xanax) and another set asked about stimulant use (e.g., Ritalin, Adderall, pseudoephedrine). These two categories are among the most likely to be abused along with pain relievers. Each set of questions was accompanied by examples of some of the best known drugs within that category and which are usually most commonly used by students. The behaviour reported in this section excludes any use under medical supervision.

Tranquilizers

Lifetime and Current Use

- Lifetime prevalence of tranquilizer use (without medical prescription) ranges from a low of 0.4% for S3students to a high of 1.4% for S2 students. Overall, 0.8% of all survey respondents have used tranquilizers without medical prescription in their lifetime.

- Current prevalence of tranquilizer use (without medical prescription) ranges from a low of 0.2% for M2, M3, and S3 students to a high of 0.7% for S1 and S2 students. Overall, current use of tranquilizers without medical prescription is prevalent among 0.4% of all survey respondents.

[24] L. D. Johnston, et al. (2012). p. 6.

Table 3.1.25
Lifetime Use of Prescription Drugs by Grade Level of Survey Respondent

Substance	Grade Level						Overall (n = 3,182)
	M2 (n = 597)	M3 (n = 553)	S1 (n = 578)	S2 (n = 566)	S3 (n = 465)	S4 (n = 383)	
	%	%	%	%	%	%	%
Tranquilizers	0.5	0.9	1.0	1.4	0.4	0.5	0.8
Stimulants	1.7	1.4	1.4	2.7	1.7	1.3	1.7

Table 3.1.26
Current Use of Prescription Drugs by Grade Level of Survey Respondent

Substance	Grade Level						Overall (n = 3,182)
	M2 (n = 597)	M3 (n = 553)	S1 (n = 578)	S2 (n = 566)	S3 (n = 465)	S4 (n = 383)	
	%	%	%	%	%	%	%
Tranquilizers	0.2	0.2	0.7	0.7	0.2	0.3	0.4
Stimulants	0.2	0.7	0.9	0.0	0.4	0.3	0.4

Stimulants

- Lifetime prevalence of stimulant use (without medical prescription) ranges from a low of 1.3% for S4 students to a high of 2.7% for S2 students. Overall, 1.7% of all survey respondents have used stimulants without medical prescription in their lifetime.

- Current prevalence of stimulant use (without medical prescription) ranges from a low of 0% for S2 students to a high of 0.9% for S1 students. Overall, current use of stimulants without medical prescription is prevalent among 0.4% of all survey respondents.

Energy Drinks

Consumption of energy drinks (beverages with caffeine content ranging from 50 mg to 505 mg per can or bottle[25]) appear to be prevalent among today's youths. Popular brands such as Red Bull, Monster, SoBe, etc., all target young consumers. Also increasing in popularity is the practice of mixing alcoholic beverages with energy drinks. Research has shown that individuals who have a high frequency of energy drink consumption are at increased risk of engaging in episodes of heavy drinking and developing alcohol dependence.[26] In addition, research has highlighted the dangers of combining energy drinks with alcohol.[27] However, to-date, in Bermuda there has been no research regarding energy drink consumption patterns, more specifically, among this age cohort. The subsequent sections will show the prevalence and frequency of energy drink use, situations for which energy drinks are used, and means by which energy drinks are obtained for both lifetime and current (last 30 days) use.

Lifetime and Current Use

- Lifetime prevalence of use of energy drinks ranges from a low of 53.7% for M2 students to a high of 73.9% for S2 students. Overall, about two-thirds (65.5%) of all survey respondents have reported using energy drinks in their lifetime.
- Current prevalence of use of energy drinks ranges from a low of 25.9% for M2 students to a high of 37.1% for S2 students. Overall, about one-third (31.7%) of all survey respondents have used energy drinks in the past 30 days.

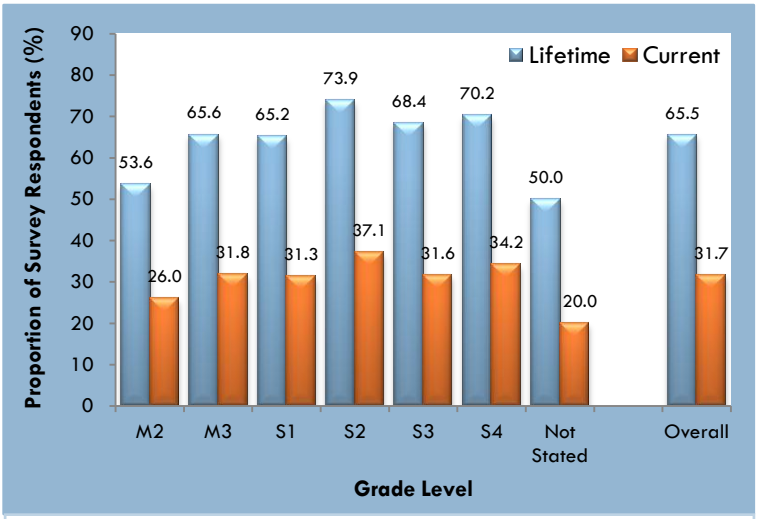

Figure 3.1.15. Lifetime and current use of energy drinks by grade level of survey respondents.

[25] C. J. Reissig, E. C. Strain, & R. R. Griffiths. (2009). Caffeinated energy drinks – a growing problem. ***Drug and Alcohol Dependence, 99***(1–3), 1–10. p. 1. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2735818/pdf/nihms90556.pdf (accessed January 23, 2012).

[26] A. M. Arria, K. M. Caldeira, S. J. Kasperski, K. B. Vincent, R. R. Griffiths, & K. E. O'Grady. (2011). Energy Drink Consumption and Increased Risk for Alcohol Dependence. ***Alcoholism: Clinical and Experimental Research, 35,*** 365–375. doi: 10.1111/j.1530-0277.2010.01352.x. p. 365. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3058776/pdf/nihms-240328.pdf (accessed January 18, 2012).

[27] Reissig, et al. (2009) p. 6; A. M. Arria, K. M. Caldeira, S. J. Kasperski, K. E. O'Grady, K. B. Vincent, R. R. Griffiths, & E. D. Wish. (2010). Increased alcohol consumption, nonmedical prescription drug use, and illicit drug use are associated with energy drink consumption among college students. ***J Addict Med, 4***(2), 74–80. doi:10.1097/ADM.0b013e3181aa8dd4. p. 3. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2923814/pdf/nihms115856.pdf (accessed January 23, 2012); M. C. O'Brien, T. P. McCoy, S. D. Rhodes, A. Wagoner, & M. Wolfson. (2008). Caffeinated cocktails: Energy drink consumption, high-risk drinking, and alcohol-related consequences among college students. ***Academic Emergency Medicine, 15***(5). 453-460. p. 453. http://onlinelibrary.wiley.com/doi/10.1111/j.1553-2712.2008.00085.x/pdf (accessed January 23, 2012).

Circumstances of Use

Most students (1,018 or 48.8%) who reported that they have used energy drinks in their lifetime indicated that they used these drinks "*before or after sporting events*". This corresponds to about 32% of all survey respondents or 1 in every 3 students. Approximately 46.7% (993) of lifetime users used energy drinks "*while hanging out*" whereas only 14.4% (301) reported that they used energy drinks "*while studying*". Almost 1 in every 4 (503 or 24.1%) student provided some other circumstance for use of energy drinks, such as "*when thirsty*", "*when I want one*", and "*just to drink*", among other situations. Similar circumstances of use have been reported by current users of energy drinks where 614 or 60.9% of current users consume energy drinks "*before or after sporting activity*" while 571 or 56.6% use these drinks "*while hanging out*". Overall, in terms of all survey respondents, this corresponds to 19.3% of students who reported using energy drinks "*before or after sporting activity*" and 17.9% "*while hanging out*".

Table 3.1.27
Circumstance of Use of Energy Drinks for Lifetime and Current Users

Lifetime Users			(n = 2,085)
Circumstance of Use	**Yes**	**No**	**Not Stated**
While studying	301	817	967
Before or after sporting activity	1,018	462	605
While hanging out	993	458	634
Other	503	-	1,582

Current Users			(n = 1,008)
Circumstance of Use	**Yes**	**No**	**Not Stated**
While studying	218	332	458
Before or after sporting activity	614	132	257
While hanging out	571	152	285
Other	205	-	803

Mode of Acquisition

Energy drinks were mainly obtained by students purchasing these drinks themselves (*see Table 3.1.28*). Approximately 4 out of every 5 lifetime users of energy drink (1,658 or 79.5%) have indicated that they purchase the energy drinks they have consumed. This means that 52.1% of all survey respondents reported that they have purchased the energy drinks themselves. On the other hand, only 15.4% (322) indicated that their "*brother and/or sister gives them*". Similarly, 85.5% (862) of current users of energy drinks reported that they have purchased these drinks themselves. In other words, 27.1% of all students purchased the energy drinks they consumed in the last 30 days.

Table 3.1.28
Mode of Acquisition of Energy Drinks for Lifetime and Current Users

Mode of Acquisition	Lifetime Users (n = 2,085)		Current Users (n = 1,008)	
	Number	Percent	Number	Percent
Friends give them to me	515	24.7	304	30.2
My parents give them to me	589	28.2	368	36.5
My brother and/or sister give(s) them to me	322	15.4	208	20.6
Other relative(s) give them to me	393	18.8	259	25.7
I purchase them	1,658	79.5	862	85.5
Other	38	1.8	15	1.5

Frequency of Use

Majority of both lifetime and current users of energy drinks reported that they used these drinks "*once per month*", 30.7% and 25.7%, respectively. This corresponds to approximately 20.1% and 8.1% of all survey respondents, who indicated "*once per month*" lifetime and current use, respectively. On the other hand, fewer students indicated daily use of energy drinks with only 7.4% of lifetime users and 11.7% of current users indicating "*once a day use*" and 3.4% and 6% reporting consumption "*twice or more a day*".

Table 3.1.29
Frequency of Use of Energy Drinks for Lifetime and Current Users

Frequency of Use	Lifetime Users		Current Users	
	Number	Percent	Number	Percent
Once a day	154	7.4	118	11.7
Twice or more a day	71	3.4	60	6.0
Once per week	233	11.2	194	19.2
Twice per week	224	10.7	192	19.0
Once per month	640	30.7	259	25.7
Other	638	30.6	155	15.4
Not Stated	125	6.0	30	3.0
Total	**2,085**	**100.0**	**1,008**	**100.0**

Prevalence of Combining Energy Drinks with Alcoholic Beverages

Table 3.1.30 shows that of those students who have consumed energy drinks in their lifetime, the majority (72.1%) have not consumed a mixture of these drinks with alcoholic beverages; whereas one-quarter or 1 in every 4 (25.8%) of these students has consumed a mixture (*see Figure 3.1.16*). This therefore means that 16.9% of all survey respondents (537 of 3,182) have consumed a mixture of energy drinks with alcoholic beverages in their lifetime.

In contrast, of the current users, approximately two-thirds (67.7%) or 2 in every 3 of these students have not consumed a mixture, while one-third (32%) have reported mixing energy drinks with alcoholic beverages and consuming these mixtures (*see Figure 3.1.17*). This corresponds to about 10.2% of all survey respondents (323 of 3,182) who consume a combination of energy drinks and alcoholic beverages.

Table 3.1.30
Prevalence of Combining Energy Drinks with Alcoholic Beverages

Frequency of Use	Lifetime Users		Current Users	
	Number	Percent	Number	Percent
Yes	537	25.8	323	32.0
No	1,504	72.1	682	67.7
Not Stated	44	2.1	3	0.3
Total	**2,085**	**100.0**	**1,008**	**100.0**

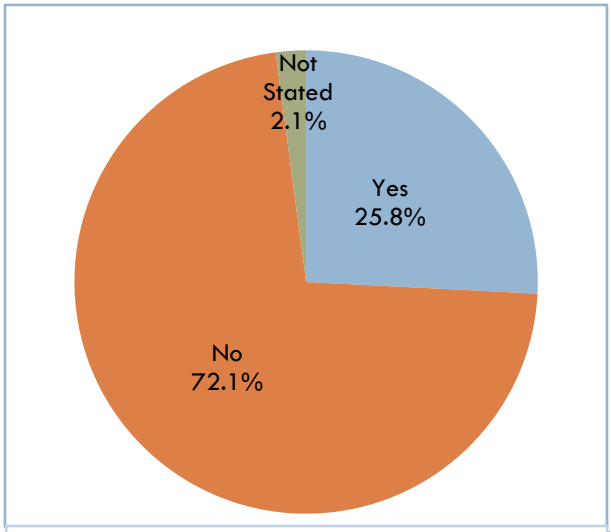

Figure 3.1.16: Prevalence of combining energy drinks with alcoholic beverages among lifetime users of energy drinks.

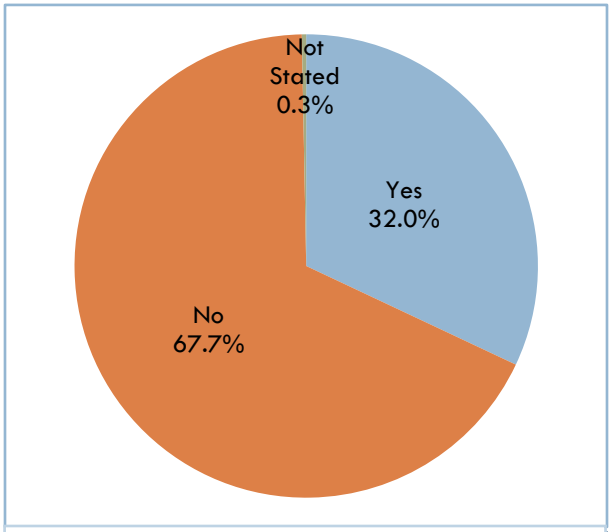

Figure 3.1.17: Prevalence of combining energy drinks with alcoholic beverages among current users of energy drinks.

3.1.7 Access to Drugs

- Marijuana seemed to be the easiest drug to obtain as indicated by 40.3% of all survey respondents.

- Most students reported that ecstasy (19.3%) and crack (19.5%) are the drugs most "*impossible to obtain*".

Table 3.1.31
Ease of Access to Drugs by Proportion of Survey Respondents

					(n = 3,182)
Ease of Access	**Marijuana** %	**Cocaine** %	**Hashish** %	**Ecstasy** %	**Crack** %
Easy	40.3	9.5	8.7	9.2	10.9
Difficult	11.9	18.9	12.8	15.0	15.3
Impossible to Obtain	12.0	19.0	18.7	19.3	19.5
Don't Know	32.2	48.8	56.0	52.6	50.5
Not Stated	3.5	3.9	3.9	3.9	3.7

- About one-fifth (16.9%) of all survey respondents reported that they were offered to buy or consume marijuana in the last 30 days, while 10.4% had this offer within the last year.
- The majority of students reported that they have "*never been offered*" to buy or consume any of the drugs for which they were questioned.

Table 3.1.32
Last Offer to Buy or Use Drugs by Proportion of Survey Respondents

					(n = 3,182)
Last Offer to Buy or Use	**Marijuana** %	**Cocaine** %	**Hashish** %	**Ecstasy** %	**Crack** %
During the last 30 days	16.9	1.2	1.9	1.5	1.4
More than a month ago, but less than a year ago	10.4	1.3	1.8	1.7	1.1
More than a year ago	6.9	1.4	1.0	0.9	1.2
I have never been offered	62.2	91.9	91.1	91.4	92.1
Not Stated	3.6	4.3	4.3	4.4	4.3

- When students were asked about their curiosity to try an illicit drug, 67.8% reported "*No*" while 16.1% said "*Yes*".
- When asked if they would seize the opportunity to try an illicit drug if presented, 71.9% said "*No*" whereas only 6.5% indicated "*Yes*".

Table 3.1.33
Proportion of Survey Respondents Curious About Trying or Seizing Opportunity to Try Illicit Drugs

		(n = 3,182)
Responses	**Curious** %	**Seize Opportunity** %
No	67.8	71.9
Not sure	13.3	17.9
Yes	16.1	6.5
Not Stated	2.8	3.6

3.1.8 Perception of Health Risk

Perception of health risk is an important determinant in the decision-making process young people consider when deciding whether or not to use ATODs. Research has shown a consistent negative correlation between perception of health risk and the level of reported ATOD use.[28] That is, generally when the perceived risk of harm is high, reported frequency of use is low. Evidence also suggests that perceptions of risks and benefits associated with drug use sometimes serve as a leading indicator of future drug use patterns.[29] Table 3.1.34 shows the proportion of students who perceived various risks as "harmful". Harmful, in this instance, is taken to be the sum of the ratings "*slightly harmful*", "*moderately harmful*", and "*very harmful*". Table 3.1.35 presents the prevalence for survey respondents who assigned their perception of the risk level of harm to various drug use behaviour that occur either "*sometimes*" or "*frequently*". These survey items form the risk factor scale *Low Perceived Risks of Drug Use*.

Table 3.1.34
Percentage of Survey Respondents by Grade Level Who Reported Perception of Health Risk

Health Risk	Grade Level						Overall
	M2 (*n = 597*) %	M3 (*n = 553*) %	S1 (*n = 578*) %	S2 (*n = 566*) %	S3 (*n = 465*) %	S4 (*n = 383*) %	***(n = 3,182)*** %
Drinking alcoholic beverages frequently	88.8	86.8	88.4	86.2	90.3	91.4	88.0
Getting Drunk	89.8	86.4	90.7	87.8	90.5	91.4	89.0
Smoking cigarettes frequently	91.5	90.1	93.4	90.6	95.5	93.5	92.0
Smoking marijuana sometimes	88.3	84.3	77.0	68.4	67.3	74.2	76.7
Smoking marijuana frequently	89.1	86.4	81.8	77.2	75.1	81.5	81.8

- The majority of students (92%) perceived "*smoking cigarettes frequently*" to be the most harmful behaviour when compared to alcohol or marijuana use; whereas "*smoking marijuana sometimes*" is perceived to be harmful by 76.7% of survey respondents.
- "*Getting drunk*" ranges from a low of 86.4% for M3 students to a high of 91.4% for S4 students.
- "*Smoking marijuana frequently*" ranges from a low of 75.1% for S3 students to a high of 89.1% for S1 students.

[28] J. Bejarano, G. Ahumada, G. Sa´nchez, N. Cadenas, M. de Marco, M. Hynes, & F. Cumsille. (2011). Perception of risk and drug use: An exploratory analysis of explanatory factors in six Latin American countries. ***The Journal of International Drug, Alcohol and Tobacco Research, 1***(1), 9–17. p. 16. http://www.idatjournal.com/issues/Perception%20of%20Risk%20and%20Drug%20Use%20An%20Exploratory%20Analysis%20of%20Explanatory%20Factors%20in%20Six%20Latin%20American%20Countries.pdf (accessed February 10, 2012).

[29] L. D. Johnston, et al. (2011). p. 345.

Table 3.1.35
Perception of Health Risk by Proportion of Survey Respondents

(n= 3,182)

Health Risk	Not Harmful	Slightly Harmful	Moderately Harmful	Very Harmful	Don't Know	Not Stated
	%	%	%	%	%	%
Smoking cigarettes sometimes	3.3	16.0	36.9	36.9	4.1	2.7
Smoking cigarettes frequently	1.6	2.3	9.0	80.7	3.6	2.8
Drinking alcoholic beverages frequently	5.2	15.5	27.7	44.8	3.9	2.8
Getting drunk	4.0	10.5	22.1	56.4	4.2	2.8
Taking tranquilizers/stimulants without medical prescription sometimes	2.3	3.9	18.9	60.4	11.6	3.0
Taking tranquilizers/stimulants without medical prescription frequently	2.2	1.9	6.1	75.3	10.8	3.7
Inhaling solvents sometimes	2.9	9.9	27.8	46.0	10.3	3.2
Inhaling solvents frequently	2.4	3.4	12.5	68.5	9.4	4.0
Smoking marijuana sometimes	13.7	16.7	22.3	37.7	4.5	3.0
Smoking marijuana frequently	10.7	10.5	14.3	57.0	4.4	3.2
Consuming cocaine sometimes	2.1	2.6	17.2	69.6	5.7	2.9
Consuming cocaine frequently	1.8	0.8	4.0	84.4	5.7	3.3
Consuming crack sometimes	1.9	3.3	19.0	66.3	6.3	3.3
Consuming crack frequently	1.7	1.1	4.2	83.8	5.8	3.3
Consuming ecstasy sometimes	2.3	4.3	19.1	58.7	12.1	3.5
Consuming ecstasy frequently	1.8	1.6	6.5	74.5	11.8	3.8
Inhaling second hand cigarette smoke	4.3	18.8	27.8	40.8	4.8	3.8
Inhaling second hand marijuana smoke	11.9	14.3	23.2	40.9	6.1	3.6

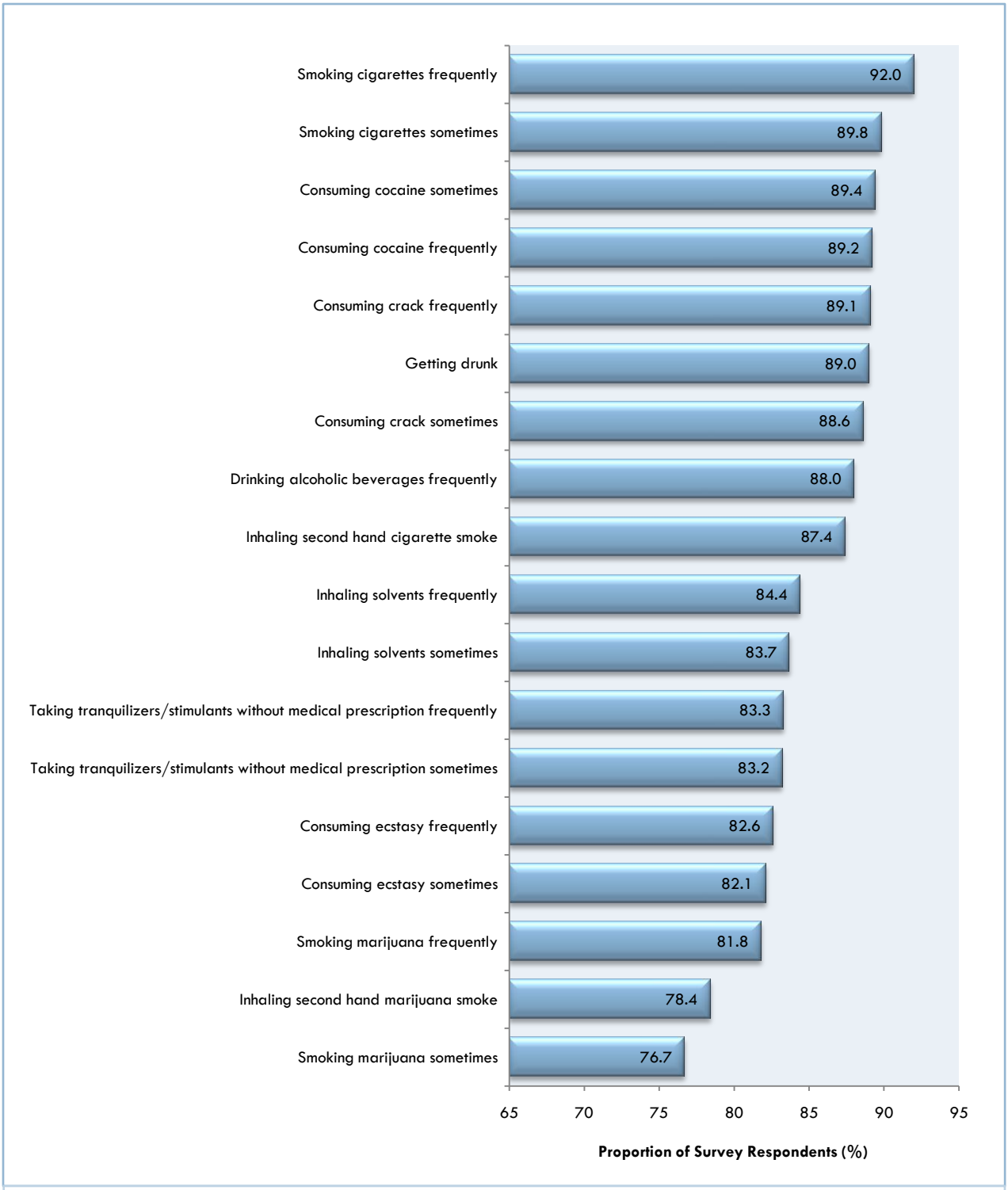

Figure 3.1.18. Harmful rating of health risk behaviours by survey respondents.

CHAPTER 3.2
RESULTS
Risk and Protective Factors

3.2.1 Introduction

There has been substantial research over the years regarding factors that promote healthy social and emotional well being of young people and those that increase the likelihood of a young person becoming involved in substance use and antisocial behaviour.[30] Protective factors identified through research include strong bonding to family, school, community, and peers.[31] These groups support the development of healthy behaviours for children by setting and communicating healthy beliefs and clear standards for children's behaviour. Young people are more likely to follow the standards for behaviour set by these groups if the bonds are strong. Strong bonds are encouraged by providing young people with opportunities to make meaningful contributions, by teaching them the skills they need to be successful in these new opportunities, and by recognising their contributions. On the other side, studies have also demonstrated that adolescents' introduction to an increasing number of risk factors is associated with more drug use and delinquency[32], whereas exposure to a number of protective factors is associated with lower prevalence of these problem behaviours.[33]

The analysis of risk and protective factors is the most powerful tool available for understanding the characteristics that promote both positive and negative adolescent behaviour and for helping to design successful prevention programmes for young people. To promote positive development and prevent problem behaviour, it is necessary to address the factors that predict these outcomes. By assessing these risk and protective factors, usually considered to be precursors to drug use, then those factors that are prominent should be prioritised in the community for targeted evidence-based prevention programming shown to address those factors and consequently provide the greatest likelihood of success.

3.2.2 Measurement

The risk and protective factor scales utilised in the National School Survey 2011 are taken from the *Communities That Care Youth Survey*. The *Communities That Care Youth Survey* provides the most comprehensive measurement of risk and protective factors currently available for 6th to 12th grade students. Additionally, by continuing to utilise these scales direct comparison of historical data can be made to assess trends and establish the direction and magnitude of changes in the factors under observation.

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[30] R. H. C. Palmer, S. E. Young, C. J. Hopfer, R. P. Corley, M. C. Stallings, T. J. Crowley, & J. K. Hewitt. (2009). Developmental epidemiology of drug use and abuse in adolescence and young adulthood: Evidence of generalized risk. ***Drug Alcohol Dependence, 102***(1-3), 78-87. p. 83.

[31] E. E. Doherty, K. M. Green, H. S. Reisinger, M. E., & Ensminger, M. E. (2007). Long-term patterns of drug use among an urban Afircan-American cohort: The role of gender and family. ***Journal of Urban Health: Bulletin of the New York Academy of Medicine, 85***(2), 250-267. p. 255.

[32] T. Taiwo & S. Goldstein. (2006). Drug use and its association with deviant behavior among rural adolescent students in South Africa. ***East African Medical Journal, 83***(9), 500-506. p. 505.

[33] R. Corona, E. Turf, M. A. Corneille, F. Z. Belgrave, & A. Nasim. (2009). Risk and protective factors for tobacco use among 8th- and 10th-grade African American students in Virginia. ***Prevention of Chronic Disease, 6***(2): A 45. p. 4.

The C*ommunities That Care Youth Survey* instrument was designed to assess a wide set of risk and protective factors identified by prospective longitudinal research across the domains of community, school, family, peer, and individual as well as health and behaviour outcomes, including substance abuse violence, and delinquency.[34] The risk and protective factors selected for inclusion were factors that have been found to predict drug use and delinquent behaviour. The scales comprising the questionnaire have been extensively tested and found to have excellent validity (construct and face validity) and reliability.[35]

Risk and protective factors are measured by sets of survey items called scales. Because they are very broad, some risk factors are measured by multiple scales. For example, "*Favourable Parental Attitudes and Involvement in the Problem Behaviour*" is a single risk factor, but it is measured by two risk factor scales: *Parental Attitudes Favourable toward ATOD Use* and *Parental Attitudes Favourable toward Antisocial Behaviour*. In total, 16 risk factors were measured by 25 risk factor scales, while each of the 13 protective factors is measured by a single protective factor scale.

A technique called *summation* was applied to multiple items in each scale to provide a score for each scale. To accomplish this, specific responses to the items were combined allowing for the calculation of a total score for each scale. This technique is commonly applied in social science research and has a high degree of reliability.[36] Cronback's alpha for internal consistency reliability has been calculated and reported for all scales utilised in this analysis (*see Appendix E*).

Like the scoring systems used by many national testing programs – such as the SAT® and ACT™ – this method of norm-referencing generates percentile scores ranging from 0 to 100. A score of 50, which matches the normative median, indicates that 50% of the respondents in the normative sample reported a score that is lower than the average for Bermuda and 50% reported a score that is higher. Similarly, a score of 75 indicates that 75% of the normative sample reported a lower score and 25% reported a higher score. Because risk is associated with negative behavioural outcomes, it is better to have lower risk factor scale scores, not higher. Conversely, because protective factors are associated with positive behavioural outcomes, it is better to have higher protective factor scale scores, not lower.

Risk and protective factor scales are presented as overall aggregated percentiles and on a grade-by-grade basis. Unlike the C*ommunities That Cares Survey* in 2007, which made direct comparison of Bermuda students with that of students in the United States, there were no comparisons made against the C*ommunities That Care* normative database. Comparisons are, however, provided for trends in data over the past three surveys (*see Appendix F*).

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[34] W. M. Arthur, D. J. Hawkins, A. J, Pollard, F. R. Catalano, & J. A. Baglioni. (2002). Measuring Risk and Protective Factors for Substance Use, Delinquency, and Other Adolescent Problem Behaviors, That Communities That Care Youth Survey. ***Evaluation Review, 26***(6), 575-601. p. 580.

[35] M. W. Arthur, J. S. Briney, J. D. Hawkins, R. D. Abbott, B. L. Brooke-Weiss, & F. R. Catalano. (2007). Measuring risk and protective factors in communities using the Communities That Care Youth Survey. ***Evaluation Program Planning, 30***(2), 197-211. p. 200.

[36] J. A Gliem & R. R. Gliem. (2003). ***Calculating, interpreting, and reporting Cronbach's Alpha Reliability Coefficient for Likert-Type Scales***. Presented at the Midwest Research-to-Practice Conference in Adult, Continuing, and Community Education, The Ohio State University, Columbus, OH. p. 83.

3.2.3 Overall Results

Overall risk and protective factor scale scores are presented in Figures 3.2.1 and 3.2.2. These results provide a general description of the prevention needs of M2 through S4 students as a whole.

As Figure 3.2.1 shows, overall percentile scores across the 13 protective factor scales range from a low of 41 to a high of 84, with an average score of 70. The three lowest proportions were for the following protective factor scales: *Community Opportunities for Prosocial Involvement* (41), *Religiousity (43), and Belief in Moral Order (44)*. These protective factors fall below the normative average of 50. While policies that target any protective factor could potentially be an important resource for students, focusing prevention planning in these areas could be especially beneficial. Students reported the three highest overall proportions for the following protective factor scales: *School Opportunities for Prosocial Involvement* (84), *Family Rewards for Prosocial Involvement* (84), and *School Rewards for Prosocial Involvement* (83). These protective factors are above the normative score of 50. The higher scores reported by students in these areas represent strengths on which prevention programmes can build.

Comparisons Across Protective Factors

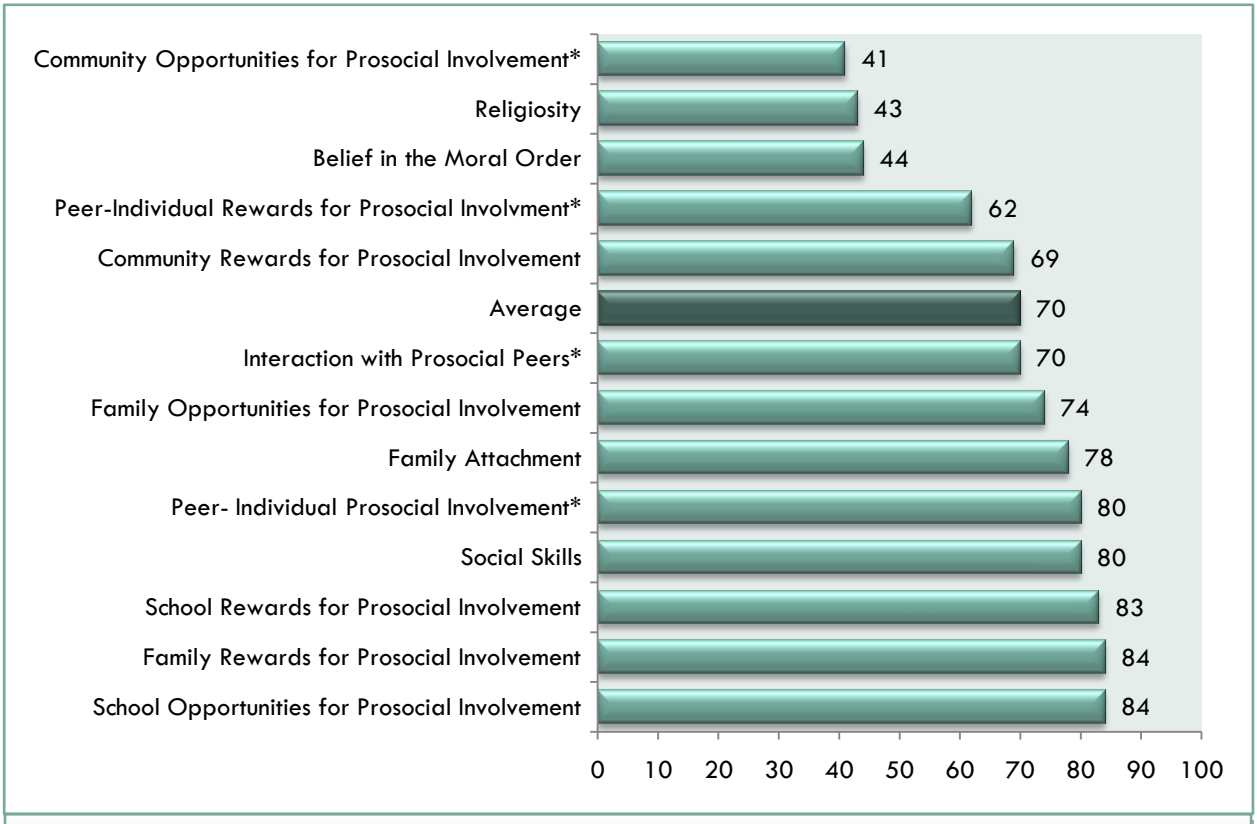

Figure 3.2.1. Overall protective factor scale scores.

