National Drug Council
Cayman Islands

CISDUS 2022

CAYMAN ISLANDS STUDENT DRUG USE SURVEY

Acknowledgement

The continued success of the Cayman Islands Student Drug Use Survey (CISDUS) would not be possible without the unwavering dedication and support of the Ministry of Education, the leadership and staff at participating schools, our students, and the wider Cayman community. The National Drug Council is extremely grateful to our young people for their participation in this research project which is imperative to the foundation of our prevention programming, policies, and other anti-drug strategies. Additionally, a special mention of gratitude must be given to Dr. Ken-Garfield Douglas, who has been an essential part of this survey's success over the past several years and without whom the survey's re-design and execution in 2022 would not have been possible.

Introduction

For more than twenty years, the Cayman Islands Student Drug Use Survey (CISDUS) has served as an imperative piece of research for the National Drug Council (NDC) as it estimates the magnitude and characteristics of the trends surrounding youth substance use in the Cayman Islands. The data from the CISDUS serves as the evidence base in the design of all policies, prevention programming, and other anti-drug strategies offered not only by the NDC but also community stakeholders at large. As such, the CISDUS plays an important role in ensuring that all institutions that serve youth populations in the Cayman Islands respond to the needs of our youth in a manner that is both appropriate and evidence based.

The 2022 CISDUS marks the eleventh cycle of the school-based survey and is the first cycle to be administered in an online and modular format. The aim of the survey is to estimate the magnitude and characteristics surrounding the consumption of psychoactive substances among students between the ages of 11 and 18 years in the Cayman Islands. The problem of drug use is a complex task, especially within schools. The intention of this study is to help with the accumulation of scientific evidence that can guide decision-making for both school policies and prevention programming that is aimed at the reduction of adolescent drug use and misuse.

Additionally, through an understanding of the risks and trends surrounding youth substance use, it is hoped that the data from the CISDUS can better inform key decision-makers in their policy making, legislation, and other public health strategies that are intended to address demand reduction and substance use harms at the population level. Research that estimates the extent of drug abuse among young people is essential to accomplishing this goal, as youth drug use represents an integral part of any drug information system.[1] As such, the following report is intended to provide a transparent overview of both the data collection process and the research findings to aid both intra and inter-sectorial drug prevention strategies, treatment, and rehabilitation.

[1] United Nations Office on Drugs & Crime. (2003). Conducting school surveys on drug abuse. Retrieved from https://www.unodc.org/documents/data-and-analysis/statistics/Drugs/GAP_module_3.pdf

Background & Conceptual Framework

The public health impact resulting from the supply, trafficking, and consumption of drugs is a challenge that transcends international borders. According to the 2021 World Drug Report, substance use disorders accounted for a loss of approximately 18 million years of healthy life and around half a million deaths worldwide.[2] The illicit drug trade continues to impede social and economic advancement worldwide, and disproportionately impacts the world's most vulnerable and marginalized populations. [2] It is recognized that reasons for engaging in substance use is a complex interaction of numerous socio psychological, spiritual, neurological, and cultural factors. However, international research suggests that an effective way to mitigate the risks associated with substance misuse and abuse is the implementation of drug prevention during adolescence; a time where experimentation with drugs usually begins.[3]

On a global level, adolescent substance use continues to pose major public health concerns amid significant upsurges in alcohol, cannabis, and vaping usage. Previous CISDUS data have also revealed similar growth in the use of these substances among young people within the Cayman Islands, especially with regards to the increasing use of vaping devices. The concern of such trends surround the notion that adolescence is a critical stage of development for both a young person's physical and mental health, during which time early experimentation with drugs can substantially harm their developing brain and daily executive functioning.[4] Experimentation has been associated with poor physical and mental health indicators such as heightened risk of depression, anxiety, risky sexual behaviours, and a significant increase in the odds of developing substance use disorders or dependence later in life.[4]

[2] United Nations Office on Drugs and Crime. (2021). World Drug Report 2021. Retrieved from https://www.unodc.org/unodc/en/data-and-analysis/wdr2021.html
[3] Das, J., Salam R., Arshad A., Finkelstein Y., Bhutta Z. (2016). Intervention for adolescent substance abuse: An overview of systematic reviews. *Journal of Adolescent Health*. 59(4), 61-75.
[4] Centers for Disease Control and Prevention. (2020). Teen substance use & risks. Retrieved https://www.cdc.gov/ncbddd/fasd/features/teen-substance-use.html

In addition to the CISDUS, the Ministry of Health has recognized that the use of illicit drugs is a serious health problem with a large public health impact for the entire population, especially adolescents and young adults.

This survey allows a visualization in the age of onset for both licit and illicit drugs as well as the ability to describe the patterns of consumption among young people in the Cayman Islands. The data from this survey is invaluable to the ability of the organization to design, implement, and advocate for prevention programming, policy, and other anti-drug strategies in a timely and appropriate manner for the entire population. In addition to identifying the risks of substance use, the CISDUS also serves to identify important protective factors and areas of strength that can be capitalized on to encourage the development of an empowered generation that is healthy and capable of making positive decisions for their lives.

Aims & Objectives

Aim:

To understand the magnitude and characteristics surrounding the consumption of psychoactive substances among all students between the ages of 11 and 18 years old in the Cayman Islands.

Objectives:

1. To describe the trends and patterns of substance use among middle and high school students in the Cayman Islands
2. Identify changes in the prevalence and frequency of substance use among students
3. To explore the protective and risk factors underlying youth substance use among students in the Cayman Islands
4. Provide guidance on areas of focus for prevention programming, policy, and other anti-drug strategies

Methodology

Survey Design

The CISDUS employs a complete census of students enrolled in years 7-13 (grades 6-12) to describe the patterns in substance use and the knowledge of these substances among students between the ages of 11 to 18 years in the Cayman Islands. In this eleventh cycle, the survey was transitioned into an online and modular survey design for the first time since the survey was first administered.

Although sample surveys are preferable for collecting data amongst larger populations, there are several advantages to conducting a complete census when the population is deemed small, as is the case for the Cayman Islands school population. First, public acceptance and compliance is often enhanced in census surveys. In turn, this also strengthens political acceptance and credibility, especially in new research endeavours. Second, data analysis is less complicated because calculation of sampling error is irrelevant. Third, survey administration is easier, and fourth, a census provides the maximum numbers required to study subgroup differences. In sum, a census can increase reliability of your data as well as the public acceptance of it.

Survey Setting, Sample Participation & Characteristics

In October of 2021, the Ministry of Education was provided with an update on the intended changes for the 2022 CISDUS. Following this correspondence, all schools with a student population enrolled in years 7-13 (grades 6-12) were contacted to confirm their participation in the upcoming survey. A total of 20 schools were contacted, with 19 agreeing to participate in the 2022 survey.[5] The target population for the survey includes all students residing in the Cayman Islands, ages 11-18, who were enrolled in years 7-13 (grades 6-12) at the time of the survey. Of the 4366 students enrolled in years 7-13 across all public and private schools, a total of 3608 students participated in the 2022 CISDUS survey, accounting for an overall participation rate of 83%. It should be noted that to our knowledge, this was

[5] The singular school who did not participate did not have any students enrolled in the target population

the first time a student drug survey has successfully used this methodology in the Caribbean region.

Data Interpretation and Presentation

Because the survey is based on a census, there is no sampling error attached to estimates (although estimates still have error based on non-sampling error such as misreporting). Thus, the calculation of confidence intervals is inappropriate. Although the data is population derived, there are still important reasons to perform inferential statistical analysis. First, a census can be regarded as a sample because it is subject to observational error (rates of marijuana use could vary slightly if the census was replicated the following day) and it has a population limited in time and space. Second, random sampling is not a prerequisite for drawing statistical inference. For example, if we were to find numerical differences in alcohol use among districts, we still need to rule out the possibility of chance processes in generating the differences.

Consequently, in this report we employ statistical tests, primarily the chi-square test, to ensure that differences are not due to chance processes. We report a difference as statistically significant if the probability is at the 0.05 alpha level or lower, meaning that there is only a 5% risk that the results found are due to chance (we can be 95% certain that the results found were not due to chance). However, readers should note the following important points regarding the data analyses in this report:

(1) Since there is still the element of chance findings and the element of non-sampling errors (such as misreporting), we cannot treat all absolute differences in percentages as meaningful and important; and

(2) Small percentages are more unreliable than larger percentages.

Survey Instrument

The 2022 survey marked a significant change to the design of the CISDUS which is now administered in an online and modular format. Modular surveys have grown in popularity for social science research as their shortened length is considered to reduce the

burden of completing the survey.[6] Consequently, the research suggests that a shortened survey length serves to improve the quality of the data and increase participation rates that are otherwise much lower for online-based surveys when compared to their paper-based counterparts.

In comparison to the 2020 survey instrument, this transition significantly shortened the length of the survey with students completing the questionnaire at an average of 13 minutes in comparison to the 50 minutes typically allotted for the paper-based survey. The online format also allowed for a safe survey facilitation amidst the community transmission of COVID-19 and subsequent restrictions. The new modular format consisted of a concentration on specific thematic areas such as core demographic questions and the following seven modules: (1) family alcohol, tobacco & other drug use (ATOD); (2) parental involvement; (3) peer & individual relationships; (4) use related-risks, perceived harm/risk & antisocial behaviours; (5) perceived availability of drugs & access to illicit drugs & supply; (6) consumption patterns; and (7) mental health. In addition to core demographic questions, this eleventh survey cycle utilized the following four modules:

(1) Peer & individual relationships

(2) Use-related risks, perceived harm/risk & antisocial behaviours

(3) Consumption patterns; and

(4) Mental health

Unlike previous cycles, only one survey instrument was designed and administered to all students regardless of their year group. However, only students in years 9-13 (grades 8-12) received the module on mental health to complete.

PROCEDURE

The survey was designed and administered to schools using the online platform *Survey Monkey*. Students completed the survey on computers or mobile devices during school hours at a time that was most convenient for their respective schools. Each school was assigned a unique identifier link to facilitate the process of batching their responses

[6] Toepoel, V. & Lugtig, P., 2018. Modularization in an era of mobile web: investigating the effects of cutting a survey into smaller pieces on data quality. *Social Science Computer Review*. 40(1), 150-164.

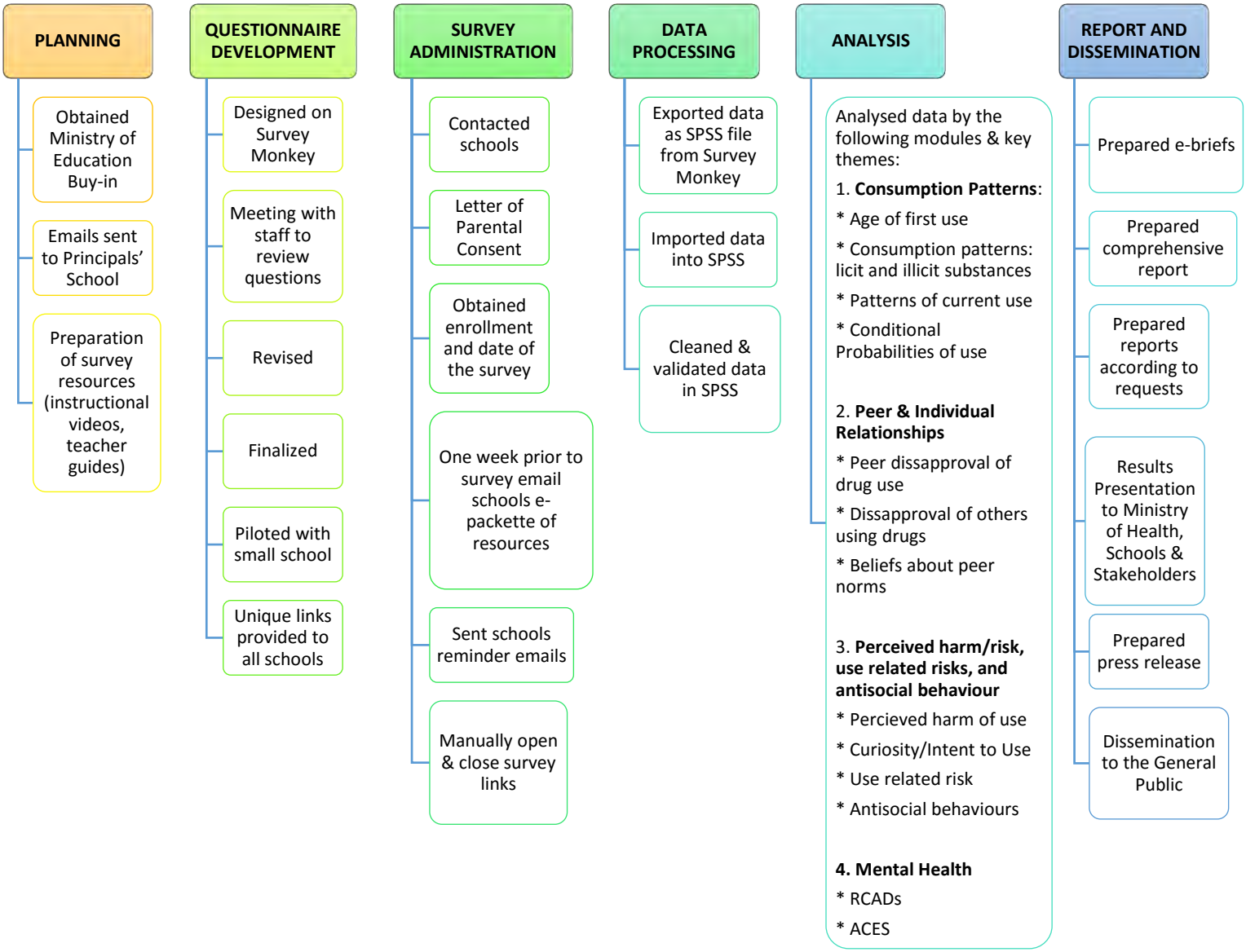
independently from other schools. The survey link remained open and active for the duration of a school's scheduled survey date(s) between the hours of 7:30am and 3:15pm. This was to ensure that students could not duplicate their responses once leaving the school premises.

Schools were provided with a virtual CISDUS packet that included the following resources to help facilitate the administration of the survey: (1) an instructional video for teachers; (2) teachers survey guide; (3) an instructional video for students; (4) survey administrators form; and their (5) unique survey link.

Unlike previous CISDUS cycles, there were no volunteers recruited to administer the survey except for one school who required additional assistance in overseeing the survey. Otherwise, the role of survey invigilators was conducted by the teachers at each respective school who were asked to oversee the classroom while the survey was in progress.

The entire month of February was allocated to the collection of survey data from all schools. A few schools required the month of March to complete the survey, with all survey collections closing on April 1st.

Fig 1. Procedure of the 2022 CISDUS



Data Processing and Analysis

Responses to the survey questions were captured directly onto the online questionnaire by the respondents. Data entry and analysis was conducted at the NDC and by Dr. Ken-Garfield Douglas.

Surveys were automatically batched by *Survey Monkey* in accordance with schools' unique identifier links. Survey data was then downloaded directly from Survey Monkey as a csv. file for upload into SPSS for cleaning and analysis. Our external epidemiologist Dr. Ken-Garfield Douglas assisted with the data analysis process and advised in the development of this comprehensive report.

Substance Use Measures & Definitions

The CISDUS report primarily emphasizes the prevalence of substance use, i.e., the percentage of students who report using a given drug at some point in their lifetime, during the 12 months before the survey or more recently during the 30 days prior to the survey. It is important to note that prevalence does not imply regular, frequent, or problematic use, but it is an important first-order epidemiological indicator of the size of the population that has at minimum tried a substance. Throughout this report certain terms have been used to describe the prevalence of substance use which are defined as follows:

Drugs: The World Health Organization (WHO) defines drugs as any natural or synthetic substance that when introduced into the body can alter and modify the psychic, emotional activity and functioning of the organism due to its effects on the central nervous system.

Illicit Drugs: Refers to substances whose production, possession, transportation, and marketing is prohibited by law without a medical prescription. According to the United Nations Office on Drugs and Crime, illicit drugs refer to drugs listed on the international drug schedules that are strictly controlled for licit use in medical or scientific settings but remain illegal for personal use, production, sale, transportation, or possession among the public.

Psychoactive Drugs: According to the WHO, psychoactive drugs refer to substances that affect one's mental processes including their perception, cognition,

consciousness, mood, and emotions. It is important to note that psychoactive drugs do not imply that a substance is dependence-producing.

In accordance with the objectives of the study, the following psychoactive substances were considered:

- Tobacco – cigarettes & e-cigarettes
- Alcohol – in any form including wine, beer, hard liquor (such as whisky, rum, vodka, tequila) etc.
- Marijuana
- Inhalants/Solvents (i.e., glue, paint thinner, gasoline)
- Ecstasy
- Crack Cocaine & Cocaine Powder
- Heroin

Prevalence: The term prevalence refers to the proportion of a population who has used a drug during a specific period. In this survey of middle and high school students, prevalence is measured by asking students to recall their use of drugs over the following three periods of time: (1) lifetime: having ever used a drug; (2) last year: having ever used a drug during the last twelve months; and (3) last month: having ever used a drug in the last 30 days.

Lifetime prevalence: the proportion of survey respondents who reported having ever 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.

Past year/annual prevalence (last 12 months): the proportion of survey respondents who reported using a named drug at least once during the year/past 12 months prior to the survey. For this reason, past year prevalence is often referred to as recent use.

Current prevalence (past 30 days): the proportion of survey respondents who reported using a named drug at least once in the 30-day period prior to the survey. Last month prevalence is often referred to as current use. 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: typically refers to a pattern of drinking which results in a blood alcohol concentration (BAC) of 0.08 percent or higher. In adults, this is typically achieved through the consecutive consumption of five or more drinks within 2 hours, however, young people can achieve this BAC on fewer drinks in the same timeframe; about 3 drinks for girls, and 3 to 5 drinks for boys depending on their age and size.[7]

Early onset: The age of onset is an important indicator for policies on substance use; therefore, it must be interpreted with great precision. This calculation is done based on students who have consumed a substance on or before the age of 13 years.

On the other hand, it must be recognized that the subpopulation that does not participate in this indicator (because until the time of the study had never been consumed) could do it in the future, at a later age, in such a way that if the cohort of people were followed in time, the average and median age of first use would be higher.

[7] National Institute on Alcohol Abuse and Alcoholism. (2022). *Understanding Binge Drinking*. Retrieved from https://www.niaaa.nih.gov/sites/default/files/publications/NIAAA_Binge_Drinking_3.pdf

Survey Limitations

Research findings have demonstrated that the use of surveys to collect data on the prevalence of alcohol, tobacco, and other drug use among young populations is the most efficient and frequently used data collection method. As both technology and internet access grow, the use of online surveys comes with a wide range of advantages including being more cost effective, having a wider participant reach, greater flexibility in survey participation, and automation.[8] Modular surveys are advantageous in shortening survey length and respondent completion time, as well as lowering drop-out rates.[9] However, the following limitations with the survey was a challenge:

Participation: While the online delivery of the survey aided the completion of the survey in many schools who were not allowing visitors because of COVID-19, some schools had a lower participation rate than was expected. Lower participation rates resulted from both COVID-19 illness among both students and staff, as well as internet connection issues. While most schools were successful in completing the survey independently, one school required NDC staff and volunteers to oversee the administration of the survey in-person while students completed the survey using their laptops, phones, or school computers. It was noted that this school utilized a rotating schedule for in-person attendance among both staff and students which is believed to have made the execution of the survey more challenging.

Lastly, there remains a gap in participation from the homeschool population which has not yet been successfully accessed by the research team. Direct access to this population is more challenging because of data privacy and protection laws. Therefore, any communication with this population requires the Department of Education to relay information as a third party.

Reliable Internet Access: Although internet access is widespread across the Cayman Islands, some schools had difficulties with the amount of bandwidth their systems could support when large quantities of students needed simultaneous internet access. This was solved by

[8] Ball, H. (2019). Conducting online surveys. *Journal of Human Lactation*. 35(*3*), 413-417.
[9] Toepoel, V., Lugtig, P. (2018). Modularization in an era of mobile web: Investigating the effects of cutting a survey into smaller pieces on data quality. *Social Science Computer Review*. 40(1),150-164.

spreading the survey out over several days and having students sit the survey in smaller batches.

Reliable internet connection is imperative for this type of survey. Due to the anonymous nature of the survey, a participant's answers will not be saved until the survey is manually submitted. Therefore, in the event of an unstable internet connection, any questions answered prior to submission will be lost, leaving the participant to start the survey from the beginning. This was only experienced by one school but is an important limitation to consider for all future cycles.

Reliability: 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. As this survey was based on self-reported data, the results should therefore be interpreted with caution.

Analysis & Results

The following section presents the 2022 results of the survey in accordance with the four modules used and their corresponding key themes. Results are shown using tables and charts that compare the unweighted survey averages.

The key themes are demonstrated within the questions categorized in the survey under the four selected modules: (1) Consumption patterns; (2) Peer & Individual Relationships; (3) Perceived harm/risk, use-related risks, and antisocial behaviours; and (4) Mental Health. For further information please see the master questionnaire in appendix A.

The modules and corresponding themes discussed in this report are listed as follows:

(1) Consumption Patterns:

a. Age of onset/early onset of substance use
b. Consumption patterns: illicit and licit substances
c. Patterns of current substance use
d. Conditional probabilities of substance use

(2) Peer & Individual Relationships

a. Peer disapproval of substance use
b. Disapproval of others using substances
c. Beliefs about peer norms

(3) Perceived harm/risk, use-related risks, and antisocial behaviour

a. Perceived harmfulness of substance use
b. Curiosity/Intent to use substances
c. Use related risk from substance use
d. Antisocial behaviours

(4) Mental Health:

a. Revised Children's Anxiety and Depression Scale (RCADs)
b. Adverse Childhood Experiences Questionnaire (ACE-Q)

Summary of Key Results

Module A: Consumption Patterns

Age of onset (first use)

- The average age of first use for inhalants/solvents was the lowest average among all substances (9.5 years)
- The second lowest average age of first use was found for alcohol at 11.3 years. This was the same across genders
- First use for all substances, except inhalants/solvents ranged from 11.3 to 13.5 years
- The average age of first use for marijuana and e-cigarettes were both 13 years
- Boys were more likely to report an earlier use of cigarettes, and e-cigarettes

Early onset of substance use

- Illicit substance such as cocaine, crack, heroin had the lowest proportions of use among students ages 13 years or younger (2.1%)
- A low proportion of students (5.1%) have smoked cigarettes at the age of 13 years or younger
- More than three times the proportion of students who have smoked cigarettes have smoked an e-cigarette at the age of 13 years or younger (17.6%). Early onset of e-cigarettes has the second highest prevalence out of all other substances.
- Alcohol has the highest prevalence for early onset of use among students, with a reported 27.8% of students indicating first use at the age of 13 years or younger

Licit & illicit substances

Cigarettes

- Approximately 8.6% of students reported a lifetime prevalence of cigarettes. The average lifetime prevalence of cigarette smoking was about the same for both boys (8.7%) and girls (8.6%).
- On average, 1.1% of students reported having smoked cigarettes during the last 30 days. The reported current use of cigarettes was similar for both boys (1.1%) and girls (1.2%).

E-Cigarettes

- E-cigarettes was the second most prevalent substance reported in this survey
- The overall lifetime prevalence of e-cigarettes was 29.3% - approximately one in three students have tried an e-cigarette.
- Slightly more girls (30.5%) reported having used an e-cigarette when compared to boys (28.1%), however this difference was not statistically significant.
- On average, 10.9% of students reported using e-cigarettes during the past 30 days. When comparing current use by gender, 12.2% of girls reported use compared to 9.6% of boys. This difference was not statistically significant.

Alcohol

- Alcohol was the most prevalent substance reported among students in this survey
- The overall lifetime prevalence for alcohol was 40.5%, with slightly more girls (41.6%) reporting use when compared to boys (38.4%). This difference was not statistically significant.
- Overall, 13.1% of students reported using alcohol during the last 30 days. This was slightly different among girls (13.6%) and boys (12.6%), however, this was not statistically significant.

Marijuana

- Marijuana was the third most prevalent substance reported in this survey, and was the most prevalent illicit drug reported in this survey
- On average, 14.1% of students have consumed marijuana during their lifetime, with use reported by 14.9% of girls and 13.4% of boys.
- On average, 5.3% of students have consumed marijuana during the last 30 days, with similar use reported by boys (5.5%) and girls (5.2%).

Inhalants/Solvents

- A reported 5.3% of students have used inhalants/solvents at least once in their lifetime, with a similar average of use reported by both boys (5.1%) and girls (5.6%).
- On average, 1.4% of students reported using inhalants/solvents during the last 30 days and was reported by an equal proportion of boys and girls (1.4% respectively).

Other Illicit Substances

- Students were asked if they have ever used any other illegal drug besides marijuana, which included but was not limited to ecstasy, crack cocaine, cocaine, and heroin.
- Approximately 4.0% of students reported having used an illicit substance other than marijuana at least once in their lifetime.
- Prevalence of current use was reported by 0.9% of students, with slightly more boys reporting current use (1.2%) than girls (0.7%).

Module B: Patterns of Current Substance Use

Binge Drinking

- Binge drinking was measured for students who reported alcohol use during the last 30 days prior to completing the survey. Among students who reported drinking in the last 30 days (number (n) =471), 48.7% of students (229/471) also reported having participated in heavy episodic drinking (binge drinking) at least once during the two weeks prior to participating in the survey.
- The prevalence of binge drinking varied by gender, with 51.2% of boys reporting heavy episodic drinking compared to 46.2% of girls (a percentage point difference of 5.0%).

Conditional probabilities of substance use

Cigarette Use

- Among students who have used cigarettes at least once (n = 310), 87.1% have also used an e-cigarette, 83.2% have drunk alcohol, 58.6% have tried marijuana, and 17.5% have used inhalants/solvents.
- Boys and girls who have used cigarettes at least once were both likely to report a notably high proportion of other substance use
- Girls were notably more likely to report a higher proportion use of e-cigarettes, alcohol, and marijuana when compared to boys

E-cigarette Use

- Among students who have used e-cigarettes at least once (n=1056), 25.0% have also used cigarettes, 79.6% used alcohol, 45.0% used marijuana, and 9.9% report use of inhalants/solvents.
- Boys and girls who have used e-cigarettes at least once were both likely to report a notably high proportion of other substance use
- Boys were more likely to report the use of cigarettes and inhalants/solvents when compared to girls
- Girls who have used e-cigarettes at least once were notably more likely to report the use of alcohol and marijuana

Alcohol Use

- Among students who have used alcohol at least once (n=1462), 17.3% have also used cigarettes, 57.6% have used e-cigarettes, 32.4% have used marijuana, and 9.2% have used inhalants/solvents.
- Boys and girls who have used alcohol at least once were also as likely to report the use of other substances
- Boys who have consumed alcohol at least once were more likely to report a greater proportion of cigarette use
- Girls who have consumed alcohol at least once were more likely to report a greater proportion of use for e-cigarettes, marijuana, and inhalants/solvents.

Marijuana Use

- Among students that have used marijuana at least once (n=507), 34.4% have also used cigarettes, 91.9% have used e-cigarettes, 91.9% used alcohol, and 10.6% used inhalants/solvents.
- Boys and girls who have used marijuana at least once were also as likely to report the use of other substances
- Boys who have used marijuana at least once were more likely to report the use of inhalants/solvents when compared to girls
- Girls who have used marijuana at least once were more likely to report a higher proportion of use for cigarettes, e-cigarettes, and alcohol.

Inhalant/Solvent use

- Among students that have used inhalants/solvents at least once (n=193), 27.2% have also used cigarettes, 52.9% have used e-cigarettes, 69.5% have used alcohol, and 27.6% have used marijuana.
- Boys and girls who have used inhalants/solvents at least once were also as likely to report other substance use.
- Boys who have used inhalants/solvents at least once were more likely to report a greater proportion of use for cigarettes, e-cigarettes, and marijuana.
- An equal proportion of girls and boys who have used inhalants/solvents at least once have also tried alcohol.

Module C: Peer & Individual Relationships

Peer disapproval of substance use

- There was a greater perception among students that their peers would disapprove/strongly disapprove of known marijuana use (51.7%) in comparison to alcohol use (47.0%).
- A greater proportion of girls believed that their friends would disapprove of known marijuana use when compared to boys (57.4% of girls vs 51.9% of boys).
- Cross-tabulation showed a lower proportion of students reported early onset of use for both marijuana (14.5% compared to 46.9%) and alcohol (32.0% compared to 40.5%) when they perceived that their close peers would not approve of the substance use.
- Current users (students who reported using within the last 30 days) were proportionally more likely to perceive that their peers would not disapprove of their current substance use.
- Girls who reported the use of alcohol and marijuana during the last 30 days were proportionally more likely to report that their peers would not disapprove of their alcohol or marijuana consumption compared to boys.

Disapproval of others using substances

- Students were most disapproving of others smoking cigarettes frequently (87.7%), followed by smoking crack cocaine (84.7%), and smoking cigarettes sometimes (79.5%).
- Students were least disapproving of others smoking marijuana sometimes (63.9%) in comparison to other substance use.
- 25.3% of students do not disapprove of others smoking marijuana sometimes.
- "Smoking marijuana sometimes" had the highest reported proportion of approval regarding students' attitudes of others substance use. This was followed by 21.9% of students who approved of others getting drunk.

Beliefs about peer norms

- Overall, most students do not believe that their friends are using substances.
- Current use (use within the last 30 days) tends to be lower among students who believe that their friends are not using drugs.
- Overall, most students reported that their friends do not drink alcohol regularly (45.7%). Of students who believed that none of their friends drink alcohol regularly, 9.1% reported alcohol use during the last 30 days. This was the lowest reported proportion of current use.
- Regarding regular marijuana use, most students reported that none of their friends smoke marijuana regularly (51.4%). Of these students 3.1% reported having used marijuana during the last 30 days.
- 26.3% of students believe that none of their friends have ever used a drug like alcohol, tobacco, marijuana, or crack cocaine. This was reported by more boys (30.4%) than girls (26.5%).

Module D: Perceived harm/risk, Use-related Risks, and Antisocial Behaviour

Perceived harmfulness of substance use

- Students reported the highest amount of perceived risk for smoking one or more packs of cigarettes a day (66.0%), followed by daily alcohol use (48.6%), regular

marijuana use (47.2%), inhalant/solvent use (44.9%), e-cigarette use (29.5%), and lastly trying marijuana use once or twice (15.6%).

- When the items of perceived harm was cumulated (i.e. slight, medium, and great) , student's perceived harm was highest for smoking one or more packs of cigarettes a day (87.6%), followed by smoking e-cigarettes (85.9%), drinking alcohol daily (85.1%), regular marijuana use (82.7%), using inhalants (82.0%), and lastly trying marijuana once or twice (65.9%).
- Current users of various substances were significantly more likely than those who were not current users to indicate that there was no risk of harm from smoking cigarettes, using e-cigarettes, drinking alcohol, smoking marijuana, and using inhalants.

Curiosity/Intent to use substances

- 39.6% of students reported that they have never been curious to try any drugs. This was reported by more boys (48.7%) than girls (40.0%).
- 29.3% of students reported that they have been curious to try drugs. This was reported by more girls (35.8%) than boys (29.4%).
- 66.7% of students strongly disagreed with the intent to start smoking cigarettes
- 13.8% of students reported that they would get drunk if they had the chance and knew they would not be caught. Proportionally, this was reported more among girls (18.3%) than boys (12.5%).
- Based on proportions, most students (44.9%) strongly disagree with the intent to get drunk sometime in the next year.
- 46.5% of students strongly agreed to having made a final decision to stay away from marijuana

Overall Use-related Risk

- Memory loss was proportionally the highest reported use-related risk as reported by 45.3% of students. When compared by gender, more girls reported this risk than did boys (52.5% vs 37.0%). This difference was found to be statistically significant ($p<0.05$).
- Problems with family/friends was the second most reported use-related risk (41.1% of students). This was reported by more girls than boys (43.4% vs 38.3%), a difference that was

found to be statistically significant. Additionally, this risk was more commonly reported by students in lower grade levels (61.3% of grade 6 students) in comparison to those in higher grade levels (33.7% of grade 12 students).

- 32.5% of students reported that they have not been successful in trying to stop their drug use. This was reported by slightly more girls (34.6%) than boys (30.0%), however, this difference was not statistically significant.

Antisocial Behaviours

Bullying

- Close to half of all students overall (47.7%) reported having been bullied at some time
- The proportion of students who reported being bullied within the past 12 months was lower at 23.1%, and the past 30 days even lower at 12.1%
- Girls (52.9%) were significantly more likely to report being bullied at least once in their lifetime, $p<0.05$ compared to boys (42.3%).
- There was no statistically significant difference between boys and girls for the items of past year bullying, bullying in the last 30 days, or bullying someone in the community.
- Both Cayman Brac (51.9%) and Bodden Town (51.4%) reported proportions of having ever been bullied that was higher than the overall survey average (47.7%).
- The highest proportions of having ever been bullied was reported by students in grade 11 (53.6%). However, past year and current bullying (last 30 days) seemed to decrease as grade level increased.

Weapons in the Community or School

- Overall, approximately 19.2% of students reported having ever carried a weapon (21.8% of boys and 16.7% of girls).
- 18.0% of students reported having ever been threatened or injured with a weapon. This was reported by more boys (20.2%) than girls (16.0%).

Other Antisocial Behaviours

- The antisocial behaviour that was most reported by students was being in a fight, as reported by 38.8% of students. More than half of those reporting having been in a fight were boys (52.4%).
- The second most reported antisocial behaviour was attacking someone with the intention of causing serious harm. This was reported by 10.4% of students, with significantly more boys (13.0%) than girls (7.9%) attacking someone with the intent of causing serious harm.
- Only a small percentage of students reported being drunk at school (3.3%)
- Similarly, a small percentage of students reported being arrested (2.2%)
- 9.2% of students reported being suspended because of violence, with more boys (13.1%) reporting this than girls (5.7%).
- 6.8% of students reported belonging to a gang or crew, with twice as many boys (8.8%) reporting this compared to girls (4.8%).

Witnessing a Life-Threatening Event

- Overall, 31.1% of students report having experienced a life-threatening event. More boys (33.5%) reporting this than girls (28.9%).
- With regards to the location of witnessing violence, most students report witnessing violence while at school (55.5%), followed by the community at 48.4%, and the least at home (25.7%).

Module E: Mental Health

RCADs (Revised Children's Anxiety and Depression Scales)

- There was a significant difference in the total internalizing scores for girls (Mean = 53.1±15.8) compared to boys (Mean = 42.3±13.3).
- Girls reported higher levels of anxiety and depression than boys on all subscales.

ACEs (Adverse Childhood Experiences)0

- More than 1 in 5 students reported 4 or more ACEs (23.1%).
- Girls (30.0%) were more likely to report four or more ACEs when compared to boys (16.0%).
- Boys reported higher proportions of one ACE (24.0% boys vs 19.0% girls).

- Household challenges (58.3%) was the most commonly reported ACEs in this survey, followed by abuse (42.9%), and neglect (31.1%).
- Girls were significantly more likely to report abuse (59.4% vs 40.6%, OR=1.742), household challenges (57.1% vs 42.9%, OR = 1.702), and neglect (68.6% vs 31.4%, OR = 2.81) when compared to boys.
- Significantly more girls reported sexual abuse than boys (13.4% vs 4.3%)
- More than twice the proportion of girls reported mental illness within their household when compared to boys (26.0% vs 12.0%). This difference was found to be statistically significant.
- More than 4 in 10 students reported parental separation or divorce. This was reported by significantly more girls than boys.
- 3 in 10 students reported emotional neglect. This was reported by significantly more girls (42.0%) than boys (19.0%).
- Total ACE scores were higher for grades 10 and 11 than those of other grades.

Drug Education

- Overall, most students (61.9%) reported having an interest in there being more drug education at their schools.
- In terms of programming, students indicated an overall interest in alcohol awareness month (38.7%), a vaping campaign (35.7%), and national drug and alcohol facts month (34.0%).

Summary of Key Results by Gender

Boys	Girls
• Binge drinking • Carrying a weapon • Being injured or threatened with a weapon • Being in a fight • Attacking someone with the intent to cause serious harm • Belonging to a gang or crew • Higher proportions of one ACE and no ACEs	• More likely to report memory loss related to substance use • More likely to report problems with friends/family related to substance use • Being bullied at least once in their lifetime • Witnessed violence at home • Higher RCAD scores for anxiety & depression • Higher reported social phobia • Higher reported panic disorder • Higher reported obsessive compulsive disorder • Higher reported major depressive disorder • More likely to report four or more ACEs & two or more ACEs • More likely to report abuse (emotional, physical, and sexual) • More likely to report household challenges such as substance abuse, mental illness, and divorce. • More likely to report emotional neglect

Consumption Patterns:

Age of First Use

TABLE 1: AGE OF ONSET (FIRST USE) OF SELECTED SUBSTANCES

Age of Onset (First Use) of Selected Substances						
Substances 2022	**Age in years**					
	Frequency	**Mean Age**	**Median**	**Mode**	**Standard Deviation**	**Range**
Cigarette	288	11.9	13	14	3.315	13.0
E-cigarette	1024	12.9	12	13	3.301	13.0
Alcohol	1393	11.3	13	13	2.039	13.0
Marijuana	498	13.5	14	14	2.247	13.0
Inhalants/Solvents	170	9.5	10	5	3.478	13.0
Other Illicit (Illegal) Substances	134	12.2	13	14	3.336	12.0

AGE OF FIRST USE

The term “age of onset” refers to the age at which a student first uses a substance. As shown in Table 1 above, the substance with the earliest reported age of first use was inhalants/solvents at 9.5 years old. This was followed by the age of first use for alcohol which has the second earliest average at 11.3 years old. The average age of first use for all other substances ranged between 11.9 and 13.5 years. The average age of first use for both marijuana and e-cigarettes were reported as 13 years old, while cigarettes and other illegal substances begins at an average of 12 years old.

When comparing the age of first use by gender (See Table 2 below), boys were more likely than girls to report an earlier use of cigarettes, however, this difference was not found to be statistically significant. Girls were more likely to report an earlier average age of first use for e-cigarettes when compared to boys. Girls and boys reported the same average age of first use for alcohol (11 years), marijuana (13 years), and inhalants/solvents (9 years).

TABLE 2: AGE OF ONSET (FIRST USE) OF SELECTED SUBSTANCES BY GENDER

Average Age of Onset by Gender (years) (%)			
Substances 2022	**Survey Average**	**Males**	**Females**
Cigarette	11.9	11.6	12.2
E-cigarettes	12.9	12.8	13.0
Alcohol	11.3	11.2	11.5
Marijuana	13.5	13.2	13.7
Inhalants/Solvents	9.5	9.3	9.7
Other Illicit (Illegal) Substances	12.2	11.7	12.9

Early Onset of Substance Use

Early onset refers to the prevalence of students experiencing substance use at the age of 13 years or younger.

TABLE 3: EARLY ONSET OF SUBSTANCE USE (%) BY GENDER

Percentage of students using a substance at age of 13 years or younger					
Substances	**Survey %**	**Boys**	**Girls**	**Chi Square**	**P-Value**
Cigarette	5.1	5.5	4.7	1.017	0.313
E-cigarette	17.6	16.6	18.6	2.490	0.115
Alcohol	27.8	28.3	27.4	0.388	0.533
Marijuana	5.9	5.7	6.3	0.696	0.404
Inhalants/Solvents	4.2	3.8	4.6	1.484	0.223
Other Illicit Substances	2.1	2.3	1.9	0.914	0.339

TABLE 4: EARLY ONSET OF SUBSTANCE USE (%) BY LOCATION

Percentage of students using a substance at age of 13 years or younger (%)				
Location	**Cigarettes**	**E-cigarettes**	**Alcohol**	**Marijuana**
Survey Average	5.1	17.6	27.8	5.9
Bodden Town	5.8	22.0	33.2	7.5
East End	4.9	18.0	26.2	7.4
George Town	4.1	14.3	25.6	5.0
North Side	4.5	22.9	29.9	7.6
West Bay	5.7	17.9	26.7	5.5
Cayman Brac	8.2	15.8	21.5	4.4

Early Onset of Cigarettes (Table 3 and Table 4A - see pg. 89)

As can be seen in Table 3, only a low proportion of students have smoked cigarettes at the age of 13 years or younger (5.1%). The proportion of cigarette use remains low across all districts in Grand Cayman ranging from 4.0-6.0% of all students, however, Cayman Brac reported the highest proportions of early onset for cigarette use at 8.2% of students. While more boys reported early onset of cigarette use when compared to girls, this difference was not found to be statistically significant.

The largest difference of early cigarette use, when compared by location and gender, was found in Cayman Brac (See Table 4A on pg. 89 - 13.1% of boys and 2.7% of girls). The second highest rates among boys were found in East End (6.3%) and Bodden Town (6.0%).

E-cigarettes/Vapes (Table 3 and Table 4A – see pg. 89)

More than three times as many students have used e-cigarettes at the age of 13 years or younger when compared to the early onset of traditional cigarettes. E-cigarettes are the second most reported substance for early onset of use in this survey. A greater proportion of girls reported the early use of e-cigarettes at a proportion of 18.6%, compared to 16.6% of boys. However, this difference was not found to be statistically significant with respect to the early onset of e-cigarette use.

Proportions of e-cigarette use varied considerably across districts, with George Town reporting percentages as low as 14.3% and North Side as high as 22.9%. The proportion of early onset for cigarette use was higher for girls than boys across the districts of Bodden Town, North Side, and West Bay. An equal proportion of early onset for e-cigarette use was found for both boys and girls in the district of George Town at 14.3%. Only the locations of East End (17.2% of boys vs 16.4% of girls) and Cayman Brac (19.0% of boys vs 12.3% of girls) reported a higher proportion of early e-cigarette use among boys when compared to girls.

Early Onset of Alcohol (Table 3 and Table 4A – see pg. 89)

Alcohol use was reported as the most frequently used substance with regards to early onset of use, with 28% of students reporting the use of alcohol at the age of 13 years or younger. The highest proportions of students reporting early onset of use was found in Bodden Town (33.2%) followed by

North Side (29.9%). The locations with the lowest rates were Cayman Brac (21.5%) and George Town (25.6%).

Overall, slightly more boys (28.3%) compared to girls (27.4%) reported an early onset of alcohol use, however this difference was not found to be statistically significant.

With regards to gender and location, the greatest differences were found in East End (31.3% of males compared to 20% of females, a difference of 11.3 percentage points), and Cayman Brac (26.2% of males compared to 16.4% of females, a difference of 9.8 percentage points).

Early Onset of Marijuana (Table 3 and Table 4A – see pg. 89)

Marijuana was the most frequently used illicit substance at the age of 13 years or younger as reported by 5.9% of students. Students in North Side (7.6%), Bodden Town (7.5%), and East End (7.4%) reported the highest proportions of early onset marijuana use. The locations with the lowest proportions of early onset were Cayman Brac (4.4%) and George Town (5.0%).

Similar proportions of early onset were reported for boys at 5.7% and girls at 6.3%. The highest gender differences by location were found in East End where more girls than boys reported use (3.3% of boys compared to 13.5% of girls, a difference of 10.2 percentage points). The lowest proportions across gender were reported for George Town (5.1% of boys vs 5.0% of girls) and Bodden Town (7.4% of boys vs 7.7% of girls).

Comparison of Early Onset Between the 2020 and 2022 Surveys

Overall, the reported proportions of early onset of tobacco, alcohol, and marijuana in 2022 was lower than what was reported in 2020. The largest drop in reported proportion was seen for cigarette use (5.1% in 2022 vs 8.6% in 2020, a difference of 3.5 percentage points), followed by marijuana use (5.9% in 2022 vs 9.3% in 2020, a difference of 3.4 percentage points). Reported proportions of alcohol and e-cigarette use were relatively similar across both years. In relation to gender differences, the proportion of early onset among boys was slightly lower for all substances in 2022 when compared to 2020. While a similar observation was also found among girls, there was an exception relating to e-cigarettes which had a slightly higher proportion (1.1 percentage points higher) of early reported use in 2022 when compared to 2020.

Licit and Illicit Substances

Prevalence of Licit and Illicit Substances

This section discusses the percentage of students reporting the use of selected substances during their lifetime, the past year, and the last 30 days (also called current use). The results are displayed in the tables below, with comparisons categorized by gender and location.

TABLE 5: OVERALL PREVALENCE OF SUBSTANCE USE (%): LIFETIME, PAST YEAR, AND CURRENT (LAST 30 DAYS)

Percentage of students reporting use of cigarette, e-cigarette, alcohol, marijuana, inhalants, and other illicit drugs for lifetime, past year, and last 30 days			
Substances	**Lifetime**	**Past Year**	**Last 30 Days**
Cigarette	8.6	2.5	1.1
E-cigarette	29.3	17.3	10.9
Alcohol	40.5	25.3	13.1
Marijuana	14.1	9.4	5.3
Inhalants/Solvents	5.3	2.1	1.4
Other Illicit Substances	4.0	1.8	0.9

Prevalence & Grade Level Comparison

TABLE 6: PREVALENCE OF LIFETIME USE BY GRADE LEVEL (%)

Percentage of students reporting lifetime use of various substances (%)							
Substances	**Grade Level**						
	Grade 6	**Grade 7**	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Grade 12**
Cigarette	3.0	3.7	6.2	8.2	15.4	13.6	18.7
E-cigarette	8.4	12.4	28.4	32.2	44.1	51.5	52.0
Alcohol	15.2	23.3	36.0	45.5	57.7	65.3	70.2
Marijuana	1.2	1.9	8.3	11.4	27.7	32.9	36.9
Inhalants/Solvents	5.9	5.0	6.4	4.3	6.8	3.9	3.5
Other Illicit Substances	1.0	1.6	3.9	2.6	7.5	6.7	8.6

TABLE 7: PREVALENCE OF PAST YEAR USE BY GRADE LEVEL (%)

Percentage of students reporting past year use of various substances (%)							
Substances	**Grade Level**						
	Grade 6	**Grade 7**	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Grade 12**
Cigarette	1.0	0.3	0.9	2.4	5.3	5.3	6.1
E-cigarette	3.5	6.1	15.2	18.9	26.8	35.2	31.8
Alcohol	5.1	8.8	20.7	25.8	40.7	48.7	58.6
Marijuana	0.7	1.4	6.2	7.9	17.1	22.3	25.3
Inhalants/Solvents	2.0	1.7	3.2	1.5	2.0	2.1	2.0
Other Illicit Substances	0.8	0.6	2.5	0.9	3.7	2.5	1.5

TABLE 8: PREVALENCE OF CURRENT USE BY GRADE LEVEL (%)

Percentage of students reporting current use (last 30 days) of various substances (%)							
Substances	**Grade Level**						
	Grade 6	**Grade 7**	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Grade 12**
Cigarette	0.3	0.1	0.9	1.1	2.4	2.1	2.0
E-cigarette	1.4	2.7	9.0	10.1	18.8	23.4	24.7
Alcohol	2.5	3.2	8.0	11.2	21.2	29.9	37.4
Marijuana	0.7	0.1	3.4	5.6	9.7	12.0	14.6
Inhalants/Solvents	1.4	0.9	2.3	0.7	1.5	1.6	1.0
Other Illicit Substances	0.3	0.3	0.9	0.6	2.5	0.9	1.5

Prevalence & Gender Comparison

TABLE 9: PREVALENCE OF SUBSTANCE USE BY GENDER (%): LIFETIME, PAST YEAR, CURRENT (LAST 30 DAYS)

Percentage of students reporting use of cigarette, e-cigarette, alcohol, marijuana, inhalants, and other illicit drugs for lifetime, past year, and last 30 days (%)						
Substances	**Lifetime**		**Past Year**		**Last 30 Days**	
	Male	**Female**	**Male**	**Female**	**Male**	**Female**
Cigarette	8.7	8.6	2.5	2.6	1.1	1.2
E-cigarette	28.1	30.5	15.9	18.7	9.6	12.2
Alcohol	39.4	41.6	23.8	26.8	12.6	13.6
Marijuana	13.4	14.9	9.1	9.9	5.5	5.2
Inhalants/Solvents	5.1	5.6	2.1	2.1	1.4	1.4
Other Illicit Substances	4.3	3.6	2.1	1.4	1.2	0.7

Prevalence & Location Comparison

TABLE 10: PREVALENCE OF LIFETIME USE BY LOCATION (%)

Percentage of students reporting use of various substances – Lifetime (%)					
Location	Substances				
	Cigarette	E-cigarette	Alcohol	Marijuana	Inhalants
Survey Average	8.6	29.3	40.5	14.1	5.3
Bodden Town	8.8	32.5	44.7	15.4	7.9
East End	7.4	30.3	37.7	20.5	4.9
George Town	8.0	26.7	39.9	13.1	3.7
North Side	5.7	31.8	40.1	10.8	10.8
West Bay	10.0	30.8	39.5	15.6	4.4
Cayman Brac	9.5	22.2	29.7	6.3	5.1

TABLE 11: PREVALENCE OF PAST YEAR USE BY LOCATION (%)

Percentage of students reporting use of various substances – Past Year (%)					
Location	Substances				
	Cigarette	E-cigarette	Alcohol	Marijuana	Inhalants
Survey Average	2.5	17.3	25.3	9.4	2.1
Bodden Town	2.7	20.3	26.8	10.6	2.7
East End	1.6	18.0	23.0	13.9	1.6
George Town	2.5	15.7	26.7	8.9	2.5
North Side	1.9	15.3	17.2	5.7	1.9
West Bay	3.1	18.3	26.1	10.2	3.1
Cayman Brac	0.6	11.4	10.1	3.2	0.6

TABLE 12: PREVALENCE OF CURRENT USE (LAST 30 DAYS) BY LOCATION (%)

Percentage of students reporting use of various substances – Last 30 Days (%)					
Location	Substances				
	Cigarette	E-cigarette	Alcohol	Marijuana	Inhalants
Survey Average	1.1	10.9	13.1	5.3	1.4
Bodden Town	1.2	13.0	12.6	6.1	1.9
East End	0.8	13.1	10.7	7.4	2.5
George Town	1.2	9.5	14.0	4.5	1.0
North Side	1.3	10.2	8.9	4.5	3.2
West Bay	1.2	12.3	14.8	6.4	0.8
Cayman Brac	0.6	3.8	5.1	1.9	1.3

TABLE 13: PREVALENCE OF LIFETIME USE BY GENDER AND LOCATION (%)

Percentage of students reporting lifetime use of various substance by location (%)							
		Districts					
	Overall	Bodden Town	East End	George Town	North Side	West Bay	Cayman Brac
Cigarette							
Survey Average	8.6	8.8	7.4	8.0	5.7	10.0	9.5
Males	8.7	8.5	10.9	7.4	4.9	10.4	14.3
Females	8.6	9.3	3.6	8.5	7.0	9.8	4.1
E-cigarette							
Survey Average	29.3	32.5	30.3	26.7	31.8	30.8	22.2
Males	28.1	30.0	28.1	25.3	31.7	30.9	26.2
Females	30.5	35.1	30.9	28.5	32.4	30.6	17.8
Alcohol							
Survey Average	40.5	44.7	37.7	39.9	40.1	39.5	29.7
Males	39.4	39.6	40.6	40.2	35.4	39.6	33.3
Females	41.6	49.2	34.5	39.6	46.5	38.9	26.0
Marijuana							
Survey Average	14.1	15.4	20.5	13.1	10.8	15.6	6.3
Males	13.4	14.3	20.3	12.5	8.5	15.0	8.3
Females	14.9	16.5	21.8	13.8	14.1	16.1	4.1
Inhalants/Solvents							
Survey Average	5.3	7.9	4.9	3.7	10.8	4.4	5.1
Males	5.1	6.5	6.3	3.0	7.3	6.3	7.1
Females	5.6	9.3	3.6	4.2	15.5	2.4	2.7

Prevalence & Age Comparison

TABLE 14: PERCENTAGE OF STUDENTS REPORTING LIFETIME USE OF VARIOUS SUBSTANCES BY AGE

Percentage of students reporting use of various substances by Age – Lifetime Prevalence (%)										
Substances	**Age**									
	(N)	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**
Cigarette	310	1.0	2.9	5.5	10.3	16.1	22.3	23.2	14.2	4.5
E-cigarette	1056	0.3	2.6	6.1	13.4	18.0	21.1	22.5	12.5	3.5
Alcohol	1462	0.2	2.4	9.6	13.9	16.6	20.2	21.5	11.9	3.8
Marijuana	507	0.8	0.2	1.8	5.9	13.0	24.9	30.0	18.5	4.9
Inhalants/Solvents	193	1.6	6.7	20.7	16.6	18.7	19.2	11.4	4.7	0.5
Other Illicit Drugs	143	1.4	2.8	5.6	9.1	19.6	16.1	24.5	17.5	3.5

TABLE 15: PERCENTAGE OF STUDENTS REPORTING CURRENT USE OF VARIOUS SUBSTANCES BY AGE

Percentage of students reporting use of various substances by Age – Current (%)									
Substances	**Age**								
	(N)	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**
Cigarette	41	0.0	7.3	4.9	19.5	9.8	36.6	12.2	7.3
E-cigarette	394	0.5	3.8	8.9	15.2	22.8	28.2	16.2	4.1
Alcohol	471	0.8	4.9	7.6	12.3	20.8	27.0	18.3	8.1
Marijuana	192		1.6	5.2	16.7	26.0	26.6	16.1	7.3
Inhalants/Solvents	49	4.1	18.4	24.5	16.3	14.3	14.3	4.1	2.0
Other Illicit Drugs	34	0.0	5.9	8.8	26.5	20.6	23.5	2.9	8.8

PREVALENCE OF CIGARETTE USE

Lifetime

Overall lifetime prevalence of cigarettes was 8.6%. With respect to gender, the average lifetime prevalence of cigarette use was about the same between boys (8.7%) and girls (8.6%) overall. When comparing lifetime prevalence by location this ranged from as high as 10.0% of students in West Bay to as low as 5.7% of students in North Side. Students in Bodden Town (8.8%) and Cayman Brac (9.5%) reported a lifetime prevalence that was above the survey average of 8.6%.

When comparing lifetime prevalence by location and gender, boys report a higher prevalence of use when compared to girls - East End (10.9% vs 3.6%), West Bay (10.4% vs 9.8%), and Cayman Brac (14.3% vs 4.1%). However, girls reported a higher prevalence of use, compared to boys, in Bodden Town (9.3% vs 8.5%), George Town (8.5% vs 7.4%), and North Side (7.0% vs 4.9%). The largest gender difference was reported for Cayman Brac - the lifetime prevalence for cigarettes was reported by 14.3% of boys compared to 4.1% of girls (a difference of 10.2 percentage points).

With regards to grade level, lifetime cigarette use increased as grade level increased, with students aged 16 years reporting the highest lifetime prevalence of cigarette use (23.2%).

Last 30 Days

Overall, 1.1% of students reported using cigarettes during the last 30 days. The difference by gender was marginal, with 1.1% of boys and 1.2% of girls reporting cigarette use in the past 30 days. When comparing 30-day prevalence by location, this ranged from as high as 1.3% of students in North Side

to as low as 0.6% of students in Cayman Brac. All locations, except East End and Cayman Brac, reported prevalence of 30-day use that was above the survey average. In terms of age, 36.6% of students aged 16 years old reported current use of cigarettes and this represents the highest prevalence of current use by age.

Prevalence of E-cigarette Use

Lifetime

E-cigarette is the second most frequently used substance for lifetime prevalence within this survey. The overall lifetime prevalence of e-cigarette use was 29.3%, with a slightly higher proportion of girls reporting lifetime use at 30.5% when compared to boys at 28.1%. The lifetime prevalence of e-cigarette use varied across districts, ranging from as high as 32.5% of students in Bodden Town, to a low of 22.2% of students in Cayman Brac. All locations, except George Town and Cayman Brac, reported an average lifetime prevalence that was above the overall survey average. The lifetime prevalence of e-cigarette use was higher among girls when compared to boys in all locations except Cayman Brac (26.2% boys vs 17.8% girls). However, in West Bay the proportions were similar (30% among both boys and girls).

As would be expected, the lifetime prevalence of e-cigarette use increased as grade level increased. The ages of students with the highest reported prevalence of e-cigarette use were those aged 16 years (22.5%) and 15 years (21.1%) old.

Last 30 Days

An overall average of 10.9% of students reported using e-cigarettes during the last 30 days. Slightly more girls (12.2%) than boys reported using e-cigarettes during the past 30 days when compared to boys (9.6%). When comparing 30-day prevalence by location this ranged from as high as 13.1% in East End to as low as 3.8% in Cayman Brac. In addition to East End, a high prevalence of use was also reported by students in Bodden Town (13.0%) and West Bay (12.3%). Most current users, or 28.2%, were age 16 years old.

Prevalence of Alcohol Use

Lifetime

Alcohol was the most frequently used substance for lifetime prevalence within this survey. The overall lifetime prevalence of alcohol use was 40.5%, with a slightly higher prevalence reported by girls (41.6%) when compared to boys (39.4%).

The lifetime prevalence varied across districts, with the highest reported prevalence found among 44.7% of students in Bodden Town, and the lowest lifetime prevalence found among 29.7% of students in Cayman Brac. Aside from Bodden Town, all locations reported an overall lifetime prevalence that was lower than the survey average. In terms of gender, boys tended to report a higher lifetime prevalence of alcohol use by location than did girls. The highest reported lifetime prevalence for alcohol use was found among students aged 16 years (21.5%).

Last 30 Days

Overall, 13.1% of students reported using alcohol during the last 30 days. Slightly more girls (13.6%) reported use of alcohol in the last 30 days when compared to boys (12.6%), however, this difference was not statistically significant. The highest rates of current use by location were reported by 14.8% of students from West Bay, followed by 14.0% from George Town. All remaining locations reported a prevalence of current use that was lower than the survey average, with the lowest prevalence of 5.1% reported by students in Cayman Brac.

Most students reporting current use of alcohol was 16 years old (27.0%), followed by those aged 15 years (20.8%), and 17 years (18.3%).

PREVALENCE OF MARIJUANA USE

Lifetime

According to the rates of lifetime prevalence, marijuana was the most frequently used illicit substance among students within this survey. The overall lifetime prevalence of marijuana use was 14.1%, with a slightly higher prevalence of 14.9% found among girls, compared to 13.4% among boys.

Lifetime prevalence varied by district, with the highest prevalence reported in East End by 20.5% of students, and the lowest prevalence reported in Cayman Brac by 6.3% of students. The districts of Bodden Town (15.4%) and West Bay (15.6%) reported a lifetime prevalence that was higher than the survey average. When comparing use by gender, all locations, except Cayman Brac, typically reported a higher prevalence of marijuana use among girls compared to boys, however, this difference was not statistically significant. In North Side, a notably higher proportion of girls reported a lifetime prevalence for marijuana compared to boys (14.1% of girls vs 8.5% of boys). With respect to age, most students reporting lifetime use of marijuana were 16 years old (30.0%).

Last 30 Days

Overall, 5.3% of students reported the use of marijuana during the last 30 days prior to the survey. Overall, a similar proportion of boys and girls reported marijuana use in the last 30 days (5.5% of boys versus 5.2% of girls). The highest rates of current use of marijuana were found in East End among 7.4% of students. In comparison, the lowest prevalence of current use was found in Cayman Brac among 1.9% of students, followed by 4.5% of students in both George Town and North Side.

With respect to age, the highest prevalence for current use was reported by students ages 15 years (26.0%) and 16 years old (26.6%).

PREVALENCE OF INHALANTS/SOLVENTS

Lifetime

Overall, 5.3% of students reported a lifetime prevalence of inhalants/solvents. The lifetime prevalence of inhalant/solvent use was about the same across genders, with 5.1% of boys and 5.6% of girls reporting lifetime prevalence of use.