*New survey item

As Figure 3.2.2 shows, overall scores across the 25 risk factor scales range from a low of 7 to a high of 72, with an average score of 26. The three highest risk factor scales are *Sensation Seeking (72)*, *Transitions and Mobility (60)*, *Friends Use of Drugs (54)* and *Family History of Antisocial Behaviour (54)*. These risk factors fall above the normative score of 50. Once again, while policies that target any risk factor could potentially be an important resource for students, directing prevention programming in these areas is likely to be especially beneficial. The three lowest risk factor scales are *Parental Attitudes Favourable toward ATOD (7)*, *Low Perceived Risks of Drug Use (8)*, *Favourable Attitudes toward Antisocial Behaviour (8)*, *Gang Involvement (8)*, *and Poor Family Management (8)*. These risk factors fall below the normative score of 50. The lower scores reported by students in these areas represent strengths on which to build.

Comparisons Across Risk Factors

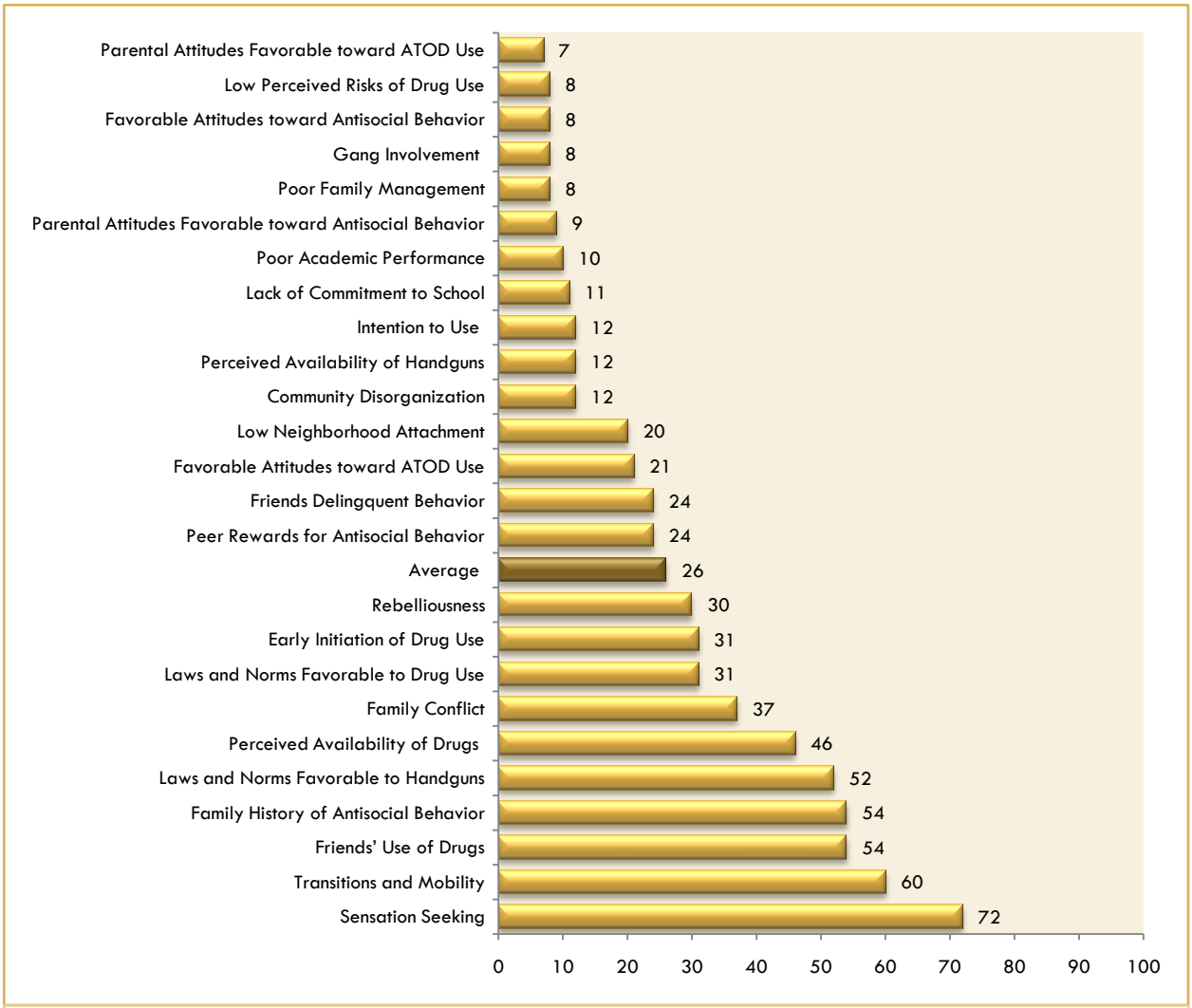

Figure 3.2.2. Overall risk factor scale scores

3.2.4 Grade Level Results

While overall scores provide a general picture of the risk and protective factor profile, they can mask problems within individual grades. Tables 3.2.1 and 3.2.2, as well as a series of graphs on the proceeding pages, present individual-grade data for risk and protective factor scale scores. This detailed information provides prevention planners with a snapshot; revealing the risk and protective factor scales that are of greatest concern by grade level. It allows those prevention planners to focus on the most appropriate points in youth development for preventive intervention action – and to target their prevention efforts as precisely as possible.

Younger students tend to report different factors than older students as being the most elevated or suppressed, as seen in Tables 3.2.1 and 3.2.2. When it came to the three highest protection scales, M2 students reported highest levels for: *Family Rewards for Prosocial Involvement (92), School Rewards for Prosocial Involvement (91), and Social Skills (91)*. However, S4 students reported highest levels for: *School Opportunities for Prosocial Involvement (85), Peer-Individual Prosocial Involvement (85), and School Rewards for Prosocial Involvement (81)*. On the other hand, M2 students reported their three highest levels of risk as *Early Initiation of Drug Use (69), Sensation Seeking (61), and Transitions and Mobility (59)*. S4 students, on the other hand, reported their three highest levels of risk as *Sensation Seeking (81), Friends Use of Drugs (81), and Family History of Antisocial Behaviour (74)*.

Table 3.2.1
Protective Factor Scale Proportions[1] Reported by Survey Respondents, by Grade Level

		M2	M3	S1	S2	S3	S4
		%	%	%	%	%	%
Community Domain	Community Rewards for Prosocial Involvement	75	74	68	67	65	63
	Community Opportunities for Prosocial Involvement	39	37	42	39	45	43
Family Domain	Family Attachment	86	83	77	73	76	73
	Family Opportunities for Prosocial Involvement	83	78	72	69	70	70
	Family Rewards for Prosocial Involvement	92	89	84	79	81	79
School Domain	School Opportunities for Prosocial Involvement	89	89	83	79	80	85
	School Rewards for Prosocial Involvement	91	85	82	79	81	81
Peer and Individual Domain	Rewards for Prosocial Involvement*	70	61	61	55	62	62
	Interaction with Prosocial Peers*	71	72	71	68	67	69
	Belief in the Moral Order	27	37	45	54	47	52
	Prosocial Involvement*	78	80	79	80	77	85
	Religiousity	44	44	47	42	39	42
	Social Skills	91	88	79	70	76	73
Average		**73**	**72**	**71**	**68**	**66**	**67**

Notes:
[1] Some scores are low because of the small number of responses to the survey items comprising the particular scale.
** New survey item.*

Table 3.2.2
Risk Factor Scale Scores[1] Reported by Survey Respondents, by Grade Level

		M2	M3	S1	S2	S3	S4
		%	%	%	%	%	%
Community Domain	Low Neighbourhood Attachment	16	18	21	21	20	24
	Community Disorganisation	9	11	12	13	10	14
	Transitions and Mobility	59	57	70	60	56	61
	Perceived Availability of Drugs	14	24	40	58	65	72
	Perceived Availability of Handguns	6	7	10	14	17	16
	Laws and Norms Favourable to Drug Use	18	23	28	36	36	43
	Laws and Norms Favourable to Handguns	30	39	52	62	63	66
Family Domain	Family History of Antisocial Behaviour	30	36	50	64	68	74
	Poor Family Management	4	6	7	10	8	12
	Family Conflict	32	33	28	45	38	44
	Parental Attitudes Favourable toward ATOD Use	3	4	7	8	10	10
	Parental Attitudes Favourable toward Antisocial Behaviour	4	8	14	11	9	8
School Domain	Poor Academic Performance	9	9	9	13	9	9
	Lack of Commitment to School	5	8	11	15	12	12
Peer and Individual Domain	Rebelliousness	17	22	30	41	35	34
	Gang Involvement	5	5	9	12	8	8
	Favourable Attitudes toward ATOD Use	5	6	17	30	33	33
	Favourable Attitudes toward Antisocial Behaviour	4	5	11	12	11	7
	Sensation Seeking	61	64	72	77	77	81
	Peer Rewards for Antisocial Behaviour	13	19	24	31	30	28
	Friends' Use of Drugs	18	31	53	69	76	81
	Friends Delinquent Behaviour	10	17	23	36	29	30
	Low Perceived Risks of Drug Use	9	3	4	8	12	10
	Early Initiation of Drug Use	69	51	30	22	10	6
	Intention to Use	5	7	12	17	16	16
Average		**18**	**21**	**26**	**31**	**30**	**32**

Note:
[1] Some scores are low because of the small number of responses to the survey items comprising the particular scale.

3.2.5 Protective Factors

Protective factors are characteristics that are known to decrease the likelihood that a student will engage in problem behaviours. They encompass family, social, psychological, and behavioural characteristics that can provide a buffer for young people and mitigate the effects of risk factors while promoting positive youth development. These factors fall into three categories – individual characteristics, bonding, healthy beliefs and clear standards. For example, bonding to parents reduces the risk of an adolescent engaging in problem behaviours. To develop these healthy positive behaviours, young people must be immersed in environments that consistently communicate healthy beliefs and clear standards for behaviour; that foster the development of strong bonds to members of their family, school, and community; and that recognise the individual characteristics of each young person (Social Development Strategy).

Below, each protective factor scale is described and the results are presented. Higher scores on the protective factor scales are preferred as they indicate greater levels of protection.

Community Rewards for Prosocial Involvement

Students who feel recognised and rewarded by members of their community are less likely to engage in negative behaviours, because that recognition helps increase a student's self-esteem and the feeling of being bonded to that community. This protective factor is measured using the *Community Rewards for Prosocial Involvement* scale.

The protective factor *Community Rewards for Prosocial Involvement* is measured by a single scale using three survey items:

- ✓ There are people in my neighbourhood, or the area around where I live, who are proud of me when I do something well.
- ✓ There are people in my neighbourhood, or the area where I live, who encourage me to do my best.
- ✓ My neighbours notice when I am doing a good job and let me know about it.

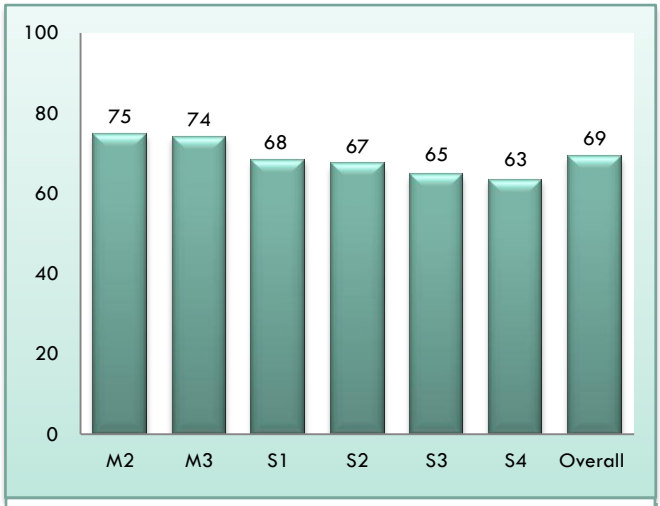

Figure 3.2.3. Community rewards for prosocial involvement scale by grade level and overall.

- Across grade levels, percentile scores for *Community Rewards for Prosocial Involvement* range from a low of 63 among S4 students to a high of 75 among M2 students.
- Overall, students received a percentile score of 69 on the *Community Rewards for Prosocial Involvement* scale.

Community Opportunities for Prosocial Involvement

When students have the opportunity to make meaningful contributions to their communities they are less likely to get involved in risky behaviours. By having the opportunity to make a contribution, students feel as if they are an integral part of their community.

The protective factor *Community Opportunities for Prosocial Involvement* is measured by a single scale using six survey items:

- ✓ There are a lot of adults in my neighbourhood I could talk to about something important.
- ✓ Which of the following activities for people your age are available in your community:
  - Sports teams.
  - Boys and girls clubs.
  - Community clubs.
  - Community service.

- Across grade levels, percentile scores for *Community Opportunities for Prosocial Involvement* range from a low of 37 among M3 students to a high of 45 among S3 students.
- Overall, students received a percentile score of 41 on the *Community Opportunities for Prosocial Involvement* scale.

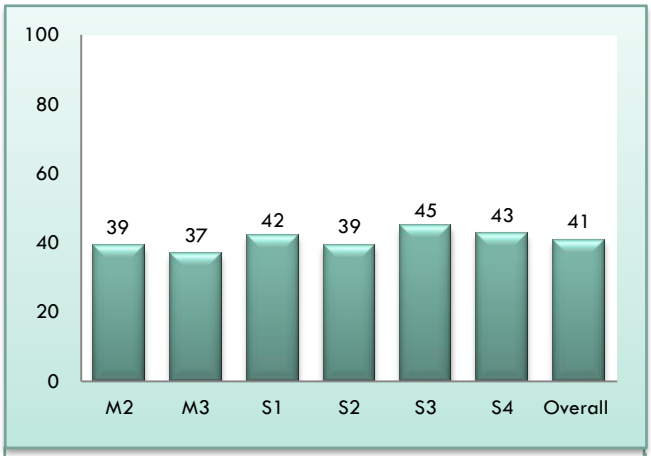

Figure 3.2.4. Community opportunities for prosocial involvement scale by grade level and overall.

Family Attachment

One of the most effective ways to reduce the risk of problem behaviours among young people is to help strengthen their bonds with family members who embody healthy beliefs and clear standards. Children who are bonded to family members who have healthy beliefs are less likely to do things that threaten that bond, such as using drugs, committing crimes, or dropping out of school. Positive bonding can act as a buffer against risk factors. If children are attached to their parents and want to please them, they will be less likely to threaten that connection by doing things that meet strong disapproval from their parents.

The protective factor *Family Attachment* is measured by a single scale using four survey items:

- ✓ Do you feel very close to your mother?
- ✓ Do you share your thoughts and feelings with your mother?
- ✓ Do you feel very close to your father?
- ✓ Do you share your thoughts and feelings with your father?

- Across grade levels, percentile scores for *Family Attachment* range from a low of 73 among S2 and S4 students to a high of 86 among M2 students.
- Overall, students received a percentile score of 78 on the *Family Attachment* scale.

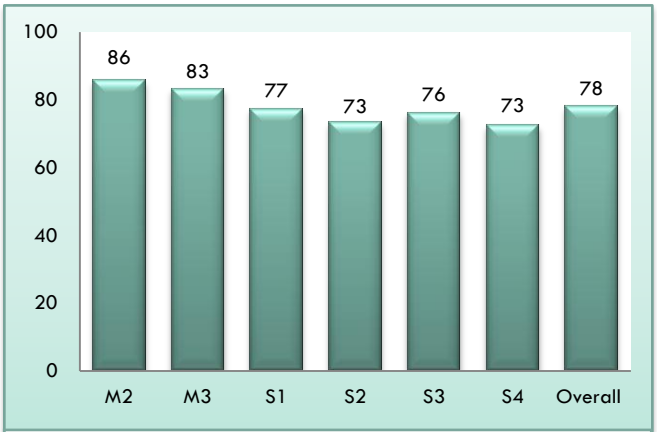

Figure 3.2.5. Family attachment scale by grade level and overall.

Family Opportunities for Prosocial Involvement

When students have the opportunity to make meaningful contributions to their families, they are less likely to get involved in risky behaviours. By having the opportunity to make a contribution, students feel as if they are an integral part of their families. These strong bonds allow students to adopt the family norms, which can protect students from risk. For instance, children whose parents have high expectations for their school success and achievement are less likely to drop out of school.

The protective factor *Family Opportunities for Prosocial Involvement* is measured by a single scale using three survey items:

- ✓ If I had a personal problem, I could ask my mom or dad for help.
- ✓ My parents give me lots of chances to do fun things with them.
- ✓ My parents ask me what I think before most family decisions affecting me are made.

Figure 3.2.6. Family opportunities for prosocial involvement scale by grade level and overall.

- Across grade levels, percentile scores for *Family Opportunities for Prosocial Involvement* range from a low of 69 among S2 students to a high of 83 among M2 students.
- Overall, students received a percentile score of 74 on the *Family Opportunities for Prosocial Involvement* scale.

Family Rewards for Prosocial Involvement

When family members reward their children for positive participation in activities, it helps children feel motivated to contribute and stay involved with the family, thus reducing their risk for problem behaviours. When families promote clear standards for behaviour, and when young people consequently develop strong bonds of attachment and commitment to their families, young people's behaviour becomes consistent with those standards.

The protective factor *Family Rewards for Prosocial Involvement* is measured by a single scale using four survey items:

- ✓ My parents notice when I am doing a good job and let me know about it.
- ✓ How often do your parents tell you they're proud of you for something you've done?
- ✓ Do you enjoy spending time with your mother?
- ✓ Do you enjoy spending time with your father?

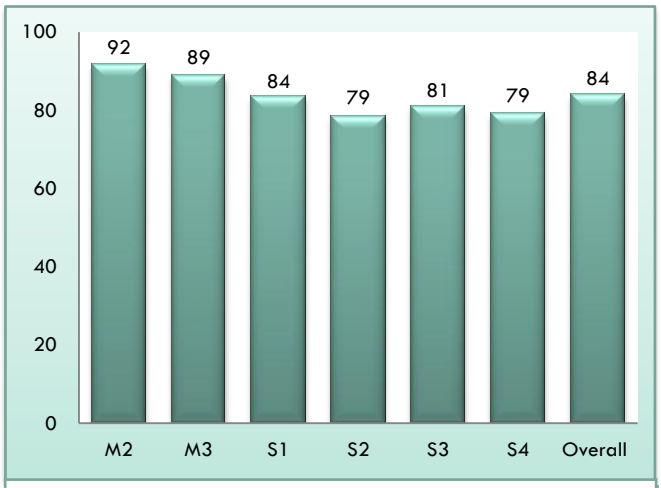

Figure 3.2.7. Family rewards for prosocial involvement scale by grade level and overall.

- Across grade levels, percentile scores for *Family Rewards for Prosocial Involvement* range from a low of 79 among S2 and S4 students to a high of 92 among M2 students.
- Overall, students received a percentile score of 84 on the *Family Rewards for Prosocial Involvement* scale.

School Opportunities for Prosocial Involvement

Giving students opportunities to participate in important activities at school helps to reduce the likelihood that they will become involved in problem behaviours. Students who feel they have opportunities to be involved are more likely to contribute to school activity. This bond can protect a student from engaging in behaviours that violate socially accepted standards.

The protective factor *School Opportunities for Prosocial Involvement* is measured by a single scale using five survey items:

- ✓ In my school, students have lots of chances to help decide things like class activities and rules.
- ✓ Teachers ask me to work on classroom projects.

- ✓ There are a lot of chances for student in my school to get involved in sports, clubs, and other school activities outside of class.
- ✓ There are lots of chances for students in my school to talk with a teacher one-on-one.
- ✓ I have lots of chances to be part of class discussions or activities.

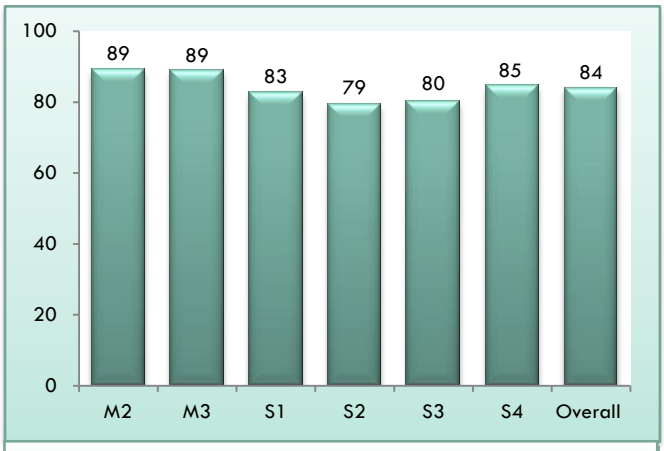

Figure 3.2.8. School opportunities for prosocial involvement scale by grade level and overall.

- Across grade levels, percentile scores for *School Opportunities for Prosocial Involvement* range from a low of 79 among S2 students to a high of 89 among M2 and M3 students.
- Overall, students received a percentile score of 84 on the *School Opportunities for Prosocial Involvement* scale.

School Rewards for Prosocial Involvement

Making students feel appreciated and rewarded for their involvement at school helps reduce the likelihood of their involvement in drug use and other problem behaviours. This is because students who feel appreciated for their activity at school bond to their school.

The protective factor *School Rewards for Prosocial Involvement* is measured by a single scale using four survey items:

- ✓ My teacher(s) notices when I am doing a good job and lets me know about it.
- ✓ I feel safe at my school.
- ✓ The school lets my parents know when I have done something well.
- ✓ My teachers praise me when I work hard in school.

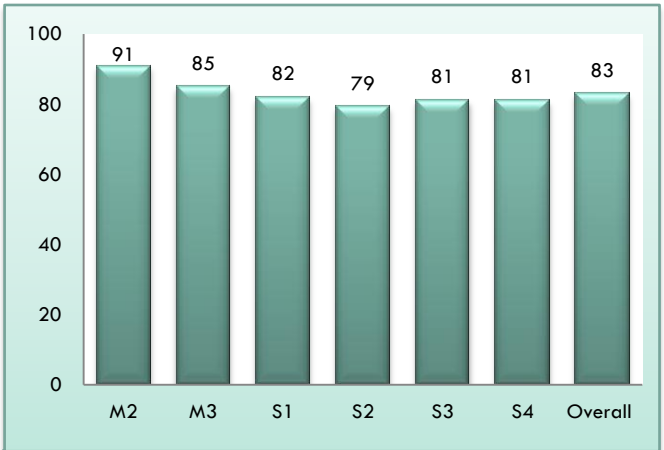

Figure 3.2.9. School rewards for prosocial involvement scale by grade level and overall.

- Across grade levels, percentile scores for *School Rewards for Prosocial Involvement* range from a low of 79 among S2 students to a high of 91 among M2 students.
- Overall, students received a percentile score of 83 on the *School Rewards for Prosocial Involvement* scale.

Peer-Individual Rewards for Prosocial Involvement*

Often peer acceptance of certain behaviours leads to increased social status amongst young people. Being rewarded by peers for involvement in antisocial behaviours may increase the likelihood of involvement in drug use and other problem behaviours.

The protective factor *Peer-Individual Rewards for Prosocial Involvement* is measured by a single scale using four survey items:

- ✓ What are the chances that you would be seen as cool if you worked hard at school?
- ✓ What are the chances that you would be seen as cool if you defended someone who was being verbally abused at school?
- ✓ What are the chances that you would be seen as cool if you regularly volunteered to do community service?
- ✓ What are the chances that you would be seen as cool if you made a commitment to stay drug-free?

- Across grade levels, percentile scores for *Peer Rewards for Prosocial Involvement* range from a low of 55 among S2 students to a high of 70 among M2 students.
- Overall, students received a percentile score of 62 on the *Peer Rewards for Prosocial Involvement* scale.

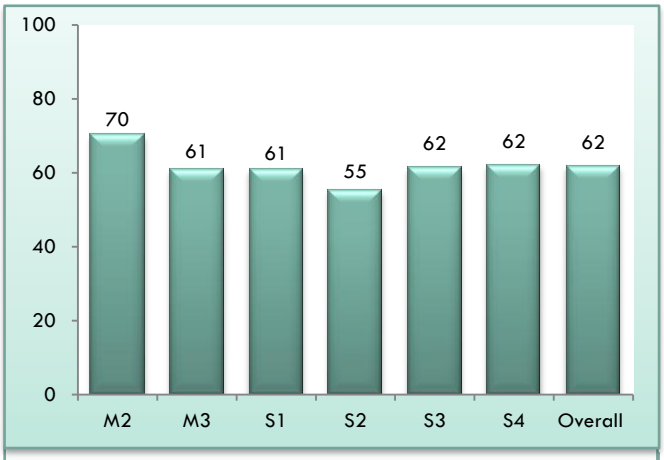

Figure 3.2.10. Peer-individual rewards for prosocial involvement scale by grade level and overall.

Peer-Individual Interaction with Prosocial Peers*

Students who feel they have opportunities to be involved are more likely to contribute to school activity. These students are likely to avoid negative behaviours and delay use of alcohol and drugs. This bond can protect a student from engaging in behaviours that violate socially accepted standards.

The protective factor *Interaction with Prosocial Peers* is measured by a single scale using five survey items:

- ✓ In the past year (12 months), how many of your four (4) best friends have….
  - ✓ Participated in clubs, organisations, or activities at school?
  - ✓ Made a commitment to stay drug-free?

*New survey item

- ✓ Liked school?
- ✓ Regularly attended religious services?
- ✓ Tried to do well in school?

- Across grade levels, percentile scores for *Interaction with Prosocial Peers* range from a low of 67 among S3 students to a high of 72 among M3 students.
- Overall, students received a percentile score of 70 on the *Interaction with Prosocial Peers* scale.

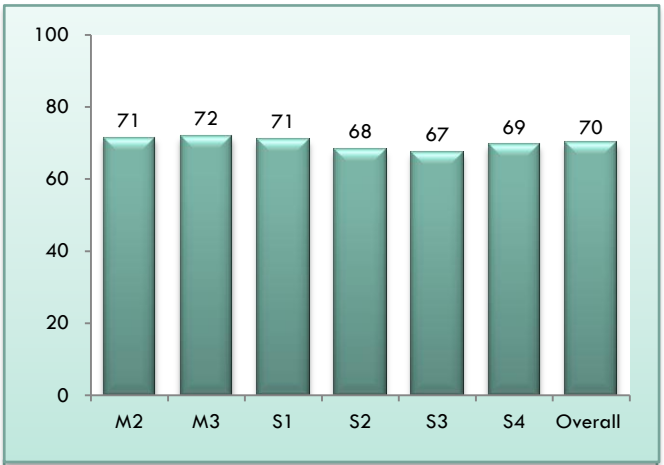

Figure 3.2.11. Interaction with prosocial peers scale by grade level and overall.

Belief in the Moral Order

When people feel bonded to society, they are more motivated to follow society's standards and expectations. It is important for families, schools, and communities to have clearly stated policies on drug use. Young people who have developed a positive belief system are less likely to become involved in problem behaviours. For example, young people who believe that drug use is socially unacceptable or harmful are likely to be protected against peer influences to use drugs.

The protective factor *Belief in the Moral Order* is measured by a single scale using four survey items:

- ✓ It is important to be honest with your parents, even if they become upset or you get punished.
- ✓ I think sometimes it is okay to cheat at school.
- ✓ I think it's okay to take something without asking if you can get away with it.
- ✓ It is all right to beat up people if they start the fight.

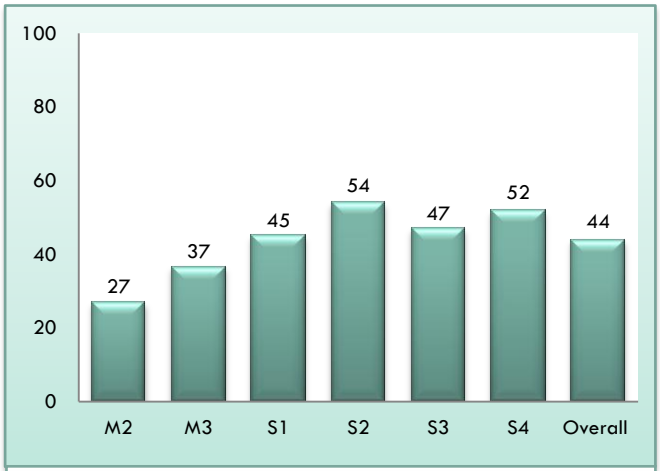

Figure 3.2.12. Belief in moral order scale by grade level and overall.

- Across grade levels, percentile scores for *Belief in the Moral Order* range from a low of 27 among M2 students to a high of 54 among S2 students.
- Overall, students received a percentile score of 44 on the *Belief in the Moral Order* scale.

Peer-Individual Prosocial Involvement*

Students who feel recognised and rewarded by peers are less likely to engage in negative behaviours, because that acceptance helps increase a student's self-esteem and the feeling of being bonded with their peers. This protective factor is measured using the *Peer Prosocial Involvement* scale.

The protective factor *Prosocial Involvement* is measured by a single scale using three survey items:

- ✓ How many times in the past year (12 months), have you….
  - ✓ Participated in clubs, organisations, or activities at school?
  - ✓ Done extra work on your own for school?
  - ✓ Volunteered to do community service?

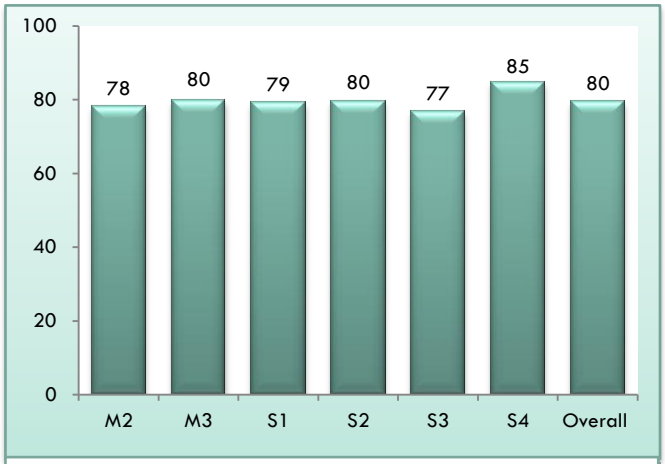

Figure 3.2.13. Peer-individual prosocial involvement scale by grade level and overall.

- Across grade levels, percentile scores for *Prosocial Involvement* range from a low of 77 among S3 students to a high of 85 among S4 students.
- Overall, students received a percentile score of 80 on the *Prosocial Involvement* scale.

Religiousity

Religious institutions can help students develop firm prosocial beliefs. Students who have high levels of religious connection are less vulnerable to becoming involved in antisocial behaviours, because they have already adopted a social norm against those activities.

The protective factor *Religiousity* is measured by a single scale using one survey item:

- ✓ How often do you attend religious services?

This score was calculated by collapsing two response categories, "*1-2 times a month*" and "*about once a week or more*", to determine respondents attending religious activities at least once a month.

*New survey item

- Across grade levels, percentile scores for *Religiousity* range from a low of 39 among S3 students to a high of 47 among S1 students.
- Overall, students received a percentile score of 43 on the *Religiousity* scale.

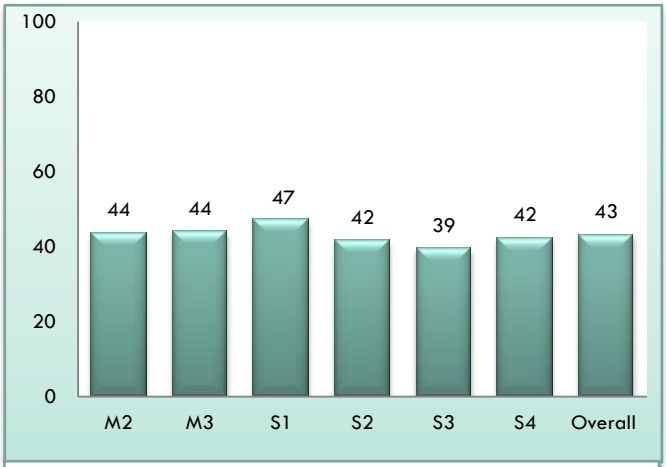

Figure 3.2.14. Religiousity scale by grade level and overall.

Social Skills

Students who have developed a high level of social skills are more likely to do well interacting with others, and will find these interactions rewarding. If they are skilled at avoiding trouble, they are less likely to engage in problem behaviours, such as drug use.

The protective factor *Social Skills* is measured by presenting students with four different scenarios and giving them four possible responses to each scenario. The following four scenarios were included on the survey:

- ✓ You are looking at CD's in the music store with a friend. You look up and see her slip a CD under her coat. She smiles and says, "Which one do you want? Go ahead, take it while nobody's around". There is no one in sight, no employees or other customers. What would you do now?
- ✓ It is 8:00 on a weeknight and you are about to go over to a friend's house when your mother asks you where you are going. You say, "Oh, just going to go hang out with some friends." She says, "No, you'll just get into trouble if you go out. Stay home tonight" What would you do?
- ✓ You are visiting another part of town, and you don't know any of the people your age there. You are walking down the street, and some teenager you don't know is walking toward you. He is about your size, and as he is about to pass you, he deliberately bumps into you and you almost lose your balance. What would you do or say?"
- ✓ You are at a party at someone's house, and one of your friends offers you a drink containing alcohol. What would you say or do?