By location, the highest prevalence for inhalant/solvent use was reported in North Side by 10.8% of students. The lowest prevalence was reported in George Town by 3.7% of students. Most locations reported a prevalence rate that was below the survey average except for North Side (10.8%) and Bodden Town (7.9%).

Students aged 12 years old (20.7%) reported the highest lifetime prevalence followed by those aged 15 years (19.2%).

Last 30 Days

Overall, the use of inhalants/solvents during the last 30 days was reported by 1.4% of students. The rates of use in the last 30 days for inhalants/solvents were the same across gender at 1.4% for both boys and girls respectively. By location, the highest proportion of use during the last 30 days was reported in North Side by 3.2% of students. The lowest proportion of last 30-day use was found in West Bay (0.8%). With respect to current use and age, students 13 years (24.5%) and 14 years (16.3%) old account for the highest proportions of use in the last 30 days.

PREVALENCE OF OTHER ILLICIT SUBSTANCES

Overall, a small proportion (4.0%) of students reported lifetime prevalence for other illicit substances such as ecstasy, crack cocaine, cocaine, and heroin. The use of these substances was reported by slightly more boys (4.3%) than girls (3.6%). This difference was not statistically

significant. Less than 1% of students reported the use of illicit substances (besides marijuana), during the last 30 days, and this was also reported by more boys (1.2%) than girls (0.7%).

Patterns of Current Substance Use

Heavy Episodic Drinking

Heavy episodic drinking refers to having five or more drinks in a single outing. This is also referred to as binge drinking.

TABLE 16: BINGE DRINKING AMONG CURRENT USERS OF ALCOHOL

Percentage of Binge Drinking in the Last Two Weeks Among Current Users of Alcohol (%)		
Binge Drinking Behaviour	**Number (n)**	**Percentage**
Never	204	43.4
Only Once	99	21.1
Between 2 and 3 times	80	17.0
Between 4 and 5 times	20	4.3
More than 5 times	30	6.4
I do not know	37	7.9

Students who reported current use of alcohol in the last 30 days were asked to indicate how many times they have drank five or more drinks at a single outing in the last two weeks – this is referred to as binge drinking. Most students (43.4%) report that they have never engaged in binge drinking within the last 2 weeks of participating in the survey. This was followed by 21.1% of students who reported binge drinking only once during the past 2 weeks. In Table 17 below, the responses “only once”, “between 2 and 3 times”, “between 4 and 5 times”, and “more than 5 times” were re-coded and combined to indicate that a student has participated in “binge drinking” at least once.

TABLE 17: PERCENTAGE OF BINGE DRINKING BY GENDER (%)

Percentage of binge drinking overall during the past two weeks by gender (%)			
Binge Drinking	**Overall**	**Gender**	
		Males	**Females**
Never	43.3	40.4	45.4
Binge drinking	48.6	51.8	46.2
I do not know	7.9	7.3	8.4

TABLE 18: PERCENTAGE OF BINGE DRINKING BY LOCATION AND GENDER (%)

Percentage of binge drinking among current users (last 30 days) of alcohol by location and gender (%)			
Location	**Substances**		
	Overall (%)	**Males**	**Females**
Survey Average	48.7	51.2	46.2
Bodden Town	44.9	54.0	38.2
East End	76.9	83.3	71.4
George Town	47.3	50.5	44.4
North Side	46.2	33.3	57.1
West Bay	53.9	52.6	57.1
Cayman Brac	25.0	40.0	0.0

TABLE 19: PERCENTAGE OF BINGE DRINKING BY GRADE LEVEL (%)

Percentage of binge drinking among current users of alcohol (last 30 days) by grade (%)							
Binge Drinking	**Grade Level**						
	Grade 6	**Grade 7**	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Grade 12**
At least once or more	25.0	29.2	46.8	28.8	52.0	53.8	58.1

Among students who reported drinking in the 30-day period prior to the survey (n = 471), 48.7% of students (229/470) also reported heavy episodic drinking during the two weeks prior to participating in the survey. Overall, binge drinking was reported most frequently by boys (51.2%) when compared to girls (46.2%). With respect to location, the highest prevalence of binge drinking was reported for East End (76.9% of students), followed by 53.9% of students from West Bay. All other districts reported a proportion of binge drinking that was below the overall survey average.

When compared by gender and location, a higher proportion of boys reported binge drinking across the districts compared to girls, except in North Side and West Bay. Students in North Side had the highest percentage point difference for binge drinking between girls and boys at 28.5%, with 57.1% of girls reporting binge drinking compared to 28.6% of boys. Interestingly, no girls reported binge drinking in Cayman Brac, however, this behaviour was reported by 40.0% of boys. The overall difference between girls and boys with regard to binge drinking was not statistically significant.

Lastly, with respect to grade level, binge drinking among current users was mostly reported by students in higher grades, with more than half of all students in grade 10 (52.0%), 11 (53.8%), and 12 (58.1%)—or years 11-13--reported binge drinking.

Pattern of current use: Preferences of Alcoholic Beverages

This survey was interested in assessing the preference of alcoholic beverages among students who reported having consumed alcohol during the past 12 months prior to the survey. Students were asked to report on all types of alcoholic beverages that they have consumed. The results are displayed in the tables below.

TABLE 20: OVERALL PREFERENCE OF ALCOHOLIC BEVERAGES AMONG PAST YEAR USERS OF ALCOHOL (%)

Preference of Alcoholic Beverages Consumed Among Past Year Users of Alcohol (%)				
Alcoholic Beverage	**N**	**Percentage of Students (n= 2052)**	**Males**	**Females**
Ice Coolers	587	64.2	58.8	68.7
Beer	380	41.6	52.5	32.7
Wine	494	54.0	51.1	56.5
Hard Liquor	591	64.7	62.7	66.7

TABLE 21: PREFERENCE OF ALCOHOLIC BEVERAGES BY GRADE LEVEL (%)

Preference of Alcoholic Beverages by Grade Level (%)							
Alcoholic Beverage	**Grade 6**	**Grade 7**	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Grade 12**
Ice Coolers	36.7	42.6	44.4	57.2	69.2	75.9	79.3
Beer	26.7	39.3	30.8	60.9	42.5	44.8	52.6
Wine	46.7	52.5	45.3	51.4	56.7	53.8	63.8
Hard Liquor	30.0	36.1	57.3	55.8	68.8	78.3	73.3

As shown in Table 20, hard liquor and ice coolers were the top two alcoholic beverages of choice among students who have drank alcohol during the past 12 months prior to the survey. Overall, a greater proportion of girls when compared to boys reported a preference for all beverage items except for beer. When assessing beverage preference by grade level, students in grade 6 and 7, reported a greater preference for wine in comparison to the other beverage items (See Table 21). Students in grade 8 (57.3%) and grade 11 (78.3%) reported a greater preference for hard liquor. Only students in grade 9 (60.9%) reported a preference for beer over other beverage items, while students in grade 10 (69.2%) and grade 12 (79.3%) reported a preference for ice coolers.

TABLE 22: PERCENTAGE OF STUDENTS REPORTING BEING DRUNK BY GRADE LEVEL (%)

Percentage of Students Reporting Being Drunk During the Past 12 Months by Grade Level (%)			
Grade	**Percentage of Students (n= 435)**	**Males**	**Females**
Survey Average	12.1	11.5	12.7
Grade 6	0.8	1.4	0.3
Grade 7	1.3	1.2	1.4
Grade 8	6.4	4.0	8.7
Grade 9	9.6	8.9	10.3
Grade 10	20.9	20.5	21.5
Grade 11	30.6	26.6	34.2
Grade 12	39.4	50.0	32.1

TABLE 23: PREFERENCE OF ALCOHOLIC BEVERAGES AMONG STUDENTS WHO REPORTED BEING DRUNK IN THE PAST 12 MONTHS (%)

Preference of Alcoholic Beverages Consumed Among Students Who Reported Being Drunk in the Past 12 Months (%)				
Alcoholic Beverage	**N**	**Percentage of Students (n= 434)**	**Males**	**Females**
Ice Coolers	327	75.3	72.5	77.7
Beer	232	53.5	69.5	39.9
Wine	249	57.4	52.5	61.4
Hard Liquor	393	90.6	88.0	92.7

The overall prevalence of being drunk in the past 12 months was 12.1% of students. As seen in Table 22, the proportion of students who reported being drunk at least once during the past 12 months increased as the grade level increased. The largest increase in proportion of students who reported being drunk occurred between grade 9 (9.6%) and grade 10 (20.9%) at a percentage point difference of 11.3%. The highest reported proportion of being drunk was found for students in grade 12 (39.4%). When compared by gender, girls tended to report a higher proportion of being drunk than did boys except in grade 6 (1.4% of boys vs 0.3% of girls) and grade 12 (50.0% of boys vs 32.1% of girls).

Table 23 shows the alcoholic beverages of choice among students who reported being drunk at least once in the past year prior to the survey. Hard liquor was the top alcoholic beverage of choice among students who reported being drunk (90.6%), followed by ice coolers (75.3%), wine (57.4%) and lastly beer (53.5%). A higher proportion of girls reported a preference for all alcoholic beverage types when compared to boys except for beer.

Conditional Probabilities of Use

Prevalence of lifetime use of substance B conditional on the lifetime use of substance A (percentage) and number of users of substance A (n).

TABLE 24: CONDITIONAL PROBABILITIES OF USE FOR SUBSTANCE B BASED ON LIFETIME PREVALENCE OF SUBSTANCE A (%)

[Prevalence of lifetime use of substance B conditional on the lifetime use of substance A (percentage) and number of users of substance A (n)]						
Substance A	**Overall Lifetime Prevalence – Substance B**					
	# of users (n)	**Cigarette**	**E-cigarette**	**Alcohol**	**Marijuana**	**Inhalants/Solvents**
Cigarette	310	-	87.1	83.2	58.6	17.5
E-cigarette	1056	25.0	-	79.6	45.0	9.9
Alcohol	1462	17.3	57.6	-	32.4	9.2
Marijuana	507	34.4	91.9	91.9	-	10.6
Inhalants/Solvents	193	27.2	52.9	69.5	27.6	-

TABLE 25: CONDITIONAL PROBABILITIES OF USE FOR SUBSTANCE B BASED ON LIFETIME PREVALENCE OF SUBSTANCE A BY GENDER (MALES)

[Prevalence of lifetime use of substance B conditional on the lifetime use of substance A (percentage) and number of users of substance A (n)]						
Substance A	**Males Lifetime Prevalence – Substance B**					
	# of users (n)	**Cigarette**	**E-cigarette**	**Alcohol**	**Marijuana**	**Inhalants/Solvents**
Cigarette	150	-	84.5	81.2	51.7	17.9
E-cigarette	487	25.8	-	76.4	44.0	10.5
Alcohol	683	17.8	54.7	-	30.9	8.9
Marijuana	232	32.5	90.1	89.7	-	12.2
Inhalants/Solvents	88	30.2	56.8	69.0	31.8	-

TABLE 26: CONDITIONAL PROBABILITIES OF USE FOR SUBSTANCE B BASED ON LIFETIME PREVALENCE OF SUBSTANCE A (%) BY GENDER (FEMALES)

[Prevalence of lifetime use of substance B conditional on the lifetime use of substance A (percentage) and number of users of substance A (n)]						
Substance A	**Females Lifetime Prevalence – Substance B**					
	# of users (n)	**Cigarette**	**E-cigarette**	**Alcohol**	**Marijuana**	**Inhalants/Solvents**
Cigarette	158	-	89.5	84.9	65.3	16.7
E-cigarette	561	24.3	-	82.3	46.3	9.0
Alcohol	764	16.9	60.5	-	34.2	9.3
Marijuana	274	35.8	93.4	93.8	-	9.3
Inhalants/Solvents	102	24.5	49.0	69.0	24.8	-

Cigarette Use

Among students who have used cigarettes at least once (n =310), 87.0% have also used an e-cigarette, 83.1% have drunk alcohol, 58.6% have tried marijuana, and 17.3% have used inhalants/solvents.

Both boys and girls who have used cigarettes at least once were also likely to report the use of other substances: (1) e-cigarette use – 84.5% boys versus 89.5% girls; (2) Alcohol – 81.2% of boys versus 84.9% of girls; (3) Marijuana – 51.7% of boys versus 65.3% of girls; (4) Inhalants/Solvents – 17.9% of boys versus 16.7% of girls. While use was comparable among boys and girls, girls had a higher proportion of use for all substances except inhalants/solvents.

E-cigarette

Among students who have used e-cigarettes at least once (n=1056), 25.0% have also used cigarettes, 79.6% used alcohol, 45.2% reported marijuana use, and 9.7% reported using inhalants/solvents.

Both boys and girls who have used e-cigarettes at least once were also likely to report the use of other substances: (1) cigarettes – 25.8% of boys versus 24.3% of girls; (2) alcohol – 76.4% of boys versus 82.3% of girls; (3) marijuana – 44.0% of boys versus 46.3% of girls; (4) inhalants/solvents – 10.5% of boys versus 9.0% of girls. Proportionally, boys who have used e-cigarettes were more likely to report cigarette and inhalant/solvent use. Alternatively, girls who have used e-cigarettes at least once were more likely to report the use of alcohol and marijuana.

Alcohol Use

Among students who have used alcohol at least once (n =1462), 17.4% have also used cigarettes, 57.7% have used e-cigarettes, 32.7% used marijuana, and 9.1% used inhalants/solvents.

Both boys and girls who have used alcohol at least once were also as likely to report the use of other substances: (1) cigarettes – 17.8% of boys versus 16.9%; (2) e-cigarettes – 54.7% of boys versus 60.5% of girls; (3) marijuana – 30.9% of boys versus 34.2% of girls; (4) inhalants/solvents – 8.9% of boys versus 9.3% of girls. Boys who have consumed alcohol at least once had a greater proportion of use for cigarettes only. Girls who have consumed alcohol at least once reported a higher proportion of use for e-cigarettes, marijuana, and inhalants/solvents.

MARIJUANA USE

Among students who have used marijuana at least once (n=507), 34.3% have also used a cigarette, 91.8% used e-cigarettes, 91.9% used alcohol, and 10.6% used inhalants/solvents.

Both boys and girls who have used marijuana at least once were also likely to use other substances: (1) cigarettes – 32.5% of boys versus 35.8% of girls; (2) e-cigarettes – 90.1% of boys versus 93.4% of girls; (3) alcohol – 89.7% of boys versus 93.8%; (4) inhalants/solvents – 12.2% of boys versus 9.3% of girls. Girls who have used marijuana at least once were more likely to have used all substances when compared to boys except for inhalants/solvents.

INHALANTS/SOLVENTS USE

Among students who have used inhalants/solvents at least once (n=193), 27.1% have also used cigarettes, 52.7% have used an e-cigarette, 69.0% have used alcohol, and 28.0% have used marijuana.

Both boys and girls who have used inhalants/solvents at least once were also as likely to report the use of other substances: (1) cigarettes – 30.2% of boys versus 24.5% of girls; (2) e-cigarettes – 56.8% of boys versus 49.0% of girls; (3) alcohol – 69.0% of boys versus 69.0% of girls; (4) marijuana - 31.8% of boys versus 24.8% of girls. Overall, a higher proportion of boys who have used inhalants/solvents at least once have also used cigarettes, e-cigarettes, and marijuana. Interestingly, an equal proportion of boys and girls who have used inhalants/solvents at least once have also used alcohol.

Peer & Individual Relationships:

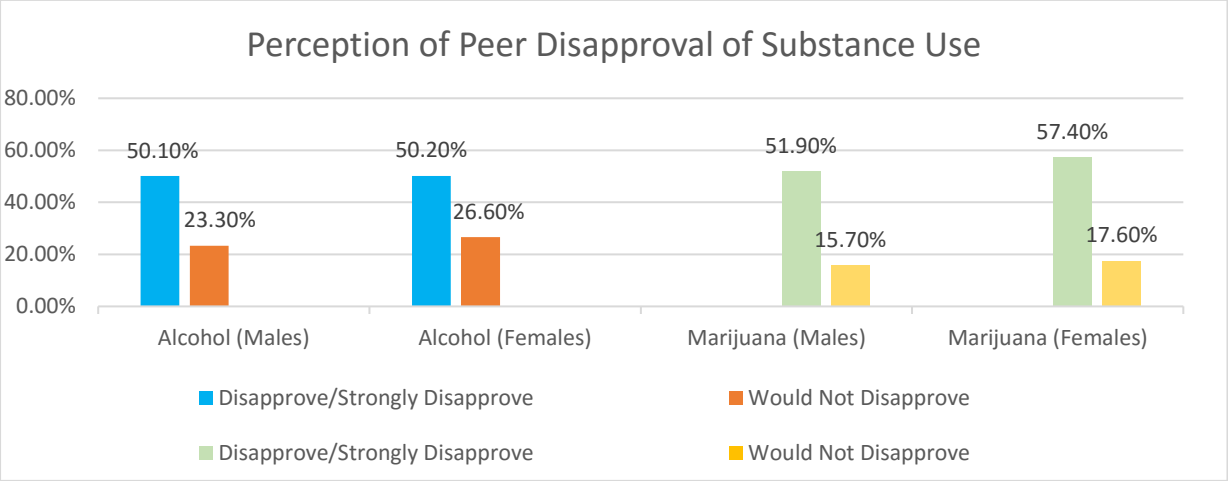
Perception of Peer Disapproval of Drug Use

The perception of peer disapproval surrounding drug use is thought to relate to a delay in onset for substance use.

TABLE 27: PERCEPTION OF PEER DISAPPROVAL OF SUBSTANCE USE (%)

Perception of Peer Disapproval for Alcohol & Marijuana Use (%)						
Perception	**Alcohol**			**Marijuana**		
	Overall	**Gender**		**Overall**	**Gender**	
		Males	**Females**		**Males**	**Females**
They would disapprove / Strongly Disapprove	47.0	50.1	50.2	51.7	51.9	57.4
They would not disapprove	23.5	23.3	26.6	15.9	15.7	17.6
I can't Say / Do Not Know	23.6	26.6	23.3	27.0	32.4	25.0

FIGURE 1: PERCEPTION OF PEER DISAPPROVAL OF SUBSTANCE USE (%)



As shown in Table 25, most students in this survey perceived that their friends would disapprove of both alcohol (47.0%) and marijuana use (51.7%). The perception of peer disapproval for alcohol was relatively the same for both boys and girls at 50.0%. However, slightly more girls perceived that their peers would disapprove of marijuana use than did boys.

The perception of peer disapproval across grade levels varied. As seen in Table 28, the perception of peer disapproval for alcohol use was higher for earlier grade levels than for later grade levels. This ranged from as high as 23.8% among students in grade 6 to a low of 1.6% of students in grade 12. According to Table 28, the disapproval of alcohol use tends to decrease among students as grade level increases. A similar pattern was seen with regards to marijuana use, with the perception of peer disapproval decreasing as grade level increased. The percentage of peer disapproval ranged from 73.1% of students in grade 6 to as low as 30.0% in grade 12.

Table 29 displays the results of peer disapproval by age grouping. Students aged 18 years reported the lowest percentage of peer disapproval at 7.9%. More than half of all students aged 17 (59.5%) and 18 (68.4%) years reported that their peers would not disapprove of their alcohol use. With respect to marijuana, students aged 18 years also had the lowest proportion of reported peer disapproval at 23.7%. As would be expected based on the findings of disapproval by grade level, the older a student's age the lower their reported perception of peer disapproval for substance use became.

TABLE 28: PERCEPTION OF PEER DISAPPROVAL OF SUBSTANCE USE BY GRADE LEVEL (%)

Perception of Peer Disapprove for Alcohol & Marijuana Use by Grade Level (%)							
	Grade 6	**Grade 7**	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Grade 12**
Alcohol							
They would disapprove/Strongly disapprove	23.8	26.6	17.2	13.8	11.3	5.8	1.6
They would not disapprove	3.7	5.9	10.2	13.6	26.3	25.9	14.5
Can't Say/ Do not know	15.5	17.1	17.2	17.7	16.8	11.5	4.2
Marijuana							
They would disapprove / Strongly disapprove	73.1	70.8	55.3	51.1	43.6	34.0	30.0
They would not disapprove	2.5	4.0	13.5	16.0	26.6	36.5	42.8
I can't say / do not know	24.4	25.2	31.2	32.9	29.7	29.5	27.3

TABLE 29: PERCEPTION OF PEER DISAPPROVAL OF SUBSTANCE USE BY AGE GROUP (%)

Perception of Peer Disapprove for Alcohol & Marijuana Use by Age Group (%)								
	11	**12**	**13**	**14**	**15**	**16**	**17**	**18**
Alcohol								
They would disapprove/Strongly disapprove	75.3	69.9	61.4	53.0	33.7	28.6	20.7	7.9
They would not disapprove	2.9	6.5	12.5	20.3	36.3	48.4	59.5	68.4
Can't Say/ Do not know	21.8	23.6	26.1	26.7	30.0	23.0	19.8	23.7
Marijuana								
They would disapprove / Strongly disapprove	74.6	71.6	63.1	54.0	43.4	39.5	31.7	23.7
They would not disapprove	1.0	3.0	8.7	15.4	23.7	34.4	39.3	40.8
I can't say / do not know	24.4	25.5	28.1	30.6	32.9	26.1	29.1	35.5

TABLE 30: PERCEPTION OF PEER DISAPPROVAL OF SUBSTANCE USE BY EARLY ONSET OF USE AND GENDER (%)

Crosstabulation: Perception of Peer Disapproval of Alcohol and Marijuana Use by Early Onset of Use and Gender (%)						
Perception	**Alcohol**			**Marijuana**		
	Early onset alcohol (Overall)	**Gender**		**Early onset Marijuana (Overall)**	**Gender**	
		Males (%)	**Females (%)**		**Males (%)**	**Females (%)**
They would disapprove/strongly disapprove	32.0	34.7	29.7	14.5	14.3	14.6
They would not disapprove	40.5	36.9	44.6	51.4	46.9	55.2
I can't say/ I do not know	27.6	28.5	25.8	34.1	38.8	30.2

Table 28 demonstrates that the proportion of students reporting early onset for both alcohol and marijuana use is lower among students who perceive that their peers would disapprove of the substance use when compared to those who perceived peer approval of substance use.

Among students who perceive that their peers would approve of alcohol and marijuana use, 40.5% reported early onset of alcohol use and 51.4% reported early onset of marijuana use. Early onset of

both alcohol and marijuana use was higher among girls who perceived peer approval for substance use when compared to boys.

TABLE 31: PERCEPTION OF PEER DISAPPROVAL OF SUBSTANCE USE BY CURRENT USE AND GENDER (%)

Perception of Peer Disapproval of Alcohol and Marijuana Use by Current Use (last 30 days) and Gender (%)						
Perception	**Current Use of Alcohol**	**Males**	**Females**	**Current Use of Marijuana**	**Males**	**Females**
They would disapprove/strongly disapprove	10.9	11.9	10.1	9.9	9.3	10.4
They Would Not Disapprove	73.5	71.0	76.5	71.9	70.8	72.9
I Can't Say/ I Do Not Know	15.6	17.1	13.4	18.2	19.8	16.7

With regards to current use and the perception of peer disapproval, current users were more likely to report that their peers would approve of their current substance use. With regards to current users of alcohol, girls were proportionally more likely to report that their peers would not disapprove of their alcohol consumption than boys. Girls were slightly more likely to report that their peers would not disapprove of their marijuana use when compared to boys.

Student Disapproval of Substance Use

A student's disapproval of substance use has been found to negatively relate to the use and onset of use for substances.

TABLE 32: STUDENT'S DISAPPROVAL OF OTHERS SUBSTANCE USE (%)

Percentage of Student's Disapproval of Others Using Substances (%)			
Substances	**I disapprove/ strongly disapprove**	**I do not disapprove**	**Can't Say / I do not know**
Smoking cigarettes sometimes	79.5	12.3	2.6
Smoking cigarettes frequently	87.7	3.9	2.4
Drinking alcoholic beverages frequently	70.6	20.0	2.8
Getting drunk	68.8	21.9	2.5
Having five or more drinks one or twice each weekend (binge drinking)	74.7	16.2	3.0
Smoking marijuana sometimes	63.9	25.3	4.5
Smoking marijuana frequently	76.2	12.7	4.4
Inhaling solvents	69.5	6.4	17.0
Taking tranquilizers/stimulants without medical prescription frequently	78.6	4.4	11.2
Smoking crack cocaine	84.7	4.2	5.3

Students were asked to rate their level of disapproval regarding others' use of cigarettes, alcohol, marijuana, inhalants/solvents, tranquilizers, and crack cocaine. As seen in Table 32, the results demonstrate that for all question items, more than half of all students disapprove/strongly disapprove of others using these substances. The highest proportion for disapproval of use was reported by 87.7% of students for "smoking cigarettes frequently", followed by 84.7% of students for "smoking crack cocaine". The lowest percentage of disapproval was reported by 63.9% of students for "smoking marijuana sometimes" followed by 68.8% of students for "getting drunk". Students were most approving of behaviours relating to marijuana and alcohol use.

Table 33 below is a cross-tabulation of peer disapproval for others substance use by the reported past year of use for cigarettes, alcohol, marijuana, and inhalants/solvents. Overall, the proportion of students who disapprove/strongly disapprove of others substance use for the itemized substances

also demonstrate a lower proportion of past year use for the corresponding substance when compared to students who approve of the substance use.

When assessing disapproval of cigarettes, the corresponding proportion of past year use was the lowest out of all other substances at 16.9%. With regards to disapproval of others using alcohol, the corresponding proportions for past year use were the highest of all other substances, with 57.6% who disapproved of binge drinking having consumed alcohol at least once in the last 12 months. In comparison, 76.5% of students who approved of binge drinking have also consumed alcohol at least once during the past 12 months.

Past year use of marijuana showed the second highest proportion of all substances, with 51.4% of students who disapprove/strongly disapprove of frequent marijuana use having also used marijuana at least once during the past year. In comparison, 80.7% of students who approved of frequent marijuana use have also used marijuana during the past year.

TABLE 33: PERCENTAGE OF STUDENT'S DISAPPROVAL FOR CIGARETTE, ALCOHOL, MARIJUANA, AND INHALANT/SOLVENTS USE AMONG THOSE WHO HAVE USED IN THE PAST YEAR (%)

Percentage of Student's Disapproval of Others Using Substances (%) Among Those Who Have Used In the Past Year		
	Percent of Past Year Use	
Substances	**I disapprove/strongly disapprove (Disapprove)**	**I do not disapprove**
Smoking cigarettes sometimes	16.9	57.3
Smoking cigarettes frequently	28.0	52.9
Drinking alcoholic beverages frequently	54.4	78.6
Getting drunk	49.9	82.9
Having five or more drinks one or twice each weekend (binge drinking)	57.6	76.5
Smoking marijuana sometimes	37.8	73.6
Smoking marijuana frequently	51.4	80.7
Inhaling solvents	32.0	66.7

Beliefs About Peer Norms

TABLE 34: PERCEPTION OF PEER ALCOHOL USE BY PREVALENCE: LIFETIME, PAST YEAR, AND CURRENT USE (LAST 30 DAYS) (%)

Perception of Peer's Alcohol Use Overall and by Lifetime, Past year, and Current Use (last 30 days) (%)				
How many of your friend's drink alcohol regularly?	**Overall Perception (%)**	**Lifetime Prevalence (%)**	**Past Year Prevalence (%)**	**Last 30 Days (%)**
None	45.7	28.0	17.4	9.1
Less than half	15.1	24.1	26.7	23.6
Half	4.8	9.3	11.5	12.7
More than half	4.1	8.2	11.1	13.8
All or Almost All	5.7	12.5	18.6	29.5
I do not know	17.7	18.1	14.8	11.3

TABLE 35: PERCEPTION OF PEER'S MARIJUANA USE OVERALL BY LIFETIME, PAST YEAR, AND CURRENT USE (%)

Perception of Peer's Marijuana Use Overall and by Lifetime, Past year, and Current Use (last 30 days) (%)				
How many of your friends smoke marijuana regularly?	**Overall Perception (%)**	**Lifetime Prevalence (%)**	**Past Year Prevalence (%)**	**Last 30 Days (%)**
None	51.4	9.5	7.1	3.1
Less than half	14.3	29.0	26.8	19.3
Half	4.5	18.1	18.3	17.2
More than half	3.7	15.6	19.5	22.9
All or Almost All	3.5	17.0	21.5	30.7
I do not know	15.6	10.8	6.8	6.8

In assessing students' beliefs about the norms of substance use among their peers, we are better able to understand the prevalence and acceptability of drug use among this population. The majority of students in this survey reported that they do not believe any of their friend's drink alcohol regularly (45.7%) or smoke marijuana regularly (51.4%). Of these students, 9.1% reported having the current consumption (use in the last 30 days) of alcohol and 3.1% reported the current use of marijuana.

TABLE 36: PERCEPTION OF PEER'S LIFETIME SUBSTANCE USE BY GENDER (%)

Perception of Peer's Lifetime Substance Use by Gender (%)			
How many friends do you think have ever used a drug like alcohol, tobacco, marijuana, or crack cocaine?	**Survey Average (%)**	**Boys (%)**	**Girls (%)**
All of them	9.9	9.8	11.6
Most of them	13.8	13.6	16.0
Some of them	24.7	25.6	27.2
None of them	26.3	30.4	26.5
Don't Know	18.2	20.5	18.8

TABLE 37: PERCEPTION OF PEER'S LIFETIME SUBSTANCE USE BY GRADE LEVEL (%)

Perception of Peer's Lifetime Substance Use by Grade Level (%)							
How many friends do you think have ever used a drug like alcohol, tobacco, marijuana, or crack cocaine?	**Grade 6**	**Grade 7**	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Grade 12**
All of them	2.0	2.5	8.8	6.9	15.5	25.6	33.0
Most of them	2.3	6.6	12.8	16.3	23.6	28.0	27.5
Some of them	16.8	24.8	30.8	36.0	29.3	23.4	23.1
None of them	53.8	44.4	27.2	19.3	15.3	8.8	5.5
Don't Know	25.2	21.6	20.3	21.4	16.4	14.1	11.0

students were asked their perception of their peers' use of drugs. Most students (26.3%) reported that they believe none of their peers have ever tried a substance like alcohol, tobacco, marijuana, or crack cocaine. This belief was reported by more boys (30.4%) than girls (26.5%). The lowest reported proportion was in relation to students who believe that all their peers have tried a substance (9.9%), with more girls believing this than boys (11.6% vs 9.8%).