- Across grade levels, percentile scores for *Social Skills* range from a low of 70 among S2 students to a high of 91 among M2 students.
- Overall, students received a percentile score of 80 on the *Social Skills* scale.

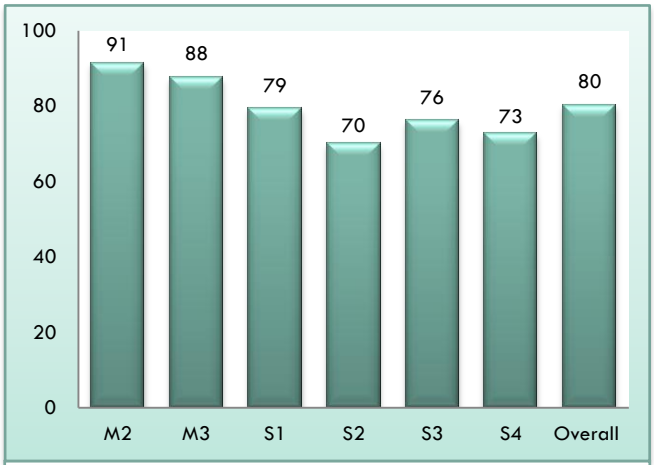

Figure 3.2.15. Social skills scale by grade level and overall.

3.2.6 Risk Factors

Risk factors are characteristics in the community, family, school, peer, and individual's environments that are known to increase the likelihood of a student engaging in one or more problem behaviours (substance abuse, depression and anxiety, delinquency, teen pregnancy, school dropout, or violence). For example, a risk factor in the community environment is the existence of laws and norms favourable to drug use, which can affect the likelihood that a young person will try alcohol, tobacco, or other drugs. In those communities where there is acceptance or tolerance of drug use, students are more likely to engage in alcohol, tobacco, and other drug use.

On the following pages, each of the risk factor scales, measured in the Community, Family, School, Peer-Individual domains, is described and the results are reported. In contrast to the protective factor scales, lower scores on the risk factors scales are preferred as they indicate lower levels of risk.

Low Neighbourhood Attachment

Higher rates of drug usage, delinquency, and violence occur in communities or neighbourhoods where people feel little attachment to the community. This situation is not specific to low-income neighbourhoods. It also can be found in affluent neighbourhoods. Perhaps the most significant issue affecting community attachment is whether residents feel they can make a difference in each other's lives. If the key players in a neighbourhood – such as merchants, teachers, clergy, police and human and social services personnel – live outside the neighbourhood, residents' sense of commitment will be lower. This low sense of commitment may be reflected in lower rates of voter participation and parental involvement in schools.

The *Low Neighbourhood Attachment* scale was developed to measure a component of the risk factor *Low Neighbourhood Attachment and Community Disorganisation*. This scale is measured by three survey items:

- ✓ I'd like to get out of my neighbourhood.
- ✓ If I had to move, I would miss the neighbourhood I now live in.
- ✓ I like my neighbourhood.

To obtain a score, one survey item comprising the *Low Neighbourhood Attachment* scale was reverse coded, that of "*I'd like to get out of my neighbourhood*".

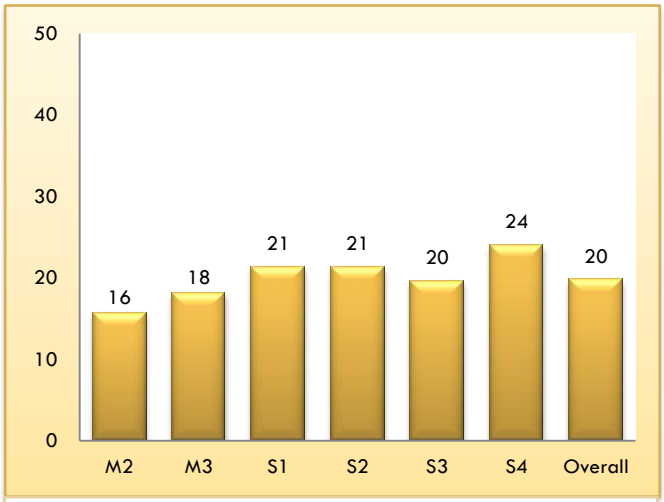

Figure 3.2.16. Low neighbourhood attachment scale by grade level and overall.

- Across grade levels, percentile scores for *Low Neighbourhood Attachment* range from a low of 16 among M2 students to a high of 24 among S4 students.
- Overall, students received a percentile score of 20 on the *Low Neighbourhood Attachment* scale.

Community Disorganisation

The *Community Disorganisation* scale pertains to students' perceptions of their communities' appearance and other external attributes.

The *Community Disorganisation* scale was developed to measure a component of the risk factor *Low Neighbourhood Attachment and Community Disorganisation*. This scale is measured by five survey items that describe the neighbourhood in which the student resides. These items include:

- ✓ I feel safe in my neighbourhood.
- ✓ Neighbourhood has crime and/or drug selling.
- ✓ Neighbourhood has lots of empty or abandoned buildings.
- ✓ Neighbourhood has lots of graffiti.

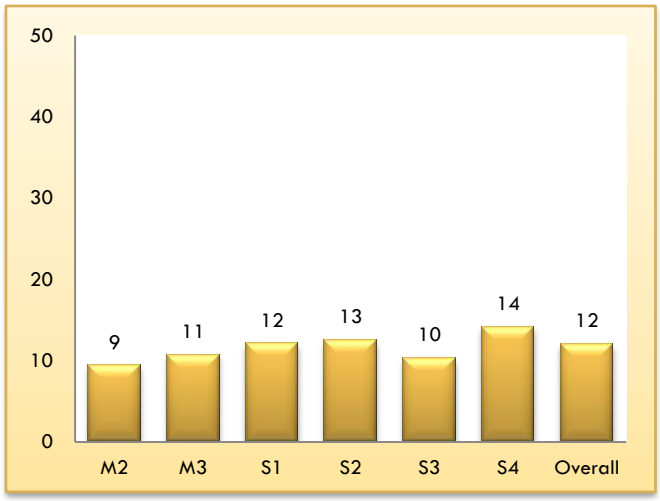

Figure 3.2.17. Community disorganisation scale by grade level and overall.

- ✓ Neighbourhood has fighting.

To obtain a score, one survey item comprising the *Community Disorganisation* scale was reverse coded, that of "*I feel safe in my neighbourhood*".

- Across grade levels, percentile scores for *Community Disorganisation* range from a low of 9 among M2 students to a high of 14 among S4 students.
- Overall, students received a percentile score of 12 on the *Community Disorganisation* scale.

Transitions and Mobility

Even normal school transitions are associated with an increase in problem behaviours. When children move from elementary school to middle school or from middle school to high school, significant increases in the rates of drug use, school dropout, and antisocial behaviour may occur. This is thought to occur because by making a transition to new environments, students no longer have the bonds they had in their old environments. Consequently, students may be less likely to become attached to their new environments and develop the bonds that help protect them from involvement in problem behaviours.

The risk factor *Transitions and Mobility* is measured by a single scale using four survey items:

- ✓ Have you changed homes in the past year?
- ✓ Have you changed schools in the past year?
- ✓ How many times have you changed homes since kindergarten?
- ✓ How many times have you changed schools since kindergarten?

To obtain a score, two survey items comprising the Transitions and Mobility scale was recoded, that of "*How many times have you changed schools since kindergarten?*" and, "*How many times have you changed homes since kindergarten?*".

- Across grade levels, percentile scores for *Transitions and Mobility* range from a low of 56 among S3 students to a high of 70 among S1 students.
- Overall, students received a percentile score of 60 on the *Transitions and Mobility* scale.

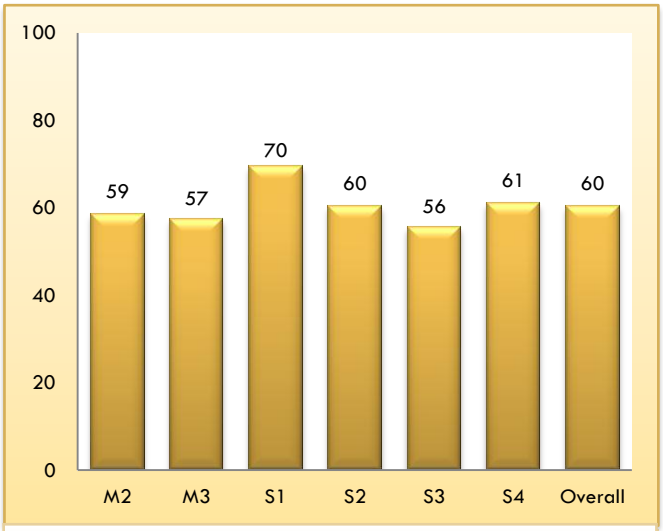

Figure 3.2.18. Transitions and mobility scale by grade level and overall.

Perceived Availability of Drugs

The perceived availability of alcohol, tobacco, and other drugs in a community is directly related to the incidence of delinquent behaviour. For example, in schools where children believe that drugs are more available, a higher rate of drug use occurs.

The risk factor scale *Perceived Availability of Drugs* was developed to measure a component of the risk factor *Availability of Drugs*. This scale is measured by four survey items:

- ✓ If you wanted to get some cigarettes, how easy would it be for you to get some?
- ✓ If you wanted to get some beer, wine, or hard liquor, how easy would it be for you to get some?
- ✓ If you wanted to get some marijuana, how easy would it be for you to get some?
- ✓ If you wanted to get a drug like cocaine, LSD, or amphetamines, how easy would it be for you to get some?

Elevation of this risk factor scale score may indicate the need to make alcohol, tobacco, and other drugs more difficult for students to acquire. For instance, a number of policy changes have been shown to reduce the availability of alcohol and cigarettes. Minimum-age requirements, taxation, and responsible beverage service have all been shown to affect the perception of availability of alcohol.

- Across grade levels, percentile scores for *Perceived Availability of Drugs* range from a low of 14 among M2 students to a high of 72 among S4 students.
- Overall, students received a percentile score of 46 on the *Perceived Availability of Drugs* scale.

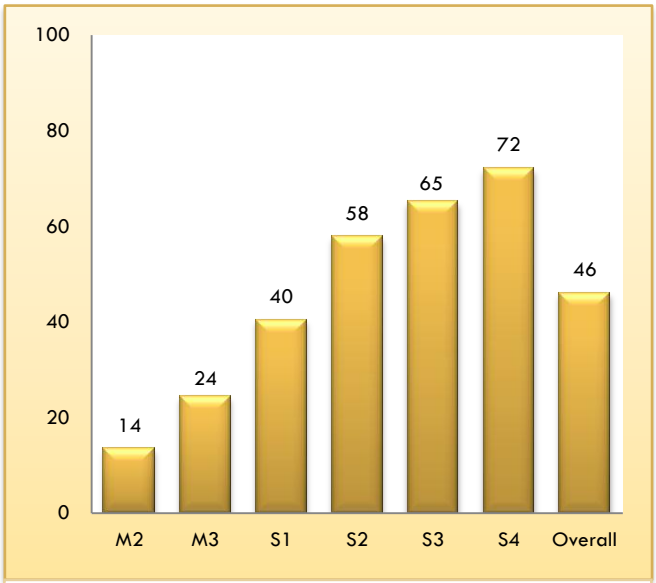

Figure 3.2.19. Perceived availability of drugs scale by grade level and overall.

Perceived Availability of Handguns

While a few studies report no association between firearm availability and violence, more studies do show a relationship. Given the lethality of firearms, the greater likelihood of conflict escalating into homicide when guns are present, and the strong association between the availability of guns and homicide rates, the availability of handguns is included in this survey.

The *Perceived Availability of Handguns* scale was developed to measure a component of the risk factor *Availability of Handguns*. This scale is measured using one survey item:

- ✓ If you wanted to get a handgun, how easy would it be for you to get one?

During analysis categories of "*sort of easy*" and "*very easy*" were collapsed for ease of reporting.

- Across grade levels, percentile scores for *Perceived Availability of Handguns* range from a low of 6 among M2 students to a high of 17 among S3 students.
- Overall, students received a percentile score of 12 on the *Perceived Availability of Handguns* scale.

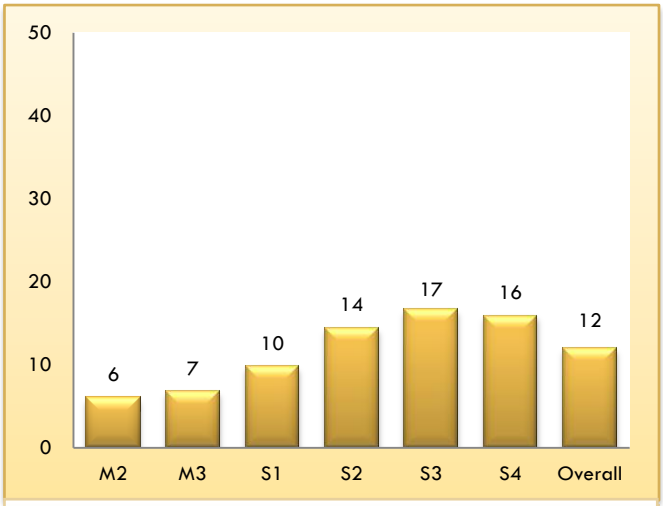

Figure 3.2.20. Perceived availability of handguns scale by grade level and overall.

Laws and Norms Favourable to Drug Use

Students' perceptions of the rules and regulations concerning alcohol, tobacco, and other drug use that exist in their neighbourhoods are also associated with problem behaviours in adolescence. Community norms – the attitudes and policies a community holds in relation to drug use and other antisocial behaviours – are communicated in a variety of ways: through laws and written policies, through informal social practices, and through the expectations parents and other members of the community have of young people. When laws and community standards are favourable toward drug use, violence and/or other crime, or even when they are just unclear, young people are more likely to engage in negative behaviours.[37]

An example of conflicting messages about drug use can be found in the acceptance of alcohol use as a social activity within the community. The visual promotion of alcohol and spirits at sporting events are in contrast to the "stopping use before it starts" messages that schools, parents, and prevention specialist may be promoting. These conflicting and ambiguous messages are problematic in that they do not have the positive impact on preventing alcohol and other drug use as compared to the impact of a clear community-level anti-drug message.

[37] L. L. Eggert, E. A. Thompson, J. R. Herting, & B. P. Randall. (2001). Reconnecting youth to prevent drug abuse, school dropout, and suicidal behaviors among high-risk youth. In Wagner, E., and Waldron, H. B. (Eds.). ***Innovations in Adolescent Substance Abuse Intervention. Oxford: Elsevier Science***, 51–84.p. 80.

The *Laws and Norms Favourable to Drug Use* scale was developed to measure a component of the risk factor *Community Laws and Norms Favourable toward Drug Use, Firearms, and Crime*. This scale is measured by five survey items:

- ✓ If a kid drank some beer, wine, or hard liquor in your neighbourhood, or the area around where you live, would he or she be caught by the police?
- ✓ If a kid smoked marijuana in your neighbourhood, or the area around where you live, would he or she be caught by the police?
- ✓ How wrong would most adults in your neighbourhood, or the area around where you live, think it is for kids your age to smoke marijuana?
- ✓ How wrong would most adults in your neighbourhood, or the area around where you live, think it is for kids your age to drink alcohol?
- ✓ How wrong would most adults in your neighbourhood, or the area around where you live, think it is for kids your age to smoke cigarettes?

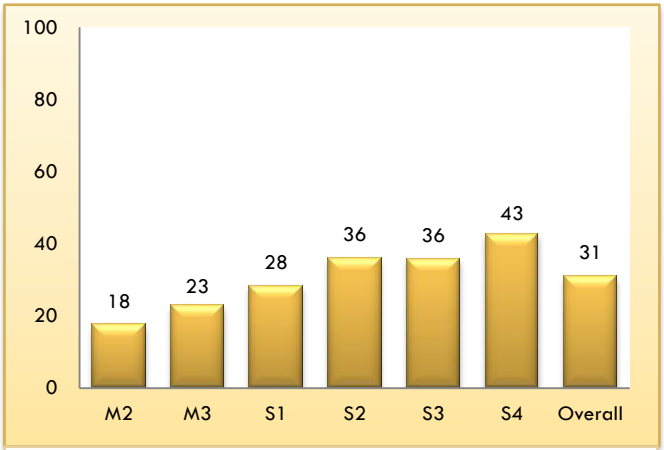

Figure 3.2.21. Laws and norms favourable to drug use scale by grade level and overall.

- Across grade levels, percentile scores for *Laws and Norms Favourable to Drug Use* range from a low of 18 among M2 students to a high of 43 among S4 students.
- Overall, students received a percentile score of 31 on the *Laws and Norms Favourable to Drug Use* scale.

Laws and Norms Favourable to Handguns

As with drug use, students' perceptions of the laws regarding illegal use of firearms may be related to violence. That is, when students perceive laws to be strict and consistently enforced, they may be less likely to carry guns and to engage in gun violence.

The *Laws and Norms Favourable to Handguns* scale was developed to measure a component of the risk factor *Community Laws and Norms Favourable toward Drug Use, Firearms and Crime*. This scale is measured using one survey item:

- ✓ If a kid illegally carried a handgun in your neighbourhood, or the area you live, would he or she be caught by the police?"

- Across grade levels, percentile scores for *Laws and Norms Favourable to Handguns* range from a low of 30 among M2 to a high of 66 among S4 students.
- Overall, students received a percentile score of 52 on the *Laws and Norms Favourable to Handguns* scale.

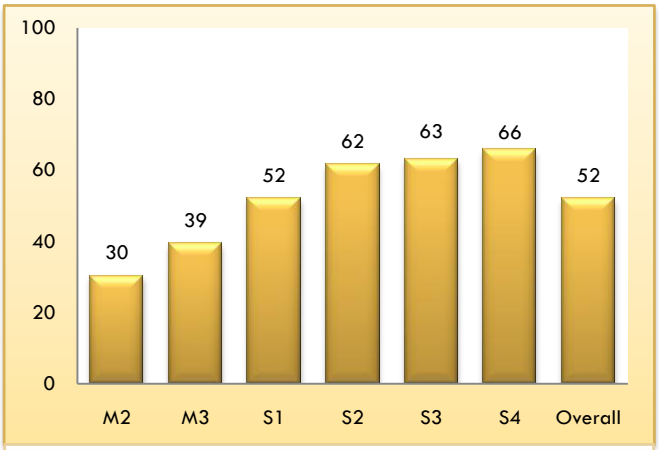

Figure 3.2.22. Laws and norms favourable to handguns scale by grade level and overall.

Family History of Antisocial Behaviour

If children are raised in a family where a history of addiction to alcohol or other drugs exists, the risk of having alcohol or other drug problems themselves increases. If children are born or raised in a family where criminal activity is present, their risk for delinquency increases. Similarly, children who are born to teenage mothers are more likely to become teen parents, and children of dropouts are more likely to drop out of school themselves. Children whose parents engage in violent behaviour inside or outside the home are at greater risk for exhibiting violent behaviour themselves. Students' perceptions of their families' behaviour and standards regarding drug use and other antisocial behaviours are measured by the survey.

The *Family History of Antisocial Behaviour* scale was developed to measure a component of the risk factor *Family History of Problem Behaviour*. This scale is measured by ten survey items:

- ✓ Has anyone in your family ever had a severe alcohol or drug problem?
- ✓ Have any of your brother(s) or sister(s) ever drunk beer, wine, or hard liquor?
- ✓ Have any of your brother(s) or sister(s) ever smoked marijuana?
- ✓ Have any of your brother(s) or sister(s) ever smoked cigarettes?
- ✓ Have any of your brothers or sisters brother(s) or sister(s) ever taken a handgun to school?
- ✓ Have any of your brother(s) or sister(s) ever been suspended or expelled from school?
- ✓ About how many adults have you known personally who in the past year have used marijuana, crack, cocaine, or other drugs?
- ✓ About how many adults have you known personally who in the past year have sold or dealt drugs?

- ✓ About how many adults have you known personally who in the past year have done other things that could get them in trouble with the police, like stealing, selling stolen goods, mugging or assaulting others, etc.?
- ✓ About how many adults have you known personally who in the past year have gotten drunk or high?

To obtain a score, five survey items comprising the *Family History of Antisocial Behaviour* scale were recoded, that of "*Have any of your brother(s) or sister(s) ever drunk beer, wine, or hard liquor?*", "*Have any of your brother(s) or sister(s) ever smoked marijuana?*", "*Have any of your brother(s) or sister(s) ever smoked cigarettes?*", "*Have any of your brothers or sisters brother(s) or sister(s) ever taken a handgun to school*", and "*Have any of your brother(s) or sister(s) ever been suspended or expelled from school?*"

- Across grade levels, percentile scores for *Family History of Antisocial Behaviour* range from a low of 30 among M2 students to a high of 74 among S4 students.
- Overall, students received a percentile score of 54 on the *Family History of Antisocial Behaviour* scale.

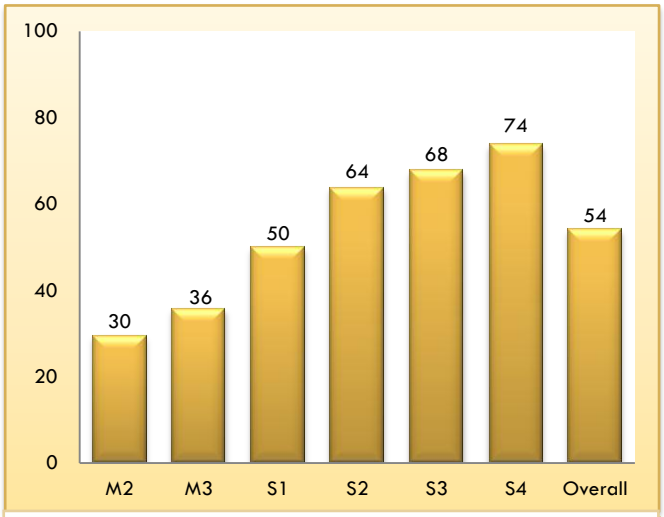

Figure 3.2.23 Family history of antisocial behaviour scale by grade level and overall.

Poor Family Management

The risk factor scale *Poor Family Management* measures two components of family life: "*poor family supervision*", which is defined as parents failing to supervise and monitor their children, and "*poor family discipline*", which is defined as parents failing to communicate clear expectations for behaviour and giving excessively severe, harsh or inconsistent punishment. Children who experience poor family supervision and poor family discipline are at higher risk of developing problems with drug use, delinquency, violence, and school dropout.

The risk factor scale *Poor Family Management* was developed to measure a component of the risk factor *Family Management Problems*. This scale is measured by the following eight survey items:

- ✓ The rules in my family are very clear.
- ✓ My parents ask if I have gotten my homework done.
- ✓ When I am not home, one of my parents know where I am and who I am with.
- ✓ Would your parents know if you did not come home on time?

- ✓ My family has clear rules about alcohol and drug use.
- ✓ If you drank some beer, wine, or other hard liquor without your parents' permission, would you be caught by your parents?
- ✓ If you carried a handgun without your parents' permission, would you be caught by your parents'?
- ✓ If you skipped school without your parents' permission, would you be caught by your parents?

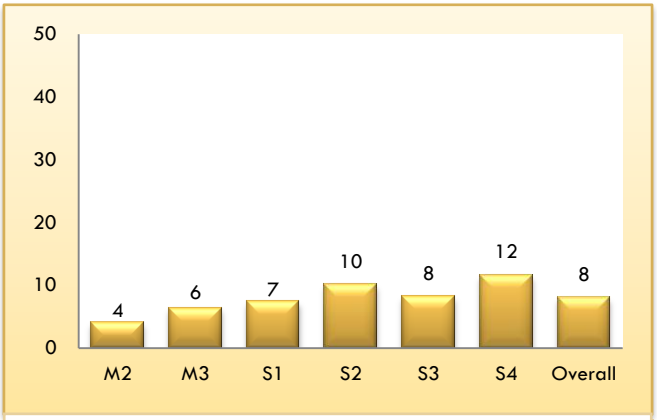

Figure 3.2.24. Poor family management scale by grade level and overall.

- Across grade levels, percentile scores for *Poor Family Management* range from a low of 4 among M2 students to a high of 12 among S4 students.
- Overall, students received a percentile score of 8 on the *Poor Family Management* scale.

Family Conflict

Bonding between family members, especially between children and their parents or guardians, is a key component in the development of positive social norms. High levels of family conflict interfere with the development of these bonds, and increase the likelihood that young people will engage in illegal drug use and other forms of delinquent behaviour.

The risk factor *Family Conflict* is measured by a single scale using three survey items:

- ✓ We argue about the same things in my family over and over.
- ✓ People in my family have serious arguments.
- ✓ People in my family often insult or yell at each other.

- Across grade levels, percentile scores for *Family Conflict* range from a low of 28 among S1 students to a high of 45 among S2 students.
- Overall, students received a percentile score of 37 on the *Family Conflict* scale.

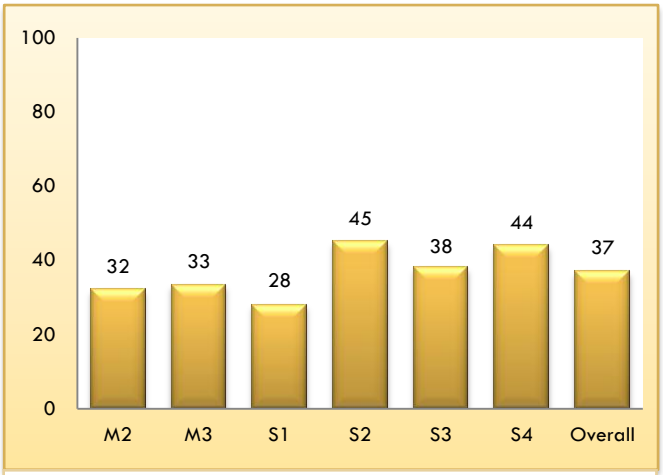

Figure 3.2.25. Family conflict scale by grade level and overall.

Parental Attitudes Favourable toward ATOD Use

Students' perceptions of their parents' opinions about alcohol, tobacco, and other drug use are an important risk factor. In families where parents use illegal drugs, are heavy users of alcohol, or are tolerant of use by their children, children are more likely to become drug users in adolescence.

The *Parental Attitudes Favourable toward ATOD Use* scale was developed to measure a component of the risk factor *Favourable Parental Attitudes and Involvement in Problem Behaviour*. This scale is measured by three survey items:

- ✓ How wrong do your parents feel it would be for you to drink beer, wine or hard liquor regularly?
- ✓ How wrong do your parents feel it would be for you to smoke cigarettes?
- ✓ How wrong do your parents feel it would be for you to smoke marijuana?

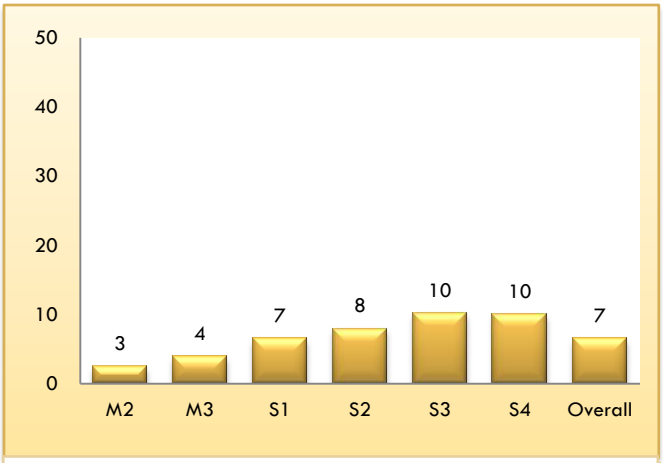

Figure 3.2.26. Parental attitudes favourable toward ATOD use scale by grade level and overall.

- Across grade levels, percentile scores for *Parental Attitudes Favourable toward ATOD Use* range from a low of 3 among M2 students to a high of 10 among S3 and S4 students.
- Overall, students received a percentile score of 7 on the *Parental Attitudes Favourable toward ATOD Use* scale.

Parental Attitudes Favourable to Antisocial Behaviour

Students' perceptions of their parents' opinions about antisocial behaviour are also an important risk factor. Parental attitudes and behaviour regarding crime and violence influence the attitudes and behaviour of children. If parents approve of, or excuse, their children for breaking the law, then the children are more likely to develop problems with juvenile delinquency.

The *Parental Attitudes Favourable to Antisocial Behaviour* scale was developed to measure a component of the risk factor *Favourable Parental Attitudes and Involvement in Problem Behaviour*. This scale is measured by three survey items:

- ✓ How wrong do your parents feel it would be for you to steal anything worth more than $5.00?
- ✓ How wrong do your parents feel it would be for you to draw graffiti, write things, or draw pictures on buildings or other property?
- ✓ How wrong do your parents feel it would be for you to pick a fight with someone?

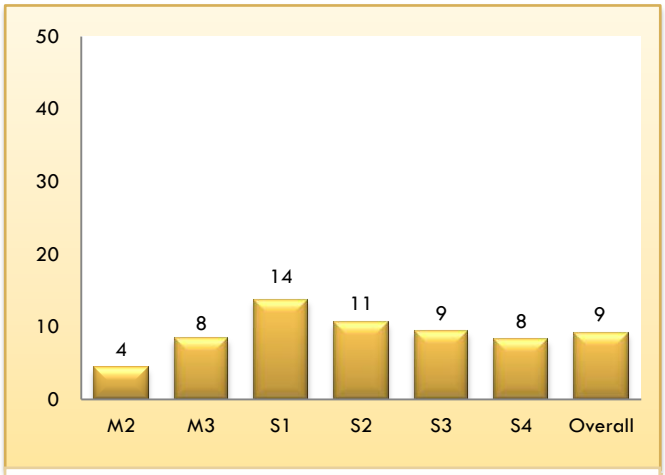

Figure 3.2.27. Parental attitudes favourable to antisocial behaviour scale by grade level and overall.

- Across grade levels, percentile scores for *Parental Attitudes Favourable to Antisocial Behaviour* range from a low of 4 among M2 students to a high of 14 among S1 students.
- Overall, students received a percentile score of 9 on the *Parental Attitudes Favourable to Antisocial Behaviour* scale.

Poor Academic Performance

Beginning in the late elementary grades, poor academic performance increases the risk of drug use, delinquency, violence, and school dropout. Children fail for many reasons, but it appears that the experience of failure increases the risk of these problem behaviours.

The *Poor Academic Performance* scale was developed to measure a component of the risk factor *Academic Failure Beginning in Late Elementary School*. This scale is measured by two survey items:

- ✓ Putting them all together, what were your grades like last year?
- ✓ Are your school grades better than the grades of most students in your class?

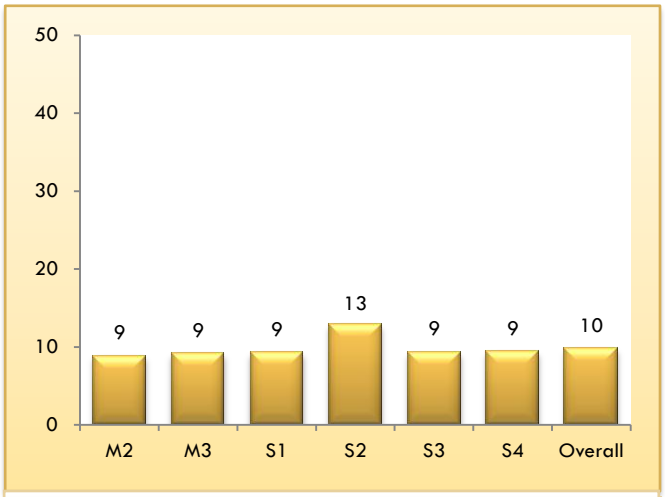

Figure 3.2.28. Poor academic performance scale by grade level and overall.

To assess poor academic performance, grades were ranked according to pass/fail and then combined with the second item to determine a score. Elevated findings for this risk factor scale suggest that not only do students believe that they have lower grades than they might expect to get, but also that they perceive that compared to their peers, they have below-average

grades.

- Across grade levels, percentile scores for *Poor Academic Performance* range from a low of 9 among M2, M3, S1, S3, and S4 students to a high of 13 among S2 students.
- Overall, students received a percentile score of 10 on the *Poor Academic Performance* scale.

Lack of Commitment to School

Lack of Commitment to School assesses a student's general feelings about his or her schooling. Elevated findings for this risk factor scale can suggest that students feel less attached to, or connected with, their classes and school environment. Lack of commitment to school means the child has ceased to see the role of student as a positive one. Young people who have lost this commitment to school are at higher risk for a variety of problem behaviours.

The risk factor *Lack of Commitment to School* is measured by a single scale using seven survey items:

- ✓ During the LAST FOUR WEEKS, how many whole days have you missed because you skipped or cut?
- ✓ How often do you feel that the school work you are assigned is meaningful and important?
- ✓ How interesting are most of your courses to you?
- ✓ How important do you think things you are learning in school are going to be for your later life?
- ✓ Now thinking back over the past year in school, how often did you enjoy being in school?
- ✓ Now thinking back over the past year in school, how did often did you hate being in school?
- ✓ Now thinking back over the past year in school, how often do you try to do your best work in school?

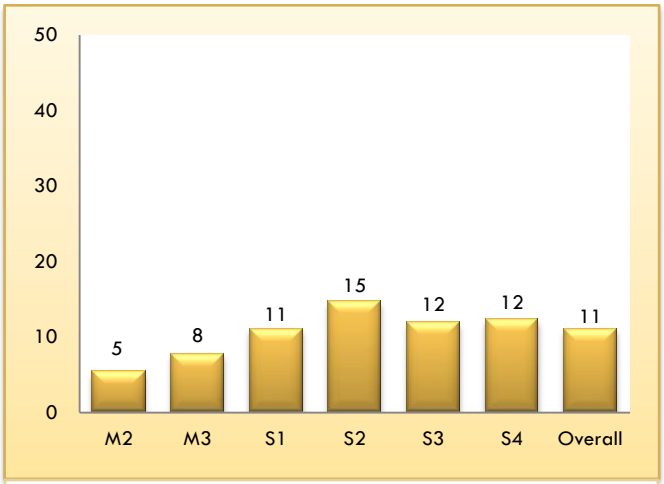

Figure 3.2.29. Lack of commitment to school scale by grade level and overall.

- Across grade levels, percentile scores for *Lack of Commitment to School* range from a low of 5 among M2 students to a high of 15 among S2 students.
- Overall, students received a percentile score of 11 on the *Lack of Commitment to School* scale.

Rebelliousness

The survey also determines the number of young people who feel they are not part of society, who feel they are not bound by rules, and who do not believe in trying to be successful or responsible. These students are at higher risk of drug use, delinquency, and school dropout.

The risk factor *Rebelliousness* is measured by a single scale using three survey items such as:

- ✓ I like to see how much I can get away with.
- ✓ I ignore the rules that get in my way.
- ✓ I do the opposite of what people tell me, just to get them mad.

- Across grade levels, percentile scores for *Rebelliousness* range from a low of 17 among M2 students to a high of 41 among S2 students.

- Overall, students received a percentile score of 30 on the *Rebelliousness* scale.

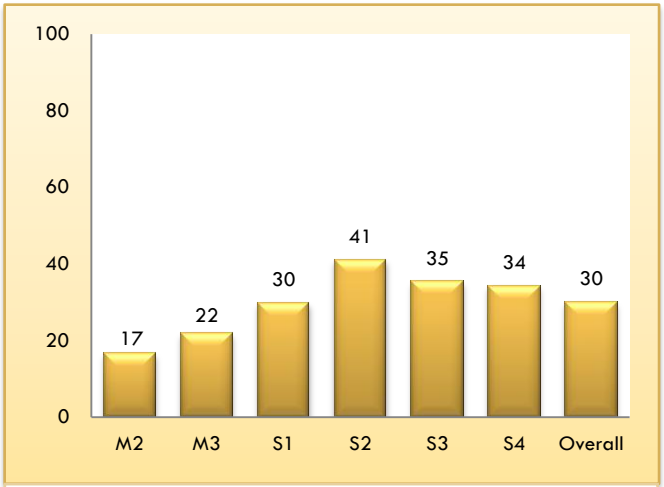

Figure 3.2.30. Rebelliousness scale by grade level and overall.

Gang Involvement

Gangs have long been associated with crime, violence, and other antisocial behaviours. Evidence suggests that gangs can contribute to antisocial behaviour beyond simple association with delinquent peers.

The risk factor *Gang Involvement* is measured by a single scale using four survey items:

- ✓ Have you ever belonged to a gang?
- ✓ If you have ever belonged to a gang, did the gang have a name?
- ✓ Think of your four best friends (the friends you feel closest to), in the past (12 months), how many of your best friends have been members of a gang?
- ✓ How old were you when you first belonged to a gang?

- Across grade levels, percentile scores for *Gang Involvement* range from a low of 5 among M2 and M3 students to a high of 12 among S2 students.
- Overall, students received a percentile score of 8 on the *Gang Involvement* scale.
- Of respondents indicating gang involvement, 2.1% said they first belonged to a gang by age 10 years or younger (*see Table* 3.2.3).

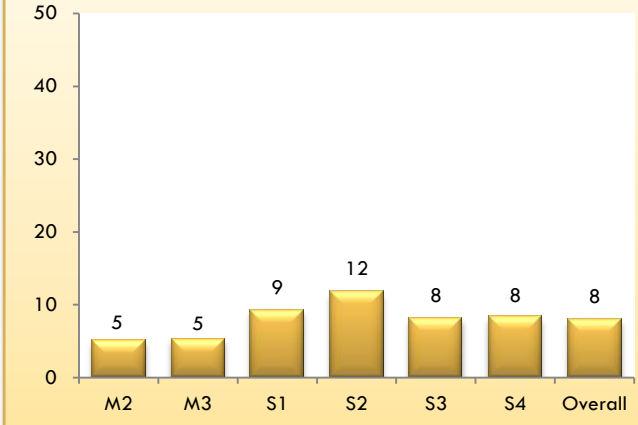

Figure 3.2.31. Gang involvement scale by grade level and overall.

Table 3.2.3
Age of First Belonging to a Gang by Grade Level and Overall

Age	M2		M3		S1		S2		S3		S4		Overall	
	%	n	%	n	%	n	%	n	%	n	%	n	%	n
10 or younger	2.2	12	1.4	7	3.0	15	2.6	13	1.0	4	2.0		2.1	59
11	1.3	7	1.4	7	1.0	5	2.4	12	0.7	3	-	-	1.3	36
12	0.9	5	0.8	4	1.2	6	1.6	8	0.7	3	1.4	5	1.1	31
13	0.6	3	1.8	9	1.8	9	1.8	9	2.0	8	1.4	5	1.6	44
14	-	-	-	-	2.4	12	3.0	15	2.4	10	0.6	2	1.4	39
15	-	-	0.6	3	0.4	2	2.4	12	2.0	8	2.5	9	1.2	34
16	-	-	-	-	-	-	0.6	3	1.2	5	0.8	3	0.4	11
17 or older	0.4	2	-	-	0.2	1	0.4	2	-	-	0.8	3	0.3	8

Favourable Attitudes toward ATOD Use

During the elementary school years, children usually express anti-drug attitudes and have difficulty imagining why people use drugs. However, in middle school, as others they know begin to participate in such activities, their attitudes often shift toward greater acceptance of these behaviours. This acceptance places them at higher risk. The risk factor scale *Favourable Attitudes toward ATOD Use* assesses risk by asking young people how wrong they think it is for someone their age to use drugs.

The *Favourable Attitudes toward ATOD Use* scale was developed to measure a component of the risk factor *Favourable Attitudes toward Problem Behaviour*. This scale is measured by four survey items:

- ✓ How wrong do you think it is for someone your age to:
  - ✓ Drink beer, wine or hard liquor (for example, vodka, whiskey or gin) regularly?
  - ✓ Smoke cigarettes?
  - ✓ Smoke marijuana?
  - ✓ Use LSD, cocaine, amphetamines or another illegal drug?

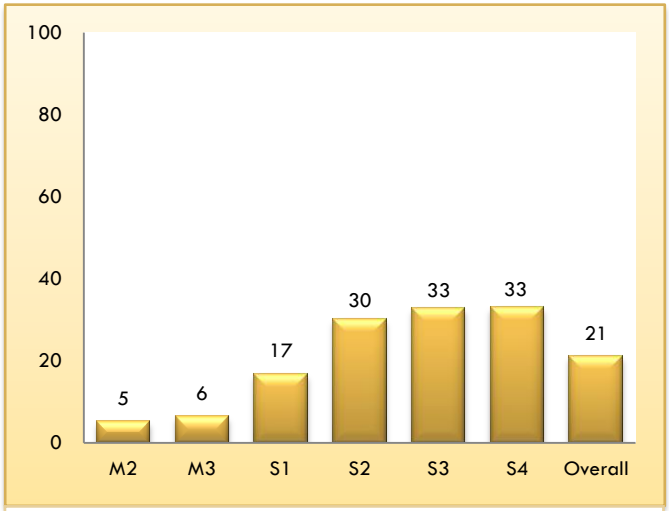

Figure 3.2.32. Favourable attitudes toward ATOD use scale by grade level and overall.

- Across grade levels, percentile scores for *Favourable Attitudes toward ATOD Use* range from a low of 5 among M2 students to a high of 33 among S3 and S4 students.
- Overall, students received a percentile score of 21 on the *Favourable Attitudes toward ATOD Use* scale.

Favourable Attitudes toward Antisocial Behaviour

During the primary school years, children usually express anticrime and prosocial attitudes and have difficulty imagining why people commit crimes or drop out of school. However, in middle school, as others they know begin to participate in such activities, their attitudes often shift toward greater acceptance of these behaviours. This acceptance places them at higher risk for antisocial behaviours.

The *Favourable Attitudes toward Antisocial Behaviour* scale was developed to measure a component of the risk factor *Favourable Attitudes toward Problem Behaviour*. This scale is measured by five survey items:

- ✓ How wrong do you think it is for someone your age to take a handgun to school?
- ✓ How wrong do you think it is for someone your age to steal anything worth more than $5.00?
- ✓ How wrong do you think it is for someone your age to attack someone with the idea of seriously hurting them?
- ✓ How wrong do you think it is for someone your age to pick a fight with someone?
- ✓ How wrong do you think it is for someone your age to stay away from school all day when their parents think they are at school?

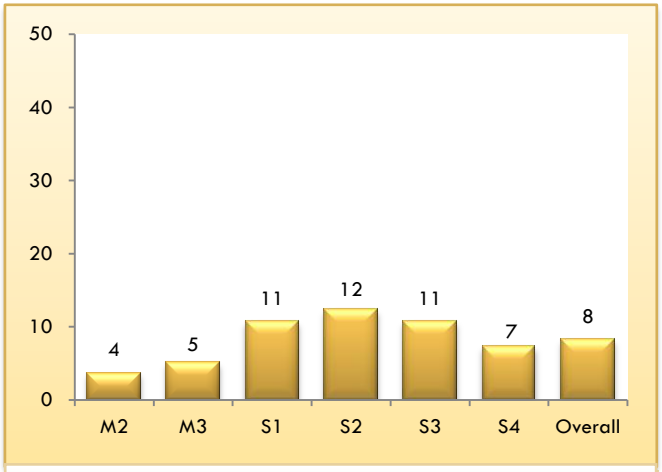

Figure 3.2.33. Favourable attitudes toward antisocial behaviour scale by grade level and overall.

- Across grade levels, percentile scores for *Favourable Attitudes toward Antisocial Behaviour* range from a low of 4 among M2 students to a high of 12 among S2 students.
- Overall, students received a percentile score of 8 on the *Favourable Attitudes toward Antisocial Behaviour* scale.

Sensation Seeking

Individual characteristics that may have a biological or physiological basis are sometimes referred to as "constitutional factors". *Sensation Seeking* is among those constitutional factors that appear to increase the likelihood of a young person using drugs, engaging in delinquent behaviour and/or committing violent acts.

Sensation Seeking is assessed by asking how often students participate in behaviours to experience thrills or a particular feeling or emotion.

The *Sensation Seeking* scale was developed to measure a component of the risk factor *Constitutional Factors*. This scale is measured by three survey items:

- ✓ How many times have you done what feels good no matter what?
- ✓ How many times have you done something dangerous because someone dared you to do it?
- ✓ How many times have you done crazy things even if they are a little dangerous?

- Across grade levels, percentile scores for *Sensation Seeking* range from a low of 61 among M2 students to a high of 81 among S4 students.
- Overall, students received a percentile score of 72 on the *Sensation Seeking* scale.

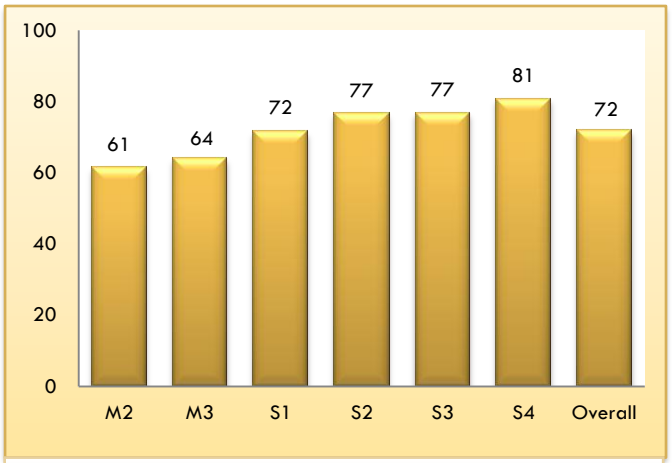

Figure 3.2.34. Sensation seeking scale by grade level and overall.

Peer Rewards for Antisocial Involvement

Students' perceptions of their peer groups' social norms are also an important predictor of involvement in problem behaviour. When students feel that they get positive feedback from their peers for using alcohol, tobacco, or other drugs, or getting involved in delinquent behaviours, they are more likely to engage in these behaviours. When young people believe that their peer groups are involved in antisocial behaviours, they are more likely to become involved in antisocial behaviours themselves.

The *Peer Rewards for Antisocial Behaviour* scale was developed to measure a component of the risk factor *Friends Who Engage in the Problem Behaviour*. This scale is measured by four survey items:

- ✓ What are the chances you would be seen as cool if you smoked cigarettes?
- ✓ What are the chances you would be seen as cool if you began drinking alcoholic beverages regularly?
- ✓ What are the chances you would be seen as cool if you smoked marijuana?
- ✓ What are the chances you would be seen as cool if you carried a handgun?

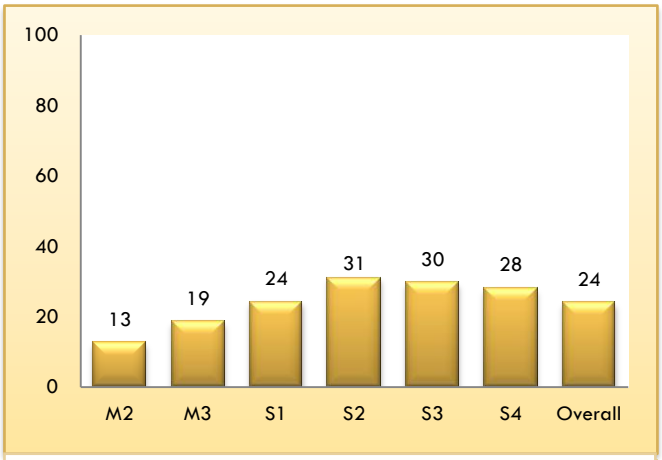

Figure 3.2.35. Peer rewards for antisocial involvement scale by grade level and overall.

- Across grade levels, percentile scores for *Peer Rewards for Antisocial Behaviour* range from a low of 13 among M2 students to a high of 31 among S2 students.
- Overall, students received a percentile score of 24 on the *Peer Rewards for Antisocial Behaviour* scale.

Friends' Use of Drugs

Young people who associate with peers who engage in substance use are much more likely to engage in it themselves. This is one of the most consistent predictors identified by research. Even when young people come from well-managed families and do not experience other risk factors, spending time with peers who use drugs greatly increases a youth's risk of becoming involved in such behaviour.

The *Friends' Use of Drugs* scale was developed to measure a component of the risk factor *Friends Who Engage in the Problem Behaviour*. This scale is measured by four survey items:

- ✓ In the past year, how many of your four best friends have smoked cigarettes?
- ✓ In the past year, how many of your four best friends have tried beer, wine, or hard liquor?
- ✓ In the past year, how many of your four best friends have used marijuana?
- ✓ In the past year, how many of your four best friends have used LSD, cocaine, amphetamines, or other illegal drugs?

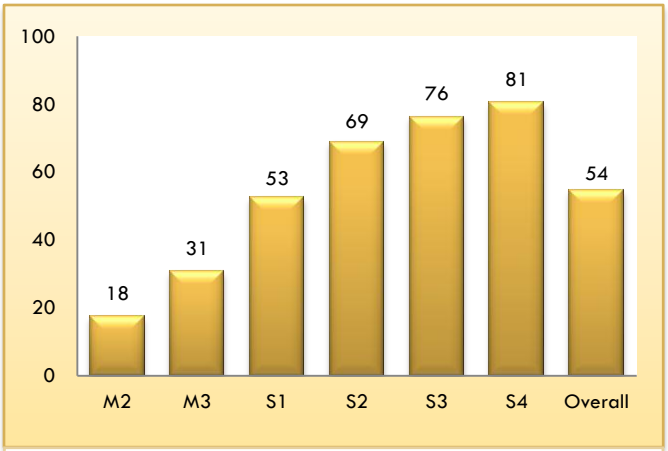

Figure 3.2.36. Friends' use of drugs scale by grade level and overall.

- Across grade levels, percentile scores for *Friends' Use of Drugs* range from a low of 18 among M2 students to a high of 81 among S4 students.
- Overall, students received a percentile score of 54 on the *Friends' Use of Drugs* scale.

Friends' Delinquent Behaviour

Young people who associate with peers who engage in delinquent behaviour are much more likely to engage in delinquent behaviour themselves. This is one of the most consistent predictors identified by research. Even when young people come from well-managed families and do not experience other risk factors, spending time with peers who engage in delinquent behaviour greatly increases the risk of their becoming involved in delinquent behaviour.

The *Friends' Delinquent Behaviour* scale was developed to measure a component of the risk factor *Friends Who Engage in the Problem Behaviour*. This scale is measured by six survey items:

- ✓ In the past year, how many of your four best friends have:
  - ✓ Been suspended from school?

- ✓ Carried a handgun?
- ✓ Sold illegal drugs?
- ✓ Stolen or tried to steal a motor vehicle?
- ✓ Been arrested?
- ✓ Dropped out of school?

Elevated scores can indicate that students are interacting with more antisocial peers than average. Low scores can suggest that students' delinquent behaviour is not strongly influenced by their peers.

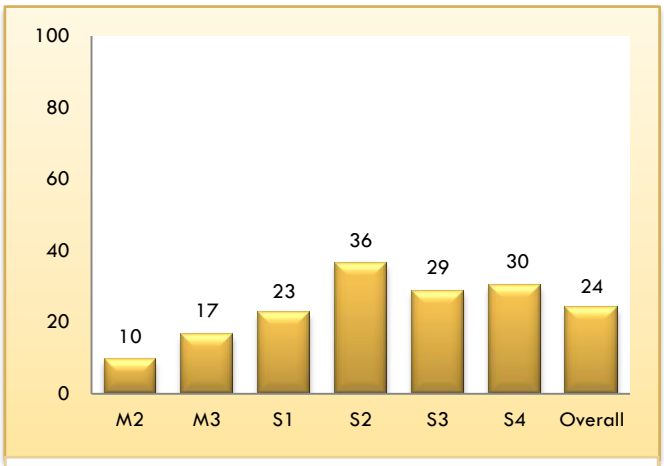

Figure 3.2.37. Friends' delinquent behaviour scale by grade level and overall.

- Across grade levels, percentile scores for *Friends' Delinquent Behaviour* range from a low of 10 among M2 students to a high of 36 among S2 students.
- Overall, students received a percentile score of 24 on the *Friends' Delinquent Behaviour* scale.

Low Perceived Risks of Drug Use

The perception of harm from drug use is related to both experimentation and regular use. The less harm that an adolescent perceives as the result of drug use, the more likely it is that he or she will use drugs.

The *Low Perceived Risks of Drug Use* scale was developed to measure a component of the risk factor *Favourable Attitudes toward Problem Behaviour*. This scale is measured by four survey items:

- ✓ How harmful is each of the following to your health?
  - ✓ Smoking cigarettes frequently.
  - ✓ Drinking alcoholic beverages frequently.
  - ✓ Smoking marijuana sometimes.
  - ✓ Smoking marijuana frequently.

An elevated score can indicate that students are not aware of, or do not comprehend, the possible harm resulting from drug use.

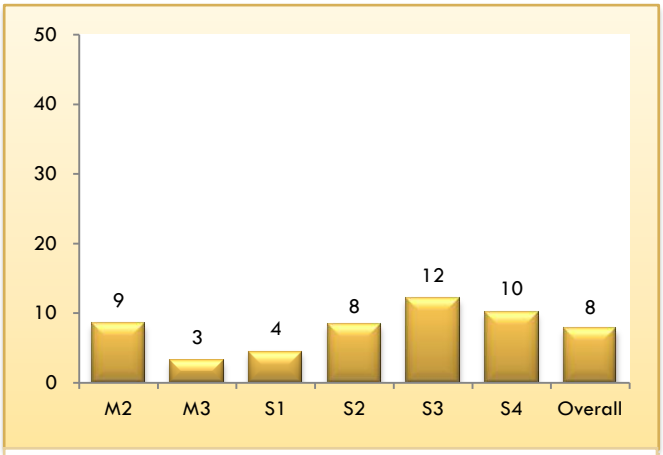

Figure 3.2.38. Low perceived risks of drug use scale by grade level and overall.

- Across grade levels, percentile scores for *Low Perceived Risks of Drug Use* range from a low of 3 among M3 students to a high of 12 among S3 students.
- Overall, students received a percentile score of 8 on the *Low Perceived Risks of Drug Use* scale.

Early Initiation of Drug Use

The initiation of alcohol, tobacco, or other drug use at an early age is linked to a number of negative outcomes. The earlier that experimentation with drugs begins, the more likely it is that experimentation will become consistent, regular use. Early initiation may lead to the use of a greater range of drugs, as well as other problem behaviours. In this current survey, early initiation of drug use is defined as drug use at age 11 years or younger.

The risk factor scale *Early Initiation of Drug Use* was developed to measure a component of the risk factor *Early Initiation of Problem Behaviour*. This scale is measured by survey items that ask when drug use began.

- Across grade levels, percentile scores for *Early Initiation of Drug Use* range from a low of 6 among S4 students to a high of 69 among M2 students.
- Overall, students received a percentile score of 31 on the *Early Initiation of Drug Use* scale.

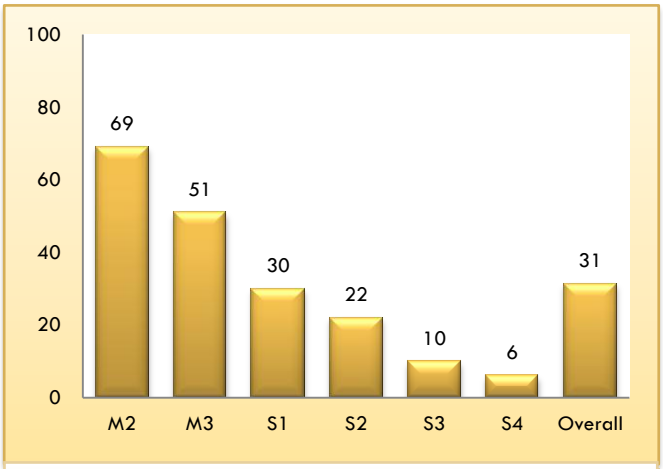

Figure 3.2.39. Early initiation of drug use scale by grade level and overall.

Intention to Use

The intended use of alcohol and drugs later in life was assessed by asking students their intent to participate in certain behaviours when they become adults. This information may be helpful in stopping substance use behaviour before it starts. Prevention specialists are encouraged to review grade level results which may be predictive of future substance use behaviours.

The risk factor scale *Intention to Use* is measured by three survey items:

- ✓ When I am an adult I will smoke cigarettes.
- ✓ When I am an adult I will drink beer, wine, or liquor.
- ✓ When I am an adult I will smoke marijuana.

- Across grade levels, percentile scores for *Early Initiation of Drug Use* range from a low of 5 among M2 students to a high of 17 among S2 students.
- Overall, students received a percentile score of 12 on the *Intention to Use* scale.

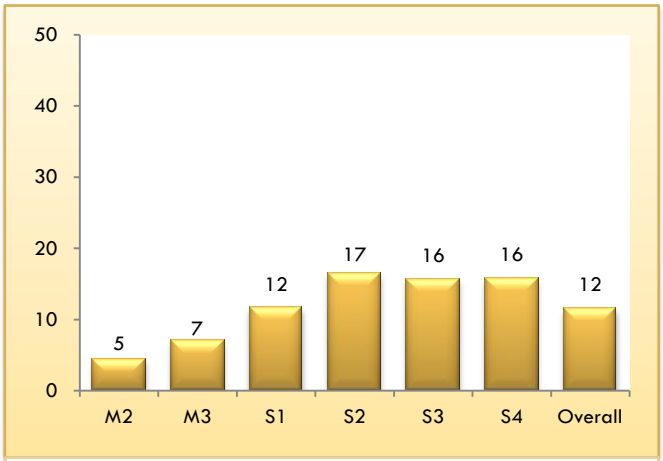

Figure 3.2.40. Intention to use scale by grade level and overall.

CHAPTER 3.3
RESULTS
Outcome Measures

3.3.1 Introduction

The following section reports the results of two additional topics of interest from the *Communities That Cares* Survey, that of *Depression and Other Antisocial Behaviours*. Four survey items comprise the *Depression* scale:

- ✓ Sometimes I think that life is not worth it.
- ✓ At times I think I am no good at all.
- ✓ All in all, I am inclined to think that I am a failure.
- ✓ In the past year have you felt depressed or sad MOST days, even if you felt OK sometimes?

Other antisocial behaviours were assessed by the following 11 statements which were preceded by "*How many times in the year (the last 12 months) have you…*":

- ✓ Been suspended from school?
- ✓ Carried a Handgun.
- ✓ Sold Illegal Drugs.
- ✓ Stolen or Tried to Steal a Motor Vehicle.
- ✓ Being Arrested.
- ✓ Attacked Someone with the Idea of Seriously Hurting Them.
- ✓ Been Drunk or High at School.
- ✓ Taken a Handgun to School.
- ✓ Stolen Something Worth More than $5.
- ✓ Purposely Damaged or Destroyed Property that did not Belong to You.
- ✓ Taken Something from a Store Without Paying for It.

3.3.2 Measurement

As with alcohol, tobacco, and other drug use, as well as risk and protective factors, prevalence tables and graphs are presented to illustrate the percentage of students who reported depression and other antisocial behaviours over the past 12 months. Instead of reporting on each item in the Depression section, responses to all four questions were summed to create a single score measuring depression. The score is then presented by grade level and overall for all survey respondents.

The outcome measure *Other Antisocial Behaviours* assesses students on various delinquent behaviours they might engage in. Three new statements were added to this section since the 2007 survey; that of: "*Stolen Something Worth More Than $5*", "*Purposely Damaged or Destroyed*

Property that did not Belong to You", and "*Taken Something from a Store without Paying for It*". Additionally, two items previously assessed in the 2007 survey, were removed; that of "*carrying a bladed weapon*" and "*carrying a bladed weapon to school*". For *Other Antisocial Behaviours*, a score was not created. Instead, each statement is reported by percentile for each grade level and overall for all survey respondents.

3.3.3 Depression

The *Depression* scale was designed to measure how students think about life. Research indicates that young people with undiagnosed or behavioural problems often use drugs and alcohol as a way to relieve their frustrations. A depressed teen may self-medicate with drugs or alcohol to escape the sense of hopelessness.[38]

- Across grade levels, percentile scores for *Depression* range from a low of 30 among M2 students to a high of 39 among S2 and S4 students.
- Overall, students received a percentile score of 36 on the *Depression* scale.

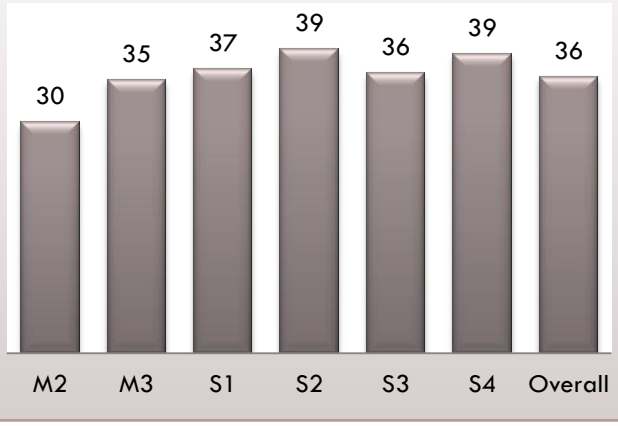

Figure 3.3.1: Depression scale by grade level and overall.

3.3.4 Other Antisocial Behaviours

Overall Results

Other antisocial behaviour prevalence rates for the combined sample of M2 through S4 students are presented in Figure 3.3.2, and in the overall results column of Table 3.3.1. Across all grades, "*Attacking Someone with Intent to Seriously Harm*" was reported at 21%, making it the most prevalent of the 11 behaviours. "*Being Suspended from School*", is the second most prevalent antisocial behaviour at 16%. Students reported low levels of participation in "*Taking a Handgun to School*", "*Carrying a Handgun*", and "*Been Arrested*".

[38] A. M. Libby, H. D. Orton, S. K. Stover, & P. D. Riggs. (2005). What came first, major depression or substance use disorder? Clinical characteristics and substance use comparing teens in a treatment cohort. ***Addictive Behaviors 30***(9), 1649-1662. p. 1655.

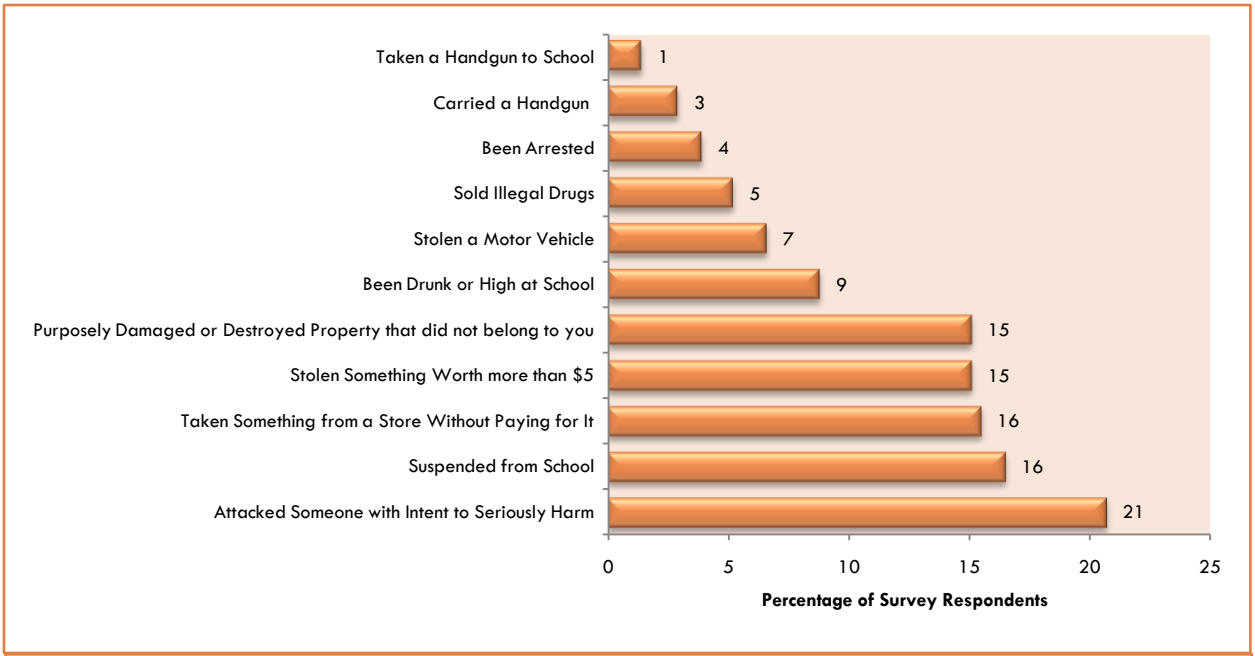

Figure 3.3.2: Overall prevalence of antisocial behaviours.

Grade Level Results

Other antisocial behaviour prevalence rates within individual grades are presented in Figure 3.3.3 and Table 3.3.1. In many communities, these behaviours reveal a complex pattern of changes across grades. Typically, reports of "*Being Drunk or High at School*" and "*Selling Drugs*" follow the ATOD model, with prevalence rates increasing through the upper grade levels. In contrast, reports of "*Attacking Someone with Intent to Harm*", "*Getting Suspended*", and "*Being Arrested*" often peak in the late middle school or early high school years. Prevention planners should review the other antisocial behaviour profiles within individual grades, with special attention toward behaviours that show a marked deviation from these patterns.

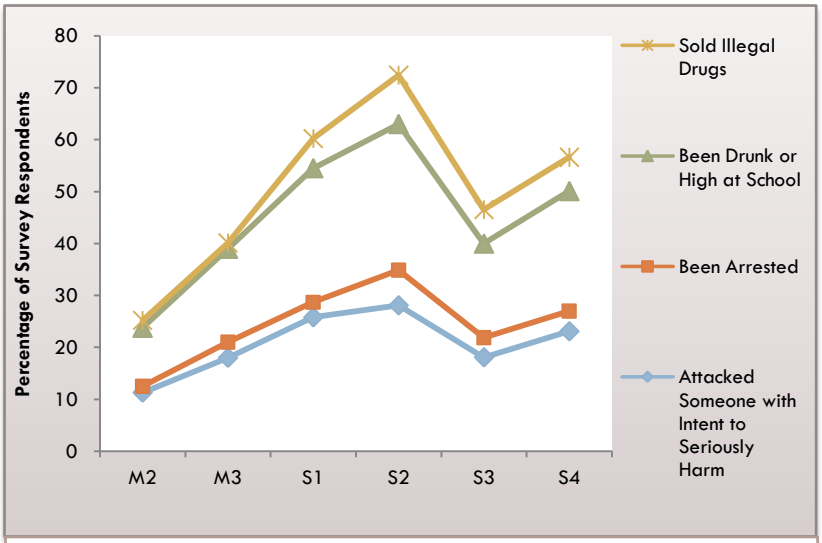

Figure 3.3.3: Prevalence of other antisocial behaviours.