Students in lower grade levels tend to believe that none of their peers have ever tried a drug. This belief tends to decrease as grade levels increase, with 53.8% of students in grade 6 reporting none of their peers have ever used a substance compared to 5.5% of students in grade 12.

Perceived Harm/Risk, Use-Related Risks, and Antisocial Behaviour:

Perceived Harmfulness of Substance Use

Perceived harm from substance use has been found to negatively relate to the use and onset of use for substances. Students were asked to indicate how much they think people risk harming themselves physically or in other ways if they try or use substances such as cigarettes, e-cigarettes, alcohol, marijuana, and inhalants. The results are demonstrated in Table 38 below.

TABLE 38: PERCEPTION OF HARM RELATED TO THE USE OF CIGARETTES, E-CIGARETTES, ALCOHOL, MARIJUANA, AND INHALANTS/SOLVENTS (%)

Perception of Harm Related to Use of Cigarette, E-cigarette, Alcohol, Marijuana, and Inhalants/Solvents (%)					
	No Risk	**Slight Risk**	**Medium Risk**	**Great Risk**	**Cumulative Risk of Harm**
Smoke one or more packs of cigarettes a day	3.7	5.7	15.9	66.0	87.6
Smoke e-cigarettes (vapes)	5.0	20.8	35.6	29.5	85.9
Drink Alcohol Daily	3.6	10.2	26.3	48.6	85.1
Try marijuana once or twice	24.7	31.3	19.0	15.6	65.9
Smoke marijuana regularly	7.4	14.1	21.4	47.2	82.7
Use inhalants (e.g., sniffing glue or gasoline, inhale markers, white-out, nail polish remover)	8.8	16.8	20.3	44.9	82.0

As shown in Table 38, perception of "no risk" of harm ranged from a low of 3.7% for smoking one or more packs of cigarettes a day, to a high of 24.7% for trying marijuana once or twice. The second lowest proportion of "no risk" perceived from substance use related to daily alcohol use as reported by 3.6% of students. This was followed by 5% of students perceiving "no risk" for smoking e-cigarettes. The regular use of marijuana was reported by 7.4% of students as having "no risk" of harm.

In contrast, there was a notably high proportion of "great risk" of harm perceived by students for smoking one or more packs of cigarettes a day (66%), drinking alcohol daily (48.6%), smoking marijuana regularly (47.2%), and using inhalants (44.9%). A perceived "great risk" of harm for

smoking e-cigarettes (29.5%) and trying marijuana once or twice (15.6%) was much lower in comparison.

Overall, the cumulated perception of harm (slight, medium, and great risk) was greatest for smoking one or more packs of cigarettes per day, followed by smoking e-cigarettes, drinking alcohol daily, smoking marijuana regularly, using inhalants/solvents, and lastly trying marijuana once or twice.

Perception of Risk of Harm and Current Substance Use

TABLE 39: PERCEPTION OF RISK OF HARM AMONG CURRENT SUBSTANCE USERS

Perception of Risk (%)					
Substances	**Current Users**	**No Risk**	**Slight Risk**	**Medium Risk**	**Great Risk**
Cigarettes (p< 0.01)	Yes	22.0	14.6	12.2	51.2
	No	5.0	5.0	20.0	70.0
E-cigarettes (p< 0.01)	Yes	11.3	40.7	36.1	12.0
	No	6.9	34.6	39.8	18.6
Alcohol (p< 0.01)	Yes	6.7	19.8	33.5	40.0
	No	2.3	12.0	32.7	53.0
Marijuana (once or twice) (p< 0.01)	Yes	76.1	18.6	2.7	2.7
	No	65.8	30.9	2.0	1.3
Marijuana regularly (p< 0.01)	Yes	36.5	40.2	16.9	6.3
	No	14.7	43.3	29.3	12.7
Use Inhalants (p<0.01)	Yes	34.7	22.4	20.4	22.4
	No	22.9	31.4	20.0	25.7

To identify the perception of harm around substance use and current users, perception of harm was cross tabulated for each of the substance categories in Table 39 among current users (use in the last 30 days) of cigarettes, e-cigarettes, alcohol, marijuana, and inhalants.

The null hypothesis was as follows "*The perception of risk among students who are currently using various substances is no different from the risk perception among students who were not current substance users.*"

As demonstrated in Table 39, current users of cigarettes were significantly more likely than those who were not current users to indicate that there was no risk of harm from smoking cigarettes (22.0% versus 5.0%) at a p-value of 0.01. In contrast, students who are not current users indicated a

greater proportion of great harm from cigarette use (70.0%) than those who are currently using cigarettes (51.2%).

With relation to e-cigarettes, current users were also significantly more likely to indicate that there was no risk of harm from using e-cigarettes when compared to non-current users (11.3% versus 6.9%). Additionally, non-current users had a greater proportion of reporting great harm from e-cigarette use (18.6%) when compared to current users (12.0%).

For daily alcohol use, current users were significantly more likely to indicate that there was no harm from use compared to students who are not currently using (6.7% versus 2.3%), p-value <0.01. A greater proportion of non-current users indicated a great risk from daily use of alcohol (53.0%) in comparison to current users (40.0%).

With regards to smoking marijuana, overall current users of the substance were significantly more likely to indicate no risk from use. 76.1% of current users indicated no risk from using marijuana once or twice in comparison to 65.8% of non-current users. Similarly, more current users (36.5%) indicated no risk of harm from using marijuana frequently than did non-current users (14.7%). With regards to indicating great risk of harm, this was indicated more frequently by non-current users than current users (12.7% vs 6.3%).

Lastly, the perception of harm from inhalant use showed a similar result to the other substances, with significantly more current users associating no risk of harm from use when compared to non-current users (34.7% versus 22.9%). More non-current users associated great risk with inhalant use (25.7%) than did those who currently use (22.4%).

TABLE 40: PERCEPTION OF RISK/HARM AMONG CURRENT SUBSTANCE USERS BY GENDER

Perception of harm related to use of cigarettes, e-cigarettes, alcohol, and marijuana by gender (%)												
	Smoking one or more packs of cigarettes daily		**Smoke e-cigarettes**		**Drink alcohol daily**		**Try marijuana once or twice**		**Smoke marijuana regularly**		**Use Inhalants**	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
No Risk	5.5	2.7	6.9	4.0	5.9	2.2	28.5	26.0	11.4	5.1	10.7	8.7
Risk (combined slight risk, medium risk, great risk)	94.5	97.3	93.1	96.0	94.1	97.8	71.5	74.0	88.6	94.9	89.3	91.3
	P<0.05		P<0.05		P<0.05		p> 0.05		P<0.05		p> 0.05	

To assess the perception of harm among boys and girls, the risk of harm variable was re-coded to reflect “no risk of harm” and “risk of harm” (a combination of slight risk, medium risk, and great risk). Cross-tabulation by gender showed that there was no statistically significant difference between boys and girls with respect to their perception of risk relating to trying marijuana once or twice and the use of inhalants.

However, significantly more boys felt there was no risk of harm related to smoking one or more packs of cigarettes daily (5.5% versus 2.7%), smoking e-cigarettes (6.9% versus 4.0%), drinking alcohol daily (5.9% versus 2.2%), and smoking marijuana regularly (11.4% versus 5.1%).

When comparing the perception of risk across grade levels, there was no statistically significant difference between grade levels for risk of harm related to the use of cigarettes or drinking alcohol. However, there were significant differences found across grade levels for the risk of harm relating to e-cigarette use, trying marijuana once or twice, smoking marijuana regularly, and the use of inhalants.

As can be seen in Table 41, the perception of risk for e-cigarette use tends to decrease as grade level increases, with 4.4% of grade 6 students reporting no risk of harm compared to 10.1% of grade 12 students. A similar pattern is observed for trying marijuana once or twice, with significantly more students in higher grade levels reporting no risk of harm (9.5% of grade 6 students versus 54.8% of grade 12 students). The percentage of no risk of harm for smoking marijuana frequently was lower than for trying marijuana once or twice. However, the proportion of risk associated with frequent marijuana use decreases as grade level increased.

The perceived risk of harm related to the use of inhalants was lower among students in lower grade groups compared to students in higher grade levels (12.3% of grade 6 students vs 6.2% of grade 12 students).

TABLE 41: PERCEPTION OF RISK OF HARM FOR VARIOUS SUBSTANCES BY GRADE LEVEL

Perception of harm related to use of cigarettes, e-cigarettes, alcohol, and marijuana by grade level (%)														
	Grade 6		**Grade 7**		**Grade 8**		**Grade 9**		**Grade 10**		**Grade 11**		**Grade 12**	
	No Risk	Risk	No Risk	Risk	No Risk	Risk	No Risk	Risk	No Risk	Risk	No Risk	Risk	No Risk	Risk
Smoke one or more packs of cigarettes daily p>0.05	3.4	96.9	2.8	97.2	5.3	94.7	4.7	95.3	3.3	96.7	4.4	95.6	6.2	93.8
Smoke e-cigarettes P<0.05	4.4	95.6	3.7	96.3	6.1	93.9	6.5	93.5	5.0	95.0	6.2	93.8	10.1	89.9
Drink Alcohol p>0.05	3.0	97.0	3.8	96.2	5.1	94.9	4.7	95.3	3.6	96.4	2.8	97.2	7.3	92.7
Try marijuana once or twice P<0.05	9.5	90.5	11.8	88.2	24.8	75.2	31.3	68.7	41.1	58.9	42.4	57.6	54.8	45.2
Smoke marijuana regularly P<0.05	3.7	96.3	3.5	96.5	8.9	91.1	7.3	92.7	11.7	88.3	13.1	86.9	16.2	83.8
Use inhalants P<0.05	12.3	87.7	9.0	91.0	11.6	88.4	12.2	87.8	7.2	92.8	6.9	93.1	6.2	93.8

Curiosity/Intention to Use

In this survey, we assessed students' curiosity and intention to use drugs in order to measure the likelihood of future substance use as well as their level of commitment to not use drugs.

TABLE 42: CURIOSITY TO TRY VARIOUS SUBSTANCES BY GENDER (%)

Curiosity to Try Any Substance by Gender (%)			
	Survey Average	**Males**	**Females**
Yes	29.3	29.4	35.8
No	39.6	48.7	40.0
Maybe	14.4	14.8	17.3
I do not know	6.3	7.1	7.0

We asked students to report whether they have ever been curious to try any drug such as alcohol, marijuana, ecstasy, e-cigarettes, or cocaine. When assessing the overall survey average, most students responded "no" to being curious about trying any substance. This was reported by more boys (48.7%) than girls (40.0%). 29.3% of students reported "yes" that they have been curious to try a drug, and this was reported by more girls (35.8%) than boys (29.4%). 14.4% of students responded "maybe" to being curious about trying drugs, and 6.3% responded, "I do not know".

However, when comparing curiosity to try substances by grade level, Table 43 demonstrates that the percentage of students responding "yes" tended to increase as grade level increased. The percentage of students in grades 8-12 who responded "yes" to being curious to try drugs exceeded the survey average. Students in grade 6 were the least curious about drug use, with 70.7% responding "no" to wanting to try a substance.

As would be expected this pattern is also seen as the age of students increases (See Table 44). Students ages 14 through 18 years reported percentages of curiosity in substance use that exceed the survey average. While students' curiosity to try drugs increases as they get older, the biggest percentage difference between consecutive age groups can be seen between students ages 13 and 14 where there is a 12.9% increase in students responding "yes" to curiosity in drug use.

TABLE 43: CURIOSITY TO TRY VARIOUS SUBSTANCES BY GRADE LEVEL (%)

Curiosity to Try Any Substance by Grade Level (%)								
	Survey Average	**Grade 6**	**Grade 7**	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Grade 12**
Yes	29.3	12.1	16.6	31.3	33.9	48.4	53.3	56.7
No	39.6	70.7	61.2	41.6	40.0	26.5	24.8	20.0
Maybe	14.4	11.0	15.2	18.9	17.2	18.9	15.0	18.3
I do not know	6.3	6.2	7.0	8.2	8.9	6.2	7.0	5.0

TABLE 44: CURIOSITY TO TRY VARIOUS SUBSTANCES BY AGE GROUP (%)

Curiosity to Try Any Substance by Age Group (%)									
	Survey Average	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**
Yes	29.3	11.0	14.3	23.0	35.9	44.5	50.7	55.9	53.6
No	43.8	71.7	65.9	50.7	38.6	31.6	25.7	21.1	20.3
Maybe	13.3	11.7	13.3	17.7	17.1	17.1	17.9	17.6	15.9
I do not know	6.3	5.7	6.5	8.5	8.3	6.9	5.8	5.3	10.1

TABLE 45: INTENTION TO USE DRUGS (%)

Percentage of intention to use various substances: cigarettes, alcohol, and marijuana (%)					
	I have decided that I will smoke cigarettes	**If I had the chance and knew I would not be caught, I would get drunk**	**I plan to get drunk sometime in the next year**	**I have made a final decision to stay away from marijuana**	**I have told at least one person that I do not intend to smoke**
Strongly Agree	1.8	8.8	9.3	46.5	41.6
Agree	1.3	13.8	11.6	14.6	26.7
Disagree	19.7	25.8	23.0	13.6	8.5
Strongly Disagree	66.7	40.9	44.9	14.4	12.0

In assessing students' overall intention to use drugs, most students report a strong commitment to not smoke cigarettes, with 66.7% of students strongly disagreeing to smoke. This was followed by 46.5% of students strongly agreeing that they have made a final decision to stay away from

marijuana. 41.6% of students reported that they have told at least one person they do not intend to smoke.

With regards to alcohol use, 44.9% of students reported that they strongly disagree with getting drunk sometime within the next year, and 40.9% of students strongly disagree with getting drunk even if they knew they would not get caught.

When comparing student intention to use drugs by gender (See Table 46), more boys "strongly disagreed" with the intention to smoke cigarettes (75.2% vs 74.0%), get drunk when they knew they would not be caught (49.1% vs 42.8%), and get drunk during the next year (53.7% vs 47.7%) than did girls. Slightly more boys also reported "strongly agreeing" to having told at least one person that they do not intend to smoke than did girls (47.1% vs 46.5%). However, less boys reported "strongly agreeing" to staying away from marijuana than did girls (51.0% vs 53.5%).

TABLE 46: INTENTION TO USE DRUGS BY GENDER (%)

Percentage of intention to use various substances: cigarettes, alcohol, and marijuana (%)										
	I have decided that I will smoke cigarettes		**If I had the chance and knew I would not be caught, I would get drunk**		**I plan to get drunk sometime in the next year**		**I have made a final decision to stay away from marijuana**		**I have told at least one person that I do not intend to smoke**	
	Males	**Females**	**Males**	**Females**	**Males**	**Females**	**Males**	**Females**	**Males**	**Females**
Strongly Agree	2.4	1.4	9.9	9.8	10.4	10.6	51.0	53.5	47.1	46.5
Agree	1.7	1.2	12.5	18.3	10.8	15.2	16.1	16.7	27.7	32.5
Disagree	20.4	23.5	28.5	29.1	25.0	26.4	15.4	15.0	9.9	9.4
Strongly Disagree	75.2	74.0	49.1	42.8	53.7	47.7	17.5	14.8	15.4	11.7

TABLE 47: INTENTION TO TRY VARIOUS SUBSTANCES BY AGE GROUP (%) (AGREE/STRONGLY AGREE)

Percentage of intention to use various substances: cigarettes, alcohol, and marijuana by age group (%)								
	Age							
	11	12	13	14	15	16	17	18
Agree/Strongly Agree Combined								
I have decided that I will smoke cigarettes	0.6	2.1	2.6	3.5	5.2	3.5	5.7	10.3
If I had the chance and knew I would not be caught, I would get drunk	2.7	6.9	13.5	25.6	40.1	45.0	46.7	60.8
I plan to get drunk sometime in the next year	4.7	4.8	10.0	20.1	35.7	44.2	56.7	61.7
I have made a final decision to stay away from marijuana	84.2	81.6	71.6	66.7	60.5	57.9	55.8	52.2
I have told at least one person that I do not intend to smoke	83.0	78.2	74.8	76.4	76.2	75.5	77.4	75.4

TABLE 48: INTENTION TO TRY VARIOUS SUBSTANCES BY GRADE LEVEL (%) (AGREE/STRONGLY AGREE)

Percentage of intention to use various substances: cigarettes, alcohol, and marijuana by grade level (%)							
	Grade Level						
	Grade 6	Grade 7	Grade 8	Grade 9	Grade 10	Grade 11	Grade 12
Agree/Strongly Agree Combined							
I have decided that I will smoke cigarettes	1.4	2.1	3.0	5.3	4.0	4.0	7.3
If I had the chance and knew I would not be caught, I would get drunk	4.8	7.4	21.2	28.6	41.5	48.4	50.8
I plan to get drunk sometime in the next year	3.6	7.3	15.0	23.4	38.5	51.3	56.6
I have made a final decision to stay away from marijuana	82.6	78.4	67.2	66.3	60.8	54.5	56.7
I have told at least one person that I do not intend to smoke	80.1	77.3	74.9	75.1	75.7	77.5	78.0

TABLE 49: INTENTION TO TRY VARIOUS SUBSTANCES BY LOCATION (%) (AGREE/STRONGLY AGREE)

Percentage of intention to use various substances: cigarettes, alcohol, and marijuana by location (%)						
	Location					
	Bodden Town	**East End**	**George Town**	**North Side**	**West Bay**	**Cayman Brac**
Agree/Strongly Agree Combined						
I have decided that I will smoke cigarettes	3.5	3.9	2.7	5.0	4.2	5.3
If I had the chance and knew I would not be caught, I would get drunk	27.3	28.4	24.6	22.9	26.3	14.3
I plan to get drunk sometime in the next year	24.4	26.5	23.0	24.3	25.1	12.1
I have made a final decision to stay away from marijuana	65.5	54.9	69.4	66.4	71.6	77.5
I have told at least one person that I do not intend to smoke	72.9	67.3	78.2	72.5	80.5	81.2

With regards to students who agree/strongly agree with the items in Tables 47-49, there was a tendency for older students or those in higher grade levels to display a greater intention towards substance use. This was especially true with regards to getting drunk if they knew they would not be caught, with 60.8% of students ages 18 years agreeing/strongly agreeing compared to 13.5% of students ages 13 years old. Similarly, students' commitment to not using a substance, such as marijuana, decreased as they got older. With 71.6% of students aged 13 years old agreeing/strongly agreeing to make a final decision to stay away from marijuana compared to 52.2% of students aged 18 years old.

Overall, the intention to use cigarettes had the lowest reported proportions in comparison to marijuana and alcohol use. Greater proportions of students reported an intention to stay away from or not use marijuana when compared to alcohol. The reported proportions of commitment to stay away from alcohol were low.

Use-related Risk from Substance Use

Students were asked if they have used any drugs during the past 12 months. If they had, they were then asked to indicate whether they have experienced any user-related risks from substance use during the past 12 months prior to the survey. The question was phrased as **"Over the past 12 months have you experienced the following situation because of drinking or using any other substance"?**

Responses were measured based on the following options: "never", "hardly ever", "sometimes", and "often". Table 50 displays the responses with the cumulative column representing the summed percentages for the options of "sometimes", "often", and "hardly ever", which all indicates students having had an experience of use-related risk. The overall proportions are displayed in table 50 while the proportion by gender is displayed in table 51, proportions by grade in table 52 and by age in table 53.

TABLE 50: PROPORTION OF STUDENTS WHO EXPERIENCED USE-RELATED RISK (%)

Proportion of Students Who Experienced Use-related Risk (%)					
	Overall		**(%)**		
Have you used any drugs in the past 12 months?	775		21.5		
	Never	**Hardly Ever**	**Sometimes**	**Often**	**Cumulative**
Getting a low grade on an important test/exam or school project	57.9	18.3	16.3	4.4	**39.0**
Getting into some trouble with the police	84.6	7.4	3.1	1.8	**12.3**
Getting into an argument or a fight	56.1	16.0	17.7	6.6	**40.3**
Memory Loss	51.1	15.5	19.5	10.3	**45.3**
Problems with your family/friends	55.2	15.0	16.0	10.1	**41.1**
Risky behaviour or engaging in antisocial behaviours (e.g. vandalism, bullying)	58.3	15.1	16.5	7.0	**38.6**
Trying without success to stop using drugs	63.6	12.4	12.6	7.5	**32.5**

TABLE 51: PROPORTION OF STUDENTS WHO EXPERIENCED USE-RELATED RISK BY GENDER (%)

Proportion of Students Who Experienced Use-related Risk (%)					
	Never	**Hardly Ever**	**Sometimes**	**Often**	**Cumulative**
Males					
Getting a low grade on an important test/exam or school project	57.3	20.1	15.2	4.3	**39.6**
Getting into some trouble with the police	81.9	8.0	4.3	2.6	**14.9**
Getting into an argument or a fight	57.3	18.1	15.8	5.7	**25.0**
Memory Loss	59.6	13.5	17.5	6.0	**37.0**
Problems with your family/friends	58.5	18.6	12.0	7.7	**38.3**
Risky behaviour or engaging in antisocial behaviours (e.g., vandalism, bullying)	60.7	14.0	14.6	7.7	**36.3**
Trying without success to stop using drugs	66.5	12.3	10.3	7.4	**30.0**
Females					
Getting a low grade on an important test/exam or school project	59.2	16.1	17.3	4.6	**38.0**
Getting into some trouble with the police	86.8	7.0	2.2	1.2	**10.4**
Getting into an argument or a fight	55.6	13.7	19.7	7.2	**40.6**
Memory Loss	43.9	17.3	21.3	13.9	**52.5**
Problems with your family/friends	52.5	11.8	19.4	12.2	**43.4**
Risky behaviour or engaging in antisocial behaviours (e.g. vandalism, bullying)	56.8	15.6	18.0	6.5	**40.1**
Trying without success to stop using drugs	61.4	12.5	14.4	7.7	**34.6**

GETTING A LOW GRADE

The cumulative proportion of students who indicated that they have experienced getting a low grade due to substance use was 39.0% (Table 50). This was reported by slightly more boys (39.6%) than girls (38.0%) however this difference was not statistically significant. When proportions were compared by grade level all groups reported proportions that were higher than the cumulative survey average, with proportions decreasing as grade level increased. The highest reported proportion of getting a low grade was among students in grade 8 (58.1%).

GETTING INTO TROUBLE WITH THE POLICE

The overall proportion of students who indicated that they have experienced trouble with the police was 12.3% (Table 50). It should be noted that getting into trouble with the police accounts for the lowest proportion of student's experiences with use-related risk out of all other risks assessed. A slightly higher proportion of boys (14.9%) reported getting in trouble with the police when

compared to girls (10.4%) however this difference was not found to be statistically significant. When proportions were compared by grade level, they all reported proportions that were higher than the survey average, with students in grade 6 reporting the highest percentage at 25.8%. The grade with the lowest proportion was grade 9 at 10.5%.

GETTING INTO AN ARGUMENT OR FIGHT

The overall proportion of students who reported getting into an argument or fight because of substance use was 40.3% (Table 50). A slightly higher proportion of girls reported getting into an argument or fight than did boys (40.6% of girls versus 40.3% of boys) however this was not statistically significant. When the overall average was compared by grade level, there was notably high proportions reported for grade 6 (58.0%), grade 7 (55.3%), and grade 8 students (55.6%)

MEMORY LOSS

Memory loss accounted for the highest reported use-related risk prevalence among students in comparison to all other risks that were assessed. The overall proportion of students who indicated that they experience memory loss in relation to their substance use was 45.3% (Table 50). When compared across gender, more girls (52.5%) reported experiencing memory loss related to substance use than did boys (37.0%). This difference was found to be statistically significant ($p<0.01$) meaning that girls were significantly more likely to have experienced memory loss in relation to their substance use. The proportion of memory loss experienced from substance use across grade levels varied. Students in grade 6 reported the lowest proportions of memory loss (29.9%), while students in grade 8 reported the highest proportions of memory loss (53.7%).

PROBLEMS WITH YOUR FAMILY/FRIENDS

This was the second highest reported prevalence of use-related risk. The overall proportion of students who indicated that they experienced problems with their family or friends in relation to their substance use was 41.1%. When proportions were compared by gender, a higher proportion of girls (43.4%) reported problems with their family or friends than did boys (38.3%). This difference was found to be statistically significant meaning that girls were significantly more likely to experience problems with their family or friends because of their substance use. When proportions were compared across grade level, students reporting problems with family or friends varied. Students in lower grade levels tended to report higher experiences of problems with their family or friends when compared to students in higher grades.

Risky Behaviour/Engaging with antisocial behaviours

The overall proportion of students who indicated that they have experienced risky behaviour or engaged in antisocial behaviours was 38.6%. This was reported by more girls (40.1%) than boys (36.3%), however, this difference was not found to be statistically significant. When the experience of risky behaviour or engaging with antisocial behaviours was compared by grade level the results varied. Students in grade 8 (55.2%) and grade 9 (49.1%) reported higher proportions of this use-related risk when compared to students in all other grade levels.

Trying without success to stop using drugs

The overall proportion of students who indicated that they have not been successful and trying to stop using drugs was 32.5%. A higher proportion of girls (34.6%) reported a lack of success when trying to stop using drugs in comparison to boys (30.0%).This difference was not found to be statistically significant. Proportions across grade levels for students experiencing this use-related risk varied. The highest proportion of students experiencing this risk was in grade 8 (51.5%) followed by grade 6 (44.8%). Students in grade 11 (29.6%), and grade 12 (20.1%) had the lowest reported proportions of trying without success to stop using drugs.

Table 52: Proportion of students who experienced use-related risk by grade level (%)

Cumulative Proportion of Students Who Experienced Use-Related Risk by Grade (%)							
	Grade						
	Grade 6	Grade 7	Grade 8	Grade 9	Grade 10	Grade 11	Grade 12
Getting a low grade on an important test/exam or school project	41.9	57.4	58.1	45.3	35.7	34.8	26.3
Getting into some trouble with the police	25.8	17.0	17.5	10.5	11.4	11.4	10.6
Getting into an argument or a fight	58.0	55.3	55.6	47.8	34.7	35.2	34.7
Memory Loss	29.9	37.0	53.7	41.3	49.0	48.9	43.2
Problems with your family/friends	61.3	55.3	56.3	44.2	37.5	38.1	33.7
Risky behaviour or engaging in antisocial behaviours (e.g. vandalism, bullying)	38.8	38.3	55.2	49.1	35.1	36.9	29.5
Trying without success to stop using drugs	44.8	38.2	51.5	33.7	31.3	29.6	20.1

TABLE 53: PROPORTION OF STUDENTS WHO EXPERIENCED USE-RELATED RISK BY AGE (%)

Cumulative Proportion of Students Who Experienced Use-Related Risk by Age Group (%)								
	Age							
	11	**12**	**13**	**14**	**15**	**16**	**17**	**18**
Getting a low grade on an important test/exam or school project	40.0	52.8	63.5	44.9	41.4	30.2	33.1	30.7
Getting into some trouble with the police	13.3	27.8	11.8	16.7	9.3	10.6	11.7	10.2
Getting into an argument or a fight	66.7	55.5	55.3	49.6	38.6	32.5	39.3	28.2
Memory Loss	21.4	38.8	50.7	46.4	46.9	47.1	47.3	41.0
Problems with your family/friends	60.0	55.5	62.6	45.6	40.6	37.0	34.9	30.8
Risky behaviour or engaging in antisocial behaviours (e.g. vandalism, bullying)	20.0	44.4	50.7	50.3	38.2	35.0	38.4	18.0
Trying without success to stop using drugs	42.8	37.2	48.1	42.3	30.6	31.2	24.1	17.9

Antisocial Behaviours

Bullying

TABLE 54: PERCENTAGE OF STUDENTS WHO HAD EXPERIENCED BULLYING OR HAD BULLIED SOMEONE – OVERALL, GENDER, AND LOCATION (%)

Percentage of students who experienced bullying or bullied someone by gender and location (%)									
		Gender		Location					
	Overall	Males	Females	Bodden Town	East End	George Town	North Side	West Bay	Cayman Brac
Have you ever been bullied?	47.7	42.3	52.9	51.4	41.8	47.5	44.6	44.2	51.9
Have you been bullied in the past 12 months?	23.1	20.0	26.2	27.0	12.3	22.7	25.5	20.3	23.4
Have you been bullied in the past 30 days?	12.1	10.4	13.8	14.4	7.4	11.5	12.1	10.3	17.1
Have you bullied others at your school/community	20.3	20.4	20.1	25.9	19.7	16.0	24.2	20.1	24.7

OVERALL

47.7% of students reported that they have been bullied at some time. The proportions who reported being bullied within the past 12 months was lower at 23.1% and bullying within the past 30 days was 12.1%. A notably high proportion of students reported that they had bullied others at their school or community (20.3%).

GENDER DIFFERENCES

The proportions reported by boys and girls were not statistically significant for all bullying items except “have you ever been bullied”. Significantly more girls (52.9%) report having experienced bullying at least once when compared to boys (42.3%). Although not statistically significant, more girls have also experienced bullying within the past 12 months (26.2%) and 30 days of the survey (13.8%) than did boys (20.0% and 10.4% respectively). With respect to bullying others at school or in the community, the proportions among girls and boys were similar.

COMPARISONS BY LOCATION

The location with the highest proportion of having ever been bullied was Cayman Brac at 51.9% of students followed closely by Bodden Town with 51.4% of students. With regards to bullying over the past 12 months, Bodden Town (27.0%), North Side (25.5%), and Cayman Brac (23.4%) all reported proportions that were higher than the overall survey average. Similarly, Bodden Town (14.4%) and

Cayman Brac (17.1%) also reported proportions of bullying in the last 30 days that were higher than the survey average. With respect to bullying others at school or in the community, the highest proportions were reported by students in Bodden Town (25.9%), followed by Cayman Brac (24.7%) and North Side (24.2%).