Table 3.3.1
Antisocial Behaviours of Survey Respondents by Grade Level and Overall

Antisocial Behaviours	M2		M3		S1		S2		S3		S4		Overall	
	%	n	%	n	%	n	%	n	%	n	%	n	%	n
Getting Suspended from School	11.4	59	15.5	74	21.4	102	22.8	114	14.7	59	11.3	40	**16.2**	**448**
Carrying a Handgun	1.5	8	1.9	9	2.9	14	4.6	23	3.2	13	3.1	11	**2.9**	**78**
Sold Illegal Drugs	1.4	7	1.1	5	5.7	27	9.4	47	6.5	26	6.5	23	**5.1**	**135**
Attempting to Steal a Motor Vehicle	2.3	12	4.7	22	7.4	35	11.8	59	6.7	27	6.8	24	**6.6**	**179**
Being Arrested	1.2	6	3.0	14	3.6	17	6.8	34	3.7	15	5.7	20	**4.0**	**106**
Attacked Someone with Intent to Seriously Harm	11.3	59	18.0	425	25.8	122	28.1	139	18.1	72	23.1	81	**20.7**	**898**
Being Drunk or High at School	1.9	10	4.0	19	9.2	44	14.9	74	12.5	50	12.2	43	**9.1**	**240**
Taking a Handgun to School	0.8	4	0.6	3	1.0	5	3.0	15	1.5	6	1.7	6	**1.4**	**39**
Stolen Something Worth More Than $5	7.3	38	16.3	77	14.0	67	22.0	109	16.5	66	15.6	55	**15.3**	**412**
Purposely Damaged or Destroyed Property That Did not Belong to You	9.1	47	13.1	62	17.4	83	22.3	111	14.5	58	13.4	47	**15.0**	**468**
Taken Something from a Store Without Paying for It	8.1	42	14.1	67	15.3	73	22.1	110	16.2	65	18.4	65	**15.7**	**422**
Average	**5.1**	**27**	**8.4**	**71**	**11.2**	**54**	**15.3**	**76**	**10.4**	**42**	**10.7**	**38**	**10.2**	**311**

Attacking Someone with Intent to Harm

"*Attacking someone with intent to harm*" is measured by the question "*How many times in the past year (12 months) have you attacked someone with the idea of seriously hurting them?*" The question does not ask specifically about the use of a weapon; therefore, occurrences of physical fighting without weapons will be captured with this question.

- Prevalence rates for "*Attacking Someone with Intent to Harm*" range from a low of 11.3% among M2 students to a high of 28.1% among S2 students.
- Overall, 20.7% of students reported having attacked someone with intent to harm in the past year.

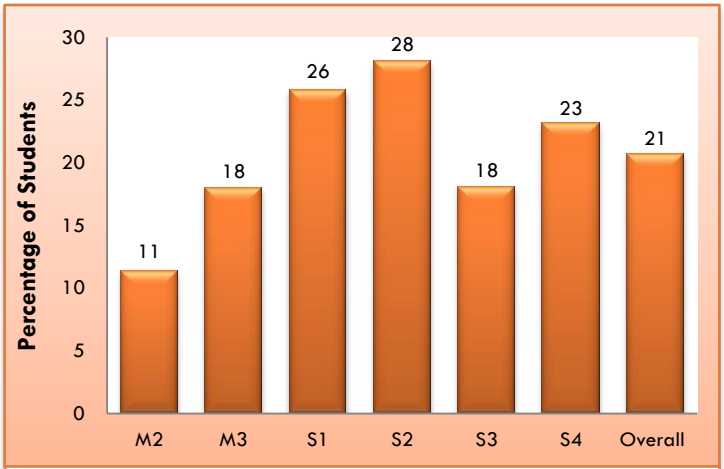

Figure 3.3.4: Attacking someone with the intent to harm.

Attempting to Steal a Motor Vehicle

Vehicle theft is measured by the question "*How many times in the past year (12 months) have you stolen or tried to steal a motor vehicle such as a car or motorcycle?*"

- Prevalence rates for "*Attempting to Steal a Vehicle*" range from a low of 2.3% among M2 students to a high of 11.8% among S2 students.
- Overall, 6.6% of students reported having attempted to steal a vehicle in the past year.

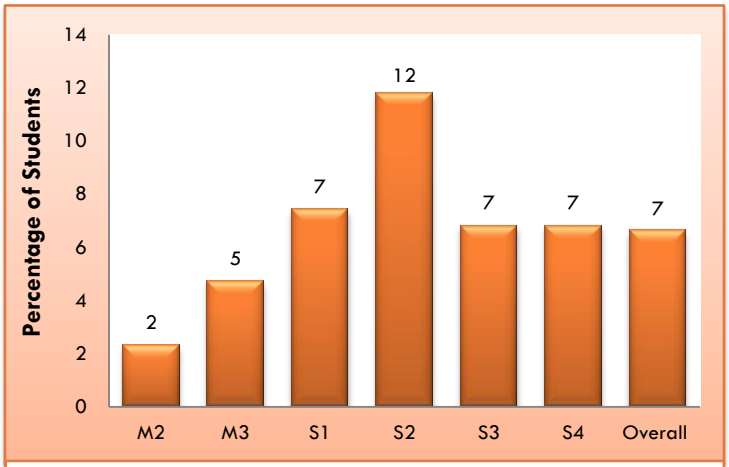

Figure 3.3.5: Stolen or tried to steal a motor vehicle such as a car or motorcycle.

Being Arrested

Any student experience with "*being arrested*" is measured by the question "*How many times in the past year (12 months) have you been arrested?*" Note that the question does not define "arrested." Rather, it is left to the individual respondent to define. Some youths may define any contact with police as an arrest, while others may consider that only an official arrest justifies a positive answer to this question.

- Prevalence rates for "*Being Arrested*" range from a low of 1.2% among M2 students to a high of 6.8% among S2 students.
- Overall, 4% of students reported having been arrested in the past year.

Figure 3.3.6: Been arrested.

Being Drunk or High at School

Having been "*drunk or high at school*" is measured by the question "*How many times in the past year (12 months) have you been drunk or high at school?*"

- Prevalence rates for "*Being Drunk or High at School*" range from a low of 1.9% among M2 students to a high of 14.9% among S2 students.
- Overall, 9.1% of students reported having been drunk or high at school in the past year.

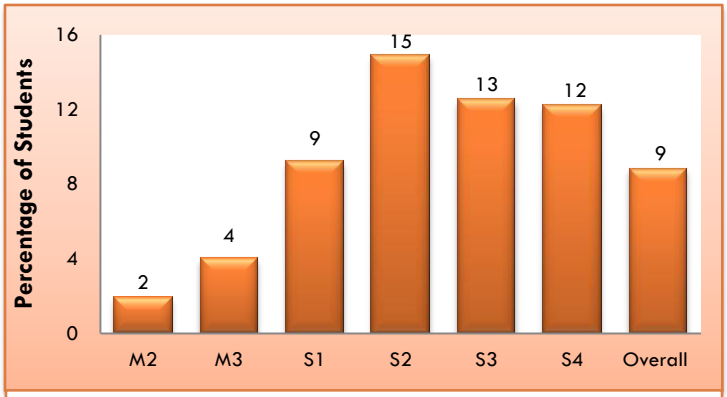

Figure 3.3.7: Drunk or high at school.

Carrying a Handgun

"*Carrying a handgun*" is measured by the question "*How many times in the past year (12 months) have you carried a handgun?*"

- Prevalence rates for "*Carrying a Handgun*" range from a low of 1.5% among M2 students to a high of 4.6% among S2 students.
- Overall, 2.9% of students reported having carried a handgun in the past year.

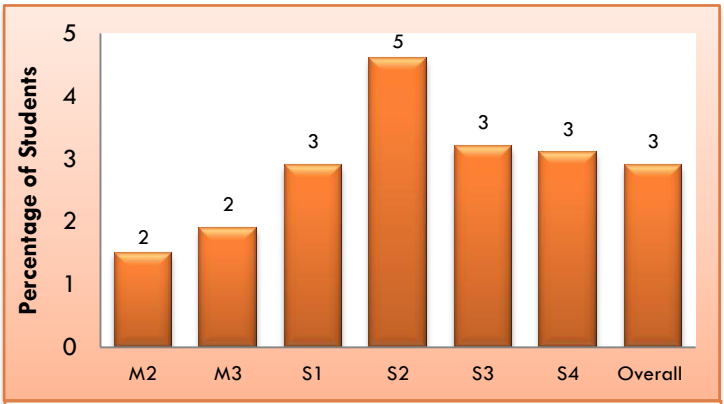

Figure 3.3.8: Carrying a handgun.

Getting Suspended from School

Suspension is measured by the question "*How many times in the past year (12 months) have you been suspended from school?*" Note that the question does not define "suspension." Rather, it is left to the individual respondent to make that definition. School suspension rates vary substantially from school to school. Therefore, these rates should be interpreted by someone knowledgeable about local school suspension policy.

- Prevalence rates for "*Getting Suspended*" range from a low of 11.4% among M2 and M3 students to a high of 22.8% among S2 students.
- Overall, 16.2% of students reported having been suspended in the past year.

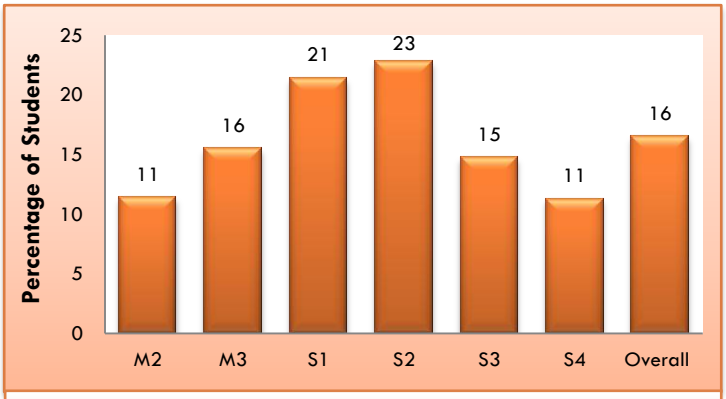

Figure 3.3.9: Getting suspended from school.

Sold Illegal Drugs

Selling drugs is measured by the question "*How many times in the past year (12 months) have you sold illegal drugs?*" Note that the question asks about, but does not define or specify, "*illegal drugs.*"

- Prevalence rates for selling drugs range from a low of 1.1% among M3 students to a high of 9.4% among S2 students.
- Overall, 5.1% of students reported having sold drugs in the past year.

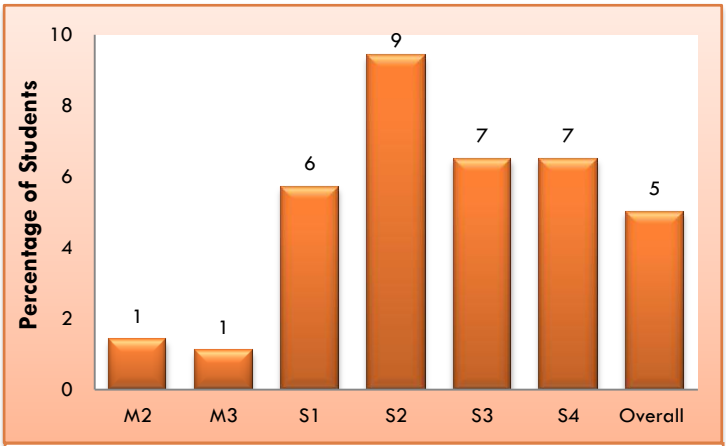

Figure 3.3.10: Sold illegal drugs.

Taking a Handgun to School

"*Taking a handgun to school*" is measured by the question "*How many times in the past year (12 months) have you taken a handgun to school?*"

- Prevalence rates for "*Taking a Handgun a Handgun to School*" range from a low of 0.6% among M3 students to a high of 3.0% among S2 students.
- Overall, 1.4% of students reported having taken a handgun to school in the past year.

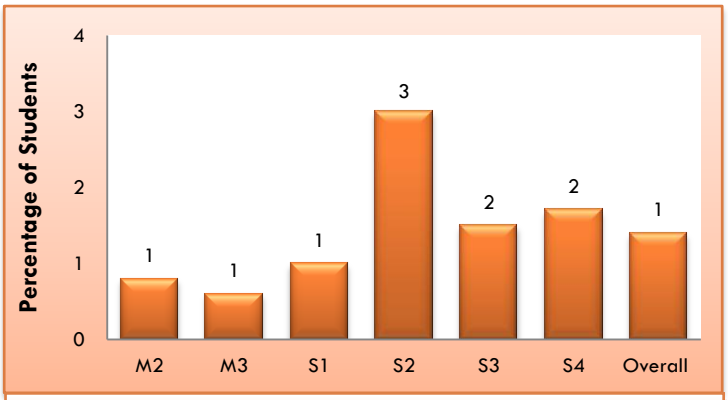

Figure 3.3.11: Taking a handgun to school.

Stolen Something Worth More Than $5

*"Stealing something worth more than $5 "*is measured by the question "*How many times in the past year (12 months) have stolen something worth more than $5?"*

- Prevalence rates for "*Stolen something Worth More Than $5"* range from a low of 7.3% among M2 students to a high of 22% among S2 students.
- Overall, 15.3% of students reported stealing something worth more than $5 in the past year.

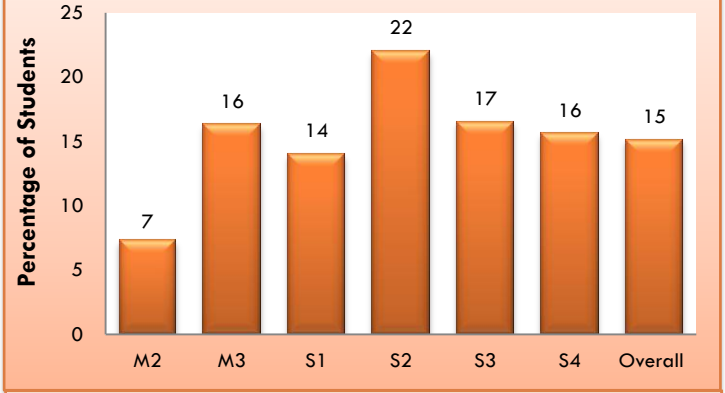

Figure 3.3.12: Stolen something worth more than $5.

Purposely Damaged or Destroyed Property that Did Not Belong to You

"*Purposely Damaged or Destroyed Property that Did Not Belong to You*" is measured by the question "*How many times in the past year (12 months) have you purposely damaged or destroyed property that did not belong to you (not counting family property)?"*

- *"Purposely Damaged or Destroyed Property that Did Not Belong to You*" ranges from a low of 9.1% among M2 to a high of 22.3% among S2 students.
- Overall, 15% of students reported having purposely damaged or destroyed property that did not belong to them in the past year.

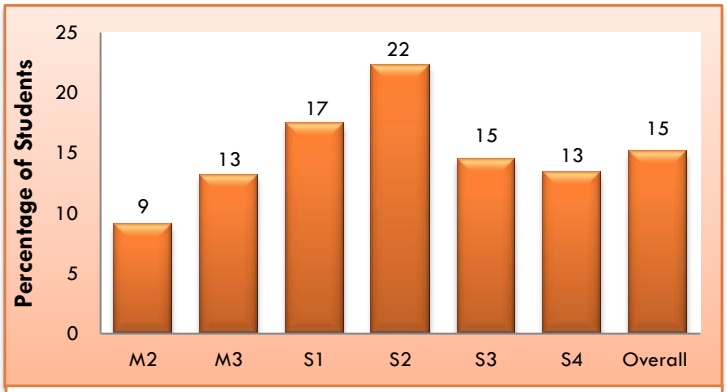

Figure 3.3.13: Purposely damaged or destroyed property that did not belong to you.

Taken Something from a Store without Paying for It

"*Taken Something from a Store Without Paying for It*" is measured by the question "*How many times in the past year (12 months) have you taken something from a store without paying for it?*"

- "*Taken Something from a Store Without Paying for It*" ranges from a low of 8.1% among M2 students to a high of 22.1% among S2 students.
- Overall, 15.7% of students reported having taken something from a store without paying for it in the past year.

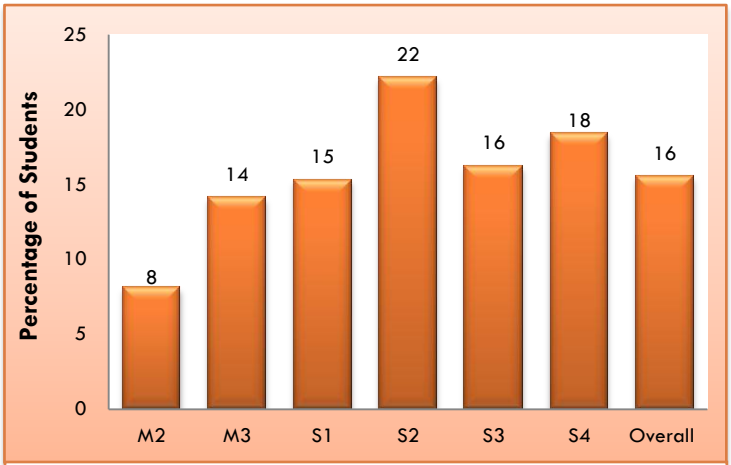

Figure 3.3.14: Taken something from a store without paying for it.

CHAPTER 3.4
RESULTS
Relationships with ATOD Use

3.4.1 Introduction and Measurement

It is generally hypothesised that ATOD use can be the result of certain perceptions, attitudes, risks, or protective factors; while, at the same time, its use can result in certain kind of behaviours. This section of the report seeks to examine a few of these assumptions that relate to ATOD use, specifically, the use of alcohol and marijuana. Questions such as: is there a relationship between the perception of the health risks associated with ATOD use and one's use of these substances; is there a relationship between a student's use of alcohol and his or her engaging in sexual activity; is there a relationship between students' attitudes towards ATOD use and their use of these substances, will be addressed to some degree in this section of the report. A full examination of these relationships is outside the scope of this report. Further, if a relationship exists, then its strength was tested.

Based on the previous research and existing theories, a few pairs of variables were selected to assess whether or not a relationship exists between them. Cross tabulations were then performed on each pair of variables to obtain the number and proportion of student responses. The proportion is reported as a percentage of the row total. A test of the strength of the relationship was carried out using the Pearson correlation. In all cases, the relationship with both lifetime and current use were assessed to ascertain possible explanations for any changes observed in the relationships.

TECHNICAL NOTE

What is Correlation?

The (Pearson) correlation coefficient, *r*, is a measure of the strength of the *linear* relationship between two variables. The correlation coefficient ranges from 1 to -1, with 1 being perfect positive relationship, -1 is perfect negative relationship, and 0 means no relationship. A positive value for the correlation implies a positive association (large values of one variable tend to be associated with large values of the other variable and small values of one variable tend to be associated with small values of the other variable). A negative value for the correlation implies a negative or inverse association (large values of one variable tend to be associated with small values of the other variable and vice versa).

3.4.2 Perception of Health Risk and Consumption

There are many factors that influence the initiation of drug or alcohol use – the perception of risk associated with these behaviours, gender, age, and type of drug, among others. Understanding the different patterns of risk perceptions that emerge during adolescent development may help to better target health communication messages and increase the effectiveness of prevention and intervention programmes. It is a common assumption that an increased perception of risk derived from drug consumption is associated with a decrease in drug consumption, or even in stopping or never beginning it. Adolescents' perceptions about the risks associated with substance use are often closely related to their substance use, with an inverse association between drug use and risk perceptions (that is, as the prevalence of risk perceptions decreases, the prevalence of drug use increases).[39] Many studies have also shown that the perception of risk appears to be negatively associated with drug use prevalence.[40] In particular, research has shown that, overall, students who report a low perception of risk associated with the use of any substances are more likely to use those substances.[41] As such, providing adolescents with credible, accurate, and age-appropriate information about the harm associated with substance use is a key component in prevention programming.

Relationship between Perception of Health Risk in Drinking Alcoholic Beverages and Alcohol Use

In the current survey, a relationship existed between students' perception of harm in "*drinking alcoholic beverages frequently*" and both their lifetime and current use of alcohol. In other words, a student's perception of the risk of consuming alcohol was associated with his or her use of alcohol. Table 3.4.1 shows that of the 1,426 students who indicated that drinking alcohol frequently is "*very harmful*", 42.6% consumed alcohol in their lifetime, and 78.1% of students who perceived it to be "*slightly harmful*" have, in fact, consumed alcohol. Overall, 55.3% of students who indicated some degree of harm still consumed alcoholic beverages in their lifetime. Although, the same relationship exists between perception of harm and current use, a smaller proportion (31.3%) of current users who indicated "*very harmful*", still consumed alcohol (*Table 3.4.2*). Overall, 45.5% of all current users of alcohol who perceived some level of harm still used alcohol in the past 30 days.The correlation coefficients ($r = 0.268$ *and* 0.264, respectively) show that a positive relationship exists between the perception of risk and alcohol use; although this relationship is somewhat weak. Figure 3.4.1, on the other hand, shows an inverse relationship between these variables.

[39] SAMSAH. (2009). National Survey on Drug Use and Health. The NSDUH Report 2009. ***Perceptions of Risk from Substance Use among Adolescents.***http://oas.samhsa.gov/2k9/158/158RiskPerceptions.htm (accessed February 10, 2012).

[40] J. Bejarano, et al. (2011). p. 16.

[41] Ibid. p. 15.

Table 3.4.1
Relationship between Perception of Health Risk in Drinking Alcoholic Beverages Frequently and Lifetime Use of Alcohol

How harmful to your health is drinking alcoholic beverages frequently?	Have you ever consumed alcoholic beverages?						Total
	Yes		No		Not Stated		
	n	%	n	%	n	%	
Not Harmful	124	74.7	34	20.5	8	4.8	**166**
Slightly Harmful	385	78.1	96	19.5	12	2.4	**493**
Moderately Harmful	558	63.2	296	33.5	29	3.3	**883**
Very Harmful	608	42.6	727	51.0	91	6.4	**1,426**
Don't Know	51	41.1	63	50.8	10	8.1	**124**
Not Stated	21	23.3	31	34.4	38	42.2	**90**
Total	**1,747**	**54.9**	**1,247**	**39.2**	**188**	**5.9**	**3,182**

Table 3.4.2
Relationship between Perception of Health Risk in Drinking Alcoholic Beverages Frequently and Current Use of Alcohol

How harmful to your health is drinking alcoholic beverages frequently?	Have you consumed alcoholic beverages in the past 30 days?						Total
	Yes		No		Not Stated		
	n	%	n	%	n	%	
Not Harmful	73	70.9	27	26.2	3	2.9	**103**
Slightly Harmful	181	59.9	115	38.1	6	2.0	**302**
Moderately Harmful	202	48.8	209	50.5	3	0.7	**414**
Very Harmful	126	31.3	266	66.2	10	2.5	**402**
Don't Know	20	64.5	9	29.0	2	6.5	**31**
Not Stated	7	50.0	5	35.7	2	14.3	**14**
Total	**609**	**48.1**	**631**	**49.8**	**26**	**2.1**	**1,266**

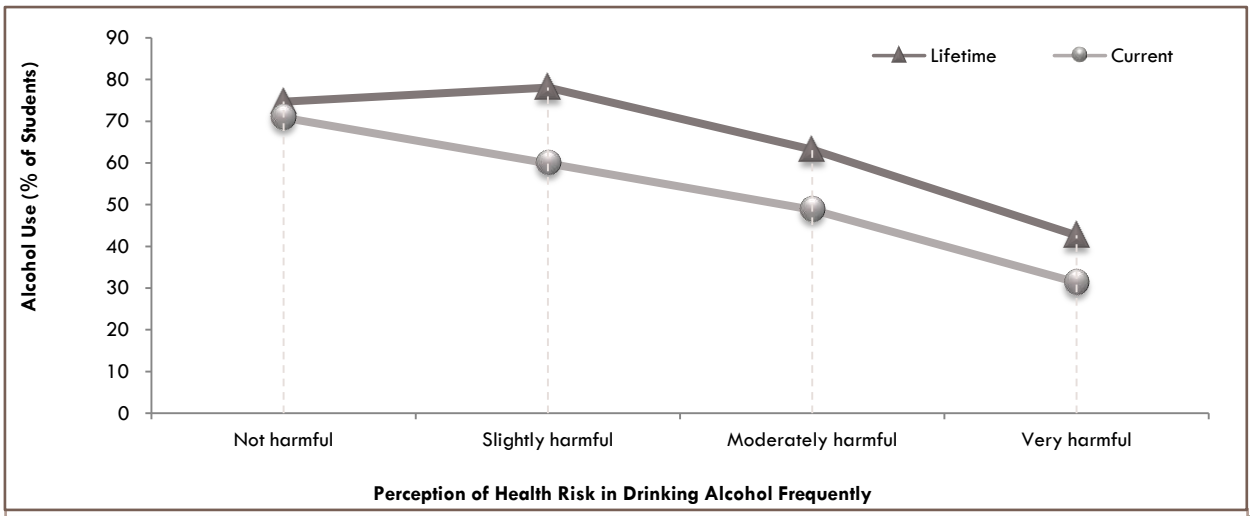

Figure 3.4.1. Relationship between perception of health risk in drinking alcohol frequently and lifetime and current use of alcohol.

Relationship between Perception of Harm in Smoking Marijuana and Marijuana Use

The current data revealed the existence of an inverse relationship between the perception of "*smoking marijuana sometimes*" or "*frequently*" and students' lifetime use of marijuana (*r = -0.481 and -0.478,* respectively). That is, students who perceived "*smoking marijuana sometimes*" or "*frequently*" to be harmful, their use of it tended to decrease, and vice versa (*see Figure 3.4.2*). Table 3.4.3 shows that of the 1,201 students who indicated that "*smoking marijuana sometimes*" is "*very harmful*", 93.1% have never used marijuana. Overall, 83.2% of students who indicated some degree of harm have not used marijuana in their lifetime. The same relationship exists between "*smoking marijuana frequently*" and lifetime use of marijuana. Table 3.4.5 shows that 89.4% of lifetime users who viewed "*smoking marijuana frequently*" as "*very harmful*" did not use marijuana in the past 30 days, while 61.7% who viewed this behaviour to not be harmful have, in fact, used marijuana in their lifetime.

A similar relationship is observed among current users (*see Figure 3.4.3*). For instance, 63.1% of current users who viewed "*smoking marijuana sometimes*" to not be very harmful, have indicated use in the past month; while 66.7% who perceived the risk to be "*very harmful*" did not use marijuana in the preceding 30 days (*see Table 3.4.4*). Likewise, 69.8% of students perceived no harm in "*smoking marijuana frequently*" have indicated use of marijuana in the past 30 days; while 72% who reported this behaviour to be "*very harmful*" were not current users of marijuana (*see Table 3.4.6*). In contrast, however, the correlation coefficients indicate a weak positive relationship between these variables (*r = 0.185 and 0.259*, respectively). In other words, while the numbers and proportions indicated the existence of an inverse relationship with perception of risk and the use of marijuana the statistical test of the strength of the relationship indicated otherwise. This may mean that there are some other underlying factors affecting current use of marijuana apart from the perception of risk associated with its use or that the relationship is not linear.

Table 3.4.3
Relationship between Perception of Health Risk in Smoking Marijuana Sometimes and Lifetime Use of Marijuana

How harmful to your health is smoking marijuana sometimes?	Have you ever consumed marijuana?						Total
	Yes		No		Not Stated		
	n	%	n	%	n	%	
Not Harmful	302	60.4	176	35.2	22	4.4	**500**
Slightly Harmful	186	35.0	326	61.4	19	3.6	**531**
Moderately Harmful	102	14.4	590	83.1	18	2.5	**710**
Very Harmful	59	4.9	1,118	93.1	24	2.0	**1,201**
Don't Know	12	8.3	120	83.3	12	8.3	**144**
Not Stated	14	14.6	50	52.1	32	33.3	**96**
Total	**675**	**21.2**	**2,380**	**74.8**	**127**	**4.0**	**3,182**

Table 3.4.4

Relationship between Perception of Health Risk in Smoking Marijuana Sometimes and Current Use of Marijuana

How harmful to your health is smoking marijuana sometimes?	Have you consumed marijuana in the past 30 days?						Total
	Yes		No		Not Stated		
	n	%	n	%	n	%	
Not Harmful	152	63.1	80	33.2	9	3.7	**241**
Slightly Harmful	63	48.5	67	51.5	0	0.0	**130**
Moderately Harmful	18	33.3	35	64.8	1	1.9	**54**
Very Harmful	8	33.3	16	66.7	0	0.0	**24**
Don't Know	7	70.0	3	30.0	0	0.0	**10**
Not Stated	2	28.6	3	42.9	2	28.6	**7**
Total	**250**	**53.6**	**204**	**43.8**	**12**	**2.6**	**466**

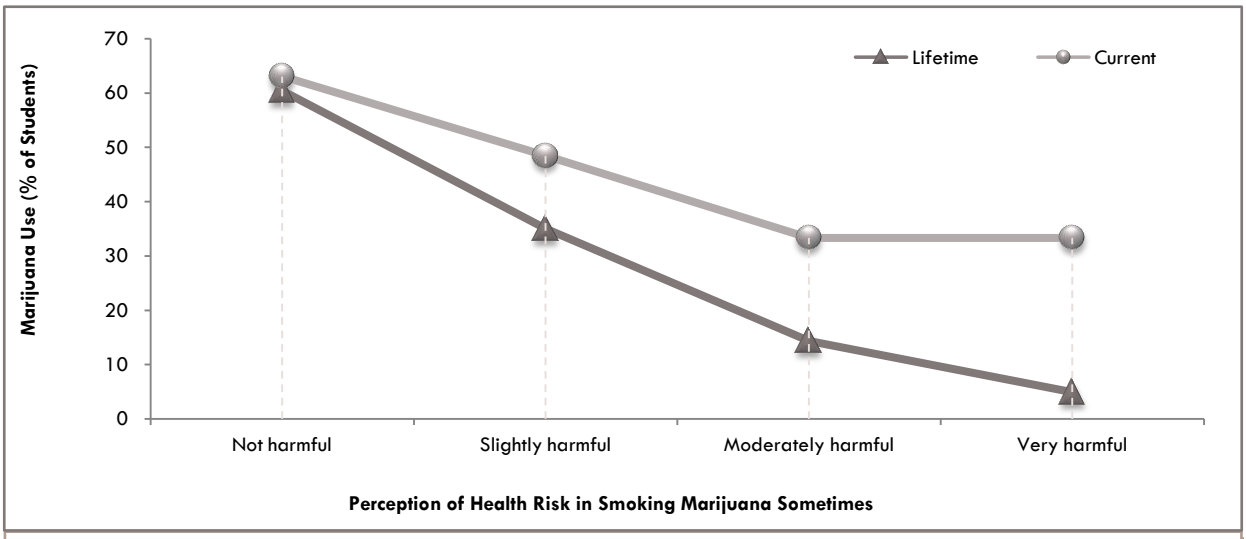

Figure 3.4.2. Relationship between perception of health risk in smoking marijuana sometime and lifetime and current use of marijuana.

Table 3.4.5

Relationship between Perception of Health Risk in Smoking Marijuana Frequently and Lifetime Use of Marijuana

How harmful to your health is smoking marijuana frequently?	Have you ever consumed marijuana?						Total
	Yes		No		Not Stated		
	n	%	n	%	n	%	
Not Harmful	209	61.7	116	34.2	14	4.1	**339**
Slightly Harmful	163	48.8	156	46.7	15	4.5	**334**
Moderately Harmful	125	27.5	321	70.5	9	2.0	**455**
Very Harmful	149	8.2	1,620	89.4	44	2.4	**1,813**
Don't Know	11	7.9	115	82.7	13	9.4	**139**
Not Stated	18	17.6	52	51.0	32	31.4	**102**
Total	**675**	**21.2**	**2,380**	**74.8**	**127**	**4.0**	**3,182**

Table 3.4.6
Relationship between Perception of Health Risk in Smoking Marijuana Frequently and Current Use of Marijuana

How harmful to your health is smoking marijuana frequently?	Have you consumed marijuana in the past 30 days?						Total
	Yes		No		Not Stated		
	n	%	n	%	n	%	
Not Harmful	120	69.8	48	27.9	4	2.3	**172**
Slightly Harmful	61	50.0	57	46.7	4	3.3	**122**
Moderately Harmful	38	48.7	38	48.7	2	2.6	**78**
Very Harmful	21	28.0	54	72.0	0	0.0	**75**
Don't Know	7	70.0	3	30.0	0	0.0	**10**
Not Stated	3	33.3	4	44.4	2	22.2	**9**
Total	**250**	**53.6**	**204**	**43.8**	**12**	**2.6**	**466**

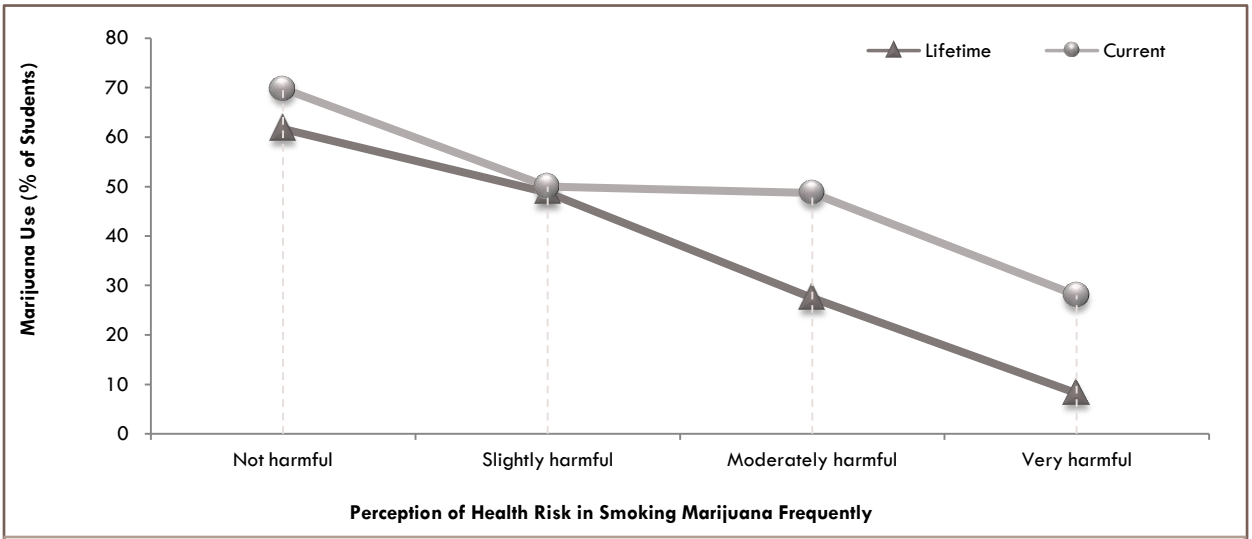

Figure 3.4.3. Relationship between perception of health risk in smoking marijuana frequently and lifetime and current use of marijuana.

3.4.3 Alcohol Use and Sexual Behaviour

Research has shown that alcohol consumption is associated with adolescents engaging in high-risk sexual behaviors, including unprotected sexual intercourse and multiple sex partners.[42] Further, public health research has focused on identifying individual and situational factors associated with sexual risk-taking behaviours that expose individuals to HIV.[43] One of these factors is the use of alcohol or other drugs in conjunction with sex. Alcohol use and sexual activity often are initiated during the teenage years when alcohol interferes with judgment and decision making and lowers

[42] H. E. Hutton, M. E. McCaul, P. B. Santora, & E. J. Erbelding. (2008). The relationship between recent alcohol use and sexual behaviors: Gender differences among STD clinic patients. ***Alcohol Clin Exp Res., 32***(11): 2008–2015. doi:10.1111/j.1530-0277.2008.00788.x. p. 2. http://www.ncbi.nlm.nih.gov/pmc/articles/PMC2588489/pdf/nihms-64363.pdf (accessed February 10, 2012).

[43] B. C. Leigh & D. M. Morrison. (1991). Alcohol consumption and sexual risk-taking in adolescents. ***Alcohol Health & Research World.*** Winter 1991. http://findarticles.com/p/articles/mi_m0847/is_n1_v15/ai_12148691/ (accessed February 10, 2012).

one's inhibitions; it can then be concluded that its use, in association with sexual activity, might increase the likelihood of unprotected intercourse.

The survey results suggest that a positive relationship exists between consumption of alcohol and sexual activity (*see Figure 3.4.4*). Table 3.4.7 below shows that of the 1,747 students who indicated lifetime consumption of alcoholic beverages, 46.3% have had sexual intercourse, while the majority (87.2%) of the students who never consumed alcohol, also never engaged in sexual activity. Of the 609 current users of alcohol, 65.8% have had sexual intercourse (*see Table 3.4.8*). This relationship is borne out by the results of the correlation test, which suggests that a strong positive relationship ($r = 0.408$) exists between lifetime consumption of alcohol and students engaging in sexual behaviours and a weaker relationship exists between current use of alcohol and sexual activity. This positive relationship suggests, in other words, that as students consumed more alcohol, they tended to be more engaged in sexual activities.

Table 3.4.7
Relationship between Lifetime Use of Alcoholic Beverages and Students Engaging in Sexual Intercourse

Have you ever consumed alcoholic beverages?	Have you ever had sexual intercourse?						Total
	Yes		No		Not Stated		
	n	%	n	%	n	%	
Yes	808	46.3	888	50.8	51	2.9	**1,747**
No	109	8.7	1,087	87.2	51	4.1	**1,247**
Not Stated	20	10.6	71	37.8	97	51.6	**188**
Total	**937**	**29.4**	**2,046**	**64.3**	**199**	**6.3**	**3,182**

Table 3.4.8
Relationship between Current Use of Alcoholic Beverages and Students Engaging in Sexual Intercourse

Have you ever consumed alcoholic beverages?	Have you ever had sexual intercourse?						Total
	Yes		No		Not Stated		
	n	%	n	%	n	%	
Yes	401	65.8	194	31.9	14	**2.3**	**609**
No	253	40.1	365	57.8	13	**2.1**	**631**
Not Stated	16	61.5	9	34.6	1	**3.8**	**26**
Total	**670**	**52.9**	**568**	**44.9**	**28**	**2.2**	**1,266**

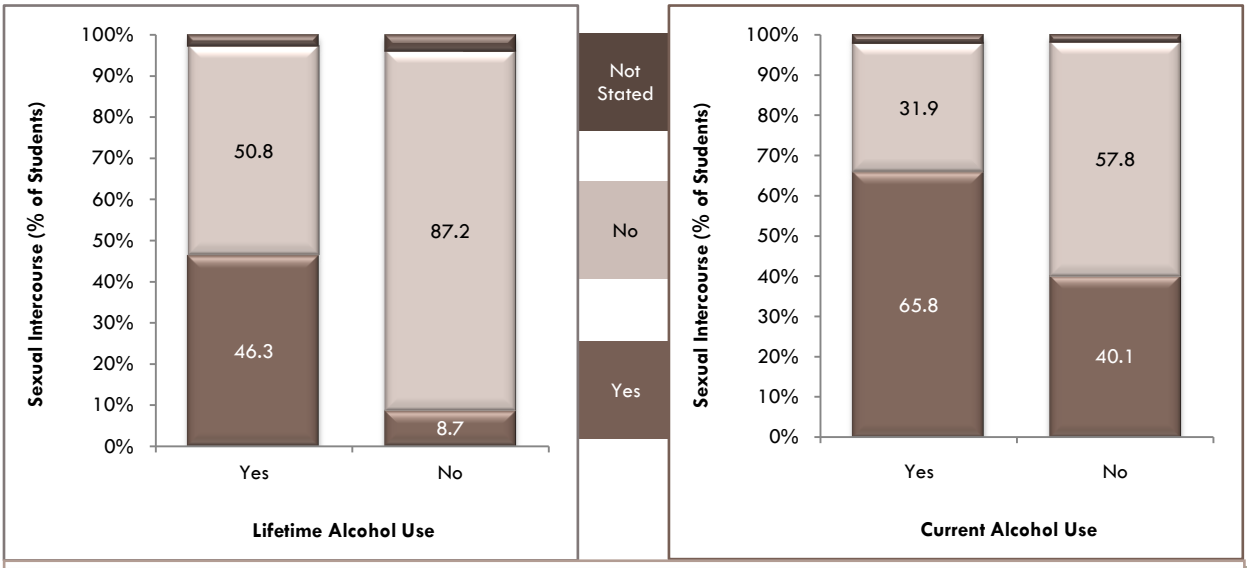

Figure 3.4.4. Relationship between lifetime and current use of alcohol and proportion of students engaged in sexual intercourse.

3.4.4 Attitudes toward Use and Consumption

Research indicates an association between parental and peer influences on the likelihood that a young person will experiment with alcohol, tobacco (cigarettes), and other drugs.[44] Teens who have witnessed one or both of their parents drunk, compared to young people who have not seen their parents drunk, are twice as likely to get drunk themselves and are three times more likely to use marijuana and smoke cigarettes.[45] Similarly, teenagers whose parents are ambivalent about deciding to use marijuana are almost twice as likely to use the drug, compared to teens whose parents say this decision is a major concern. More importantly, young people who believe their fathers approves of their drinking are two and a half times more likely to get drunk in a typical month than teens who believe their father disapproves of their drinking.

The use of marijuana and alcohol often leads to even more risky behaviour involving alcohol, drugs, sex, and associating with others who are involved in harmful behaviour. Young people whose friends are using marijuana, compared to teens who don't have any friends that use marijuana, are 36 times likelier to try marijuana; seven times likelier to try tobacco, and five times likelier to have a drink. Therefore, if a teenager feels smoking is socially acceptable and widely practiced, they are much more likely not only to smoke, but to also drink, and possibly use marijuana. The take home message for parents is clear; know your teen's friends. If your teen is

[44] New York Presbyterian Hospital/Weill Cornell Medical Center/Weill Cornell Medical College. (2009). Teen attitudes toward smoking linked to likelihood of drinking and using drugs. ***ScienceDaily***. http://www.sciencedaily.com-/releases/2009/09/090930132702.htm (accessed February 17, 2012); B. M. Rienzi, J. D. McMillan, C. L. Dickson, D. Caruthers, K. F. McNeil, M. D. Pesina, & E. Mann. (1996). Gender differences regarding peer influences and attitude toward substance abuse. ***Journal of Drug Education, 26***(4), 339-347, p. 345.

[45] The National Center on Addiction and Substance Abuse at Columbia University. (2010). ***National survey of American attitudes on substance abuse XV: Teens and parents.*** http://www.casacolumbia.org/upload/2010/20100819teensurvey.pdf (accessed February 17, 2012).

drinking, the odds are your teen is getting drunk. And teens who get drunk are much likelier to try marijuana and hang out with friends who are abusing prescription drugs and illegal drugs like cocaine and heroin.

Attitudes toward Alcohol Use and Consumption of Alcohol

Figure 3.4.5 suggests an inverse relationship exists between students' attitudes toward alcohol use and their lifetime and current consumption of alcohol. For instance, in Table 3.4.9, 92.5% of students who think that it is "*not wrong at all*" for someone their age to drink alcohol regularly have consumed alcohol in their lifetime, while only 25.7% who indicated "*very wrong*" have used alcohol in their lifetime. This relationship proved to be strong as indicated by a strong negative correlation coefficient ($r = -0.563$). The same relationship applies for current use, though the proportions are smaller, and the relationship weaker ($r = -0.244$). Table 3.4.10 shows that 64.3% of students who reported a "*not wrong at all*" attitude towards alcohol use have used alcohol in the past month, whereas 30.7% who said drinking alcohol regularly was "*very wrong*" actually drank alcohol in this reference period.

Table 3.4.9
Relationship between Attitudes toward Alcohol Use and Lifetime Use of Alcohol

How wrong do you think it is for someone your age to drink beer, wine, or hard liquor regularly, i.e., at least one or twice a month?	Have you ever consumed alcoholic beverages?						Total
	Yes		No		Not Stated		
	n	%	n	%	n	%	
Very Wrong	293	25.7	763	66.8	86	7.5	**1,142**
Wrong	284	50.6	254	45.3	23	4.1	**561**
A Little Bit Wrong	600	85.6	84	12.0	17	2.4	**701**
Not Wrong At All	396	92.5	20	4.7	12	2.8	**428**
Not Stated	174	49.7	126	36.0	50	14.3	**350**
Total	**1,742**	**54.9**	**1,247**	**39.2**	**188**	**5.9**	**3,182**

Table 3.4.10
Relationship between Attitudes toward Alcohol Use and Current Use of Alcohol

How wrong do you think it is for someone your age to drink beer, wine, or hard liquor regularly, i.e., at least one or twice a month?	Have you ever consumed alcoholic beverages?						Total
	Yes		No		Not Stated		
	n	%	n	%	n	%	
Very Wrong	42	30.7	92	67.2	3	**2.2**	**137**
Wrong	58	32.4	114	63.7	7	**3.9**	**179**
A Little Bit Wrong	218	46.1	248	52.4	7	**1.5**	**473**
Not Wrong At All	225	64.3	116	33.1	9	**2.6**	**350**
Not Stated	66	52.0	61	48.0	0	**0.0**	**127**
Total	**609**	**48.1**	**631**	**49.8**	**26**	**2.1**	**1,266**

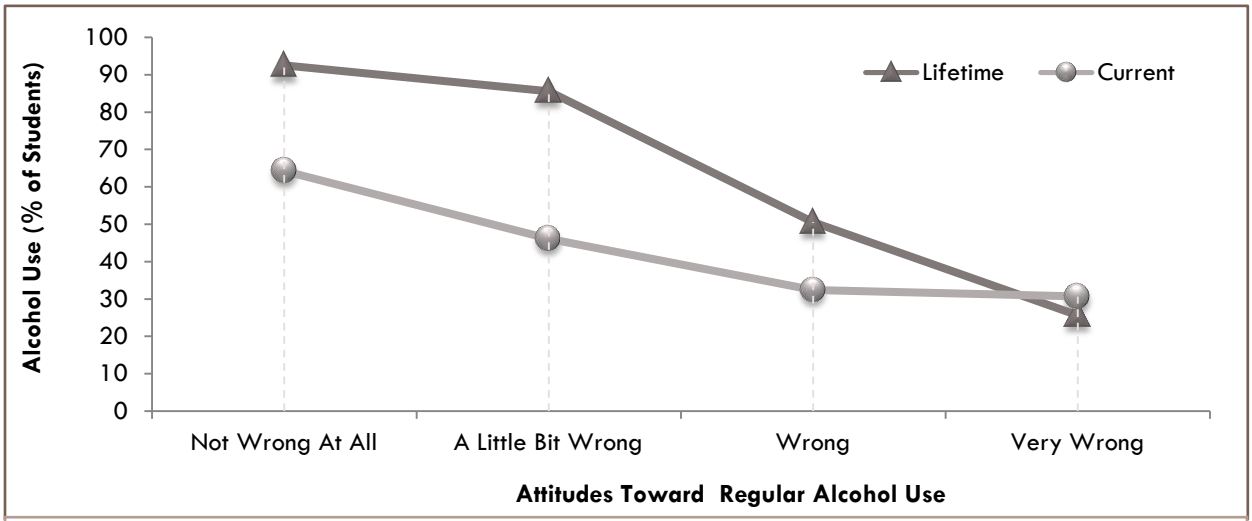

Figure 3.4.5. Relationship between attitudes toward drinking alcohol regularly and lifetime and current use of alcohol.

Attitudes toward Marijuana Use and Consumption of Marijuana

Figure 3.4.6 suggests a negative relationship between students' attitudes toward smoking marijuana and their lifetime and current consumption of this drug. In Table 3.4.11, 73.3% of students who think that it is "*not wrong at all*" for someone their age to smoke marijuana have used marijuana in their lifetime, while only 3.8% who indicated "*very wrong*" have used this drug in their lifetime. However, this relationship proved to be strong, but positive, as indicated by a correlation coefficient, $r = 0.609$. There may be other confounding factors which related to marijuana use apart from attitudes. The same inverse relationship applies for current use as seen in Table 3.4.12 and Figure 3.4.6, though the proportions are smaller, and the relationship is of moderate strength ($r = -0.313$). Over two-thirds (68.2%) of the students who reported a "*not wrong at all*" attitude towards smoking marijuana have used marijuana in the past month, whereas 28.6% who said smoking marijuana was "*very wrong*" actually consumed marijuana in the past 30 days.

Table 3.4.11
Relationship between Attitudes toward Marijuana Use and Lifetime Use of Marijuana

How wrong do you think it is for someone your age to smoke marijuana?	Have you ever consumed marijuana?			Total
	Yes	No	Not Stated	
Very Wrong	62 (3.8%)	1,515 (93.6%)	42 (2.6%)	1,619
Wrong	72 (17.3%)	330 (79.5%)	13 (3.1%)	415
A Little Bit Wrong	209 (47.2%)	225 (50.8%)	9 (2.0%)	443
Not Wrong At All	242 (73.3%)	78 (23.6%)	10 (3.0%)	330
Not Stated	90 (24.0%)	232 (61.9%)	53 (14.1%)	375
Total	**675 (21.2%)**	**2,380 (74.8%)**	**127 (4.0%)**	**3,182**

Table 3.4.12
Relationship between Attitudes toward Marijuana Use and Current Use of Marijuana

How wrong do you think it is for someone your age to smoke marijuana?	Have you consumed marijuana in the past 30 days?			Total
	Yes	No	Not Stated	
Very Wrong	8 (28.6%)	20 (71.4%)	0 (0.0%)	28
Wrong	10 (25.0%)	30 (75.0%)	0 (0.0%)	40
A Little Bit Wrong	63 (44.4%)	75 (52.8%)	4 (2.8%)	142
Not Wrong At All	137 (68.2%)	60 (29.9%)	4 (2.0%)	201
Not Stated	32 (58.2%)	19 (34.5%	4 (7.3%)	55
Total	**250 (53.6%)**	**204 (43.8%)**	**12 (2.6%)**	**466**

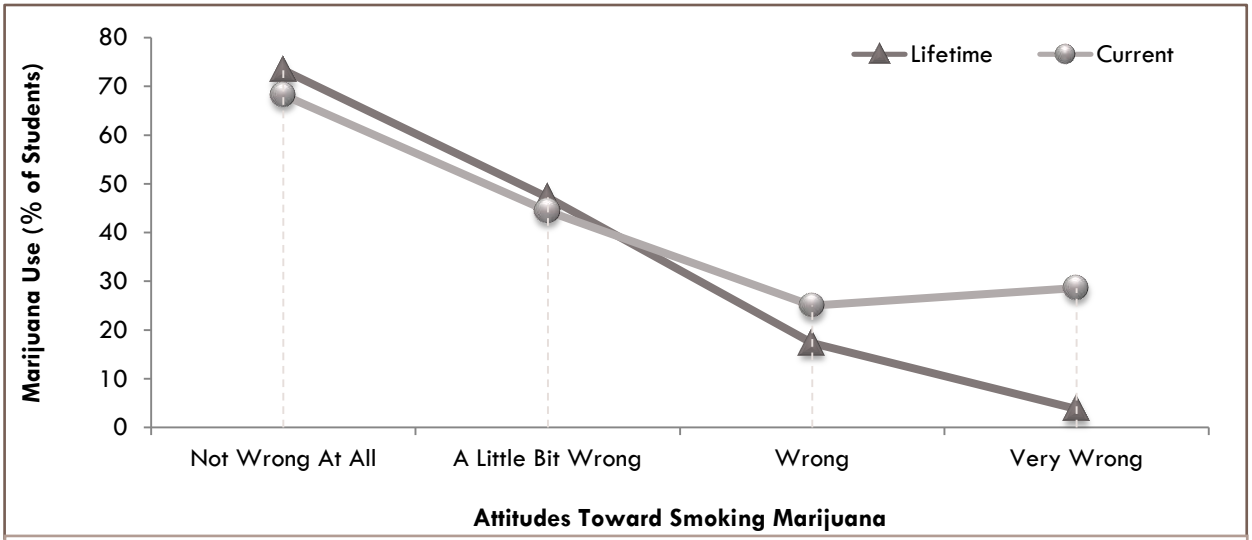

Figure 3.4.6. Relationship between attitudes toward smoking marijuana and lifetime and current use of marijuana.

CHAPTER 4

Discussion

4.1 Discussion

Substance use and abuse among young people remains an important public health concern in Bermuda and throughout the world, with alcohol and tobacco use having a greater negative impact on public health.[46] Similar to national trends in other jurisdictions, results from the current school survey indicated that Bermuda's students continue to experiment at a higher rate with alcohol, marijuana, tobacco (cigarettes), and inhalants.[47] Data from this survey revealed that a high proportion of surveyed youths indicated using at least one drug in their lifetime (76%), and 16.1% saying they were curious to try an illicit drug.

Fortunately, there has been a decline in prevalence of use of a number of substances among middle school and high school students over the past four years. Interestingly, binge drinking episodes among Bermuda's students has decreased by almost half (47.5%) since 2007. These findings are similar to results reported by Caribbean countries.[48] Conversely, a high proportion of Bermuda's young people report lifetime and current (past 30 days) use of energy drinks (65.6% and 31.7%, respectively), with a greater proportion indicating consumption of a combination of energy drinks with alcohol (32%). There is no evidence, however, to suggest students have used, or are currently using, prescription drugs at an alarming rate; as lifetime and current use among students remain stable with low proportions of use being reported. Additionally, there were no apparent gender differences in lifetime or current use of energy drinks, alcohol, cigarettes, and marijuana. While there was some data collected on lifetime use of hallucinogens, crack, cocaine, and heroin, few students reported current use of these substances. It was difficult therefore, to obtain any useful information.

More importantly were the apparent relationships observed among perceptions of level of health risk with alcohol and marijuana. An alarmingly high proportion of students who perceived alcohol consumption as not harmful to one's health were in fact current users of alcohol (70.9%), while 63.1% and 69.8% of students who indicated that smoking marijuana sometimes, and frequently respectively, were not harmful to one's health, were current users of marijuana. Not surprisingly, among current users of alcohol, 65.8% reported engaging in sexual intercourse, and 63.1% said that it was very wrong or wrong for *"someone your age to drink beer, wine, or hard liquor regularly"*. Similarly, 53.6% of students who indicated that it was very wrong or wrong for *"someone your age to smoke marijuana"* were current marijuana smokers. These results demonstrate that students, who are engaging in ATOD consumption, may be aware of the negative effects of alcohol and marijuana use on their health and understand that those behaviours are not acceptable but chose to participate in them regardless of the effects.

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[46] World Health Organization, Global Health Observatory. (2012). ***Global information system on alcohol and health (GISAH).*** http://www.who.int/gho/alcohol/en/index.html (accessed February 17, 2012).

[47] National Institute on Drug Abuse. (2008). ***Monitoring the future. National survey results on drug use. 1975-2008***. NIH Publication No. 09-7402. National Institutes of Health: US Department of Health & Human Services.

[48] Organization of American States. (2010). ***Comparative analysis of student drug use in Caribbean countries***: Antigua and Barbuda, Barbados, Dominica, Grenada, Guyana, Haiti, Jamaica, St. Kitts and Nevis, St. Lucia, St. Vincent and the Grenadines, Trinidad and Tobago, and Suriname: A report on student drug use in 12 Caribbean Countries.

While no single pattern of substance use initiation and escalation can describe the experience of all substance users, there is a general pattern that describes the experiences of many persons. From a population perspective, this general pattern of substance use onset and change over time appears to be linked to developmental transitions that occur from early adolescence to young adulthood. Survey results indicate that the age of onset of student's use of alcohol, cigarettes, and marijuana has remained stable over the past four years. As suggested in the literature, grade level results in the present survey demonstrate that experimentation in the initial stage may eventually lead to substance use progression. The findings showed significant age differences in the prevalence of alcohol, tobacco (cigarettes), and marijuana use. The observed differences in prevalence of use according to age, was most apparent with use of marijuana. In the analysis of current marijuana use, M2 students reported a lower proportion (1.7%) of use than did S4 students (14.4%). A lower proportion of use was also observed among M2 students when compared to S4 students, for other substances of use such as alcohol, cigarettes, and binge drinking. Conversely, inhalant use was more pervasive among M2 students compared to S4 students. This trend, however, is likewise observed in other countries as inhalant use in general is often the first substance adolescents tend to experiment with and as adolescents mature they tend to move from inhalants to experimenting with other types of substances. Subsequently, given that 40.3% of students said it was "*easy*" to obtain marijuana and 16.9% indicated they were offered to buy or use marijuana in the last 30 days, making access to alcohol, tobacco, and other drugs more difficult may delay progression of drug use among adolescents.

Social factors play a primary and fundamental role in promoting the initiation of substance use among adolescents. Social influences can come from a variety of sources, including peers, family (parents and older siblings), and the mass media. In the current survey, student's average level of protection increased by 73% since 2007. The three highest proportions reflected in the protective factor results were scales related to providing school opportunities and rewards for prosocial involvement, as well as, the provision of family rewards for prosocial involvement. In other words if students are able to participate in class activities, projects, sports, and clubs they are more likely to delay substance use and problem behaviours. This is especially true if they receive rewards from both family and within the school system.

On the other hand, a notable decline was observed among students in terms of religiousity and belief in moral order. Literature indicates that adolescents, who perceive religion as important in their lives, may lower their likelihood of cigarette smoking, heavy alcohol drinking, and marijuana use.[49] A decrease in religiousity and belief in moral order among this population may be indicative of students feeling less likely to be motivated to follow society's standards and more likely to engage in delinquent behaviours. This fact is further supported by current crime statistics which reflect increasing levels of violence within some Bermuda communities, especially that of gun violence.

The overall level of risk for students was reported at 26%, approximately 53% lower risk than that reported in 2007. Extended levels of risk were observed for sensation seeking, as well as for

[49] T. A.Wills, J. M. Sandy, & A. M. Yaeger. (2012). Buffering effect of religiosity for adolescent substance use. ***Psychology of Addictive Behaviors, 17*** (1), 24-31. p. 29.

transitions and mobility; suggesting that both environmental and constitutional factors may be acting to increase the likelihood of students using drugs and engaging in delinquent behaviors. While data limitations do not allow one to make assumptions as to the reasons students responded as they did, or determine the causal mechanisms associated with high scores observed on both scales, parents should be aware of the ramifications of changing students' school and/or home environment as these transitions may present additional challenges for young people.

Literature further suggests that young people who have friends who smoke, drink, or use drugs are more likely to become substance users themselves due to factors such as the need for peer acceptance, modeling of behaviour, and increased availability of substances.[50] Results from the present survey reinforce this theory as 54% of students indicated their friends' use of drugs. Similarly, parents or older siblings may model substance use behaviour and transmit positive messages and attitudes regarding substance use. Students, however, indicated a relatively low level of risk when it came to parental attitudes favorable toward ATOD use; meaning that majority of students felt their parents did not hold positive views toward ATOD use. This, combined with similarly low proportions in the poor family management and low perceived risks of drug use scales, indicate that students have a higher level of protection in the family and peer domains, than observed in 2007.

The National School Survey 2011 was implemented to assess drug consumption, as well as identify the current levels of protection and risk among middle and senior school students in Bermuda. This survey also evaluated respondents' perceptions concerning health risks associated with use of alcohol, tobacco, and other drugs. The outcomes presented in this report are consistent with prevalence of use rates observed in other countries.[51] The results indicate that substance use continues to be a public health issue among young Bermudians, which may have important implications on the health and quality of life of this population over their lifespan. By observing prevalence rates over two time frames (lifetime and current or past 30 days), it was easy to distinguish between those who used a substance "at least once" compared to those who have used a substance more recently, that is, during the last 30-days.

4.2 Recommendations for Substance Abuse Prevention Programming

The following evidence-based recommendations have been suggested to foster a holistic approach to drug prevention in Bermuda. This list is by no means inclusive of all the possible programme variations directed toward prevention programming on the Island. However, these recommendations present additional programmatic aspects in which prevention programming could have additional impact and should accompany activities currently in place. In some cases,

[50] G. J. Botvin & K. W. Griffin. (2007). School-based programmes to prevent alcohol, tobacco, and other drug use. ***International Review of Psychiatry***, *19*(6); 607-615, p. 612.

[51] OAS. (2010).

prevention specialist may already be implementing a hybrid of these techniques and are encouraged to continue to evaluate and monitor programme outcomes. Prevention programmes that are tailored to the local community and are culturally relevant are encouraged. The following list is not in order of priority.

Prevention Programmes Addressing Various Stages of Use

Knowledge regarding the developmental progression of substance use during adolescence and early adulthood is important because it can guide the focus and timing of preventive interventions. Interventions targeted at the use of substances occurring towards the beginning of this progression have the potential of preventing the use or escalation in use of those substances as well as the potential for reducing or eliminating the use of other substances further along the progression.

The feasibility of implementing universal, selected, and indicated substance abuse prevention programmes or curriculums should be researched. Programming that targets specific youths at greater risk, either because of their substance use and/or parental use (or other family use) should be considered.

Examples of such programmes include:

- ✓ A drug prevention programme/curriculum for all students in a middle or elementary school health class is considered a universal intervention because it targets young people in an effort to prevent or at least delay the onset of substance use.
- ✓ A drug prevention programme/curriculum for children of drug users or children of alcoholics is considered a selected intervention because it targets those who are at high risk for developing substance abuse problems. This type of programme may be most appropriate for older adolescents and might include monitoring and counseling.
- ✓ A prevention intervention designed to reduce drug abuse problems among individuals who have initiated drug use is considered an indicated programme (harm reduction).

School-based Prevention Programming

Efforts should be made to diversify school-based drug education and prevention with age groups other than middle school students (11-13 years). There has been research on the effectiveness of drug education and prevention with other age groups as well, including primary, high school, and college age young people.

Normative Education

Prevention programmes should include material to combat the perception and attitudes that substance use is widespread among peers and adults ('everybody's doing it'). Changing these normative beliefs can be accomplished by educating young people about the prevalence rates of substance use among their peers either in terms of national survey data or by conducting classroom or school-wide surveys, which are organised and directed by students participating in the programme.

Social Resistance Skills

Prevention programmes that focus on social resistance skills training teach students how to identify social situations in which they are likely to experience peer pressure to smoke, drink, or use drugs andhow to avoid these high-risk situations. Students are taught techniques to handle these situations when they are unavoidable, including what to say (that is, the specific content of a refusal message) and how to communicate it in the most effective way possible. These programmes often make students aware of the techniques used by advertisers to promote tobacco products or alcoholic beverages along with ways to formulate counter-arguments to such messages.[52]

Competence Enhancement

Youths with poor social and personal competence skills may be more vulnerable to the various social, environmental, and motivational forces that promote substance use. Poorly competent youths may not invoke appropriate decision-making or social skills in order to handle negative peer pressure effectively, or may turn to drugs in an effort to regulate negative affects or alleviate feelings of meaninglessness or perceived powerlessness.[53]

The competence-enhancement approach to prevention acknowledges that youths with poor personal and social skills are more susceptible to the social influences that promote drug use and may be motivated to use drugs as an alternative to more adaptive coping strategies.[54] Competence enhancement prevention programmes teach generic social and personal skills such as decision-making skills, interpersonal communication skills, assertiveness skills, and skills for coping with anxiety and anger. Meta-analytic studies have found that prevention programmes that

[52] L. M. Scheier, G. J. Botvin, K. W. Griffin, & T. Diaz. (1999). Latent growth models of drug refusal skills and adolescent alcohol use. ***Journal of Alcohol & Drug Education, 44***, 21–48. p. 40.

[53] E. W. Labouvie. (1986). Alcohol and marijuana use in relation to adolescent stress. ***International Journal of Addictions, 21***, 333–345. p. 341; A. G. Mainous, C. A. Martin, M. J. Oler, E. T. Richardson, & A. S. Haney. (1996). Substance use among adolescents: Fulfilling a need state. ***Adolescence, 31***, 807–815. p. 810.

[54] G. J. Botvin. (2000). Preventing drug abuse in schools: Social and competence enhancement approaches targeting individual-level etiological factors. ***Addictive Behaviors, 25***, 887–897. p. 892.

combine social resistance skills and competence enhancement approaches are among the most effective approaches[55] and some of these programmes have had long-term behavioural effects until the end of high school.[56]

4.3 Future Directions for Substance Abuse Prevention

The most effective prevention programmes are those which are delivered interactively and teach skills to help young people refuse drug offers, resist pro-drug influences, correct misperceptions that drug use is normative, and enhance social and personal competence skills.[57] Most school-based drug prevention programmes, have not been tested as part of a rigorous evaluated study. Thus, an important next step is for rigorous evaluation research to be conducted on the most promising drug prevention programmes and practices for application in Bermuda. In the USA, in particular, there are now several effective research-based prevention programmes that have been shown to prevent the onset and escalation of alcohol, tobacco, and other drugs during adolescence. Many of these evidence-based programmes were tested initially in small, highly controlled efficacy trials, with implementation occurring under highly controlled conditions with high levels of implementation fidelity. Ultimately, it is hoped that programmes in Bermuda that show positive effects in the early stages can be packaged and widely disseminated to prevention practitioners for use in real-world school settings.[58]

A large number of studies have shown that evidence-based prevention programmes are generally not as effective when delivered by prevention practitioners in the field, compared to their original efficacy or levels of effectiveness. One challenge in prevention is to identify the barriers to implementation fidelity and to develop methods to address and overcome them. Another approach may be to develop 'built-in' modifications, such as incorporating a menu of alternative activities that program administration can select from without compromising the core components or underlying theory of a prevention programme. In some cases, adaptations of evidence-based prevention programmes may be made in an effort to adapt the programme to fit real or perceived local needs (probably an appropriate adaptation) or because the program administrator does not have a thorough understanding of the programme and its underlying causal mechanism (not likely to be an appropriate adaptation). Some have argued that any local adaptation of a programme reduces its effectiveness[59], although others acknowledge that

[55] R. L. Bangert-Drowns. (1988). The effects of school based substance abuse education: A meta-analysis. ***Journal of Drug Education, 18***, 243–265, p. 259; N. Tobler. (1992). Drug prevention programs can work: Research findings. ***Journal of Addictive Diseases, 11***, 1–28. p. 21; N. S. Tobler, & H. H. Stratton. (1997). Effectiveness of schoolbased drug prevention programs: A meta-analysis of the research. ***Journal of Primary Prevention, 18***, 71–128. p. 95.

[56] G. J. Botvin, E. Baker, L. Dusenbury, E. M. Botvin, & T. Diaz, T. (1995). Long-term follow-up results of a randomized drug abuse prevention trial in a White middle-class population. ***Journal of the American Medical Association, 273***, 1106–1112. p. 1109.

[57] G. J. Botvin & K. W. Griffin. (2007). p. 609.

[58] A. V. Dane & B. H. Schneider. (1998). Program integrity in primary and early secondary prevention: Are implementation effects out of control? ***Clinical Psychology Review, 18***, 23-4. p. 23.

[59] D. S. Elliott & S. Mihalic. (2004). Issues in disseminating and replicating effective prevention programs. ***Prevention Science, 5***, 47-53. p. 50.

programme adaptation is inevitable and programmes that are adaptable and flexible are more likely to be adopted and institutionalised[60].

Further research is needed to understand how and why adaptations to evidence-based prevention programmes occur in real world settings and ways to balance the relative trade-offs associated with adaptation and implementation fidelity. Research is also needed to identify potential barriers to large-scale dissemination, implementation, and institutionalisation of effective prevention programmes in Bermuda.

[60] E. M. Rogers. (1995). ***Diffusion of innovations*** (4th Ed.). New York: Free Press.