TABLE 55: PROPORTIONS OF BULLYING BY GRADE LEVEL (%)

Proportion of Students Who Experienced Bullying or Have Bullied Others by Grade Level (%)							
	Grade						
	Grade 6	**Grade 7**	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Grade 12**
Have you ever been bullied?	50.2	48.0	44.3	43.4	50.8	52.6	39.9
Have you been bullied in the past 12 months?	30.2	29.3	22.8	19.9	20.2	16.3	13.6
Have you been bullied in the past 30 days?	16.6	15.3	12.5	10.1	11.4	7.1	5.6
Have you bullied others at your school/ community	16.7	19.5	21.9	21.3	25.3	17.9	17.2

COMPARISON BY GRADE LEVEL

Table 55 displays the proportion of students who have experienced bullying or who have bullied others. With regards to having ever been bullied, the grade level with the highest proportion of having experienced lifetime bullying was grade 11 with a reported 52.6% of students. Interestingly, the grade level with the lowest reported proportion of having ever experienced bullying was grade 12 at 39.9% of students. Past year bullying and current bullying (last 30 days), tended to decrease as grade levels increased. The proportion of students who have bullied others at school or in the community varied among grade levels, with the highest proportions found for grade 10 at 25.3% and the lowest proportion found for grade 6 students at 16.7%.

TABLE 56: PROPORTIONS OF BULLYING BY AGE GROUP (%)

Proportion of Students Who Experienced Bullying or Have Bullied Others by Age Group (%)								
	Age							
	11	**12**	**13**	**14**	**15**	**16**	**17**	**18**
Have you ever been bullied?	53.6	47.1	47.4	44.0	45.5	53.2	50.8	34.9
Have you been bullied in the past 12 months?	30.4	29.6	27.0	21.0	17.8	19.0	15.7	10.8
Have you been bullied in the past 30 days?	15.0	16.3	14.4	11.9	8.9	9.2	7.0	4.8
Have you bullied others at your school/ community	15.7	19.2	20.5	22.5	21.8	21.1	17.8	21.7

COMPARISON BY AGE GROUP

Table 56 displays the proportion of students who have experienced bullying or who have bullied others by age group. Over half of the students ages 11, 16, and 17 years old reported having experienced bullying at least once in their lifetime. Among those, students who were 11 years old had the highest reported proportions of having ever been bullied (53.6%). With regards to bullying in the past year and during the last 30 days, the reported proportions tended to decrease as grade groups increased.

Weapons in Community or School

TABLE 57: PERCENTAGE OF STUDENTS WHO HAVE CARRIED OR BEEN THREATENED/INJURED WITH A WEAPON

Percentage of Students Who Have Carried a Weapon or Been Threatened/Injured with A Weapon									
		Gender		**District (%)**					
	Overall (n)	**Males (n)**	**Females (n)**	**Bodden Town**	**East End**	**George Town**	**North Side**	**West Bay**	**Cayman Brac**
Have you ever carried a weapon	692 (19.2%)	**378 (21.8%)**	**307 (16.7%)**	21.5	20.5	17.5	22.9	18.6	18.4
Have you ever been threatened or injured with a weapon?	649 (18.0%)	**351 (20.2%)**	**294 (16.0%)**	20.0	18.0	16.2	17.8	19.0	17.1

As seen in Table 57, 19.2% of students reported that they have carried a weapon at least once. Of this, 21.8% were boys in comparison to 16.7% of girls. This difference was found to be statistically significant at a p-value of 0.01. With regards to location, students in Bodden Town (21.5%), East End (20.5%), and North Side (22.9%) reported proportions of having ever carried a weapon that was higher than the survey average. Students from George Town (17.5%) had the lowest proportion of students reporting having ever carried a weapon while students in North Side (22.9%) reported the highest proportions.

With regards to having ever been threatened or injured with a weapon, this was reported by an overall average of 18.0% of students. More boys (20.2%) reported that they have been injured or threatened with a weapon when compared to girls (16.0%), and this difference was statistically significant ($p<0.01$). By location, both students from Bodden Town (20.0%) and West Bay (19.0%) reported higher proportions of being threatened or injured with a weapon than the survey average. Students from George Town reported the lowest proportions of having been threatened or injured with a weapon (16.2%).

TABLE 58: PERCENTAGE OF STUDENTS WHO HAVE CARRIED OR BEEN THREATENED/INJURED WITH A WEAPON BY GRADE LEVEL

Percentage of Students Who Carried a Weapon or Was Threatened/Injured with a Weapon (%)							
	Grade Level (%)						
	Grade 6	**Grade 7**	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Grade 12**
Have you ever carried a weapon	13.7	18.3	19.6	22.3	21.7	21.1	17.2
Have you ever been threatened or injured with a weapon?	13.3	15.1	19.3	18.2	22.6	20.5	18.7

As shown in Table 58, between 13.7% - 22.3% of students in grades 6-12 reported carrying a weapon at least once in their lifetime. The highest proportion of students carrying a weapon was found for those in grade 9 as reported by 22.3% of students, followed by grade 10 as reported by 21.7% of students. Regarding those experiencing injury or being threatened with a weapon, reports ranged from as low as 13.3% to as high as 22.6% of students in grade 6-12. The highest proportions were reported for students in grade 10 as reported by 22.6% of students.

Other Antisocial Behaviours

TABLE 59: PERCENTAGE OF STUDENTS RESPONDING "YES" TO ANTISOCIAL BEHAVIOUR ITEMS BY GENDER (%)

Percentage of Students Responding "Yes" to Antisocial Behaviour Items by Gender (%)			
Have you ever…	**Overall (N)**	**Males (%)**	**Females (%)**
Been arrested	80 (2.2%)	3.3	1.1
Attacked someone with intention of serious harm	375 (10.4%)	13.0	7.9
Been drunk at school	119 (3.3%)	3.6	3.0
Got suspended because of violence	333 (9.2)	13.1	5.7
Belonged to a gang/crew	245 (6.8%)	8.8	4.8
Been in a fight (fought)	1399 (38.8%)	52.4	25.8

Table 59 shows the proportion of students engaging in other antisocial behaviour. Being in a fight was the most prevalent antisocial behaviour indicated (38.8% of students). This was reported by more boys (52.4%) than girls (25.8%), and this difference between genders was found to be statistically significant ($p<0.01$). The second most reported antisocial behaviour was attacking someone with the intention of causing serious harm and was reported by 10.4% of students. This was once again reported by more boys (13.0%) than girls (7.9%), and the difference was also found to be statistically significant ($P<0.01$).

Only a small percentage of students reported being drunk at school (3.3%), with more boys reporting this than girls (3.6% boys vs 3.0% girls), however, this difference was not statistically significant. An even smaller percentage of students reported having been arrested (2.2%), with more boys (3.3%) having been arrested when compared to girls (1.1%).

Only a small percentage of students reported that they belonged to a gang or crew (6.8%), with twice as many boys (8.8%) reporting this when compared to girls (4.8%). The difference between boys and girls was found to be statistically significant ($p <0.01$).

TABLE 60: PERCENTAGE OF STUDENTS RESPONDING "YES" TO ANTISOCIAL BEHAVIOUR ITEMS BY GRADE LEVEL (%)

Percentage of Students Responding "Yes" to Antisocial Behaviour by Grade (%)							
	Grade Level (%)						
Have you ever…	Grade 6	Grade 7	Grade 8	Grade 9	Grade 10	Grade 11	Grade 12
Been arrested	1.2	1.2	1.8	1.7	4.4	3.9	1.5
Attacked someone with intention of serious harm	8.1	9.2	13.3	12.9	12.2	8.0	6.1
Been drunk at school	0.7	1.2	2.7	2.8	7.5	5.5	4.5
Got suspended because of violence	5.7	6.5	11.5	9.9	13.2	11.5	4.0
Belonged to a gang/crew	5.9	6.2	8.0	5.6	8.7	6.4	6.6
Been in a fight	36.8	34.6	40.6	41.2	42.6	41.1	30.8

As shown in Table 60, students in grade 10 had the highest prevalence of being arrested (4.4%), followed by students in grade 11 (3.9%). All other grades had a prevalence that was below the survey average of 2.2% for being arrested. When compared by grades, the prevalence of those who have attacked someone with the intention of causing serious harm showed that students in grade 8 had the highest prevalence out of all grades (13.3%), followed by students in grade 9 at 12.9% and grade 10 at 12.2%.

With regards to being drunk at school, students in grade 10 accounted for the highest prevalence at 7.5%. Interestingly, the prevalence of being drunk at school decreases for grade 11 (5.5%) and 12 (4.5%) students.

When proportions for suspensions because of violence were compared by grade levels, students in grade 10 report the highest prevalence (13.2%) and grade 12 students reported the lowest prevalence (4.0%). For those reporting that they belonged to a gang/crew, the highest prevalence was reported by those in grade 9 (8.7%) and grade 8 (8.0%).

The grade with the highest reported prevalence for fighting was grade 9 as reported by 42.6% of students. Students in grade 6 (36.8%), grade 7 (34.6%) and grade 12 (30.8%) reported proportions that were lower than the survey average of 38.8%.

Witnessed Life-Threatened Events & Violence

TABLE 61: PERCENTAGE OF STUDENTS WHO HAVE EXPERIENCED A LIFE-THREATENING EVENT OR VIOLENCE BY GENDER (%)

Percentage of Students Who Have Experienced a Life-Threatening Event or Violence by Gender (%)			
Have you ever…	**Overall (N)**	**Males (%)**	**Females (%)**
Been through a life-threatening event?	1122 (31.1%)	33.5	28.9
Witnessed violence or aggression at home?	927 (25.7%)	23.1	28.1
Witnessed violence or aggression at school?	2001 (55.5%)	57.8	53.1
Witnessed violence or aggression in the community?	1745 (48.4%)	49.9	46.8

A reported 31.1% of students have experienced a life-threatening event, with more boys (33.5%) reporting this experience than girls (28.9%). With regards to witnessing violence, more than half of the student's report witnessing violence at school (55.5%), with more boys (57.8%) reporting this than girls (53.1%). Similarly, more boys (49.9%) than girls (46.8%) report witnessing violence or aggression in the community; however, this difference was not statistically significant. Witnessing violence or aggression at home was the least common location reported (25.7% of students). However, significantly more girls reported witnessing violence at home compared to boys, ($p<0.01$).

Table 62 shows that experiences of life-threatening events varied by grade with the lowest reported proportions found among students in grade 6 (24.7%), and the highest in grade 10 (39.7%). With regards to witnessing aggression at home, Table 62 shows that these proportions increase as grade levels increase, until grade 12 where the prevalence drops to 23.2%. Grades 8-10 reported a prevalence of violence at home ranging between 16.4%- 34.3% of students. Grades 9-11 all reported proportions that were above the survey average of 25.7%. With respect to witnessing violence at school, this was reported by more than half of all students in grades 7-11 ranging from 53.5%-61.3% of students. The highest proportion of witnessing violence at school was reported by 61.3% of students in grade 10. The lowest proportions for this item were in grade 12 (41.9%) and grade 6 (49.3%).

Lastly, with regards to witnessing violence or aggression in the community, this was reported by more than half of all students in grades 9-12 ranging from 51.3%-58.4%. These grade levels all reported proportions that were higher than the survey average of 48.4%. The highest proportion

was reported by 58.4% of students in grade 11. The lowest proportion was reported for witnessing violence in the community, reported by 37.8% of students in grade 6.

TABLE 62: PERCENTAGE OF STUDENTS WHO HAVE EXPERIENCED A LIFE-THREATENING EVENT OR VIOLENCE BY GRADE LEVEL (%)

Percentage of Students Who Have Experienced a Life-Threatening Event or Violence by Grade Level (%)							
Have you ever…	**Grade 6**	**Grade 7**	**Grade 9**	**Grade 9**	**Grade 10**	**Grade 11**	**Grade 12**
Been through a life-threatening event?	24.7	26.5	32.9	30.0	39.7	36.6	26.8
Witnessed violence or aggression at home?	16.4	21.8	23.9	29.6	32.4	34.3	23.2
Witnessed violence or aggression at school?	49.3	53.5	59.7	55.4	61.3	59.8	41.9
Witnessed violence or aggression in the community?	37.8	40.5	48.1	51.3	57.0	58.4	52.5

TABLE 63: PROPORTION OF STUDENTS WHO HAVE EXPERIENCED A LIFE-THREATENING EVENT OR VIOLENCE BY AGE GROUP (%)

Percentage of Students Who Have Experienced a Life-Threatening Event or Violence by Age Group (%)								
Have you ever…	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**
Been through a life-threatening event?	25.4	25.1	28.5	32.3	36.9	35.2	40.1	22.9
Witnessed violence or aggression at home?	17.2	19.3	20.2	28.0	32.1	36.0	31.4	15.7
Witnessed violence or aggression at school?	50.8	51.7	57.7	57.2	58.8	62.0	48.3	32.5
Witnessed violence or aggression in the community?	38.9	39.6	42.4	50.5	56.1	57.7	57.9	48.2

Special Analysis

This section of the CISDUS 2022 report represents analysis of a subset of students (Grades 8-12) who responded to the RCAD questionnaire. Consumption patterns, violence-related, and other anti-social behaviours were computed for this subset to represent the independent variables used in the regression analyses (predicting total anxiety and depression based on the RCAD survey questionnaire and predicting the odds of attacking someone with the intention to harm them – an important variable in the antisocial behaviour component of the survey).

Consumption Patterns – licit and Illicit Substances (Students in Grades 8-12)

Percentage of students reporting use of cigarettes, e-cigarettes, alcohol, and marijuana for the past 12 months and last 30 days. Tables below show the prevalence of past 12 months and last 30 days use (current use) for this subset of students tabulated to show overall averages and comparisons by gender, location and grade level.

TABLE 64: OVERALL PREVALENCE OF SUBSTANCE USE (%)

Overall Prevalence of Substance Use (%)									
		Gender		District Location					
	Overall	Boys	Girls	West Bay	George Town	Bodden Town	North Side	East End	Cayman Brac
Past year cigarette	4.1	3.8	4.3	5.2	4.5	3.5	3.5	-	1.6
Current cigarette	1.8	1.6	2.0	2.1	1.9	1.5	2.3	-	1.6
Past year e-cigarettes	27.7	25.5	29.7	28.6	25.3	31.3	24.4	32.8	20.6
Current e-cigarettes	18.1	16.1	20.0	20.2	16.1	20.3	17.4	32.4	7.9
Past year alcohol	41.3	37.9	44.7	42.0	44.3	40.9	31.4	37.9	19.0
Current alcohol	21.7	20.7	22.9	24.2	24.5	18.3	16.3	17.2	9.5
Past year marijuana	16.2	15.3	17.4	17.1	16.0	17.4	10.5	22.4	6.3
Current marijuana	9.3	9.5	9.2	10.8	8.2	10.2	8.1	12.1	3.2
Binge drinking	10.8	10.7	10.9	13.4	11.7	8.3	7.0	13.8	3.2
Number of students	*1934*	*929*	*989*	*426*	*783*	*518*	*86*	*58*	*63*

Cigarette Use

Past 12 months prevalence - Overall past 12 months cigarette use prevalence was 4.1% - one in twenty-four students reported using cigarettes in the past 12 months. The average past 12 months prevalence of cigarette smoking was about the same among boys (3.8%) and girls (4.3%). With regards to location, rates ranged between 1.6% (Cayman Brac) and 5.2% (West Bay). There was no reported past 12 months cigarette use in East End. Two districts reported prevalence above the subset average – George Town (4.5%) and West Bay (5.2%). The remaining two districts reported rates below the average - Bodden Town and North Side, both (3.5%).

Last 30 prevalence - On average, 1.8% of the students in the subset had used cigarettes during the last 30 days. The average rate for boys and girls was slightly different, boys reported a slightly lower prevalence (1.6%) compared to girls (2%). For location, the highest rate was reported in East End (32.4%) and followed by West Bay (20.2%), and Bodden Town (20.3%), North Side (17.4%), George Town (16.1%), and Cayman Brac (7.9%).

E-cigarette

Past 12 months prevalence - Overall past 12 months e-cigarette use prevalence was 27.7% - over a quarter of these students reported using e-cigarettes in the past 12 months. The average past 12 months prevalence of e-cigarette use was notably higher among girls (29.7%) compared to boys (25.5%). With regards to location, rates were higher in East End (32.8%) and Bodden Town (31.3%). The lowest rates were reported in Cayman Brac (20.6%) and North Side (24.4%). Prevalence for three districts was above the subset average – East End, Bodden Town, and West Bay, while the three other districts reported rates below the average – Cayman Brac, George Town, and North Side.

Last 30 prevalence - On average, 18.1% of the students in the subset had used e-cigarettes during the last 30 days. The average rate for boys and girls was notably different, boys reported a lower prevalence (16.1%) compared to girls (20%). For location, the highest rate was reported in North Side (2.3%) and followed by West Bay (2.1%), George Town (1.9%), Cayman Brac (1.6%), and Bodden Town (1.5%).

Alcohol

Past 12 months prevalence - Overall past 12 months alcohol use prevalence was 41.3% - four in ten students reported using alcohol in the past 12 months. The average past 12 months prevalence of alcohol smoking was significantly higher among girls (44.7%) compared to boys (37.9%). With

regards to location, rates ranged between 19% (Cayman Brac) and 44.3% (George Town). The reported past 12-month alcohol use prevalence in rank order showed George Town, West Bay (42%), and Bodden Town (40.9%) at or above the subset average. East End reported a prevalence of 37.9% and North Side reported 31.4%.

Last 30 prevalence - On average, 21.7% of the students in the subset had used alcohol during the last 30 days. The average rate for boys and girls was slightly different, boys reported a slightly lower prevalence (20.7%) compared to girls (22.9%). For location, the highest rate was reported in George Town (24.5%) and followed by West Bay (24.2%), Bodden Town (18.3%), East End (17.2%), North Side (16.3%), and Cayman Brac (9.5%).

Marijuana Use

Past 12 months prevalence - Overall past 12 months marijuana use prevalence was 16.2% - one in six students reported using marijuana in the past 12 months. The average past 12 months prevalence of marijuana smoking was slightly higher among girls (17.4%) compared to boys (15.3%). With regards to location, rates were higher in East End (22.4%), Bodden Town (17.4%), and West Bay (17.1%). The remaining three districts all reported prevalence that was lower than the subset average –George Town (16%), North Side (10.5%), and Cayman Brac (6.3%).

Last 30 prevalence - On average, 9.3% of the students in the subset had used marijuana during the last 30 days. The average rate for boys and girls was about the same boys (9.5%) compared to girls (9.2%). For location, the highest rate was reported in East End (12.1%) and followed by West Bay (10.8%), and Bodden Town (10.2%), North Side (8.1%), George Town (8.2%), and Cayman Brac (3.2%).

Binge Drinking

Overall binge drinking prevalence was 10.8% - one in ten students reported having five or more drinks at a single setting over the past two weeks. Binge drinking prevalence was similar among girls (10.9%) compared to boys (10.7%). With regards to location, rates ranged between 3.2% (Cayman Brac) and 13.8% (East End). The prevalence reported in the other districts showed George Town (11.7%), West Bay (13.4%), Bodden Town (8.3%), and North Side (7%).

Antisocial Behaviours

Bullying

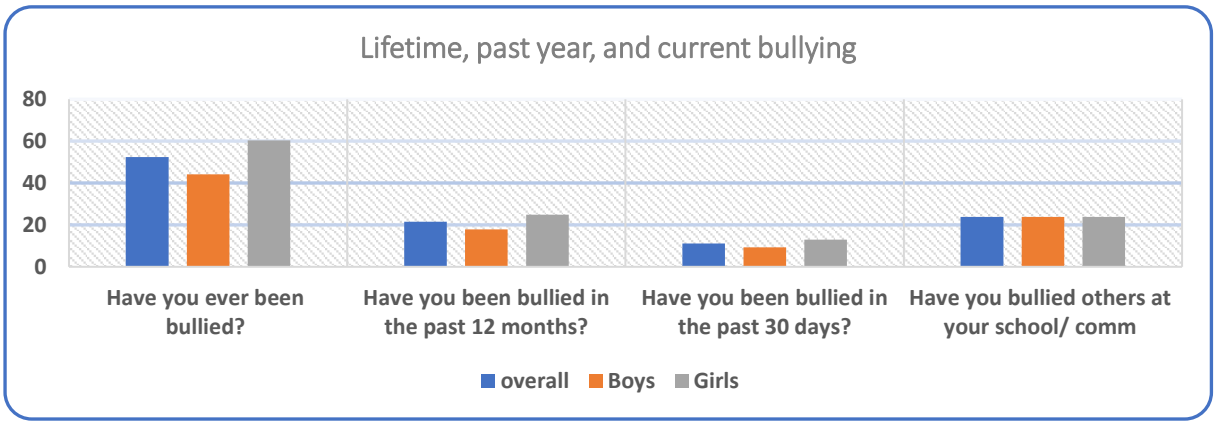
TABLE 65: PERCENTAGE OF STUDENTS WHO HAD EXPERIENCED BULLYING OR HAD BULLIED SOMEONE – OVERALL, GENDER AND LOCATION

Students Who Experienced Bullying or Bullied Someone – Overall, Gender, Location (%)									
		Gender		District Location					
	Overall	Boys	Girls	West Bay	George Town	Bodden Town	North Side	East End	Cayman Brac
Have you ever been bullied?	52.4	44.1	60.3	50.9	50.7	55.8	50.0	48.3	63.5
Have you been bullied in the past 12 months?	21.5	17.9	24.9	20.0	20.3	24.9	24.4	8.6	25.4
Have you been bullied in the past 30 days?	11.1	9.3	12.9	9.9	10.1	13.5	10.5	6.9	17.5
Have you bullied others at your school/ comm	23.9	23.9	23.9	23.0	19.3	29.9	26.7	25.9	33.3

Overall

In this subset, more than half of the students overall (52.4%) reported they have been bullied at some time. The proportion who reported being bullied in the past year was notably lower (21.5%, or just over one-fifth) while bullying in the past 30 days was even lower (11.1%, or about one in every nine students). A notable high proportion of students reported that they had bullied others at their school or community (23.9%), table 65.

Figure 2: Lifetime, past year, and current bullying



Gender Differences

The proportions reported by boys and girls were significantly different for all items except for bullying others. Significantly more girls (60.3%) compared to boys (44.1%) reported ever being bullied, p<0.01). This was also the case for past year bullying (24.9% girls versus 17.9% boys, p<0.01), and being bullied in the last 30 days (12.9% girls versus 9.3% boys, p<0.01). Interestingly, the same proportion of boys (23.9%) and girls (23.9%) reported having bullied someone at school or in the community.

Comparisons by Location

With respect to ever being bullied -proportions higher than the overall average of (52.4%) were reported for Cayman Brac (63.5%) and Bodden Town (55.8%). Three districts reported average past year bullying above the overall subset average of 21.3% --Cayman Brac (25.4%), North Side (24.4%), and Bodden Town (24.9%). With respect bullying in the last 30 days prior to the survey -proportions higher than the overall average of (11.1%) were reported for Cayman Brac (17.5%) and Bodden Town (13.5%). In terms of bullying someone in your community or school, notably high proportions were reported for East End (25.9%), North Side (26.7%), Bodden Town (29.9%), and Cayman Brac (33.3%).

Grade Level Comparisons

Grade level comparisons showed that higher proportions of lifetime bullying were reported for students in grades 8, 10, and 11. Being bullied in the past 12 months was higher for students in the two lower grades –grade 8 (24.9%), and grade 9 (25.5%). For those who reported being bullied in the last 30 days, proportions tended to decrease as grade level increased.

TABLE 66: PERCENTAGE OF STUDENTS WHO WERE BULLIED OR HAVE BULLIED SOMEONE (%) – GRADE LEVEL

Percentage of Students Who Were Bullied or Bullied Someone by Grade Level (%)					
	Grade 8	**Grade 9**	**Grade 10**	**Grade 11**	**Grade 12**
Have you ever been bullied?	50.6	46.6	55.8	56.8	44.2
Have you been bullied in the past 12 months?	25.5	22.7	22.1	17.7	14.5
Have you been bullied in the past 30 days?	14.4	11.0	12.4	7.8	6.4
Have you bullied others at your school/ community	24.8	24.5	22.7	19.3	19.8

For those who had bullied someone, the proportion varied among grade levels but showed a pattern of decrease as grade levels increased. The highest proportions were reported by students in the lowest grade and then decreased by about 8 percentage points by grade 12.

Weapons/ Violence and Aggression

Students were asked to report if they had ever carried a weapon in the community or at school, were they ever threatened or injured with a weapon, or have they ever attacked someone with intention of serious harm.

TABLE 67: PERCENTAGE OF STUDENTS WHO HAD CARRIED A WEAPON - OVERALL, GENDER AND LOCATION

Percentage of Students Who Carried a Weapon by Gender and Location (%)									
	Overall	**Gender**		**District**					
		Boys	**Girls**	**West Bay**	**George Town**	**Bodden Town**	**North Side**	**East End**	**Cayman Brac**
Have you ever carried a weapon	23.4	27.9	19.2	23.2	20.9	25.7	29.1	25.9	25.4
Been threatened or injured with a weapon	22.5	25.8	19.5	25.8	19.9	23.4	23.3	25.9	20.6
Attacked someone with intention of serious harm	12.5	15.8	9.2	9.9	11.0	15.8	18.6	15.5	9.5
Been in a fight	45.2	61.1	30.0	45.8	40.1	46.5	64.0	58.6	55.6

Overall, 23.4% of students reported that they had carried a weapon in the community or at school (almost a quarter of the students in this subset). Significantly more boys (27.9%) compared to girls (19.2%), $p<0.01$. Higher than average proportions were reported for at least four districts except – Cayman Brac (25.4%), North Side (29.1%), East End (25.9%), and Bodden Town (25.7%). Students in George Town (20.9%) reported the lowest prevalence followed by West Bay (23.2%).

In relation to the number of times **threatened or injured with a weapon**, more than a fifth (22.5%) of the students in this subset reported this. Boys (25.8%) were significantly more likely to report this compared to girls (19.5, $p<0.01$. Higher than average proportions were noted for all districts except Cayman Brac (20.6%) and George Town (19.9%).

One in eight students (12.5%) said they had **attacked someone with intention of serious harm**. Again, significantly more boys (15.8%) compared to girls (9.2%), $p<0.05$. By location, proportions

were higher in North Side (18.6%), Bodden Town (15.8%), and East End (15.5%). The lowest proportion was reported for students in Cayman Brac (9.5%).

Fighting

Overall, 45.2% of students had been in a fight- more than four in ten students reported being in a fight. This was reported by significantly more boys (61.1%) than girls (30.0%), $p<0.01$. By location, proportions were highest in North Side (64%), followed by East End (58.6%), Cayman Brac (55.6%), Bodden Town (46.5%), West Bay (45.8%), and George Town (40.1%).

Grade Level Comparison

From table 68 below, 19.2-24.4% of students in grade levels 8-12 reported carrying a weapon either in the community or at school. The highest proportion was reported for grade 9 (24.4%). With respect to being threatened, more than a fifth (21.1-24.7%) of students in all grades reported being threatened (the highest proportion reported for grade 10 (24.7%). With respect to attacking someone with the intention to harm them, proportions ranged from 7% -15.8% of students. The highest proportion reported was for grade 8 (15.8%). Grade 8-10 students were notably more likely to report being in a fight than students in the two higher grades.

TABLE 68: PERCENTAGE OF STUDENTS WHO CARRIED A WEAPON OR WERE THREATENED (%) – GRADE LEVEL

Percentage of Students Who Carried a Weapon or Have Been Threatened With A Weapon by Grade Level (%)					
	Grade 8	**Grade 9**	**Grade 10**	**Grade 11**	**Grade 12**
Have you ever carried a weapon	23.0	24.4	23.3	23.4	19.2
Been threatened or injured with a weapon	22.3	21.1	24.7	21.9	21.5
Attacked someone with intention of serious harm	15.8	14.4	13.1	8.1	7.0
Been in a fight	46.3	46.7	47.0	44.3	35.5

Other Antisocial Behaviours (Arrest, Suspension, Gang, Drunkenness)

Overall Prevalence and Gender Differences

TABLE 19: RESPONSES OF "YES" TO THE ANTISOCIAL BEHAVIOUR ITEMS (%)

Percentage of Responses to "Yes" To Antisocial Behaviour Items (%)									
		Gender		Location					
	Overall	Boys	Girls	West Bay	George Town	Bodden Town	North Side	East End	Cayman Brac
Been arrested	3.1	4.5	1.6	2.6	2.2	3.7	4.7	10.3	4.8
Been drunk at school	4.9	5.4	4.4	5.6	2.7	7.5	4.7	3.4	6.3
Got suspended because of violence	12.2	17.7	7.1	10.8	8.0	15.3	27.9	20.7	19.0
Belonged to a gang/crew	7.7	10.7	4.6	7.0	5.4	9.3	15.1	17.2	7.9

Overall, a small proportion of students said they had been arrested (3.1%) (Table 69). Boys (4.5%) were significantly more likely to indicate being arrested compared to girls (1.6%). A significantly higher prevalence was reported in the district of East End (10.3%) compared to the other grade levels where proportions ranged between 2.2% and 4.8%.

A small proportion (4.9%) reported being drunk at school (5.4% boys versus 4.4% girls). Girls were significantly more likely to report being drunk at school, $p<0.05$. Proportions reported by district showed above-average prevalence for Bodden Town (7.5%), Cayman Brac (6.3%), and West Bay (5.6%). Prevalence for the other districts was below the overall subset average.

Overall, one in eight students in this subset said they had been suspended from school because of violence (12.2%). Boys (17.7%) were significantly more likely to indicate being suspended compared to girls (7.1%). A significantly higher prevalence was reported in the district of North Side (27.9%). East End (20.7%), Cayman Brac (19%), and Bodden Town (15.3%) also reported prevalence higher than the average. The lowest prevalence was reported for George Town (8%).