APPENDICES

APPENDIX A

Demographic Trends: 2003, 2007, and 2011

	Number of Students			Percentage of Students		
	2003	**2007**	**2011**	**2003**	**2007**	**2011**
TOTAL	**2966**	**2977**	**3,182**	**100.0**	**100.0**	**100.0**
Sex						
Male	1,322	1,356	1,463	44.6	45.2	46.0
Female	1,615	1,613	1,685	54.5	53.8	53.0
Not Stated	29	28	34	1.0	0.9	1.1
Grades						
M2	544	586	597	18.3	19.6	18.8
M3	592	598	553	20.0	20.0	17.4
S1	581	600	578	19.6	20.0	18.2
S2	548	490	566	18.5	16.3	17.8
S3	412	386	465	13.9	12.9	14.6
S4	259	309	383	8.7	10.3	12.0
Not Stated	30	28	40	1.0	0.9	1.3
Age[1]						
10-11			107			3.3
12			527			16.6
13			517			16.2
14			537			16.9
15			511			16.1
16			461			14.5
17			305			9.6
18			32			1.0
19			6			0.2
Not Stated			179			5.6
Race						
Black	1,791	1,884	1,994	60.4	62.9	62.7
White	555	448	511	18.7	14.9	16.1
Portuguese	200	188	164	6.7	6.3	5.2
Asian or Pacific Islander	37	41	48	1.2	1.4	1.5
Mixed	150	175	323	5.1	2.8	10.2
Other	205	233	118	6.9	7.8	3.7
Not Stated	28	28	24	0.9	0.9	0.8
Language[2]						
English		2,813	3,052		94.5	95.9
Portuguese		61	46		2.0	1.4
Another Language		61	46		2.0	1.4
Not Stated		44	38		1.5	1.2

Notes:

[1] *In both 2003 and 2007, data was not analysed by age of respondent.*

[2] *In 2003, the language demographic characteristic was not analysed.*

APPENDIX B

Enrolment and Respondents by School and Grade

Schools	Enrolment							Respondents							
	M2	M3	S1	S2	S3	S4	Total	M2	M3	S1	S2	S3	S4	NS	Total
Public Schools															
Middle Schools Total	**340**	**344**	**-**	**-**	**-**	**-**	**684**	**316**	**292**	**-**	**-**	**-**	**-**	**10**	**618**
1. Clearwater Middle School	77	55	-	-	-	-	132	59	47	-	-	-	-	1	107
2. Dellwood Middle School	61	68	-	-	-	-	129	56	60	-	-	-	-	3	119
3. Sandys Secondary Middle School[1]	77	98	-	-	-	-	175	85	90	-	-	-	-	4	179
4. TN Tatem Middle School	59	60	-	-	-	-	119	54	36	-	-	-	-	0	90
5. Whitney Institute Middle School	66	63	-	-	-	-	129	62	59	-	-	-	-	2	123
Senior Schools Total	**-**	**-**	**427**	**378**	**293**	**270**	**1,368**	**-**	**-**	**328**	**342**	**258**	**230**	**18**	**1,176**
6. The Berkley Institute	-	-	213	201	132	125	671	-	-	169	168	115	109	7	568
7. Cedarbridge Academy	-	-	214	177	161	145	697	-	-	159	174	143	121	11	608
Private Schools Total	**336**	**314**	**284**	**235**	**222**	**182**	**1,573**	**272**	**253**	**231**	**198**	**185**	**139**	**9**	**1,287**
8. Bermuda High School for Girls	54	51	51	48	43	37	284	45	45	45	39	34	20	1	229
9. Bermuda Institute	49	41	42	37	16	23	208	49	38	35	30	16	21	3	192
10. Mount Saint Agnes Academy	33	37	35	31	32	32	200	-	1	33	29	30	29	0	122
11. Saltus Grammar School	88	81	76	52	66	49	412	79	75	50	46	44	37	3	334
12. Somersfield Academy[2]	36	30	13	16	-	-	95	34	26	6	14	-	-	0	80
13. Warwick Academy	76	74	67	51	65	41	374	65	68	62	40	61	32	2	330
Home Schools[3] Total	**169**						**169**	**101**							**101**
TOTAL						**N =**	**3,794**							**n =**	**3,182**

Notes:

[1] *Enrolment obtained prior to survey may not have been updated reflecting in the higher number of respondents on day of the survey.*

[2] *Somersfiield Academy does not have students enrolled in grades S3 and S4.*

[3] *Enrolment and respondents for the 16 Home Schools were grouped because of the low count for each grade level.*

APPENDIX C

Demographic Characteristics of Pretested Respondents

	Number of Students	Percentage of Students
TOTAL	**25**	**100.0**
Sex		
Male	15	60.0
Female	10	40.0
Grades		
M2	5	20.0
M3	5	20.0
S1	7	28.0
S2	0	0.0
S3	7	28.0
S4	1	4.0
Race		
Black	16	64.0
White	4	16.0
Portuguese	3	12.0
Asian or Pacific Islander	0	0.0
Mixed	1	4.0
Other	1	4.0

APPENDIX D

Trend Analysis of ATOD Use: 2003 and 2007

Lifetime Use of ATODs by Grade Level of Survey Respondents

ATODs[1]	Grade Level/Year												Overall	
	M2		M3		S1		S2		S3		S4			
	2003	2007	2003	2007	2003	2007	2003	2007	2003	2007	2003	2007	2003	2007
Alcohol	33.7	38.4	43.7	58.1	58.9	70.6	70.8	78.3	79.6	81.7	76.1	86.8	58.0	66.9
Cigarettes	8.6	7.8	16.5	15.7	27.3	24.9	32.7	23.7	41.3	30.9	38.4	34.8	25.7	21.9
Cocaine	0.0	0.2	0.7	0.3	1.0	1.7	1.3	1.3	0.5	0.5	2.3	0.3	0.8	0.8
Ecstasy	0.2	0.9	1.0	0.9	0.5	1.2	2.2	0.8	1.0	1.3	1.6	3.0	1.0	1.3
Heroin	0.6	0.5	0.3	0.7	1.6	0.7	0.9	0.8	0.5	0.3	0.0	0.0	0.7	0.5
Inhalants	10.5	15.2	11.4	12.9	8.4	14.3	9.6	8.2	2.9	5.8	3.9	5.0	8.2	10.8
Marijuana	2.3	3.5	8.2	14.2	19.4	23.1	25.3	29.1	39.2	42.0	35.0	42.1	19.7	23.9
Any Illicit Drug (Other than Marijuana)	11.0	15.1	12.8	13.4	9.0	15.8	11.5	9.2	5.1	7.3	6.9	7.1	9.8	11.9

Current Use of ATODs by Grade Level of Survey Respondents

ATODs[1]	Grade Level												Overall	
	M2		M3		S1		S2		S3		S4			
	2003	2007	2003	2007	2003	2007	2003	2007	2003	2007	2003	2007	2003	2007
Alcohol	6.2	12.9	19.9	24.5	24.3	36.5	35.1	45.2	46.4	57.3	50.6	63.4	26.9	37.5
Binge Drinking	3.2	7.4	6.6	12.9	12.3	18.2	16.6	21.6	23.1	32.7	25.7	36.4	13.4	20.0
Cigarettes	1.9	1.0	2.2	1.9	5.9	5.0	9.0	4.4	10.5	7.4	14.0	9.6	6.5	4.5
Cocaine	0.0	0.2	0.0	0.3	0.7	0.7	0.6	0.2	0.2	0.3	1.9	0.0	0.5	0.3
Ecstasy	0.0	0.5	0.2	0.3	0.5	0.5	0.9	0.2	0.0	0.5	0.4	0.7	0.4	0.5
Heroin	0.2	0.2	0.0	0.3	1.1	0.2	0.6	0.4	0.0	0.3	0.0	0.3	0.3	0.3
Inhalants	3.8	6.6	4.5	4.5	3.0	3.6	3.1	1.5	0.7	1.6	1.9	1.3	2.9	3.4
Marijuana	0.8	0.9	2.6	5.8	9.5	11.7	12.6	15.9	23.0	26.5	20.6	21.5	10.3	12.8
Any Illicit Drug (Other than Marijuana)	3.9	6.9	5.0	4.9	4.0	4.8	4.2	2.1	1.0	2.1	3.9	2.3	3.7	4.2

Note:

[1] *In both 2003 and 2007, use of smokeless tobacco, methamphetamine, and LSD/psychedelics were asked of survey respondents and reported.*

APPENDIX E

Cronbach's α (Alpha) Coefficient of Reliability Analysis of Risk and Protective Factor Scales

Protective Factors

Scale	Cronbach's α
Community Rewards for Prosocial Involvement	0.865
Community Opportunities for Prosocial Involvement	0.655
Family Attachment	0.734
Family Opportunities for Prosocial Involvement	0.789
Family Rewards for Prosocial Involvement	0.761
School Opportunities for Prosocial Involvement	0.745
School Rewards for Prosocial Involvement	0.758
Peer-Individual Rewards for Prosocial Involvement	0.843
Interaction with Prosocial Peers	0.764
Belief in the Moral Order	0.352
Peer-Individual Prosocial Involvement	0.722
Religiousity*	-
Social Skills	0.524

Note:
Some scales contained only one item and as such a scale variable was not created; therefore, Cronbach's α was not assessed.

APPENDIX E

Cronbach's α (Alpha) Coefficient of Reliability Analysis of Risk and Protective Factor Scales

Risk Factors

Scale	Cronbach's α
Low Neighbourhood Attachment	0.794
Community Disorganisation	0.571
Transitions and Mobility	0.458
Perceived Availability of Drugs	0.817
Perceived Availability of Handguns*	-
Laws and Norms Favourable to Drug Use	0.630
Laws and Norms Favourable to Handguns*	-
Family History of Antisocial Behaviour	0.786
Poor Family Management	0.846
Family Conflict	0.793
Parental Attitudes Favourable toward ATOD Use	0.731
Parental Attitudes Favourable toward Antisocial Behaviour	0.740
Poor Academic Performance	0.420
Lack of Commitment to School	0.529
Rebelliousness	0.760
Gang Involvement	0.847
Favourable Attitudes toward ATOD Use	0.810
Favourable Attitudes toward Antisocial Behaviour	0.847
Sensation Seeking	0.682
Peer Rewards for Antisocial Behaviour	0.810
Friends' Use of Drugs	0.696
Friends Delinquent Behaviour	0.866
Low Perceived Risks of Drug Use	0.762
Early Initiation of Drug Use	0.870
Intention to Use	0.569

Note:
Some scales contained only one item and therefore a scale variable was not created, therefore Cronbach's α was not assessed.

APPENDIX F

Risk and Protective Results: 2003 and 2007

Protective Factor Scales by Grade Level of Survey Respondents

Domain	Scale	M2	M3	S1	S2	S3	S4	All
Community Domain	**Community Rewards for Prosocial Involvement**							
	2003	52	54	51	49	51	51	51
	2007	46	41	49	43	50	51	46
Family Domain	**Family Attachment**							
	2003	60	58	53	47	43	46	52
	2007	56	49	52	49	47	53	51
	Family Opportunities for Prosocial Involvement							
	2003	59	56	53	49	43	50	52
	2007	54	47	49	50	45	54	50
	Family Rewards for Prosocial Involvement							
	2003	62	59	58	53	50	52	56
	2007	59	55	55	53	54	57	56
School Domain	**School Opportunities for Prosocial Involvement**							
	2003	58	53	54	53	53	54	51
	2007	50	46	40	44	44	47	45
	School Rewards for Prosocial Involvement							
	2003	67	69	68	59	53	65	64
	2007	58	54	55	56	56	62	56
Peer Individual Domain	**Religiousity**							
	2003	46	48	51	50	57	56	51
	2007	53	47	54	50	56	51	52
	Social Skills							
	2003	61	59	49	46	44	49	52
	2007	56	48	46	48	44	44	48
	Belief in Moral Order							
	2003	71	69	66	59	57	65	65
	2007	62	57	57	56	58	58	58

Risk Factor Scales by Grade Level of Survey Respondents

Domain	Scale	M2	M3	S1	S2	S3	S4	All
Community Domain	**Low Neighbourhood Attachment**							
	2003	46	45	49	58	58	38	46
	2007	53	52	46	47	40	39	47
	Community Disorganisation							
	2003	46	46	55	59	59	57	53
	2007	56	58	59	59	61	64	59
	Transitions and Mobility							
	2003	46	47	43	47	49	47	46
	2007	47	49	45	49	47	47	48
	Laws and Norms Favourable to Drug Use							
	2003	44	42	51	56	54	51	50
	2007	52	58	56	59	55	65	57
	Laws and Norms Favourable to Handguns							
	2003	39	39	46	49	52	41	44
	2007	48	48	51	49	54	56	50
	Perceived Availability of Drug							
	2003	38	34	37	39	42	36	38
	2007	44	44	42	41	40	42	42
	Perceived Availability of Handguns							
	2003	37	35	37	35	37	29	35
	2007	39	40	38	34	39	33	37

Risk Factor Scales by Grade Level of Survey Respondents cont'd

Domain	Scale	M2	M3	S1	S2	S3	S4	All
Family Domain	**Poor Family Management**							
	2003	42	44	48	53	55	46	48
	2007	49	54	50	51	50	50	51
	Family Conflict							
	2003	42	40	44	45	49	44	44
	2007	51	50	52	49	50	50	50
	Family History of Antisocial Behaviour							
	2003	41	43	51	47	54	52	48
	2007	53	53	56	60	60	59	57
	Parental Attitudes Favourable toward ATOD Use							
	2003	46	43	45	48	46	52	47
	2007	47	50	47	51	47	56	50
	Parental Attitudes Favourable toward Antisocial Behaviour							
	2003	40	43	47	53	50	46	46
	2007	45	51	49	52	48	52	49
School Domain	**Poor Academic Performance**							
	2003	48	54	50	56	60	61	54
	2007	52	49	50	56	58	56	53
	Lack of Commitment to School							
	2003	30	28	31	37	35	29	32
	2007	37	39	41	40	37	33	38

Risk Factor Scales by Grade Level of Survey Respondents cont'd

Domain	Scale	M2	M3	S1	S2	S3	S4	All
Peer Individual Domain	**Rebelliousness**							
	2003	31	34	39	47	46	42	39
	2007	45	52	52	52	50	44	49
	Friend's Delinquent Behaviour							
	2003	41	43	51	55	61	53	51
	2007	48	56	59	60	66	61	59
	Friends' Use of Drugs							
	2003	39	35	40	40	42	37	39
	2007	42	45	47	44	45	41	45
	Peer Rewards for Antisocial Behaviour							
	2003	47	48	53	58	60	50	52
	2007	53	62	63	59	60	56	59
	Favourable Attitudes toward Antisocial Behaviour							
	2003	32	35	40	47	42	38	39
	2007	39	45	48	44	44	37	43
	Favourable Attitudes toward ATOD Use							
	2003	37	36	38	41	37	36	38
	2007	41	45	44	41	41	39	42
	Low Perceived Risks of Drug Use							
	2003	47	47	50	52	51	50	49
	2007	50	55	50	47	53	51	51
	Early Initiation of Drug Use							
	2003	38	39	45	47	52	44	44
	2007	41	47	49	46	48	46	46
	Sensation Seeking							
	2003	35	34	42	40	40	37	38
	2007	42	40	40	39	43	39	41

APPENDIX G

Public vs. Private School Comparisons on Substance Use

Lifetime Use of Selected Substances by Public School Students as a Proportion of Overall Grade Level Survey Respondents

Substance	Grade Level							Overall (n = 3,182)
	M2 (n = 597)	M3 (n = 553)	S1 (n = 578)	S2 (n = 566)	S3 (n = 465)	S4 (n = 383)	Not Stated (n = 40)	
Alcohol	85 (14.2%)	126 (22.8%)	183 (31.7%)	232 (41.0%)	188 (40.4%)	177 (46.2)	16 (40.0%)	1,007 (31.6%)
Cigarette	13 (2.2%)	24 (4.3%)	36 (6.2%)	43 (7.6%)	29 (6.2%)	29 (7.6%)	6 (15.0%)	180 (5.7%)
Energy Drinks	185 (31.0%)	195 (35.3%)	196 (33.9%)	238 (42.0%)	159 (34.2%)	158 (41.3%)	12 (30.0%)	1,143 (35.9%)
Inhalants	49 (8.2%)	44 (8.0%)	61 (10.6%)	38 (6.7%)	20 (4.3%)	18 (4.7%)	0 (0.0%)	230 (7.2%)
Marijuana	19 (3.2%)	27 (4.9%)	91 (15.7%)	111 (19.6%)	91 (19.6%)	93 (24.3%)	10 (25.0%)	442 (13.9%)

Current Use of Selected Substances by Public School Students as a Proportion of Overall Grade Level Survey Respondents

Substance	Grade Level							Overall (n = 3,182)
	M2 (n = 597)	M3 (n = 553)	S1 (n = 578)	S2 (n = 566)	S3 (n = 465)	S4 (n = 383)	Not Stated (n = 40)	
Alcohol	13 (2.2%)	23 (4.2%)	67 (11.6%)	96 (17.0%)	70 (15.1%)	83 (21.7%)	7 (17.5%)	359 (11.3%)
Binge Drinking	4 (0.7%)	10 (1.8%)	45 (7.8%)	49 (8.7%)	38 (8.2%)	40 (10.4%)	5 (12.5%)	191 (6.0%)
Cigarette	1 (0.2%)	5 (0.9%)	5 (0.9%)	14 (2.5%)	3 (0.6%)	6 (1.6%)	2 (5.0%)	36 (1.1%)
Energy Drinks	87 (14.6%)	88 (15.9%)	85 (14.7%)	118 (20.8%)	74 (15.9%)	64 (16.7%)	5 (12.5%)	521 (16.4%)
Inhalants	7 (1.2%)	13 (2.4%)	15 (2.6%)	2 (0.4%)	3 (0.6%)	5 (1.3%)	0 (0.0%)	45 (1.4%)
Marijuana	6 (1.0%)	6 (1.1%)	41 (7.1%)	49 (8.7%)	36 (7.7%)	33 (8.6%)	3 (7.5%)	174 (5.5%)

Lifetime Use of Selected Substances by Private School Students as a Proportion of Overall Grade Level Survey Respondents

Substance	Grade Level							Overall (n = 3,182)
	M2 (n = 597)	M3 (n = 553)	S1 (n = 578)	S2 (n = 566)	S3 (n = 465)	S4 (n = 383)	Not Stated (n = 40)	
Alcohol	59 (9.9%)	98 (17.7%)	109 (18.9%)	136 (24.0%)	149 (32.0%)	116 (30.3%)	5 (12.5%)	672 (21.1%)
Cigarette	5 (0.8%)	12 (2.2%)	15 (2.6%)	31 (5.5%)	42 (9.0%)	36 (9.4%)	1 (2.5%)	142 (4.5%)
Energy Drinks	128 (21.4%)	163 (29.5%)	169 (29.2%)	159 (28.1%)	142 (30.5%)	100 (26.1%)	6 (15.0%)	867 (27.2%)
Inhalants	37 (6.2%)	34 (6.1%)	31 (5.4%)	26 (4.6%)	10 (2.2%)	5 (1.3%)	1 (2.5%)	144 (4.5%)
Marijuana	5 (0.8%)	6 (1.1%)	24 (4.2%)	38 (6.7%)	63 (13.5%)	51 (13.3%)	1 (2.5%)	188 (5.9%)

Current Use of Selected Substances by Private School Students as a Proportion of Overall Grade Level Survey Respondents

Substance	Grade Level							Overall (n = 3,182)
	M2 (n = 597)	M3 (n = 553)	S1 (n = 578)	S2 (n = 566)	S3 (n = 465)	S4 (n = 383)	Not Stated (n = 40)	
Alcohol	3 (0.5%)	13 (2.4%)	23 (4.0%)	44 (7.8%)	68 (14.6%)	65 (17.0%)	2 (5.0%)	218 (6.9%)
Binge Drinking	2 (0.3%)	1 (0.2%)	7 (1.2%)	13 (2.3%)	36 (7.7%)	34 (8.9%)	1 (2.5%)	94 (3.0%)
Cigarette	1 (0.2%)	4 (0.7%)	5 (0.9%)	5 (0.9%)	13 (2.8%)	14 (3.7%)	0 (0.0%)	42 (1.3%)
Energy Drinks	65 (10.9%)	86 (15.6%)	90 (15.6%)	84 (14.8%)	65 (14.0%)	61 (15.9%)	2 (5.0%)	453 (14.2%)
Inhalants	10 (1.7%)	8 (1.4%)	6 (1.0%)	5 (0.9%)	0 (0.0%)	0 (0.0%)	0 (0.0%)	29 (0.9%)
Marijuana	2 (0.3%)	1 (0.2%)	3 (0.5%)	7 (1.2%)	22 (4.7%)	15 (3.9%)	1 (2.5%)	51 (1.6%)

APPENDIX H
Questionnaire

SURVEY *of*
MIDDLE AND SENIOR SCHOOL STUDENTS
ON ALCOHOL, TOBACCO, OTHER DRUGS, AND HEALTH

Good day!
The Department for National Drug Control (DNDC) is carrying out a school survey on the topic of public health. The objective is to obtain information to address, in the best way possible, the problems related to public health in Bermuda. Your cooperation in this survey would be of great value to this effect. Your answers are ***absolutely confidential and are completely anonymous****. This means that no one will know your answers. To help us keep your answers in confidence, please* ***do not*** *write your name on this survey form. Thus, we ask youtorespond very honestly.*

SECTION I

INSTRUCTIONS

1. This is not a test. There is no right or wrong answer.

2. Answer **ALL** questions, UNLESS you are instructed to **skip** to another set of questions because you answered "No" or "Never" to a given question. (You must select a response to these questions before skipping). If you don't find an answer that fits exactly, use one that comes closest.

3. Check the appropriate response.

1. School ……	**2. What grade are you in?** ☐ 1. M2 ☐ 2. M3 ☐ 3. S1 ☐ 4. S2 ☐ 5. S3 ☐ 6. S4
3. Sex ☐ 1. Male ☐ 2. Female	**4. Age** ☐ years old
5. What do you consider yourself to be? (Choose all that apply.) ☐ 1. Black ☐ 2. White ☐ 3. Portuguese ☐ 4. Asian or Pacific Islander ☐ 5. Other (specify) ……	**6. What is the language you use most often at home?** ☐ 1. English ☐ 2. Portuguese ☐ 3. Another language (specify) ……

7. In which parish do you most often reside? (Tick only one(1) response)

☐ 1. Devonshire ☐ 3. Paget ☐ 5. St. George's ☐ 7. Southampton ☐ 9. Smith's
☐ 2. Hamilton ☐ 4. Pembroke ☐ 6. Sandys ☐ 8. Warwick

8. What is your parents' marital status? (in relation to each other)

☐ 1. Never Married ☐ 2. Married
☐ 3. Divorced ☐ 4. Separated
☐ 5. Widow(er) ☐ 6. Living together/Common law
☐ 7. I don't know ☐ 8. Other (specify)

.....

9. With whom do you live? (you may tick as many options as necessary)

☐ 1. Father ☐ 2. Mother
☐ 3. Brother/Sister ☐ 4. Stepmother
☐ 5. Stepfather ☐ 6. Wife/Husband
☐ 7. Girlfriend/Boyfriend ☐ 8. Other relative
☐ 9. Friend ☐ 10. Alone
☐ 11. Other (specify).....

10. What is the <u>highest</u> level of school that your mother <u>completed</u>?

☐ 1. None ☐ 5. College/University
☐ 2. Primary ☐ 6. Don't know
☐ 3. Secondary/High School
☐ 4. Technical/Vocational

11. What is the <u>highest</u> level of school that your father <u>completed</u>?

☐ 1. None ☐ 5. College/University
☐ 2. Primary ☐ 6. Don't know
☐ 3. Secondary/High School
☐ 4. Technical/Vocational

12. If you are working (paid work) as well as studying, how many hours do you work per week?

☐ 1. Do not work
☐ 2. Work approximately ..... hours per week

13. How likely is it that you will complete high school?

☐ 1. Very likely ☐ 2. Likely
☐ 3. Not very likely ☐ 4. Impossible
☐ 5. Don't know

14. How likely is that you will go to University?

☐ 1. Very likely ☐ 2. Likely
☐ 3. Not very likely ☐ 4. Impossible
☐ 5. Don't know

15. How many school years have you had to repeat during the course of your studies?

☐ 1. None
☐ 2. One
☐ 3. Two or more

16. Have you ever had behavioural or discipline problems during your school years? (e.g., detentions and suspensions, being sent to the Principal, corporal punishment)

☐ 1. Never ☐ 2. Few times ☐ 3. Frequently

17. In your opinion, how harmful is <u>each</u> of the following to your health?

	1. Not harmful	2. Slightly harmful	3. Moderately harmful	4. Very harmful	5. Don't know
1. Smoking cigarettes sometimes					
2. Smoking cigarettes frequently					
3. Drinking alcoholic beverages frequently					
4. Getting drunk					
5. Taking tranquilizers/stimulants without medical prescription sometimes					
6. Taking tranquilizers/stimulants without medical prescription frequently					
7. Inhaling solvents sometimes					
8. Inhaling solvents frequently					
9. Smoking marijuana sometimes					
10. Smoking marijuana frequently					
11. Consuming cocaine sometimes					
12. Consuming cocaine frequently					

18. In your opinion, how harmful is <u>each</u> of the following to your health?					
	1. Not harmful	2. Slightly harmful	3. Moderately harmful	4. Very harmful	5. Don't know
13. Consuming crack sometimes					
14. Consuming crack frequently					
15. Consuming ecstasy sometimes					
16. Consuming ecstasy frequently					
17. Inhaling second hand cigarette smoke					
18. Inhaling second hand marijuana smoke					

19. Have you <u>ever</u> smoked cigarettes? (You must check a response)

☐ 1. Yes ☐ 2. No **(skip to #27)**

20. How old were you when you smoked for the first time?

☐ years old

21. When was the <u>first time</u> you smoked cigarettes? (You must check a response)

☐ 1. Never **(skip to #27)**
☐ 2. During the past 30 days
☐ 3. More than 1 month ago, less than 1 year ago
☐ 4. More than a year ago

22. Have you smoked cigarettes in the <u>past 12 months</u>? (You must check a response)

☐ 1. Yes ☐ 2. No **(skip to #27)**

23. Have you smoked cigarettes in the <u>past 30 days</u>? (You must check a response)

☐ 1. Yes ☐ 2. No **(skip to #27)**

24. Approximately, how many cigarettes have you smoked a day in the past month?

☐ 1. 1 to 5 ☐ 2. 6 to 10
☐ 3. 11 to 20 ☐ 4. More than 20

25. Where do you most often smoke cigarettes? (Tick only <u>one(1)</u> response)

☐ 1. At home
☐ 2. At school
☐ 3. On the corner/block
☐ 4. At a friend's house
☐ 5. At sporting events
☐ 6. At other social event
☐ 7. Other (specify) .....

26. From whom/where do you usually get cigarettes? (Tick only <u>one(1)</u> response)

☐ 1. Friends
☐ 2. Parents
☐ 3. Brother/Sister
☐ 4. Other relative(s)
☐ 5. Street vendor
☐ 6. Shop
☐ 7. Other (specify) .....

27. Have you <u>ever</u> consumed alcoholic beverages? (You must check a response)

☐ 1. Yes ☐ 2. No **(skip to #37)**

28. How old were you when you consumed an alcoholic beverage for the first time?

☐ years old

29. When was the <u>first time</u> you consumed an alcoholic beverage? (You must check a response)

☐ 1. Never **(skip to #37)**
☐ 2. During the past 30 days
☐ 3. More than 1 month ago, less than 1 year ago
☐ 4. More than a year ago

30. Have you consumed alcoholic beverages in the <u>past 12 months</u>? (You must check a response)

☐ 1. Yes ☐ 2. No **(skip to #37)**

31. Have you consumed alcoholic beverages in the <u>past 30 days</u>? (You must check a response)

☐ 1. Yes ☐ 2. No **(skip to #37)**

32. How many days <u>in the past month</u> have you had too much to drink and got drunk?

☐ days

33. Where do you most often drink alcohol? (Tick only <u>one(1)</u> response)	**34. From whom/where do you usually get alcohol? (Tick only <u>one(1)</u> response)**
☐ 1. At home ☐ 2. At school ☐ 3. On the corner/block ☐ 4. At a friend's house ☐ 5. At sporting events ☐ 6. At other social events ☐ 7. Other (specify)	☐ 1. Friends ☐ 2. Parents ☐ 3. Brother/Sister ☐ 4. Other relative(s) ☐ 5. Street vendor ☐ 6. Shop ☐ 7. Other (specify) .....

35. In the <u>past 30 days</u>, what type of alcoholic beverage did you consume, and with what frequency?

Check the appropriate response for <u>EACH</u>.

	1. Daily	2. Weekends	3. Some week days	4. Only in social events	5. Never
1. Beer, Guinness, Breezers, Wickets					
2. Wine					
3. Hard liquor (rum, rum punch, vodka, whisky, liqueurs)					

36. In the <u>past 2 weeks</u>, how many times have you consumed 5 alcoholic drinks or more in one sitting?

☐ 1. Never
☐ 2. Only once
☐ 3. Between 2 and 3 times
☐ 4. Between 4 and 5 times
☐ 5. More than 5 times

37. How easy would it be to obtain the following drugs? Check the appropriate response for <u>EACH</u>.	1. Easy	2. Difficult	3. Impossible to obtain	4. Don't know
1. Marijuana				
2. Cocaine				
3. Hashish				
4. Ecstasy				
5. Crack				

38. When was the last time that you were offered any of these drugs, either to buy or to consume? Check the appropriate response for <u>EACH</u>.	1. During the last 30 days	2. More than a month ago, but less than a year ago	3. More than a year ago	4. I have never been offered
1. Marijuana				
2. Cocaine				
3. Hashish				
4. Ecstasy				
5. Crack				

39. Have you ever been curious about trying an illicit drug?	40. If you had the opportunity, would you try an illicit drug?
☐ 1. No ☐ 2. Not sure ☐ 3. Yes	☐ 1. No ☐ 2. Not Sure ☐ 3. Yes

41. Have you ever consumed any of these substances? Check the appropriate response for **EACH**.			41b. How old were you when you first tried?
	NO	**YES**	
1. Inhalants (e.g. glue, diesel fuel, other solvents)		→	years old
2. Marijuana		→	years old
3. Cannabis resin		→	years old
4. Cocaine		→	years old
5. Heroin		→	years old
6. Hallucinogens		→	years old
7. Hashish		→	years old
8. Crack		→	years old
9. Ecstasy		→	years old
10. Other drugs (specify):		→	years old

42a. When was the **first time** you tried inhalants (e.g. glue, diesel fuel, other solvents)? (You must check a response)	42b. Have you consumed inhalants in the **past 12 months**? (You must check a response)
☐ 1. Never **(skip to #43a)** ☐ 2. In the past 30 days ☐ 3. More than 1 month ago, but less than 1 year ago ☐ 4. More 1 year ago	☐ 1. Yes ☐ 2. No **(skip to #43a)**
42c. With what frequency have you consumed inhalants?	**42d. Have you consumed inhalants in the past 30 days?**
☐ 1. Only once ☐ 2. Sometimes in the past 12 months ☐ 3. Sometimes during the month ☐ 4. Sometimes during the week ☐ 5. Daily	☐ 1. Yes ☐ 2. No

43a. When was the <u>first time</u> you tried marijuana? (You must check a response) ☐ 1. Never **(skip to #44a)** ☐ 2. In the past 30 days ☐ 3. More than 1 month ago, but less than 1 year ago ☐ 4. More 1 year ago	**43b. Have you consumed marijuana in the <u>past 12 months</u>? (You must check a response)** ☐ 1. Yes ☐ 2. No **(skip to #44a)**
43c. With what frequency have you used marijuana? ☐ 1. Only once ☐ 2. Sometimes in the past 12 months ☐ 3. Sometimes during the month ☐ 4. Sometimes during the week ☐ 5. Daily	**43d. Have you consumed marijuana in the <u>past 30 days</u>?** ☐ 1. Yes ☐ 2. No
43e. Where do you most often use marijuana? ☐ 1. At home ☐ 2. At school ☐ 3. On the corner/block ☐ 4. At a friend's house ☐ 5. At sporting events ☐ 6. At other social events ☐ 7. Other (specify)	**43f. From whom/where do you usually get marijuana?** ☐ 1. Friends ☐ 2. Parents ☐ 3. Brother/Sister ☐ 4. Other relative(s) ☐ 5. Street pusher ☐ 6. Other (specify) .....

44a. When was the <u>first time</u> you tried cocaine? (You must check a response) ☐ 1. Never **(skip to #45a)** ☐ 2. In the past 30 days ☐ 3. More than 1 month ago, but less than 1 year ago ☐ 4. More than 1 year ago	**44b. Have you consumed cocaine in the <u>past 12 months</u>? (You must check a response)** ☐ 1. Yes ☐ 2. No **(skip to #45a)**
44c. With what frequency have you used cocaine? ☐ 1. Only once ☐ 2. Sometimes in the past 12 months ☐ 3. Sometimes during the month ☐ 4. Sometimes during the week ☐ 5. Daily	**44d. Have you consumed cocaine in the <u>past 30 days</u>?** ☐ 1. Yes ☐ 2. No
44e. Where do you most often use cocaine? ☐ 1. At home ☐ 2. At school ☐ 3. On the corner/block ☐ 4. At a friend's house ☐ 5. At sporting events ☐ 6. At other social events ☐ 7. Other (specify)	**44f. From whom/where do you usually get cocaine?** ☐ 1. Friends ☐ 2. Parents ☐ 3. Brother/Sister ☐ 4. Other relative(s) ☐ 5. Street pusher ☐ 6. Other (specify).....