Some 7.7% of students overall reported belonging to a gang/crew. The difference between boys (10.7%) and girls (4.69%) was statistically significant, $p<0.05$. Two districts, North Side (15.1%) and East End (17.2%) reported prevalence significantly higher than the overall subset average. However, George Town (5.4%) and West Bay (7%) reported prevalence below the average.

Grade Level Comparisons

TABLE 20: ANTISOCIAL BEHAVIOUR AND GRADE LEVEL

Responses of "yes" to the antisocial behaviour items (%)					
Have you ever...	**Grade 8**	**Grade 9**	**Grade 10**	**Grade 11**	**Grade 12**
Been arrested	2.3	2.1	4.4	4.2	1.7
Been drunk at school	2.9	3.2	7.0	6.0	5.2
Got suspended because of violence	14.2	10.5	14.3	12.5	4.7
Belonged to a gang/crew	8.4	6.6	8.2	7.3	7.6

Grade 10 students reported the highest prevalence of being arrested (4.4%). This was followed by grade 11 (4.2%), table 70. All other grades reported prevalence below the survey average of 3.1%.

Prevalence of students reporting being drunk at school varied by grade level. Two grades reported prevalence above the survey average (4.9%) –grades 10 and 11. Most all grades reported prevalence for having been suspended because of violence that was at or above the survey average of 12.2%. The exceptions were grade 9 (10.5%), and grade 12 (4.7%).

Belonging to a gang was most often reported by students from grade 8 (8.4%) and grade 10 (8.2%). The reported prevalence for the other three grades was about the survey of 7.7%.

Exposure to violence/aggression at home, school, or community

Students were asked if they had ever witnessed violence or aggression at home, school or in the community. The highest prevalence overall related to exposure to violence at school (65%), compared to 60% in the community and a notably lower proportion at home (32.9%). Girls (36.9%) reported a higher prevalence of exposure at home compared to boys (28.5%). However, boys reported a higher prevalence than girls for exposure at school and in the community.

Reported prevalence by location showed that all but two districts reported prevalence for exposure to violence/aggression at home that was around the subset average (32.9%). The exceptions were Bodden Town (40%) and North Side (36%).

Close to four in ten students (38.6%) reported going through a life-threatening event. A higher proportion of boys (42.1%) reported this compared to girls (35.4%). All but one district, George Town (34.1%) reported prevalence that was under the subset average.

TABLE 71: EXPOSURE TO VIOLENCE/AGGRESSION AT HOME, SCHOOL, OR COMMUNITY)

Percentage of Violence/Aggression At Home, School, or Community (%)									
		Gender		Location					
	Overall	Boys	Girls	West Bay	George Town	Bodden Town	North Side	East End	Cayman Brac
Witnessed violence at home	32.9	28.5	36.9	32.6	28.2	40.0	36.0	29.3	33.3
Witnessed violence at school	65.0	68.4	61.5	63.1	59.1	72.0	73.3	72.4	74.6
Witnessed violence at community	60.0	61.7	58.8	64.8	56.6	59.7	59.3	70.7	76.2
Through life-threatening event	38.6	42.1	35.4	42.5	34.1	38.2	47.7	48.3	50.5

Mental Health

Revised Children's Anxiety and Depression Scales - RCADs

This survey utilized the RCADS-25-item questionnaire derived from the Revised Child Anxiety and Depression Scales (RCADS)[10] original questionnaire that measures total depression and anxiety. This is the child self-report questionnaire with six subscales as shown in table 72.

Scoring the RCADS and Defining the Sub-scales

Each item is assigned a numerical value from 0-3, where 0 = Never, 1 = Sometimes, 2 = Often, and 3 = Always. The numerical values for each item in the subscale is added together to get the 'subscale score'.

The sum of the raw scores (each child's response) was converted to a standardized z-score.

The basic z score formula for a sample is: $z = (x - \mu) / \sigma$. Simply put, a z-score is the number of standard deviations from the mean a data point is. A z-score is also known as a standard score and it can be placed on a normal distribution curve. Z-scores range from -3 standard deviations (which would fall to the far left of the normal distribution curve) up to +3 standard deviations (which would fall to the far right of the normal distribution curve).

Z-scores were then converted to T-scores which are the applicable scores to determine the clinical thresholds for the syndromes. T-scores of 65 or higher indicates '***at the borderline clinical threshold'*** and T-score of 70 or higher indicates scores ***'above the clinical threshold'***.

*T-scores are standardized scores (t = [(z-score *10) +50]. A score of 50 represents the mean. A difference of 10 from the mean indicates a difference of one standard deviation. Thus, a score of 60 is one standard deviation above the mean, while a score of 30 is two standard deviations below the mean.*

[10] Bruce F. Chorpita, Chad Ebesutani, Susan H. Spence (2015) Revised Children's Anxiety and Depression Scale.

TABLE 72: ITEMS COMPRISING SUB-SCALES OF THE RCADS

Sub-scales (Disorder/Syndrome)	Items
Social Phobia	b) I worry when I think I have done poorly at something g) I worry what other people think of me v) I feel afraid that I will make a fool of myself in front of people
Panic Disorder	k) I suddenly become dizzy or faint when there is no reason for this n) I suddenly start to tremble or shake when there is no reason for this t) I worry that I suddenly get a scared feeling when there is nothing to be afraid of
Separation Anxiety Disorder	c) I would feel afraid of being on my own at home f) I am afraid of being in crowded places (like shopping etc.) i) I feel scared if I have to sleep on my own
Generalized Anxiety Disorder	e) I Worry that something awful will happen to someone in my family r) I think about death y) I worry that something bad will happen to me
Obsessive Compulsive Disorder	l) I have to do some things over and over again (like washing my hands, cleaning) q) I have to think of special thoughts (like numbers or words) to stop bad things from happening w) I have to do some things in just the right way to stop bad things from happening
Major Depressive Disorder	a) I feel sad or empty d) Nothing is much fun anymore h) I have trouble sleeping j) I have problems with my appetite m) I have no energy to do things o) I can't think clearly p) I feel worthless s) I feel like I don't want to move u) I am tired a lot x) I feel restless

Reliability Statistics for RCADS-25 Survey Items

The 25-item questionnaire used in this survey showed '**excellent**' internal consistency reliability. The overall alpha coefficient (Cronbach's alpha) for the 25-item questionnaire was .946. All subscales also showed acceptable to good internal reliability (SP .78, PD .77, SAD .80, GAD .77, OCD .79, and MDD .85). The overall alpha coefficient (Cronbach's alpha) for the subscales was .815

Test reliability refers to the degree to which a **test** is consistent and stable in measuring what it is intended to measure. The results provide convincing evidence that the RCADS-25 is a valid assessment tool for measuring anxiety and depression among Cayman Islands students.

Items in the Revised Children's Anxiety and Depression Scale (RCADS-25) – Child Self Report

Percentage Responses

TABLE 73: PERCENTAGE RESPONSES TO ITEMS IN THE RCADS

	Percentage Responses				
	Never	Sometimes	Often	Always	Often/ always
a) I feel sad or empty	20.6	49.9	19.4	10.2	30
b) I worry when I think I have done poorly at something	8.9	34.6	32.0	24.5	57
c) I would feel afraid of being on my own at home	71.6	21.4	3.9	3.1	7
d) Nothing is much fun anymore	28.3	46.1	16.2	9.4	26
e) I Worry that something awful will happen to someone in my family	28.2	41.3	15.0	15.5	31
f) I am afraid of being in crowded places (like shopping etc.)	54.8	27.0	7.5	10.7	18
g) I worry what other people think of me	28.7	35.6	17.1	18.5	36
h) I have trouble sleeping	33.9	38.8	14.4	12.9	27
i) I feel scared if I have to sleep on my own	82.6	12.5	2.0	2.8	5
j) I have problems with my appetite	48.6	28.1	12.7	10.7	23
k) I suddenly become dizzy or faint when there is no reason for this	58.0	25.0	9.6	7.3	17
l) I have to do some things over and over again (like washing my hands, cleaning)	C 50.9	27.2	11.3	10.6	22
m) I have no energy to do things	26.0	44.5	18.7	10.7	29
n) I suddenly start to tremble or shake when there is no reason for this	58.3	24.0	10.3	7.5	18
o) I can't think clearly	35.3	41.4	15.1	8.1	23
p) I feel worthless	49.0	29.5	11.3	10.3	22
q) I have to think of special thoughts (like numbers or words) to stop bad things from happening	69.1	17.1	7.0	6.8	14
r) I think about death	33.4	37.0	15.8	13.9	30

s) I feel like I don't want to move	43.1	35.0	12.8	9.1	22
t) I worry that I suddenly get a scared feeling when there is nothing to be afraid of	53.8	27.0	10.2	9.0	19
u) I am tired a lot	18.7	35.8	22.6	22.9	46
v) I feel afraid that I will make a fool of myself in front of people	28.9	35.9	18.1	17.1	35
w) I have to do some things in just the right way to stop bad things from happening	51.8	28.9	11.3	8.0	19
x) I feel restless	41.3	36.3	12.6	9.9	23
y) I worry that something bad will happen to me	38.8	36.0	12.9	12.4	25

Summary findings:

Responses to the RCAD were further cumulated for the options 'often' and 'always'. These percentages were aggregated into cumulated percentages less than 10%, 10-19%, 20-29% and 30% or greater and represented in figure 3 below. Figure 3 shows that:

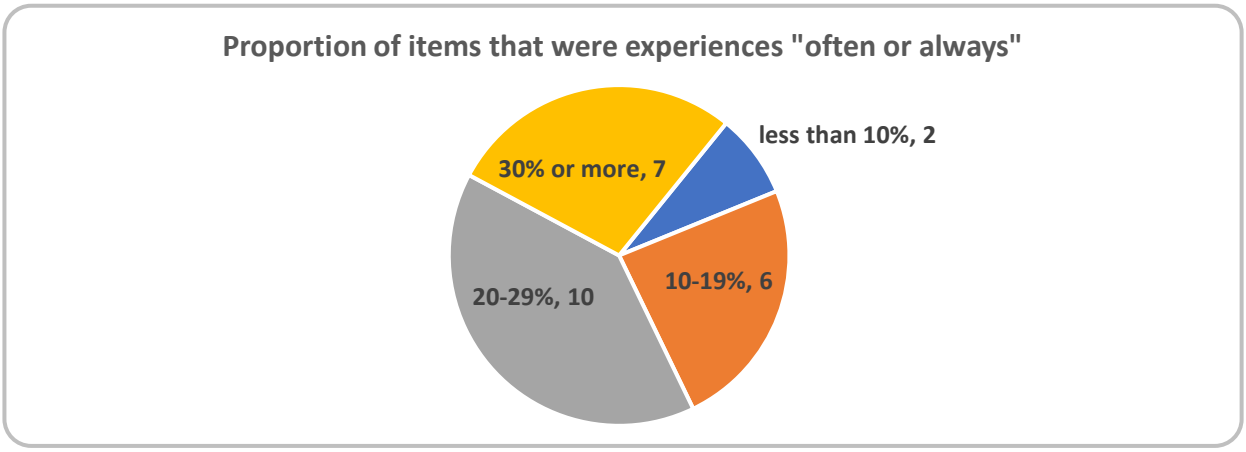
- Students responded often/always less than 10% of the times for only two (2) items (no highlight)
- Students responded often/always between 10-19% of the times for six (6) items (highlight blue)
- Students responded often/always between 20-29% of the times for ten (10) items (highlight green)
- Students responded often/always between >30% of the times for seven (7) items (highlight yellow)

TABLE 74: CUMULATIVE PERCENT RESPONSES TO OFTEN/ALWAYS

	Percentage Responses				
	Never	Sometimes	Often	Always	Often/ always
c) I would feel afraid of being on my own at home	71.6	21.4	3.9	3.1	7
i) I feel scared if I have to sleep on my own	82.6	12.5	2	2.8	5
f) I am afraid of being in crowded places (like shopping etc.)	54.8	27	7.5	10.7	18
k) I suddenly become dizzy or faint when there is no reason for this	58	25	9.6	7.3	17
n) I suddenly start to tremble or shake when there is no reason for this	58.3	24	10.3	7.5	18
q) I have to think of special thoughts (like numbers or words) to stop bad things from happening	69.1	17.1	7	6.8	14
t) I worry that I suddenly get a scared feeling when there is nothing to be afraid of	53.8	27	10.2	9	19
w) I have to do some things in just the right way to stop bad things from happening	51.8	28.9	11.3	8	19
d) Nothing is much fun anymore	28.3	46.1	16.2	9.4	26
p) I feel worthless	49	29.5	11.3	10.3	22
h) I have trouble sleeping	33.9	38.8	14.4	12.9	27
j) I have problems with my appetite	48.6	28.1	12.7	10.7	23
l) I have to do some things over and over again (like washing my hands, cleaning)	50.9	27.2	11.3	10.6	22
m) I have no energy to do things	26	44.5	18.7	10.7	29
x) I feel restless	41.3	36.3	12.6	9.9	23
y) I worry that something bad will happen to me	38.8	36	12.9	12.4	25
o) I can't think clearly	35.3	41.4	15.1	8.1	23
s) I feel like I don't want to move	43.1	35	12.8	9.1	22
a) I feel sad or empty	20.6	49.9	19.4	10.2	30

b) I worry when I think I have done poorly at something	8.9	34.6	32	24.5	57
e) I Worry that something awful will happen to someone in my family	28.2	41.3	15	15.5	31
g) I worry what other people think of me	28.7	35.6	17.1	18.5	36
r) I think about death	33.4	37	15.8	13.9	30
u) I am tired a lot	18.7	35.8	22.6	22.9	46
v) I feel afraid that I will make a fool of myself in front of people	28.9	35.9	18.1	17.1	35

FIGURE 3: CUMULATED AND AGGREGATED PERCENTAGES FOR OFTEN/ALWAYS



Gender Differences

To measure gender differences, independent samples t-tests were performed on RCADS total score (total internalizing) and on all the subscale scores. There was a significant difference in the total internalizing scores for girls (Mean = 53.1±15.8) compared to boys (Mean = 42.3±13.3). Girls also reported higher levels (scores) for anxiety and depression than boys on all subscales (see table 75). The mean score difference for the total internalizing scale (between girls and boys) was 10.7 with a statistically significant t-test statistic and 95% confidence interval (t=16.053 CI 9.420-12.042). The t-test was statistically significant on all subscales except for separation anxiety disorder and generalized anxiety disorder—mean scores for girls were no different than boys with respect to these two subscales.

TABLE 75: GENDER DIFFERENCES ON RCADS TOTAL SCORES AND SUBSCALES SCORES

Gender Differences on RCADS Total Scores & Subscale Scores						
RCADS	**Mean scores (Std, deviation)**		**Mean Diff.**	**T-statistics**	**95% CI**	
	Boys (n=939)	**Girls (n=989)**			**Lower**	**Upper**
Total internalizing	42.3 (13.3)	53.1 (15.8) **	10.7	16.053	9.420	12.042
Social phobia	6.3 (2.3)	8.0 (2.6) **	1.7	15.181	1.470	1.906
Panic disorder	4.2 (1.8)	5.8 (2.6) **	1.6	16.025	1.432	1.831
Separation anxiety disorder	3.8 (1.5)	4.8 (1.9)	1.0	13.120	.864	1.167
Generalized anxiety disorder	5.6 (2.3)	6.8 (2.5)	1.2	10.964	.996	1.431
Obsessive compulsive disorder	4.7 (2.1)	5.3 (2.4) **	0.6	6.254	.443	.848
Major depressive disorder	17.8 (6.2)	22.3 (7.3) **	4.5	14.567	3.902	5.116

****p<0.001**

Disorders/Syndromes and T-Score Classifications

TABLE 76: PERCENTAGE OF SCORES T>=65, OVERALL, BOYS, GIRLS AND GRADE

Disorders/Syndromes and score classifications	Overall	Gender		Grade level				
		Boys	Girls	8	9	10	11	12
Social phobia (n=1918)								
T >=65 (at borderline clinical threshold	7.9	2.6	**12.8**	7.7	**8.2**	8.6	**7.6**	**5.2**
T >=70 (above clinical threshold)	-	-	**-**	-	-	-	**-**	**-**
Panic disorder (n=1918)								
T >=65 (at borderline clinical threshold	10.5	3.8	**16.8**	10.4	11.7	9.6	10.7	8.7
T >=70 (above clinical threshold)	6.5	2.4	**10.4**	7.2	6.2	6.2	6.5	5.8
Separation anxiety disorder (n=1918)								
T >=65 (at borderline clinical threshold	10.5	5.1	**15.7**	11.1	7.8	11.2	**10.4**	**13.4**
T >=70 (above clinical threshold)	5.4	2.4	**8.3**	5.2	4.1	6.0	**5.5**	**7.0**
Generalized anxiety disorder (n=1918)								
T >=65 (at borderline clinical threshold	12.6	7.4	**17.5**	13.1	13.5	**12.9**	**12.8**	**7.0**
T >=70 (above clinical threshold)	4.4	3.0	**5.7**	3.8	5.0	5.6	**4.2**	**0.6**
Obsessives compulsive disorder (n=1918)								
T >=65 (at borderline clinical threshold	8.8	5.6	**11.7**	**10.4**	**8.0**	8.8	8.6	5.8
T >=70 (above clinical threshold)	5.4	2.9	**7.8**	**5.4**	**4.6**	6.0	6.5	2.9
Major depressive disorder (n=1918)								
T >=65 (at borderline clinical threshold	9.7	4.5	**14.6**	9.5	7.3	**10.2**	**12.0**	**8.7**
T >=70 (above clinical threshold)	4.6	1.9	**7.1**	4.3	3.0	5.6	**5.7**	**3.5**
Total anxiety and depression (n=1918)								
T >=65 (at borderline clinical threshold	8.4	3.7	**12.4**	8.1	7.1	**8.6**	**9.9**	**5.2**
T >=70 (above clinical threshold)	4.1	1.7	**6.4**	4.7	2.7	4.6	**4.7**	**2.9**

Sub-scale Analysis – (Table 76) and figures 4, 5, and 6.

Social Phobia

Overall, **7.9%** of the t-scores were 'at the borderline clinical threshold' with **none** 'above clinical threshold' for the social phobia sub-scale. A significantly higher proportion of girls compared to boys were 'at the borderline clinical threshold' (12.8% versus 2.6%). Only students in grade 9 (8.2%) and grade 10 (8.6%) had scores that were assessed as being above the (7.9%) borderline clinical threshold'.

Panic Disorder

Some **10.5%** of the t-scores were 'at the borderline clinical threshold' with **6.5%** 'above clinical threshold' for panic disorder. A significantly higher proportion of girls compared to boys were 'at the borderline clinical threshold' (16.8% versus 3.8%), as well as t-scores 'above clinical threshold' (10.4 versus 2.4%). A higher proportion of students in grade 9 (11.7%) and grade 11 (10.7%) were more likely than students in the other grades to report t-scores that were assessed as being above the (8.8%) borderline clinical threshold'. Only grade 8 students (7.2%) recorded scores that were assessed as being 'above clinical threshold'.

Separation Anxiety Disorder

Some **10.5%** of the t-scores were 'at the borderline clinical threshold' with **5.4%** 'above clinical threshold' for separation anxiety. A significantly higher proportion of girls compared to boys were 'at the borderline clinical threshold' (15.7% versus 5.1%), as well as t-scores 'above clinical threshold' (8.3% versus 2.4%). A higher proportion of students in all grades except grade 9 (7.8%) were more likely to be assessed as being above the (10.5%) borderline clinical threshold'. Only students in grades 10 and 12 recorded scores that were assessed as being above the overall 5.4% average for separation anxiety t-scores 'above clinical threshold'.

Generalized Anxiety Disorder

Some **12.6%** of the t-scores were 'at the borderline clinical threshold' with **4.4%** 'above clinical threshold' for generalized anxiety. A significantly higher proportion of girls compared to boys were 'at the borderline clinical threshold' (17.5% versus 7.4%), while t-scores 'above clinical threshold' showed only a slightly higher proportion for girls (5.7% versus 3.0%). A higher proportion of students in all grades except grade 12 (7%) were more likely to be assessed as being above the average (12.6%) borderline clinical threshold'. Only students in grades 9 and 10 recorded scores that were assessed as being above the overall 4.4% average for generalized anxiety t-scores 'above

clinical threshold'. It should be noted that less than one percent of students in grade 12 were assessed as being 'above clinical threshold'.

Obsessive Compulsive Disorder

Some **8.8%** of the t-scores were 'at the borderline clinical threshold' with **5.4%** 'above clinical threshold' for obsessive compulsive disorder. A significantly higher proportion of girls compared to boys were 'at the borderline clinical threshold' (11.7% versus 5.6%), as well as t-scores 'above clinical threshold' (7.8% versus 2.9%). Only students in grade 8 (10.4%) recorded scores that were assessed as being above the average (8.8%) borderline clinical threshold'. Only students in grades 9 and 12 recorded scores that were assessed as being above the overall 5.4% average for obsessive compulsive disorder t-scores 'above clinical threshold'.

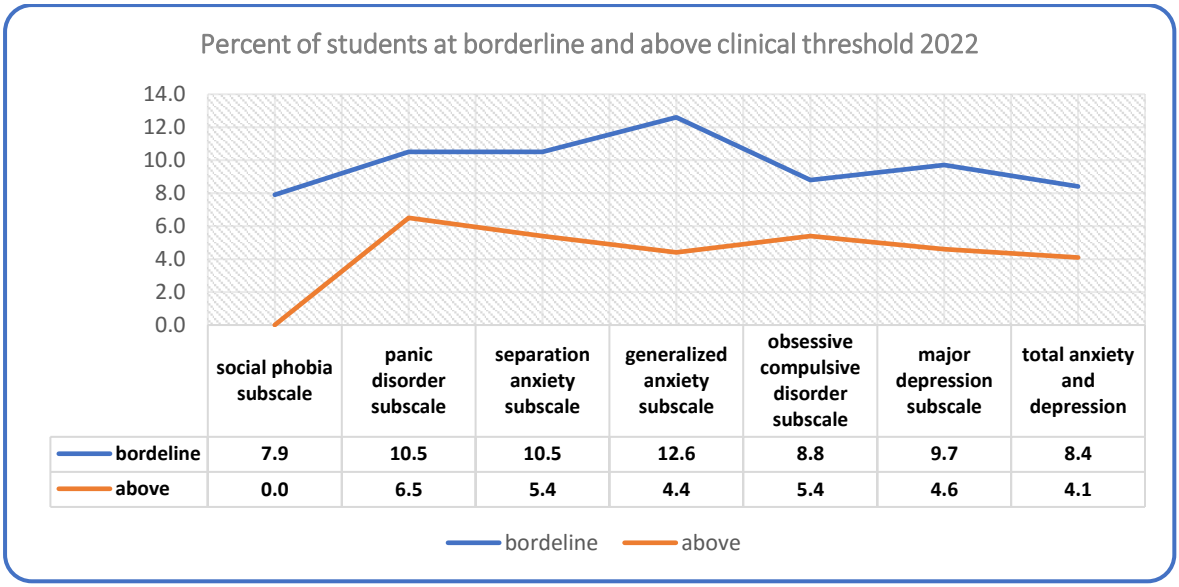
Major Depressive Disorder

Overall, **9.7%** of the t-scores were 'at the borderline clinical threshold' with **4.6%** 'above clinical threshold' for major depression. A significantly higher proportion of girls compared to boys were 'at the borderline clinical threshold' (14.6% versus 4.5%), as well as t-scores 'above clinical threshold' (7.1% versus 1.9%). Only students in grades 10 and 11 recorded scores that were assessed as being above the average (9.7%) borderline clinical threshold'. Likewise, only students in grades 10 and 11 recorded scores that were assessed as being above the overall 4.6% average for major depressive disorder t-scores 'above clinical threshold'. It should be noted that the proportions were only slightly higher.

Total Anxiety and Depression (Total Internalizing)

Some 8.4% of the t-scores were 'at the borderline clinical threshold' with 4.1% 'above clinical threshold' for total anxiety and depression. A significantly higher proportion of girls compared to boys were 'at the borderline clinical threshold' (12.4% versus 3.7%), as well as t-scores 'above clinical threshold' (6.4% versus 1.7%). Only students in grades 10 and 11 recorded scores that were assessed as being above the average (8.4%) borderline clinical threshold'. Likewise, only students in grades 10 and 11, in addition to students in grade 8, recorded scores that were assessed as being above the overall 4.1% average for total anxiety and depression t-scores 'above clinical threshold'. It should be noted that the proportions were only slightly higher.

FIGURE 4: PERCENT OF STUDENTS AT BORDERLINE AND ABOVE CLINICAL THRESHOLD 2022



	social phobia subscale	panic disorder subscale	separation anxiety subscale	generalized anxiety subscale	obsessive compulsive disorder subscale	major depression subscale	total anxiety and depression
bordeline	7.9	10.5	10.5	12.6	8.8	9.7	8.4
above	0.0	6.5	5.4	4.4	5.4	4.6	4.1

FIGURE 5: PERCENT OF STUDENTS AT BORDERLINE CLINICAL THRESHOLD 2022

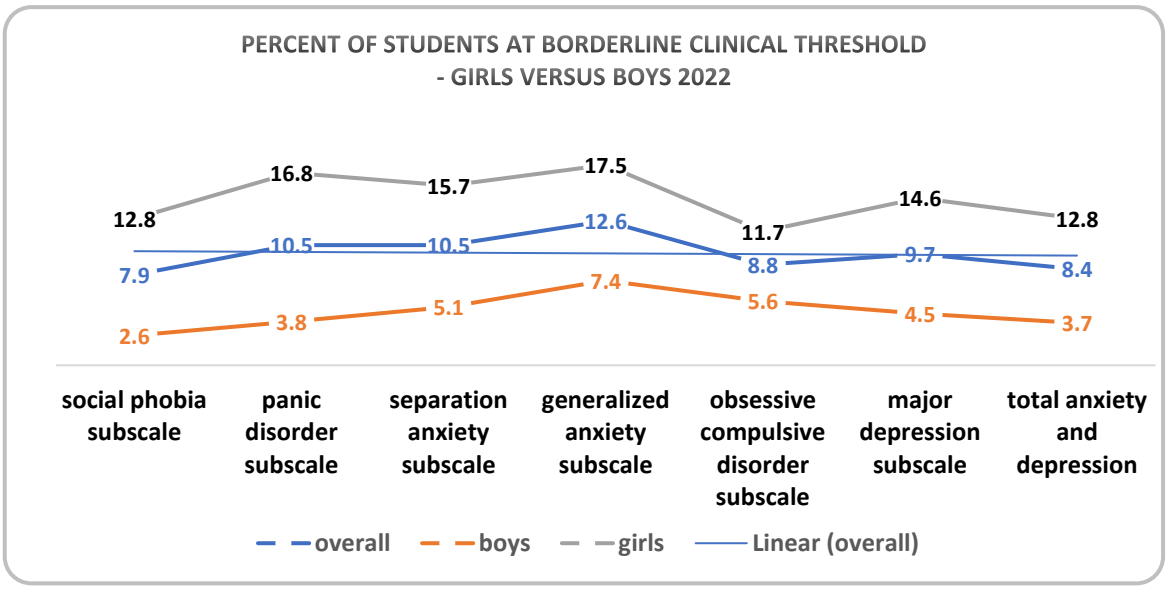


FIGURE 6: PERCENT OF STUDENTS AT ABOVE CLINICAL THRESHOLD 2022

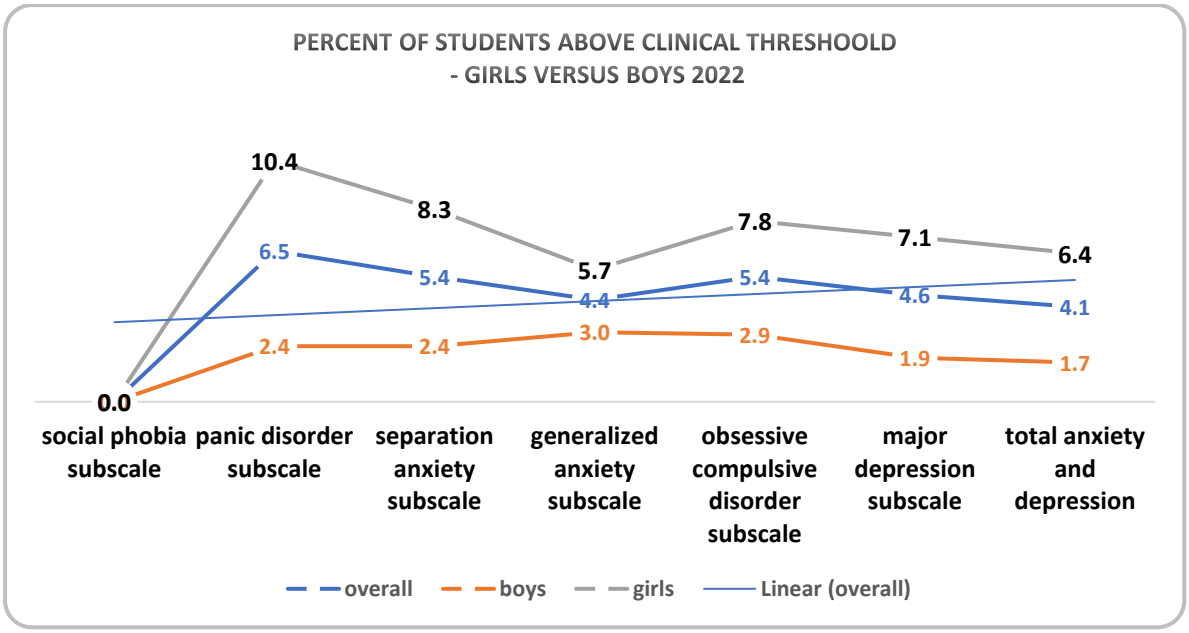


TABLE 77: EQUIVALENT NUMBER OF STUDENTS FOR THE PROPORTIONS OF SCORES T>=65, OVERALL, BOYS, GIRLS AND GRADE - 2022

Disorders/Syndromes and score classifications	Overall	Gender		Grade level				
		Boys	Girls	8	9	10	11	12
Social phobia (n=1918)								
T >=65 (at borderline clinical threshold	151	24	127	34	36	43	29	9
T >=70 (above clinical threshold)	-	-	-	-	-	-	-	-
Panic disorder (n=1918)								
T >=65 (at borderline clinical threshold	201	35	166	46	51	48	41	15
T >=70 (above clinical threshold)	125	22	103	32	27	31	25	10
Separation anxiety disorder (n=1918)								
T >=65 (at borderline clinical threshold	202	47	155	49	34	56	40	23
T >=70 (above clinical threshold)	104	22	82	23	18	30	21	12
Generalized anxiety disorder (n=1918)								
T >=65 (at borderline clinical threshold	242	69	173	58	59	64	49	12

T >=70 (above clinical threshold)	84	28	56	17	22	28	16	1
Obsessives compulsive disorder (n=1918)								
T >=65 (at borderline clinical threshold	168	52	116	46	35	44	33	10
T >=70 (above clinical threshold)	104	27	77	24	20	30	25	5
Major depressive disorder (n=1918)								
T >=65 (at borderline clinical threshold	186	42	144	42	32	51	46	15
T >=70 (above clinical threshold)	88	18	70	19	13	28	22	6
Total anxiety and depression (n=1918)								
T >=65 (at borderline clinical threshold	157	34	123	36	31	43	38	9
T >=70 (above clinical threshold)	79	16	63	21	12	23	18	5

Comparative Results – Borderline and Above Threshold T-scores Assessment 2022 Results compared to 2020 Results

For comparison, table 78 and figures 7 and 8 following show the proportion of students that were 'at the borderline clinical threshold' and 'above clinical threshold' for the two survey periods, 2020 and 2022. Comparisons are for all the subscale disorders.