45a. When was the first time you tried ecstasy? (You must check a response)	45b. Have you consumed ecstasy in the past 12 months? (You must check a response)
☐ 1. Never **(skip to #46a)** ☐ 2. In the past 30 days ☐ 3. More than 1 month ago, but less than 1 year ago ☐ 4. More than 1 year ago	☐ 1. Yes ☐ 2. No **(skip to #46a)**
45c. With what frequency have you used ecstasy? ☐ 1. Only once ☐ 2. Sometimes in the past 12 months ☐ 3. Sometimes during the month ☐ 4. Sometimes during the week ☐ 5. Daily	**45d. Have you consumed ecstasy in the past 30 days?** ☐ 1. Yes ☐ 2. No

46a. When was the first time you tried crack? (You must check a response)	46b. Have you consumed crack in the past 12 months? (You must check a response)
☐ 1. Never **(skip to #47a)** ☐ 2. In the past 30 days ☐ 3. More than 1 month ago, but less than 1 year ago ☐ 4. More than 1 year ago	☐ 1. Yes ☐ 2. No **(skip to #47a)**
46c. With what frequency have you used crack? ☐ 1. Only once ☐ 2. Sometimes in the past 12 months ☐ 3. Sometimes during the month ☐ 4. Sometimes during the week ☐ 5. Daily	**46d. Have you consumed crack in the past 30 days?** ☐ 1. Yes ☐ 2. No

47a. When was the first time you tried other drugs? (You must check a response)	47b. Have you consumed other drugs in the past 12 months? (You must check a response)
☐ 1. I have never tried other drugs **(skip to #48a)** ☐ 2. In the past 30 days ☐ 3. More than 1 month ago, but less than 1 year ago ☐ 4. More than 1 year ago	☐ 1. Yes ☐ 2. No **(skip to #48a)**
47c. With what frequency have you used other drugs? ☐ 1. Only once ☐ 2. Sometimes in the past 12 months ☐ 3. Sometimes during the month ☐ 4. Sometimes during the week ☐ 5. Daily	**47d. Have you consumed other drugs in the past 30 days?** ☐ 1. Yes ☐ 2. No

48a. When was the <u>first time</u> you consumed tranquilizers (e.g., valium, xanax) without medical prescription? (You must check a response)

☐ 1. Never **(skip to #49a)**
☐ 2. In the past 30 days
☐ 3. More than 1 month ago, but less than 1 year ago
☐ 4. More than 1 year ago

48b. Have you consumed tranquilizers without medical prescription in the <u>past 12 months</u>? (You must check a response)

☐ 1. Yes
☐ 2. No **(skip to #49a)**

48c. Have you consumed tranquilizers without medical prescription in the <u>past 30 days</u>? (You must check a response)

☐ 1. Yes
☐ 2. No **(skip to #49a)**

48d. In the <u>past 30 days</u>, how many days did you consume tranquilizers without medical prescription?

☐ days

48e. How did you have access to the tranquilizers you consumed?

☐ 1. From the doctor ☐ 2. In the street
☐ 3. At home ☐ 4. From a friend
☐ 5. At the pharmacy ☐ 6. Other (specify)
.....

49a. When was the <u>first time</u> you tried stimulants (e.g., ritalin, adderall, pseudoephedrine) without medical prescription? (You must check a response)

☐ 1. I have never consumed stimulants without medical prescription **(skip to #50a)**
☐ 2. In the past 30 days
☐ 3. More than 1 month ago, but less than 1 year ago
☐ 4. More than 1 year ago

49b. Have you consumed stimulants without medical prescription in the <u>past 12 months</u>? (You must check a response)

☐ 1. Yes
☐ 2. No **(skip to #49e)**

49c. Have you consumed stimulants without medical prescription in the <u>past 30 days</u>? (You must check a response)

☐ 1. Yes
☐ 2. No **(skip to #49e)**

49d. In the <u>past 30 days</u>, how many days did you consume stimulants without medical prescription?

☐ days

49e. How did you have access to the stimulants you consumed?

☐ 1. From the doctor ☐ 2. In the street
☐ 3. At home ☐ 4. From a friend
☐ 5. At the pharmacy ☐ 6. Other (specify)
.....

The next set of questions asks about sexual health.

50a. Have you ever had sexual intercourse? (You must check a response)

☐ 1. Yes
☐ 2. No **(skip to #51a)**

50b. How old were you when you had sexual intercourse for the first time?

☐ 1. 11 years or younger
☐ 2. 12 years old
☐ 3. 13 years old
☐ 4. 14 years old
☐ 5. 15 years old
☐ 6. 16 years old

50c. During your life, with how many people have you had sexual intercourse?

☐ 1. 1 person
☐ 2. 2 people
☐ 3. 3 people
☐ 4. 4 people
☐ 5. 5 people
☐ 6. 6 or more people

50d. The last time you had sexual intercourse, did you or your partner use a condom?

☐ 1. Yes
☐ 2. No

50e. The last time you had sexual intercourse, did you or your partner use any other method of birth control, such as withdrawal, rhythm (safe time), birth control pills, or any other method to prevent pregnancy?

☐ 1. Yes
☐ 2. No
☐ 3. I do not know

The next set of questions asks about HIV infection or AIDS.

51a. Have you ever heard about HIV infection or the disease called AIDS?

☐ 1. Yes
☐ 2. No

51b. In school, were you taught in any of your classes about HIV infection or AIDS?

☐ 1. Yes
☐ 2. No
☐ 3. I do not know

51c. In school, were you taught in any of your classes how to avoid HIV infection or AIDS?

☐ 1. Yes
☐ 2. No
☐ 3. I do not know

51d. Have you ever talked about HIV infection or AIDS with your parents or guardians?

☐ 1. Yes
☐ 2. No

END OF SECTION I

SECTION II

*This section of the survey asks your opinion on a number of things in your life, including your friends, family, neighbourhood, and community. You are reminded that your answers to these questions are **confidential**.*

INSTRUCTIONS

1. This is not a test. There is no right or wrong answers.

2. Provide a response to **ALL** questions. If you don't find an answer that fits exactly, use one that comes closest.

3. Some of the questions have the following format:

   Please check the box for the word that best describes how you feel.

   EXAMPLE: Pepperoni pizza is one of my favourite foods.

   ☐ 1. NO! ☐ 2. No ☐ 3. Yes ☐ 4. YES!

   Mark the Big "NO!" if you think the statement is definitely not true for you.

   Mark the little "No" if you think the statement is mostly not true for you.

   Mark the little "Yes" if you think the statement is mostly true for you.

   Mark the Big "YES!" if you think the statement is definitely true for you.

These questions ask about your neighbourhood and community where you live.

1. I'd like to get out of my neighbourhood. Pick one:

   ☐ 1. NO! ☐ 2. No ☐ 3. Yes ☐ 4. YES!

2. If I had to move, I would miss the neighbourhood I now live in. Pick one:

   ☐ 1. NO! ☐ 2. No ☐ 3. Yes ☐ 4. YES!

3. I like my neighbourhood. Pick one:

   ☐ 1. NO! ☐ 2. No ☐ 3. Yes ☐ 4. YES!

4. How much does each of the following statements describe your neighbourhood?

	1. **NO!**	2. **No**	3. **Yes**	4. **YES!**
1. I feel safe in my neighbourhood				
2. Crime and/or drug selling				
3. Fights				
4. Lots of empty or abandoned buildings				
5. Lots of graffiti				

5. How many times have you changed homes since kindergarten/P-1? Pick one:

   ☐ 1. Never ☐ 4. 5 – 6 times
   ☐ 2. 1 – 2 times ☐ 5. 7 or more times
   ☐ 3. 3 – 4 times

6. Have you changed homes in the past year (the last 12 months)? Pick one:

   ☐ 1. No ☐ 2. Yes

7. Have you changed schools (including changing from elementary to middle and middle to high school) in the past year (the last 12 months)? Pick one:

   ☐ 1. No ☐ 2. Yes

8. How many times have you changed schools (including changing from elementary to middle and middle to high school) since kindergarten? Pick one:

   ☐ 1. Never ☐ 4. 5 – 6 times
   ☐ 2. 1 – 2 times ☐ 5. 7 or more times
   ☐ 3. 3 – 4 times

9. If you wanted to get some cigarettes, how easy would it be for you to get some? Pick one:

   ☐ 1. Very hard ☐ 3. Sort of easy
   ☐ 2. Sort of hard ☐ 4. Very easy

10. If you wanted to get some beer, wine, or hard liquor (for example, vodka, whiskey, or gin), how easy would it be for you to get some? Pick one:

    ☐ 1. Very hard ☐ 3. Sort of easy
    ☐ 2. Sort of hard ☐ 4. Very easy

11. If you wanted to get some marijuana, how easy would it be for you to get some? Pick one:

    ☐ 1. Very hard ☐ 3. Sort of easy
    ☐ 2. Sort of hard ☐ 4. Very easy

12. If you wanted to get a drug like, cocaine, LSD, or amphetamines, how easy would it be for you to get some? Pick one:

    ☐ 1. Very hard ☐ 3. Sort of easy
    ☐ 2. Sort of hard ☐ 4. Very easy

13. If you wanted to get a handgun, how easy would it be for you to get one? Pick one:

☐ 1. Very hard ☐ 3. Sort of easy
☐ 2. Sort of hard ☐ 4. Very easy

14. If a kid drank some beer, wine, or hard liquor (for example vodka, whiskey, or gin) in your neighbourhood, or the area around where you live, would he or she be caught by the police? Pick one:

☐ 1. NO! ☐ 2. No ☐ 3. Yes ☐ 4. YES!

15. If a kid smoked marijuana in your neighbourhood, or the area around where you live, would he or she be caught by the police? Pick one:

☐ 1. NO! ☐ 2. No ☐ 3. Yes ☐ 4. YES!

16. If a kid illegally carried a handgun in your neighbourhood, or the area around where you live, would he or she be caught by the police? Pick one:

☐ 1. NO! ☐ 2. No ☐ 3. Yes ☐ 4. YES!

17. How wrong would most adults in your neighbourhood, or the area around where you live, think it is for kids your age to smoke marijuana? Pick one:

☐ 1. Very wrong ☐ 3. A little bit wrong
☐ 2. Wrong ☐ 4. Not wrong at all

18. How wrong would most adults in your neighbourhood, or the area around where you live, think it is for kids your age to drink alcohol? Pick one:

☐ 1. Very wrong ☐ 3. A little bit wrong
☐ 2. Wrong ☐ 4. Not wrong at all

19. How wrong would most adults in your neighbourhood, or the area around where you live, think it is for kids your age to smoke cigarettes? Pick one:

☐ 1. Very wrong ☐ 3. A little bit wrong
☐ 2. Wrong ☐ 4. Not wrong at all

20. There are a lot of adults in my neighbourhood I could talk to about something important. Pick one:

☐ 1. NO! ☐ 2. No ☐ 3. Yes ☐ 4. YES!

21. Which of the following activities for people your age are available in your community?

Activities	1. **Yes**	2. **No**
1. Sports teams		
2. Boys and girls clubs (e.g., Pathfinders, Girl Guides, Boy Scouts, Sea Cadets)		
3. Community clubs (e.g., Majorettes, Dancerettes, Twirlers)		
4. Community service (e.g., Candy striping, Volunteer work)		

22. There are people in my neighbourhood, or the area around where I live, who are proud of me when I do something well. Pick one:

☐ 1. NO! ☐ 2. No ☐ 3. Yes ☐ 4. YES!

23. There are people in my neighbourhood, or the area around where I live, who encourage me to do my best. Pick one:

☐ 1. NO! ☐ 2. No ☐ 3. Yes ☐ 4. YES!

24. My neighbours notice when I am doing a good job and let me know about it. Pick one:

☐ 1. NO! ☐ 2. No ☐ 3. Yes ☐ 4. YES!

These questions ask about your family.

1. Has anyone in your family ever had a severe alcohol or drug problem? Pick one:

☐ 1. No ☐ 2. Yes

2. Have any of your brother(s) or sister(s) ever drunk beer, wine, or hard liquor (for example vodka, whiskey, or gin)? Pick one:

☐ 1. No ☐ 2. Yes
☐ 3. I don't have any brother(s) or sister(s)

3. Have any of your brother(s) or sister(s) ever smoked marijuana? Pick one:

☐ 1. No ☐ 2. Yes
☐ 3. I don't have any brother(s) or sister(s)

4. Have any of your brother(s) or sister(s) ever smoked cigarettes? Pick one:

☐ 1. No ☐ 2. Yes
☐ 3. I don't have any brother(s) or sister(s)

5. Have any of your brothers or sisters brother(s) or sister(s) ever taken a handgun to school? Pick one:

☐ 1. No ☐ 2. Yes
☐ 3. I don't have any brother(s) or sister(s)

6. Have any of your brother(s) or sister(s) ever been suspended or expelled from school? Pick one:

☐ 1. No ☐ 2. Yes
☐ 3. I don't have any brother(s) or sister(s)

7. About how many adults have you known personally who in the past year have used marijuana, crack, cocaine, or other drugs? Pick one:

☐ 1. None ☐ 4. 3 or 4 adults
☐ 2. 1 adult ☐ 5. 5 or more adults
☐ 3. 2 adults

8. About how many adults have you known personally who in the past year have sold or dealt drugs? Pick one:

☐ 1. None ☐ 4. 3 or 4 adults
☐ 2. 1 adult ☐ 5. 5 or more adults
☐ 3. 2 adults

9. About how many adults have you known personally who in the past year have done other things that could get them in trouble with the police, like stealing, selling stolen goods, mugging or assaulting others, etc.? Pick one:

☐ 1. None ☐ 4. 3 or 4 adults
☐ 2. 1 adult ☐ 5. 5 or more adults
☐ 3. 2 adults

10. About how many adults have you known personally who in the past year have gotten drunk or high? Pick one:

☐ 1. None ☐ 4. 3 or 4 adults
☐ 2. 1 adult ☐ 5. 5 or more adults
☐ 3. 2 adults

11. The rules in my family are very clear. Pick one:

☐ 1. NO! ☐ 2. No ☐ 3. Yes ☐ 4. YES!

12. My parents ask if I have gotten my homework done. Pick one:

☐ 1. NO! ☐ 2. No ☐ 3. Yes ☐ 4. YES!

13. When I am not at home, one of my parents know where I am and who I am with. Pick one:

☐ 1. NO! ☐ 2. No ☐ 3. Yes ☐ 4. YES!

14. Would your parents know if you did not come home on time? Pick one:

☐ 1. NO! ☐ 2. No ☐ 3. Yes ☐ 4. YES!

15. My family has clear rules about alcohol and drug use. Pick one:

☐ 1. NO! ☐ 2. No ☐ 3. Yes ☐ 4. YES!

16. If you drank some beer, wine, or other hard liquor (for example vodka, whiskey, or gin) without your parents' permission, would you be caught by your parents? Pick one:

☐ 1. NO! ☐ 2. No ☐ 3. Yes ☐ 4. YES!

17. If you carried a handgun without your parents' permission, would you be caught by your parents? Pick one:

☐ 1. NO! ☐ 2. No ☐ 3. Yes ☐ 4. YES!

18. If you skipped school without your parents' permission, would you be caught by your parents? Pick one:

☐ 1. NO! ☐ 2. No ☐ 3. Yes ☐ 4. YES!

19. We argue about the same things in my family over and over. Pick one:

☐ 1. NO! ☐ 2. No ☐ 3. Yes ☐ 4. YES!

20. People in my family have serious arguments. Pick one:

☐ 1. NO! ☐ 2. No ☐ 3. Yes ☐ 4. YES!

21. People in my family often insult or yell at each other. Pick one:

☐ 1. NO! ☐ 2. No ☐ 3. Yes ☐ 4. YES!

22. How wrong do your parents feel it would be for <u>you</u> to…

	1. **Very Wrong**	2. **Wrong**	3. **A little bit wrong**	4. **Not wrong at all**
1. drink beer, wine or hard liquor (for example, vodka, whiskey or gin) regularly (at least once or twice a month)?				
2. smoke cigarettes?				
3. smoke marijuana?				
4. steal anything worth more than $5.00?				
5. draw graffiti, write things, or draw pictures on buildings or other property (without the owner's permission)?				
6. pick a fight with someone?				

23. Do you feel very close to your mother? Pick one:

☐ 1. NO! ☐ 2. No ☐ 3. Yes ☐ 4. YES!

24. Do you share your thoughts and feelings with your mother? Pick one:

☐ 1. NO! ☐ 2. No ☐ 3. Yes ☐ 4. YES!

25. Do you feel very close to your father? Pick one:

☐ 1. NO! ☐ 2. No ☐ 3. Yes ☐ 4. YES!

26. Do you share your thoughts and feelings with your father? Pick one:

☐ 1. NO! ☐ 2. No ☐ 3. Yes ☐ 4. YES!

27. If I had a personal problem, I could ask my mom or dad for help. Pick one:

☐ 1. NO! ☐ 2. No ☐ 3. Yes ☐ 4. YES!

28. My parents give me lots of chances to do fun things with them. Pick one:

☐ 1. NO! ☐ 2. No ☐ 3. Yes ☐ 4. YES!

29. My parents ask me what I think before most family decisions affecting me are made. Pick one:

☐ 1. NO! ☐ 2. No ☐ 3. Yes ☐ 4. YES!

30. My parents notice when I am doing a good job and let me know about it. Pick one:

☐ 1. Never or Almost Never ☐ 3. Often
☐ 2. Sometimes ☐ 4. All the time

31. How often do your parents tell you they're proud of you for something you've done? Pick one:

☐ 1. Never or Almost Never ☐ 3. Often
☐ 2. Sometimes ☐ 4. All the time

32. Do you enjoy spending time with your mother? Pick one:

☐ 1. NO! ☐ 2. No ☐ 3. Yes ☐ 4. YES!

33. Do you enjoy spending time with your father? Pick one:

☐ 1. NO! ☐ 2. No ☐ 3. Yes ☐ 4. YES!

This section asks questions about your experiences at school.

1. Putting them all together, what were your grades like last year? (E.g., Mostly Bs, Mostly Fs, Level 3, Grade 6)

2. Are your school grades better than the grades of most students in your class? Pick one:

☐ 1. NO! ☐ 2. No ☐ 3. Yes ☐ 4. YES!

3. During the LAST FOUR WEEKS, how many whole days have you missed because you skipped or cut? Pick one:

☐ 1. None ☐ 5. 4 to 5
☐ 2. 1 ☐ 6. 6 to 10
☐ 3. 2 ☐ 7. 11 or more
☐ 4. 3

4. How often do you feel that the school work you are assigned is meaningful and important? Pick one:

☐ 1. Almost always
☐ 2. Often
☐ 3. Sometimes
☐ 4. Seldom
☐ 5. Never

5. How interesting are most of your courses to you? Pick one:

☐ 1. Very interesting and stimulating
☐ 2. Quite interesting
☐ 3. Fairly interesting
☐ 4. Slightly dull
☐ 5. Very dull

6. How important do you think things you are learning in school are going to be for your later life? Pick one:

☐ 1. Very important
☐ 2. Quite important
☐ 3. Fairly important
☐ 4. Slightly important
☐ 5. Not at all important

7. Now thinking back over the past year in school, how often did you enjoy being in school? Pick one:

☐ 1. Almost always ☐ 4. Seldom
☐ 2. Often ☐ 5. Never
☐ 3. Sometimes

8. Now thinking back over the past year in school, how often did you hate being in school? Pick one:

☐ 1. Almost always ☐ 4. Seldom
☐ 2. Often ☐ 5. Never
☐ 3. Sometimes

9. Now thinking back over the past year in school, how often do you try to do your best work in school? Pick one:

☐ 1. Almost always ☐ 4. Seldom
☐ 2. Often ☐ 5. Never
☐ 3. Sometimes

10. In my school, students have lots of chances to help decide things like class activities and rules. Pick one:

☐ 1. NO! ☐ 2. No ☐ 3. Yes ☐ 4. YES!

11. Teachers ask me to work on classroom projects. Pick one:

☐ 1. NO! ☐ 2. No ☐ 3. Yes ☐ 4. YES!

12. There are a lot of chances for students in my school to get involved in sports, clubs, and other school activities outside of class. Pick one:

☐ 1. NO! ☐ 2. No ☐ 3. Yes ☐ 4. YES!

13. There are lots of chances for students in my school to talk with a teacher one-on-one. Pick one:

☐ 1. NO! ☐ 2. No ☐ 3. Yes ☐ 4. YES!

14. I have lots of chances to be part of class discussions or activities. Pick one:

☐ 1. NO! ☐ 2. No ☐ 3. Yes ☐ 4. YES!

15. My teacher(s) notices when I am doing a good job and lets me know about it. Pick one:

☐ 1. NO! ☐ 2. No ☐ 3. Yes ☐ 4. YES!

16. I feel safe at my school. Pick one:

☐ 1. NO! ☐ 2. No ☐ 3. Yes ☐ 4. YES!

17. The school lets my parents know when I have done something well. Pick one:

☐ 1. NO! ☐ 2. No ☐ 3. Yes ☐ 4. YES!

18. My teachers praise me when I work hard in school. Pick one:

☐ 1. NO! ☐ 2. No ☐ 3. Yes ☐ 4. YES!

This section asks questions about your feelings and experiences in other parts of your life and about your friends.

1. I like to see how much I can get away with. Pick one:

☐ 1. Very false ☐ 3. Somewhat true
☐ 2. Somewhat false ☐ 4. Very true

2. I ignore rules that get in my way. Pick one:

☐ 1. Very false ☐ 3. Somewhat true
☐ 2. Somewhat false ☐ 4. Very true

3. I do the opposite of what people tell me, just to get them mad. Pick one:

☐ 1. Very false ☐ 3. Somewhat true
☐ 2. Somewhat false ☐ 4. Very true

4. Have you ever belonged to a gang? Pick one:

☐ 1. Yes ☐ 2. No

5. If you have ever belonged to a gang, did the gang have a name? Pick one:

☐ 1. Yes
☐ 2. No
☐ 3. I never have belonged to a gang

6. Think of your four best friends (the friends you feel closest to), in the past (12 months), how many of your best friends have been members of a gang? Pick one:

☐ 1. None
☐ 2. 1
☐ 3. 2
☐ 4. 3
☐ 5. 4

7. How old were you when you first belonged to a gang? Pick one:

☐ 1. Never have ☐ 6. 14
☐ 2. 10 or younger ☐ 7. 15
☐ 3. 11 ☐ 8. 16
☐ 4. 12 ☐ 9. 17 or older
☐ 5. 13

8. How wrong do you think it is for someone your age to…

	1. **Very Wrong**	2. **Wrong**	3. **A little bit wrong**	4. **Not wrong at all**
1. drink beer, wine or hard liquor (e.g., vodka, whiskey or gin) regularly, that is, at least once or twice a month?				
2. smoke cigarettes?				
3. smoke marijuana?				
4. use LSD, cocaine, amphetamines or another illegal drug?				
5. take a handgun to school?				
6. steal anything worth more than $5.00?				
7. attack someone with the idea of seriously hurting them?				
8. pick a fight with someone?				
9. stay away from school all day when their parents think they are at school?				

9. How many times have you done what feels good no matter what. Pick one:

☐ 1. Never
☐ 2. I've done it, but not in the past year
☐ 3. Less than once a month
☐ 4. About once a month
☐ 5. 2 or 3 times a month
☐ 6. Once a week or more

10. How many times have you done something dangerous because someone dared you to do it? Pick one:

    ☐ 1. Never
    ☐ 2. I've done it, but not in the past year
    ☐ 3. Less than once a month
    ☐ 4. About once a month
    ☐ 5. 2 or 3 times a month
    ☐ 6. Once a week or more

11. How many times have you done crazy things even if they are a little dangerous? Pick one:

    ☐ 1. Never
    ☐ 2. I've done it, but not in the past year
    ☐ 3. Less than once a month
    ☐ 4. About once a month
    ☐ 5. 2 or 3 times a month
    ☐ 6. Once a week or more

12. What are the chances you would be seen as cool if you smoked cigarettes? Pick one:

    ☐ 1. None or very little chance
    ☐ 2. Little chance
    ☐ 3. Some chance
    ☐ 4. Pretty good chance
    ☐ 5. Very good chance

13. What are the chances you would be seen as cool if you began drinking alcoholic beverages regularly, that is, at least once or twice a month? Pick one:

    ☐ 1. None or very little chance
    ☐ 2. Little chance
    ☐ 3. Some chance
    ☐ 4. Pretty good chance
    ☐ 5. Very good chance

14. What are the chances you would be seen as cool if you smoked marijuana? Pick one:

    ☐ 1. None or very little chance
    ☐ 2. Little chance
    ☐ 3. Some chance
    ☐ 4. Pretty good chance
    ☐ 5. Very good chance

15. What are the chances you would be seen as cool if you carried a handgun (other than for hunting or sport)? Pick one:

    ☐ 1. None or very little chance
    ☐ 2. Little chance
    ☐ 3. Some chance
    ☐ 4. Pretty good chance
    ☐ 5. Very good chance

16. What are the chances that you would be seen as cool if you worked hard at school?

    ☐ 1. None or very little chance
    ☐ 2. Little chance
    ☐ 3. Some chance
    ☐ 4. Pretty good chance
    ☐ 5. Very good chance

17. What are the chances that you would be seen as cool if you defended someone who was being verbally abused at school?

    ☐ 1. None or very little chance
    ☐ 2. Little chance
    ☐ 3. Some chance
    ☐ 4. Pretty good chance
    ☐ 5. Very good chance

18. What are the chances that you would be seen as cool if you regularly volunteered to do community service?

    ☐ 1. None or very little chance
    ☐ 2. Little chance
    ☐ 3. Some chance
    ☐ 4. Pretty good chance
    ☐ 5. Very good chance

19. What are the chances that you would be seen as cool if you made a commitment to stay drug-free?

    ☐ 1. None or very little chance
    ☐ 2. Little chance
    ☐ 3. Some chance
    ☐ 4. Pretty good chance
    ☐ 5. Very good chance

20. Think of your four best friends (the friends you feel closest to), in the past (12 months), how many of your best friends have….

	None	1	2	3	4
1. smoked cigarettes?					
2. tried beer, wine, or hard liquor (for example, vodka, whiskey, or gin) when their parents didn't know about it?					
3. used marijuana?					
4. used LSD, cocaine, amphetamines, or other illegal drugs?					
5. been suspended from school?					
6. carried a handgun?					
7. sold illegal drugs?					
8. stolen or tried to steal a motor vehicle such as a motorcycle or a car?					
9. been arrested?					
10. dropped out of school?					
11. participated in clubs, organisations, or activities at school?					
12. made a commitment to stay drug-free					
13. liked school?					
14. regularly attended religious services?					
15. tried to do well in school?					

21. Sometimes we don't know what we will do as adults, but we may have an idea. Please indicate how true these statements may be for you.

	1. **NO!**	2. **No**	3. **Yes**	4. **YES!**
1. When I am adult I will smoke cigarettes				
2. When I am an adult I will drink beer, wine, or liquor				
3. When I am an adult I will smoke marijuana				

22. It is important to be honest with your parents, even if they become upset or you get punished. Pick one:

☐ 1. NO! ☐ 2. No ☐ 3. Yes ☐ 4. YES!

23. I think sometimes it is okay to cheat at school. Pick one:

☐ 1. NO! ☐ 2. No ☐ 3. Yes ☐ 4. YES!

24. I think it is okay to take something without asking if you can get away with it. Pick one:

☐ 1. NO! ☐ 2. No ☐ 3. Yes ☐ 4. YES!

25. It is all right to beat up people if they start the fight. Pick one:

☐ 1. NO! ☐ 2. No ☐ 3. Yes ☐ 4. YES!

26. How many times in the past year (12 months), have you participated in clubs, organisations, or activities at school?

☐ 1. Never
☐ 2. 1 or 2 times
☐ 3. 3 to 5 times
☐ 4. 6 to 9 times
☐ 5. 10 to 19 times
☐ 6. 20 to 29 times
☐ 7. 30 to 39 times
☐ 8. 40+ times

27. How many times in the past year (12 months), have you done extra work on your own for school?

☐ 1. Never
☐ 2. 1 or 2 times
☐ 3. 3 to 5 times
☐ 4. 6 to 9 times
☐ 5. 10 to 19 times
☐ 6. 20 to 29 times
☐ 7. 30 to 39 times
☐ 8. 40+ times

28. How many times in the past year (12 months), have you volunteered to do community service?

☐ 1. Never
☐ 2. 1 or 2 times
☐ 3. 3 to 5 times
☐ 4. 6 to 9 times
☐ 5. 10 to 19 times
☐ 6. 20 to 29 times
☐ 7. 30 to 39 times
☐ 8. 40+ times

29. How often do you attend religious services or activities? Pick one:

☐ 1. Never
☐ 2. Rarely
☐ 3. 1 – 2 times a month
☐ 4. About once a week or more

These questions ask about how you would act in certain situations. They also ask your opinion about certain things.

1. You are looking at CD's in the music store with a friend. You look up and see her slip a CD under her coat. She smiles and says, "Which one do you want? Go ahead; take it while nobody's around". There is no one in sight, no employees or other customers. What would you do now? Pick one:

   ☐ 1. Ignore her
   ☐ 2. Grab a CD and leave the store
   ☐ 3. Tell her to put the CD back
   ☐ 4. Act like it is a joke, and ask her to put the CD back

2. It is 8:00 on a weeknight and you are about to go over to a friend's house when your mother asks you where you are going. You say, "Oh, just going to go hang out with some friends." She says, "No, you'll just get into trouble if you go out. Stay home tonight" What would you do? Pick one:

   ☐ 1. Leave the house anyway
   ☐ 2. Explain what you are going to do with your friends, tell her when you will get home, and ask if you can go out
   ☐ 3. Not say anything and start watching TV
   ☐ 4. Get into an argument with her

3. You are visiting another part of the Island, and you do not know any of the people your age there. You are walking down the street, and some teenager you do not know is walking toward you. He is about your size, and as he is about to pass you, he deliberately bumps into you and you almost lose your balance. What would you say or do? Pick one:

   ☐ 1. Push the person back
   ☐ 2. Say "Excuse me"; and keep walking
   ☐ 3. Say "Watch where you're going"; and keep walking
   ☐ 4. Swear at the person and walk away

4. You are at a party at someone's house, and one of your friends offers you a drink containing alcohol. What would you say or do? Pick one:

   ☐ 1. Drink it
   ☐ 2. Tell your friend "No thanks, I don't drink" and suggest that you and your friend go and do something else
   ☐ 3. Just say, "No thanks" and walk away
   ☐ 4. Make up a good excuse, tell your friend you had something else to do, and leave

The next few questions ask about how think about life and certain antisocial behaviours.

1. Sometimes I think that life is not worth it. Pick one:

   ☐ 1. NO! ☐ 2. No ☐ 3. Yes ☐ 4. YES!

2. At times I think I am no good at all. Pick one:

   ☐ 1. NO! ☐ 2. No ☐ 3. Yes ☐ 4. YES!

3. All in all, I am inclined to think that I am a failure. Pick one:

   ☐ 1. NO! ☐ 2. No ☐ 3. Yes ☐ 4. YES!

4. In the past year have you felt depressed or sad MOST days, even if you felt OK sometimes? Pick one:

   ☐ 1. NO! ☐ 2. No ☐ 3. Yes ☐ 4. YES!

5. How many times in the year (the last 12 months) have you…

	1. **Never**	2. **1 to 2 Times**	3. **3 to 5 Times**	4. **6 to 9 Times**	5. **10 to 19 Times**	6. **20 to 29 Times**	7. **30 to 39 Times**	8. **40+ Times**
1. been suspended from school?								
2. carried a handgun (other than for hunting or sport)?								
3. sold illegal drugs?								
4. stolen or tried to steal a motor vehicle such as a car or a motorcycle?								
5. been arrested?								
6. attacked someone with the idea of seriously hurting them?								
7. been drunk or high at school?								
8. taken a handgun to school?								
9. stolen something worth more than $5?								
10. purposely damaged or destroyed property that did not belong to you (not counting family property)?								
11. taken something from a store without paying for it?								

THANK YOU FOR YOUR PARTICIPATION

PLEASE COMPLETE THIS SECTION

The next few questions ask about energy drinks.

1. Have you ever had energy drinks (Monster, Red Bull, Sobe, etc)?

   ☐ 1. Yes ☐ 2. No (End of Survey, ONLY if No, otherwise continue)

   ☐ 3. Don't Know/Not Sure

2. When do you drink energy drinks? (Please tick Yes or No for each of the following).

While studying	☐ 1. Yes	☐ 2. No
Before or after sporting activities	☐ 1. Yes	☐ 2. No
While hanging out	☐ 1. Yes	☐ 2. No

   Other (specify) _____

3. How do you get energy drinks? (Please tick Yes or No for each of the following).

Friends give them to me	☐ 1. Yes	☐ 2. No
My parents give them to me	☐ 1. Yes	☐ 2. No
My brother and/or sister give(s) them to me	☐ 1. Yes	☐ 2. No
Other relative(s) give them to me	☐ 1. Yes	☐ 2. No
I purchase them	☐ 1. Yes	☐ 2. No

   Other (specify) _____

4. How often do you consume energy drinks?

   ☐ 1. Once per day

   ☐ 2. Twice or more per day

   ☐ 3. Once per week

   ☐ 4. Twice per week

   ☐ 5. Once per month

   ☐ 6. Other (specify) _____

5. Have you consumed energy drinks in the **past 30 days**?

   ☐ 1. Yes ☐ 2. No

6. Have you **ever** consumed a mixture of an alcoholic beverage and an energy drink (e.g., Whiskey and Red Bull)?

   ☐ 1. Yes ☐ 2. No

END OF SURVEY

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