Social Phobia – there was a slightly lower proportion of students assessed 'at the borderline clinical threshold' in the 2022 survey compared to 2020 (7.9% vs 10.6%, a 2.7 percentage points decrease). However, in 2022 there were no students assessed at 'above clinical threshold'.

Panic Disorder – the overall proportion of students classified 'at the borderline clinical threshold' in 2022 showed a slight increase compared to 2020. The proportions for 'above clinical threshold' in both survey periods were practically the same.

Separation Anxiety Disorder - the overall proportion of students classified 'at the borderline clinical threshold' in 2022 showed a slight increase compared to 2020 (10.5% vs 8.1%, a 2.4 percentage point increase). The proportions for 'above clinical threshold' in both survey periods were practically the same.

Generalized Anxiety Disorder – there was a slightly higher proportion of students assessed 'at the borderline clinical threshold' in the 2022 survey compared to 2020 (12.6% vs 10.1%, a 2.5

percentage points increase). The proportions of students assessed at 'above clinical threshold' in 2022 showed a 0.7 percentage point decrease compared to 2020.

Obsessive Compulsive Disorder – there was a slightly lower proportion of students assessed 'at the borderline clinical threshold' in the 2022 survey compared to 2020 (8.8% vs 11.2%, a 2.4 percentage points increase). The proportions of students assessed at 'above clinical threshold' in 2022 showed a 1.2 percentage point decrease compared to 2020.

Major depressive Disorder – there was a slightly higher proportion of students assessed 'at the borderline clinical threshold' in the 2022 survey compared to 2020 (9.7% vs 8.4%, a 1.3 percentage points increase). The proportions of students assessed at 'above clinical threshold' in 2022 was the same compared to 2020.

Total Anxiety and Depression – there was no difference in the proportions of students assessed 'at the borderline clinical threshold' in the 2022 survey compared to 2020 (8.4% vs 8.6%). This was the same pattern observed for 'above clinical threshold'.

TABLE 78: COMPARATIVE RESULTS – BORDERLINE AND ABOVE THRESHOLD T-SCORES ASSESSMENT 2022 RESULTS COMPARED TO 2020 RESULTS

	Borderline clinical threshold		Above clinical threshold	
	Survey period		Survey period	
Subscales	**2022**	**2020**	**2022**	**2020**
Social phobia	7.9	10.6	-	5.6
Panic disorder	10.5	8.8	6.5	5.3
Separation anxiety disorder	10.5	8.1	5.4	4.6
Generalized anxiety disorder	12.6	10.1	4.4	5.1
Obsessives compulsive disorder	8.8	11.2	5.4	6.6
Major depressive disorder	9.7	8.4	4.6	4.4
Total anxiety and depression	8.4	8.6	4.1	4.2

FIGURE 7: COMPARISON BORDERLINE CLINICAL THRESHOLD 2020/2022

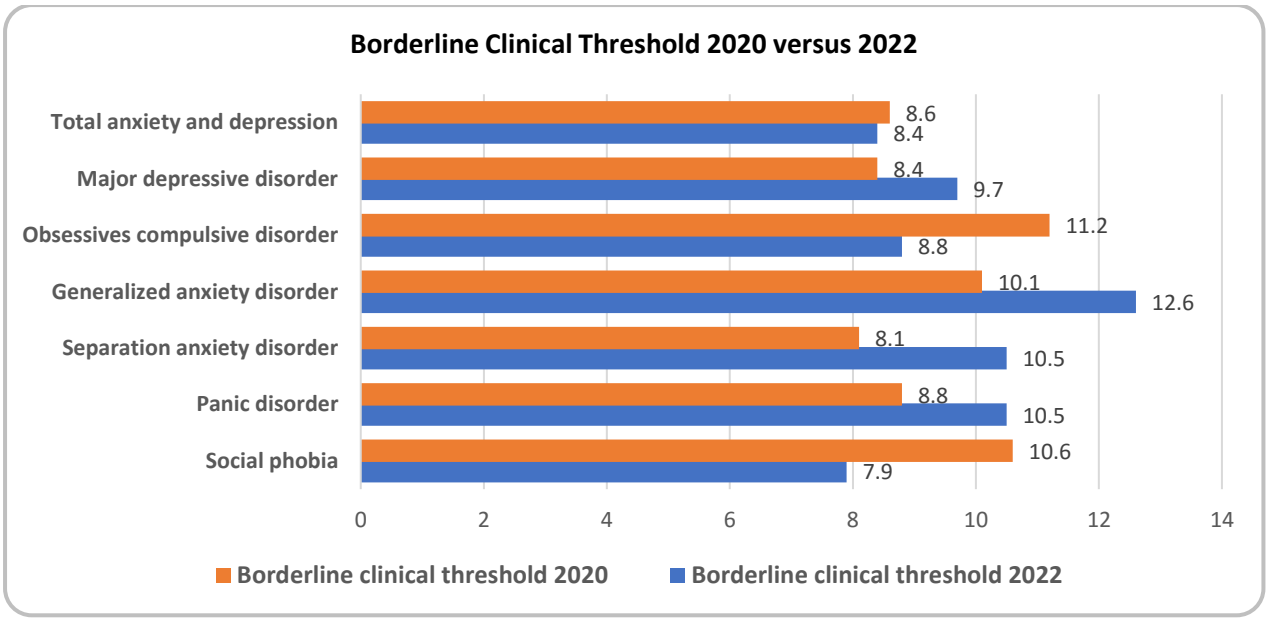


FIGURE 8: COMPARISON ABOVE CLINICAL THRESHOLD 2020/2022 REGRESSION ANALYSIS

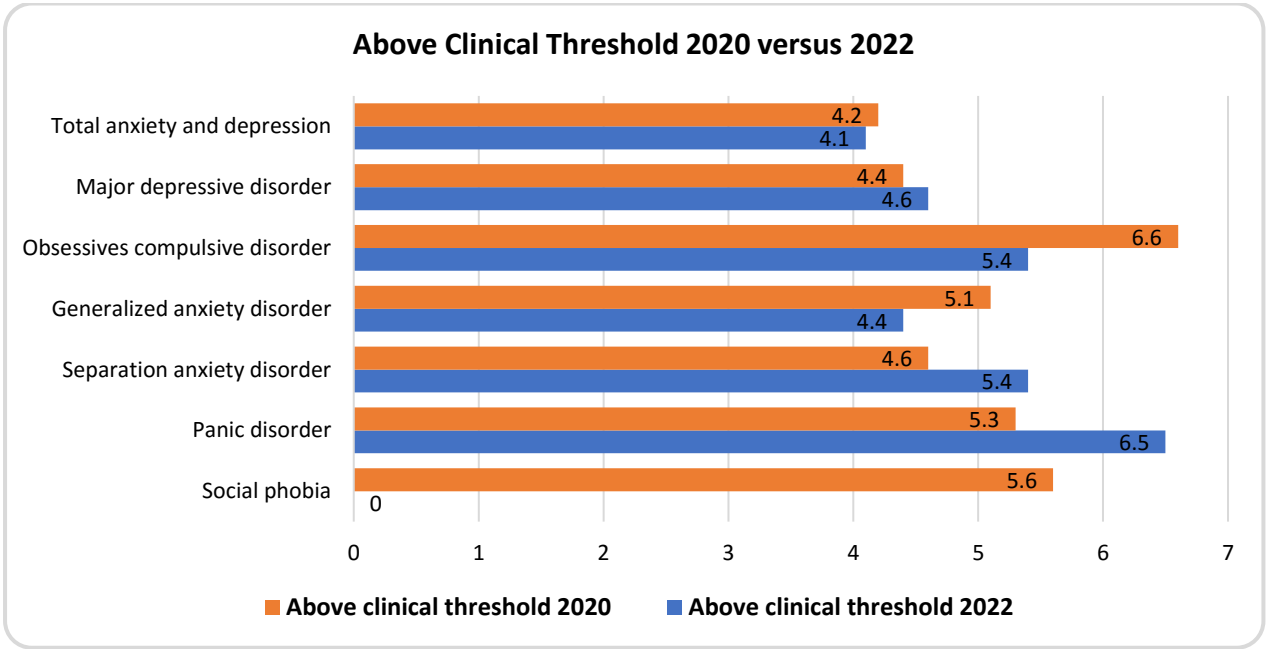


TABLE 79: DICHOTOMOUS VARIABLES IN THE REGRESSION ANALYSIS

	Overall n=1934	Male n=929	Female n=989
Past year cigarette	4.1	3.8	4.3
Current cigarette	1.8	1.6	2.0
Past year e-cigarettes	27.7	25.5	29.7
Current e-cigarettes	18.1	16.1	20.0
Past year alcohol	41.3	37.9	44.7
Current alcohol	21.7	20.7	22.9
Past year marijuana	16.2	15.3	17.4
Current marijuana	9.3	9.5	9.2
Binge drinking	10.8	10.7	10.9
Ever bullied	52.4	44.1	60.3
Bullied in past year	21.5	17.9	24.9
Bullied last 30 days	11.1	9.3	12.9
Bullied others	23.9	23.9	23.9
Carried a weapon	23.4	27.9	19.2
Threatened with injury or injured with a weapon	22.5	25.8	19.5
Attacked someone with intention of serious harm	12.5	15.8	9.2
Been arrested	3.1	4.5	1.6
Been drunk at school	4.9	5.4	4.4
Got suspended because of violence	12.2	17.7	7.1
Belonged to a gang/crew	7.7	10.7	4.6
Been in a fight (fought)	45.2	61.1	30.0
Through life-threatening event	38.6	42.1	35.4
Witnessed violence and aggression at home	32.9	28.5	36.9
Gender (boy/girl) and grade levels			

Multiple Linear Regression - Predicting Total Anxiety and Depression

Multiple Linear Regression analysis was conducted to assess if the independent variables (predictors, e.g. – bullied last 30 days, carried a weapon, attacked someone with intention of serious harm, witnessed violence and aggression at home, past year marijuana, etc.) predict the dependent variable ***(total anxiety and* depression).** The results of the analysis are shown in table 80 below.

TABLE 80: MODEL SUMMARY FOR LINEAR REGRESSION - TOTAL ANXIETY AND DEPRESSION (2022 SURVEY)

Predictor variables	Adjusted R2	F Change	Significant (p-value)
a. Predictors: (Constant), ever violence at home	.124	271.302	.000
b. Predictors: (Constant), ever violence at home, Q2=2.0	.223	243.165	.000
c. Predictors: (Constant), ever violence at home, Q2=2.0, past year bullied	.271	126.287	.000
d. Predictors: (Constant), ever violence at home, Q2=2.0, past year bullied, ever threatened	.290	51.345	.000
e. Predictors: (Constant), ever violence at home, Q2=2.0, past year bullied, ever threatened, ever bullied	.300	26.920	.000
f. Predictors: (Constant), ever violence at home, Q2=2.0, past year bullied, ever threatened, ever bullied, ever attack	.308	23.637	.000
g. Predictors: (Constant), ever violence at home, Q2=2.0, past year bullied, ever threatened, ever bullied, ever attack, injured weapon	.314	15.955	.000
h. Predictors: (Constant), ever violence at home, Q2=2.0, past year bullied, ever threatened, ever bullied, ever attack, injured weapon, ever violence at school	.318	10.531	.001
i. Predictors: (Constant), ever violence at home, Q2=2.0, past year bullied, ever threatened, ever bullied, ever attack, injured weapon, ever violence at school, ever drunk	.320	7.427	.006
j. Predictors: (Constant), ever violence at home, Q2=2.0, past year bullied, ever threatened, ever bullied, ever attack, injured weapon, ever violence at school, ever drunk, current bullied	.323	5.906	.015
k. Predictors: (Constant), ever violence at home, Q2=2.0, past year bullied, ever threatened, ever bullied, ever	.324	4.509	.034

attack, injured weapon, ever violence at school, ever drunk, current bullied, ever fight			
Dependent Variable: Total anxiety and depression			

From table 80 above, at least 11 variables in the 2022 dataset are significant predictors of total anxiety and depression in this group of students (students grades 8-12 who answered the RCAD) namely:

1. Gender (being female)
2. Having witnessed aggression or violence at home
3. Bullied at least once in lifetime
4. Bullied in the past year
5. Bullied in the last 30 days
6. Been through a life-threatening event
7. Attacking someone with the intention to harm them
8. Been threatened or injured with a weapon
9. Witnessed aggression or violence at school
10. Been drunk at school
11. Been in a fight

Based on the R^2 statistics (.324), table 16 above, - 32.4% of the variation in the model data is explained by the relationship between the predictor variables and the dependent variable (total anxiety and depression). The 11 predictor variables are significant contributors to the outcome (total anxiety and depression, 32.4% of the time).

Multiple Logistic Regression

Logistic regression generates adjusted odds ratios with 95% confidence intervals. Logistic regression is published often in the medical literature and provides a measure of strength of relationship to a dichotomous categorical outcome when controlling for other variables. An odds ratio (OR) is a measure of association between an exposure and an outcome. The OR represents the odds that an outcome will occur given a particular exposure, compared to the odds of the outcome occurring in

the absence of that exposure. Odds ratios are used to compare the relative odds of the occurrence of the outcome of interest (e.g. disease or disorder), given exposure to the variable of interest (e.g. health characteristic, aspect of medical history). The odds ratio can also be used to determine whether a particular exposure is a risk factor for a particular outcome, and to compare the magnitude of various risk factors for that outcome.

Predicting "*Attacked Someone with Intention of Serious Harm*"

Binary Logistic Regression analysis was conducted to predict the odds of a student attacking someone with intention of serious harm (the dependent variable) - "What is the probability that a given case falls into one of two categories on the dependent variable, given the predictors in the model?" Recall that a total of 241 students or 12.5% of students in this subset (grades 8-12) indicated that they had attacked someone with the intention of causing harm. The 20-plus predictor variables of interest in this prediction model are shown in table 81 following together with the outcome of the regression analysis.

TABLE 81: - BINARY LOGISTIC REGRESSION PREDICTING ATTACKING SOMEONE WITH INTENTION OF HARM

	Sig.	Exp(B)	95% C.I.for EXP(B)	
			Lower	Upper
Gender (female)	.722	1.065	.753	1.506
Grade 8	.015	2.592	1.208	5.561
Grade 9	.032	2.305	1.075	4.944
Grade 10	.269	1.531	.720	3.256
Grade 11	.875	.937	.418	2.101
Ever been bullied	.045	.670	.453	.991
Bullied in past year	.387	1.266	.742	2.159
Bullied last 30 days	.684	1.131	.625	2.044
Bullied others	.000	1.872	1.328	2.638
Carried a weapon	.000	2.237	1.596	3.136
Threatened with injury or injured with a weapon	.057	1.414	.989	2.020
Been arrested	.403	1.350	.668	2.729
Been drunk at school	.029	1.927	1.069	3.475
Got suspended because of violence	.001	1.934	1.316	2.843

Belonged to a gang/crew	.339	1.253	.789	1.989
Been in a fight (fought)	.000	4.196	2.741	6.421
Through life-threatening event	.171	1.276	.900	1.809
Witnessed violence and aggression at home	.333	1.187	.839	1.681
Witnessed violence and aggression at school	.019	1.759	1.096	2.823
Witnessed violence and aggression in community	.118	1.373	.923	2.041
Past year cigarette	.386	1.526	.587	3.968
Current cigarette	.458	.617	.172	2.212
Past year e-cigarettes	.787	1.075	.634	1.823
Current e-cigarettes	.242	1.431	.785	2.606
Past year alcohol	.844	1.044	.680	1.602
Current alcohol	.657	.868	.465	1.622
Past year marijuana	.247	.678	.350	1.311
Current marijuana	.260	1.517	.735	3.135
Binge drinking	.478	1.270	.656	2.456
Constant	.000	.006		

Dependent variable – Attacked someone with intention of serious harm

Results Summary

The odds ratio and confidence interval for eight variables in the table above show that exposure to the indicated predictor variable highlighted in yellow increases the odds of 'someone attacking someone with the intention to harm them'. For one predictor variable – 'ever being bullied', exposure to this predictor variable (highlighted in green) decreases the odds of 'someone attacking someone with the intention to harm them'**.**

Positive predictors

1. Students in grades 8 [Odds ratio: 2.59 (1.208 – 5.561)
2. Students in grades 9 [Odds ratio: 2.30 (1.075 – 4.944)
3. Bullying others [Odds ratio: 1.87 (1.328 – 2.638)
4. Carrying a weapon [Odds ratio: 2.24 (1.596 – 3.136)

5. Being drunk at school [Odds ratio: 1.93 (1.069 – 3.475)
6. Suspended from school because of violence [Odds ratio: 1.93 (1.316 – 2.843)
7. Being in a fight [Odds ratio: 4.20 (2.741 – 6.421)
8. Witnessed violence and aggression at school [Odds ratio: 1.76 (1.096 – 2.823)

Interpretation of results

Being in a fight was a positive and significant predictor of the probability of attacking someone with the intention of harm. The Odds Ratio (OR= 4.20) indicates that for every one-unit increase on this predictor the odds of attacking someone with intention of harm change by a factor of 4.2 (meaning the odds are increasing). This holds true for all the positive predictors.

There was only one significant negative predictor which would indicate that for every one-unit increment on the predictor, odds of attacking someone increase by a factor less than one (meaning that the odds are decreasing).

Most all other predictor variables are positive but non-significant – the computed OR is not significantly different from the null OR of 1.0, meaning that 1.0 falls between the lower and upper bound for a given confidence interval, and as such, the computed odds ratio is not significantly different from 1.0 (indicating no change as a function of the predictor).

Analysis of The Adverse Childhood Experience (ACE)

The Adverse Childhood Experience (ACE) Questionnaire is a 10-item self-report measure developed for the ACE study to identify childhood experiences of abuse and neglect. ACEs are common across all societies/populations. The ACE questionnaire was administered to all students in grades 8-12 in this 2022 Cayman Islands School Drug Use Survey. All ACE questions refer to the respondent's first 18 years of life.

Adverse childhood experiences (ACEs) are categorized into three groups: abuse, neglect, and household challenges. Each category is further divided into multiple subcategories.

ACEs Definitions -Subcategories

- **Abuse**
    - **Emotional abuse:** A parent, stepparent, or adult living in your home swore at you, insulted you, put you down, or acted in a way that made you afraid that you might be physically hurt.
    - **Physical abuse:** A parent, stepparent, or adult living in your home pushed, grabbed, slapped, threw something at you, or hit you so hard that you had marks or were injured.
    - **Sexual abuse:** An adult, relative, family friend, or stranger who was at least 5 years older than you ever touched or fondled your body in a sexual way, made you touch his/her body in a sexual way, attempted to have any type of sexual intercourse with you.
- **Household Challenges**
    - **Mother treated violently:** Your mother or stepmother was pushed, grabbed, slapped, had something thrown at her, kicked, bitten, hit with a fist, hit with something hard, repeatedly hit for over at least a few minutes, or ever threatened or hurt by a knife or gun by your father (or stepfather) or mother's boyfriend.
    - **Substance abuse in the household:** A household member was a problem drinker or alcoholic or a household member used street drugs.
    - **Mental illness in the household:** A household member was depressed or mentally ill or a household member attempted suicide.
    - **Parental separation or divorce:** Your parents were ever separated or divorced.

- **Incarcerated household member:** A household member went to prison.

- **Neglect**
  - **Emotional neglect:** Someone in your family never or rarely helped you feel important or special, you never or rarely felt loved, people in your family never or rarely looked out for each other and felt close to each other, or your family was never or rarely a source of strength and support.
  - **Physical neglect:** There was never or rarely someone to take care of you, protect you, or take you to the doctor if you needed it, you didn't have enough to eat, your parents were too drunk or too high to take care of you, or you had to wear dirty clothes.

Participant demographic information is available by gender, grade, and district location. The distribution is presented in the table below for ease of reference. The prevalence of ACEs is organized by category (as described above). Comparisons of mean raw scores are presented by gender, grade level, and district location.

TABLE 82: SUBSET (GRADES 8-12) DEMOGRAPHIC DISTRIBUTION

Overall/Gender	Freq.	Location	Freq.	Grade Level	Freq.
Overall	1934	**West Bay**	426	**Grade 8**	443
Boys	929	**George Town**	783	**Grade 9**	437
Girls	989	**Bodden Town**	518	**Grade 10**	498
Missing gender	16	**North Side**	86	**Grade 11**	384
		East End	58	**Grade 12**	172
		Cayman Brac	63		

Adverse Childhood Experiences (ACE) Score Prevalence by Gender

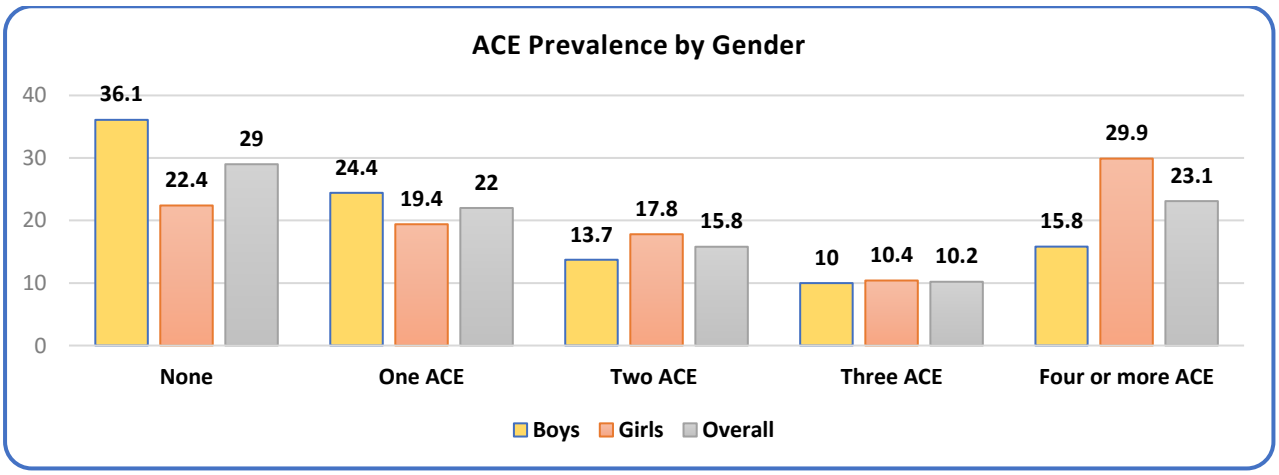
Table 83 shows that more than one in five students (22%) reported at least one ACE, and more than one in five reported four or more ACEs. Almost three in ten students (29%) reported no ACEs, while 16% reported two ACEs, and 10% reported three ACEs.

Compared to boys, girls were more likely to report four or more ACEs (30% vs 16%), as well as two or more ACEs (18% versus 14%). Boys, on the other hand, reported higher proportions of one ACE (24% versus 19%), and no ACEs (36% versus 22%).

TABLE 83: ADVERSE CHILDHOOD EXPERIENCES (ACE) SCORE PREVALENCE BY GENDER

Number of Adverse Childhood Experiences	Overall (n=1918)	Gender	
		Boys (n=929)	Girls (n=989)
None	29.0	36.1	22.4
One ACE	22.0	24.4	19.4
Two ACE	15.8	13.7	17.8
Three ACE	10.2	10.0	10.4
Four or more ACE	23.1	15.8	29.9

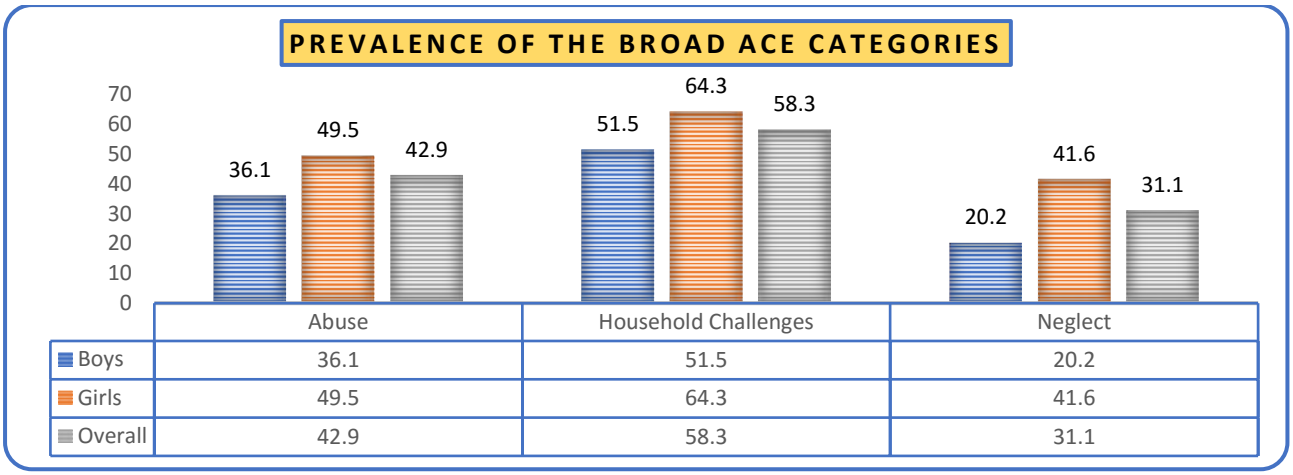
FIGURE 9: ADVERSE CHILDHOOD EXPERIENCES (ACE) SCORE PREVALENCE BY GENDER



Prevalence of ACEs by Category for Survey Participants by Gender

Figure 9 shows the prevalence of the broad ACE categories (abuse, household challenges, and neglect) among all students and compared by gender. The prevalence of abuse was reported by 43% of students overall (50% of girls and 36% of boys). The prevalence of household challenges was reported by 58% of students overall (64% of girls and 52% of boys). The prevalence of neglect was reported by 31% of students overall (42% of girls and 20% of boys).

FIGURE 10: PREVALENCE OF ACE CATEGORIES



	Abuse	Household Challenges	Neglect
Boys	36.1	51.5	20.2
Girls	49.5	64.3	41.6
Overall	42.9	58.3	31.1

Risk Estimates – Odds ratio for abuse, household challenges, and neglect categories (no/yes) by gender.

Abuse – of the 825 students reporting abuse, 40.6% were boys and 59.4% were girls. OR=1.742 (95% confidence interval, 1.449-2.094). Girls were significantly more likely to report abuse, they were 1.74 times more likely to report this.

Household challenges – of the 1114 students reporting household challenges, 42.9% were boys and 57.1% were girls. OR=1.702 (95% confidence interval, 1.415-2.048). Again, girls were significantly more likely to report household challenges, they were 1.70 times more likely to report this.

Neglect – of the 599 students reporting neglect, 31.4% were boys and 68.6% were girls. OR=2.814 (95% confidence interval, 2.293-3.453). Girls were significantly more likely to report neglect, they were 2.81 times more likely than boys to report this.

ACE Prevalence by Subcategories

The abuse category has three subcategories (emotional abuse, physical abuse, and sexual abuse). Table 84 shows the overall ACE prevalence for these subcategories and is cross tabulated by gender.

TABLE 84: PREVALENCE OF ACES BY CATEGORY FOR SURVEY PARTICIPANTS BY GENDER

Prevalence of ACES by Gender (%)			
Categories/subcategories	**Gender**		**Total (n=1934)**
	Boys (n=929)	**Girls (n=989)**	
Abuse			
Emotional abuse	26.4	40.4	33.5
Physical abuse	26.0	28.1	27.0
Sexual abuse	4.3	13.4	9.1
Household Challenges			
Mother treated violently	8.9	12.4	10.7
Substance abuse in the household	13.7	19.4	16.6
Mental illness in the household	11.9	25.9	19.1
Parental separation or divorce	37.8	48.9	43.6
Incarcerated household member	11.9	12.9	12.6
Neglect			
Emotional neglect	18.7	40.2	29.7
Physical neglect	5.2	5.7	5.4

ABUSE SUBCATEGORY

More than a third (34%) of all students in this subset reported emotional abuse (a notably lower proportion of 26% boys compared to 40% girls). More than a quarter (27%) overall reported physical abuse (only a slightly higher proportion of girls (28% compared to boys, 26%). Overall, 9% of students reported sexual abuse. Significantly more girls (13%) reported sexual abuse compared to boys (4%).

HOUSEHOLD CHALLENGES SUBCATEGORY

Eleven percent of students overall (one in nine students in this subset) reported that their mother was treated violently (a slightly higher proportion of girls (12%) compared to boys (9%). Substance abuse in the household was reported by 17% of students overall (a higher proportion of girls (19%) compared to boys (14%). Mental illness in the household was reported by 19% of students overall (a significantly higher proportion of girls (26%) compared to boys (12%), more than twice the proportion of boys.

Parental separation or divorce was reported by 44% of students overall - more than four in ten students. A significantly higher proportion of girls (49%) compared to boys (38%), more than 10 percentage points above. More than one in ten students (12%) in this subset reported an incarcerated household member (about the same proportion of boys (12%) and girls (13%).

NEGLECT

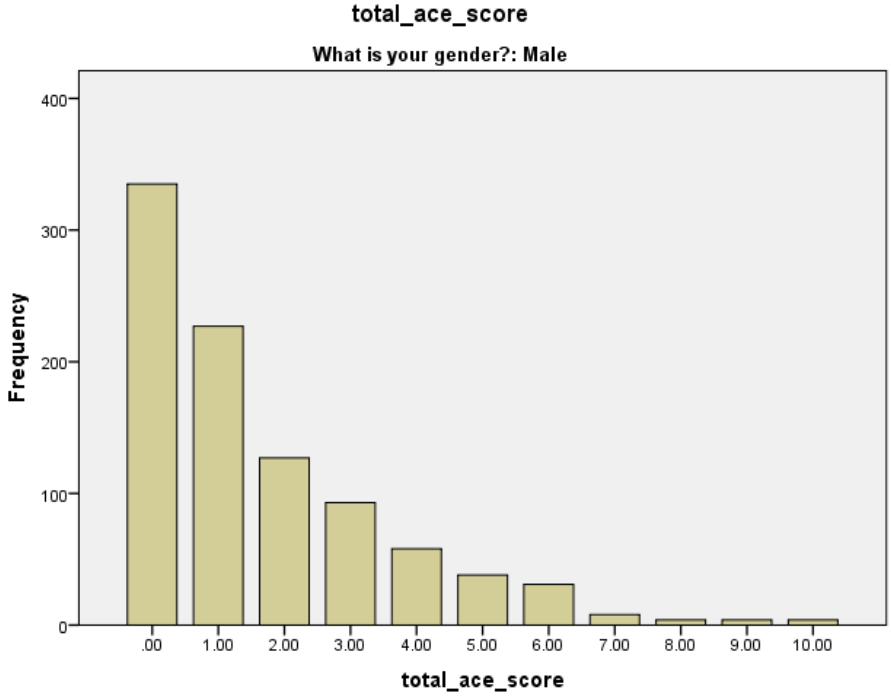
Three in ten students (30%) in this subset reported emotional neglect (a significantly higher proportion of girls (42%) compared to boys (19%). A small proportion of students overall reported physical neglect (about the same proportion of girls (6% compared to boys, 5%).

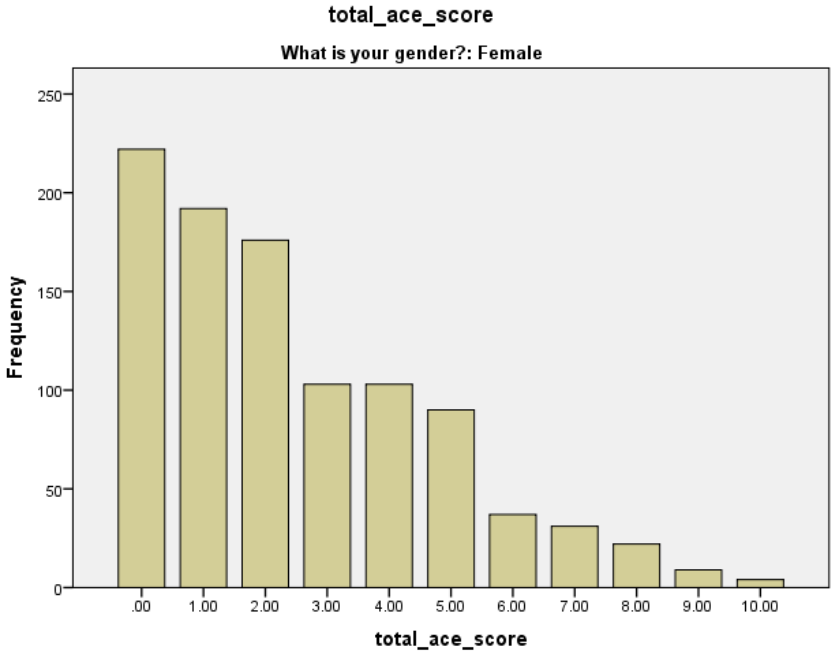
Distribution of ACE Scores (raw scores)

Table 85 shows the distribution of students' raw ACE scores. These raw scores were grouped and presented in table 84 above.

TABLE 85: DISTRIBUTION OF ACE SCORES (OVERALL AND GENDER)

Score	Overall		Boys		Girls		Missing	
	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
0.00	560	29.0	335	36.1	222	22.4	3	18.8
1.00	426	22.0	227	24.4	192	19.4	7	43.8
2.00	305	15.8	127	13.7	176	17.8	2	12.5
3.00	197	10.2	93	10.0	103	10.4	1	6.3
4.00	163	8.4	58	6.2	103	10.4	2	12.5
5.00	129	6.7	38	4.1	90	9.1	1	6.3
6.00	68	3.5	31	3.3	37	3.7	0	-
7.00	39	2.0	8	.9	31	3.1	0	-
8.00	26	1.3	4	.4	22	2.2	0	-
9.00	13	.7	4	.4	9	.9	0	-
10.00	8	.4	4	.4	4	.4	0	-
Total	1934		929		989		16	


total_ace_score
What is your gender?: Male
Frequency
400
300
200
100
0
.00
1.00
2.00
3.00
4.00
5.00
6.00
7.00
8.00
9.00
10.00
total_ace_score


total_ace_score
What is your gender?: Female
Frequency
250
200
150
100
50
0
.00
1.00
2.00
3.00
4.00
5.00
6.00
7.00
8.00
9.00
10.00
total_ace_score

Difference Between Mean Scores

In order to determine if there was any statistical difference between the raw scores for students, comparisons were made between the mean score for boys and girls, the grade levels, and by district. The independent sample t-test and the One-way ANOVA analysis were done in these cases. Table 86 below shows the distribution of ACE mean scores—overall, gender, grade levels, and district.

TABLE 86: DISTRIBUTION OF ACE MEAN SCORES

	Mean	N	Std. Deviation	Test statistics	p-value
Overall	2.0766	1918	2.13959		
Gender					
Boys	1.6491	929	1.91737	T=-8.687	<0.001
Girls	2.4783	989	2.25742		
Location/District					
West Bay	1.9930	426	2.16441	F=7.014	<0.001
George Town	1.7957	783	1.98952		
Bodden Town	2.4595	518	2.27876		
North Side	2.4419	86	2.24711		
East End	2.1034	58	1.88893		
Cayman Brac	2.3651	63	2.01848		
Grade Level					
Grade 8	1.8488	443	2.07051	F=4.548	<0.01
Grade 9	1.9863	437	2.01481		
Grade 10	2.3333	498	2.21694		
Grade 11	2.2240	384	2.17194		
Grade 12	1.7849	172	2.18587		

The overall mean ACE score was 2.0766 (std. dev. 2.13959). The mean difference between scores for boys and girls was 0.829. t-test analysis comparing these two means showed a statistically significant difference between the two means (t=-8.687, p<0.001).

Figure 11 below shows the graphic distribution of mean scores by district. George Town had the lowest mean score followed by West Bay; however, mean scores were significantly higher for Bodden Town and North Side. Statistical analysis (One-Way ANOVA) showed a statistically significant difference between the means ($F=7.014$, $p<0.001$).

Figure 12 shows the distribution of mean scores for grade levels. The scores for grades 10 and 11 were significantly higher than those of the other grades. Statistical analysis (One-Way ANOVA) showed a statistically significant difference between the means ($F=4.548$, $p<0.001$).

FIGURE 11: MEAN ACE SCORES BY LOCATION

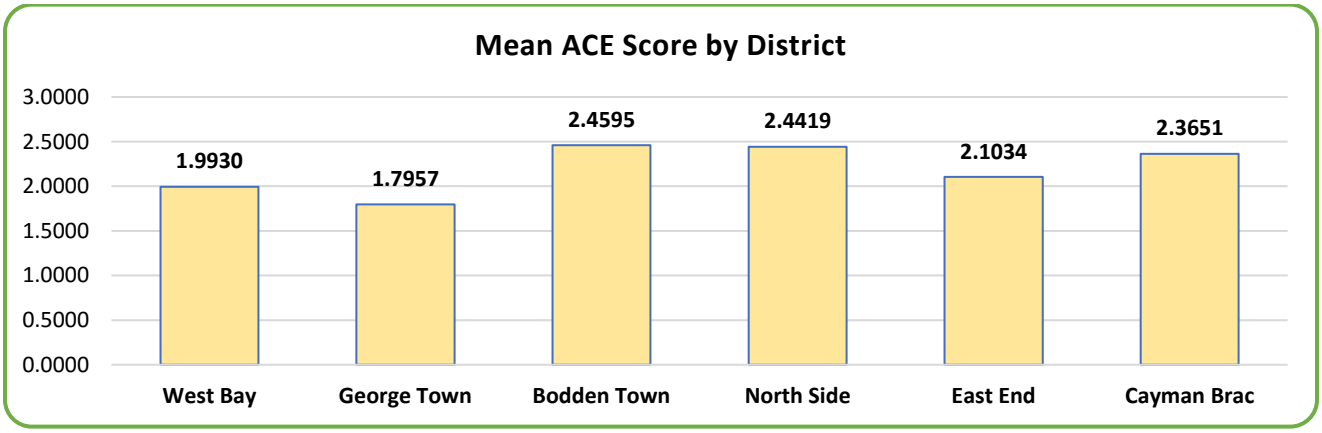
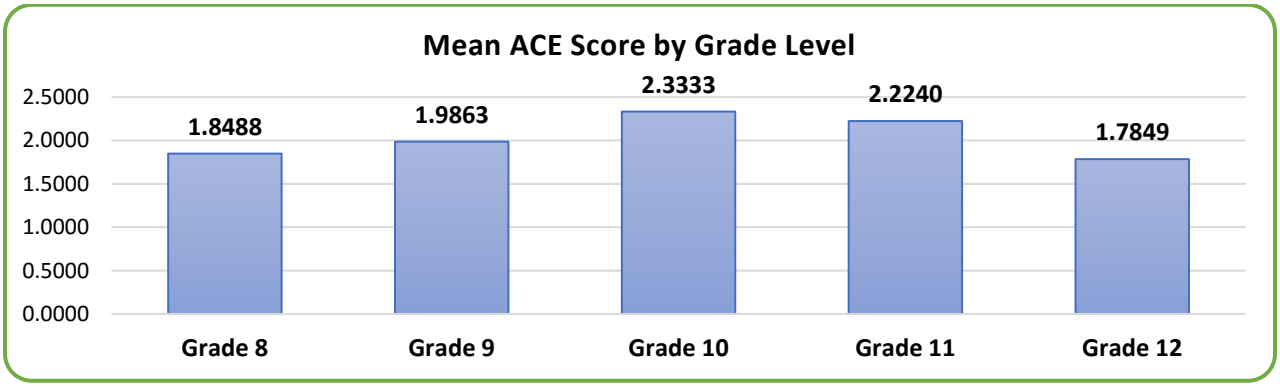


FIGURE 12: MEAN ACE SCORES BY GRADE LEVEL



Linear Regression: Adverse Childhood Experiences ACE Scores - (2022 Survey)

Multiple Linear Regression analysis was conducted to assess if the independent variables (predictors, e.g. – bullied last 30 days, carried a weapon, attacked someone with intention of serious harm,

witnessed violence and aggression at home, past year marijuana, etc.) predict the dependent variable ***(Adverse Childhood Experiences ACE scores*)**. The results of the analysis are shown in table 87 below.

TABLE 87: MODEL SUMMARY FOR LINEAR REGRESSION: ADVERSE CHILDHOOD EXPERIENCES (ACE) SCORES - (2022 SURVEY)

	R Square	F Change	Sig. F Change
1. Predictors: (Constant), ever violence at home	.316	884.128	.000
2 Predictors: (Constant), ever violence at home, year e-cigarette	.349	97.869	.000
3 Predictors: (Constant), ever violence at home, year ecig, past year bullied	.374	76.745	.000
4 Predictors: (Constant), ever violence at home, year ecig, past year bullied, Q2=2.0	.390	51.095	.000
5 Predictors: (Constant), ever violence at home, year ecig, past year bullied, Q2=2.0, ever threatened	.407	54.913	.000
6 Predictors: (Constant), ever violence at home, year ecig, past year bullied, Q2=2.0, ever threatened, ever gang	.420	42.650	.000
7 Predictors: (Constant), ever violence at home, year ecig, past year bullied, Q2=2.0, ever threatened, ever gang, ever fight	.427	23.299	.000
8 Predictors: (Constant), ever violence at home, year ecig, past year bullied, Q2=2.0, ever threatened, ever gang, ever fight, ever bullied	.432	17.217	.000
9 Predictors: (Constant), ever violence at home, year ecig, past year bullied, Q2=2.0, ever threatened, ever gang, ever fight, ever bullied, ever drunk	.437	16.074	.000
10 Predictors: (Constant), ever violence at home, year ecig, past year bullied, Q2=2.0, ever threatened, ever gang, ever fight, ever bullied, ever drunk, injured weapon	.441	12.819	.000

11 Predictors: (Constant), ever violence at home, year ecig, past year bullied, Q2=2.0, ever threatened, ever gang, ever fight, ever bullied, ever drunk, injured weapon, ever attack	.443	8.560	.003
12 Predictors: (Constant), ever violence at home, year ecig, past year bullied, Q2=2.0, ever threatened, ever gang, ever fight, ever bullied, ever drunk, injured weapon, ever attack, ever violence in comm	.446	7.074	.008
13 Predictors: (Constant), ever violence at home, year ecig, past year bullied, Q2=2.0, ever threatened, ever gang, ever fight, ever bullied, ever drunk, injured weapon, ever attack, ever violence in comm, current e-cigarette	.447	5.714	.017
14 Predictors: (Constant), ever violence at home, year ecig, past year bullied, Q2=2.0, ever threatened, ever gang, ever fight, ever bullied, ever drunk, injured weapon, ever attack, ever violence in comm, current ecig, Q3=5.0	.449	5.564	.018
15 Predictors: (Constant), ever violence at home, year ecig, past year bullied, Q2=2.0, ever threatened, ever gang, ever fight, ever bullied, ever drunk, injured weapon, ever attack, ever violence in comm, current ecig, Q3=5.0, weapon	.450	5.664	.017
16 Predictors: (Constant), ever violence at home, year ecig, past year bullied, Q2=2.0, ever threatened, ever gang, ever fight, ever bullied, ever drunk, injured weapon, ever attack, ever violence in comm, current ecig, Q3=5.0, weapon, new binge drinking	.452	4.684	.031
Dependent Variable: total_ace_score			

From table 87 above, at least 16 variables in the 2022 dataset are significant predictors of ACE scores in this subset of students (students grades 8-12 who answered the ACE questionnaire) namely:

1. Having witnessed aggression or violence at home
2. Past 12 months e-cigarette use
3. Last 30 days e-cigarette use
4. Bullied in the past year

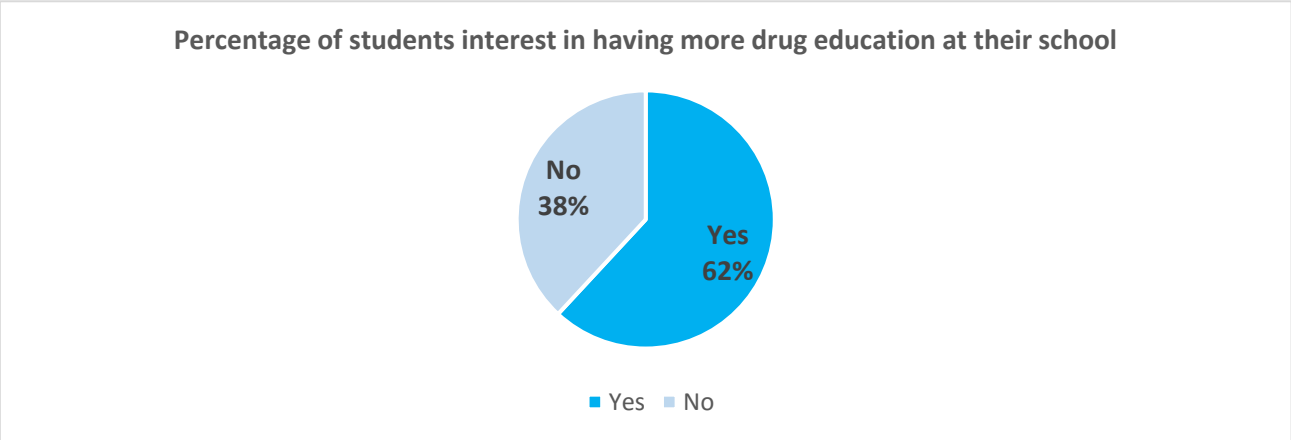
5. Gender (being female)
6. Been threatened or injured with a weapon
7. Belong to a gang or crew
8. Been in a fight
9. Bullied at least once in lifetime
10. Been drunk at school
11. Been through a life-threatening event
12. Attacking someone with the intention to harm them
13. Witnessed aggression or violence in the community
14. Being a Grade 10 student
15. Carried a weapon
16. Binge drinking

Based on the R^2 statistics (.452), table above, - 45.2% of the variation in the model data is explained by the relationship between the 16 predictor variables and the dependent variable (total ACE scores). The 16 predictor variables are significant contributors to the outcome (adverse childhood experiences 45% of the time).

Drug Education

At the end of the 2022 survey students were asked a few questions to assess their desire and interest in having drug education and prevention initiatives at their school. The purpose of these questions were to ensure that the National Drug Council is offering services that meet both the needs and interests of the students.

TABLE 88: INTEREST FOR MORE DRUG EDUCATION IN SCHOOLS (%)



Students were first asked “Should there be more educational classes about alcohol and other drugs at your school?”. Table 88 shows that most students reported that they support having more educational classes that teach about alcohol and other drugs within their schools.

Students who responded “yes” to an interest in more drug education were also asked to indicate what the educational sessions should be about. Students were allowed to select more than one option, and the results are displayed below in Table 89.

TABLE 89: AREAS OF INTEREST FOR EDUCATIONAL CLASSES ON ALCOHOL AND OTHER DRUGS (%)

Areas of Interest for Educational Classes on Alcohol & Other Drugs (%) *Multiple Response Question					
	Alcohol	**Marijuana**	**E-cigarettes/Vapes**	**Cigarettes**	**Other**
What should the educational session be about?	70.3	69.0	78.6	58.1	25.8

As shown in Table 89, e-cigarettes and alcohol were reported as the top two drugs of interest for drug education classes. Interestingly, these two substances also correspond with the highest prevalence of use among students in this survey (See table 5). The substance that had the lowest prevalence of interest was cigarettes, which corresponds with the lowest prevalence of use among students in this survey (See table 5).

TABLE 90: PREVENTION PROGRAMMING/CAMPAIGNS STUDENTS ARE INTERESTED IN PARTICIPATING IN AMONG PAST YEAR USERS (%)

Programmes & Campaigns of Interest Among Students for Their Schools (%) *Multiple Response Question*		
Programmes /Campaigns	**Overall Average (%)**	**Past Year Prev**
Alcohol Awareness Month	38.7	36.1
CODE (Leadership Training)	25.8	23.8
Drug Education	48.8	52.0
Ground Zero Day	16.5	16.2
National Drug & Alcohol Facts Month	34.0	37.4
Uprising (a Y2Y Conference)	12.7	14.8
Vaping Campaign	35.7	42.5
#WhatsTrending (CISDUS Survey Results)	22.7	25.5
Youth 2 Youth (Y2Y)	31.7	36.1

Students were then asked to indicate which prevention programming opportunities or campaigns they would be interested in participating in if it was offered at their school. Students were asked to select all options that apply, and the results are displayed in Tables 90 and 91.

As shown in Table 90, the programme with the most interest from students overall was Drug Education (48.8%), followed by Alcohol Awareness Month (38.7%), a Vaping Campaign (35.7%), and National Drug & Alcohol Facts Month (34.0%). With regards to the proportion of interest among students who have used any substance within the past year, drug education remains the number one prevention programme of choice by more than half of those who have used (52%). This is followed by 42.5% of students who are interested in participating in a Vaping Campaign, and 37.4% of students who indicated

interest in National Drug & Alcohol Facts Month. Among students who have used a substance within the past year, there was also an equal proportion of interest in alcohol awareness month (36.1%) and having a Youth 2 Youth programme at their schools (36.1%).

TABLE 91: PREVENTION PROGRAMMING/CAMPAIGNS STUDENTS ARE INTERESTED IN PARTICIPATING IN BY GRADE LEVEL (%)

Programmes & Campaigns of Interest by Grade Level (%)

*Multiple Response Question

Programmes /Campaigns	Overall Avg (%)	Grade 6	Grade 7	Grade 8	Grade 9	Grade 10	Grade 11	Grade 12
Alcohol Awareness Month	38.7	41.6	42.4	37.9	41.8	36.5	33.6	30.8
CODE (Leadership Training)	25.8	21.3	22.9	24.9	25.4	28.6	33.2	28.2
Drug Education	48.8	44.7	51.2	45.4	51.9	50.0	49.8	49.6
Ground Zero Day	16.5	10.6	20.7	20.8	17.1	15.1	14.7	16.2
National Drug & Alcohol Facts Month	34.0	30.4	34.7	32.5	39.4	32.5	37.7	29.9
Uprising (a YSY Conference)	12.7	6.5	11.1	13.9	14.3	14.6	17.4	14.5
Vaping Campaign	35.7	27.8	34.0	40.7	39.7	39.4	33.2	38.5
#WhatsTrending (CISDUS Survey Results)	22.7	15.8	24.4	25.2	22.6	24.6	24.5	22.2
Youth 2 Youth (Y2Y)	31.7	19.2	31.5	28.4	39.4	34.4	41.1	34.2

With respect to programming interests by grade level, all grade levels except grade 6 and grade 8 had proportions that exceeded the overall average of interest in having drug education at their schools. However, drug education remains the most frequently selected programme of choice among all grades. With respect to alcohol awareness month, levels of interest varied across grades, with the highest proportion of interest found for those in grade 9 (42.4%) and the lowest for grade 12 (30.8%).

The vaping campaign was the third most frequently selected programme/campaign of interest overall, however, interest across grade levels varied. The proportions of interest among students in grade 6

(27.8%) and grade 11 (33.2%), was lower than the overall average of 35.7%. Grade levels with the highest levels of interest in a vaping campaign was found for those in grades 8-10, and grade 12.

National Drug and Alcohol Facts Month (NDAFM) was the fourth most frequently selected programme or campaign of interest overall. However, interest levels varied across grade levels. Students in grade 9 chose this campaign more often than any other grade (39.4%), followed by students in grade 11 (37.7%). Interestingly, both the lowest grade 6 and highest grade 12 levels included in the survey had the lowest frequency of selecting NDAFM at 30.4% and 29.9% respectively.

Discussion Chapter

Student drug use surveys provide essential information about the prevalence and harms associated with substance use among youth who attend school. Surveys are used to monitor emerging trends and to inform decision making about policies, programmes, and services to improve the health outcomes of children and youth. The primary purpose of this type of school survey is to collect comprehensive, accurate, and reliable information about attitudes towards and usage trends regarding student drug use and substance abuse. While adolescents are certainly not the only demographic group to face issues of substance use and abuse, "data repeatedly shows that students and youth more commonly use alcohol and drugs than any other age group"[11]. This prevalence is highly problematic for several reasons.

First, a large body of research has identified a negative correlation between drug use and school performance.[12] [13] Additionally, students under the influence of cognitively impairing substances are less able to effectively learn and are at risk of long-term and permanent impairment of memory and cognitive ability.[14] Finally, student drug use is "correlated with antisocial and violent behaviour, such as bringing guns and knives to school, as well as other risk-taking behaviours.[15]

Age of First Use and Early onset of Substance Use

Age of first use (initial experimentation) appears to be an important factor in the clinical trajectory of drug abuse or dependence for specific substances. Thus, experimentation with substances in their teens is associated with greater long-term vulnerability, for specific drugs. Therefore, prevention and management strategies should address subjects before their adolescence, specifically before 13 years of age.[16] In this survey, the average age of first use for inhalants/solvents was the lowest average among all

[11] Student Drug Use. Canadian Centre on Substance Abuse. Retrieved from http://www.ccsa.ca/Eng/topics/Monitoring-Trends/Student-Drug-Use/Pages/default.aspx
[12] Sanders CE, Field TM, Diego MA. Adolescents' academic expectations and achievement. Adolescence. 2001; 36:795– 802
[13] 9 Rivers WL. Is there a relationship between drug use and academic achievement? J Sch Health. 1981; 51:171–173
[14] Goode E. Drug use and grades in college. Nature. 1971; 234:225– 227
[15] The Role of Schools in Combating Illicit Substance Abuse. December 2007. Council on School Health and Committee on Substance Abuse. American Academy of Pediatrics. Retrieved from http://pediatrics.aappublications.org/content/120/6/1379
[16] White, W., Godley, M. & Dennis, M. (2003) Early onset of substance abuse: Implications for

substances at 9.5 years old. The average age of use for all other substances ranged from 11.3 years for alcohol to 13.5 years for marijuana use.

The precocious onset of substance use in children increases their vulnerability to the development of other problems and behaviours that pose risks to the individual child and others. These other problems have a complex interaction with substance use and can precede, co-occur, or follow substance initiation. Intervening in these other problems and behaviours constitutes a crucial prevention or early intervention strategy for substance-related problems, just as proactive intervention into early substance use serves the same functions for these other problems.

Substance abuse programmes can play an important role in lowering the short and long-term risks to individuals, families and communities by postponing substance use initiation as long as possible, and by recognizing developmental windows of vulnerability and opportunity in the transitions from early drug experimentation to chronic drug dependence.

Young people are developing life-impairing and life-threatening problems with alcohol, tobacco, and other drugs who would not have developed these problems if their initial exposure to these substances could have been postponed.[17] ATOD-related problems resulting from an early age of onset are among the most preventable causes of death and disability.

CONSUMPTION PATTERN – PREVALENCE OF SUBSTANCE USE

Alcohol, e-cigarettes, and marijuana are the main substances used by students in this survey cycle. Prevalence is relatively high but there is substantial variability within location (districts) and among boys and girls. The lifetime prevalence of cigarette use was relatively high at 8.6% but decreases considerably for current use at 1.1%. The evidence suggests that cigarette use is mainly for the purposes of experimentation, given that current use rates are low. What is interesting is the comparison of use of cigarettes versus marijuana – past year marijuana prevalence (9.4%) surpassed past year cigarette

student assistance programs. Student Assistance Journal, 16(1), 22-25

[17] Chou, S. P., & Pickering, R. P. (1992). Early onset of drinking as a risk factor for lifetime alcohol related problems. British Journal of Addiction, 87, 1199-1204.
https://pdfs.semanticscholar.org/3891/af682853acf77ea5f60ee63743ca73fc08d6.pdf

prevalence (2.5%) by a factor of nearly four times (3.7 times). Current use in the last 30 days for marijuana (5.3%) was also notably higher than current use of cigarettes (1.1%).

As in previous CISDUS surveys, alcohol is the most prevalent used substance and marijuana the most prevalent illicit substance. Significant gender differences were noted with respect to consumption of various substances in the survey. Most interesting was the case of e-cigarettes smoking.

The lifetime prevalence of e-cigarettes was notably high at 29.3% - about one in three students reported having tried e-cigarettes. The average lifetime prevalence of e-cigarette smoking varied slightly by gender: boys (28.1%) and girls (30.5%). The gender rates also varied by location (districts). The prevalence of current use (last 30 days) was notably different among girls (12.2%) and boys (9.6%). With regards to a perception of harm, current users of e-cigarettes were more likely than those who were not currently using to indicate that there was no risk of harm from smoking e-cigarettes (11.3% vs 6.9%). However, perception of harm among students is not directly associated with decreased use. It is important to pay attention to the high prevalence of e-cigarette use reported in this survey. E-cigarette aerosol often contains chemicals that are harmful to the lungs. Youth e-cigarette use is also connected to the use of other tobacco products including cigarettes.

Peer & Individual Relationships

Peer influence is a critical risk factor relating to adolescent substance use.[18] An adolescent's perception that their peers are using substances or that they approve or disapprove of substance use is strongly related to the delay or onset of their substance use.[16] For example, peer disapproval of substance use is shown to be related to a lower odds of substance use among adolescents, while the perception that peers are using substances is related to the onset of substance use.[16]

Most students in this survey reported that their peers would disapprove of alcohol (47.0%) and marijuana use (51.7%). The proportion of peer disapproval for alcohol was similar among both boys (50.1%) and girls (50.2%), however, with regards to marijuana use, slightly more girls (57.4%) reported

[18] Mariani, A.C., Williams, A.R. (2021). Percieved risk of harm from monthly cannabis use among US adolescents: National survey on drug use and health, 2017. https://doi.org/10.1016/j.pmedr.2021.101436

that their peers would disapprove when compared to boys (51.9%). There was also notable variation in proportions of peer disapproval by grade, with a tendency for peer disapproval to decrease as grade levels increased from grades 6-12 (years 7-13).

As found in international literature, the early onset of alcohol and marijuana use for students in this survey tended to be lower among students who perceived that their peers would disapprove of substance use.

With respect to students' beliefs about peer norms, most students in this survey reported that they do not believe their peers drink alcohol regularly (45.7%) or smoke marijuana regularly (51.4%). Of these students, 9.1% reported the current consumption of alcohol in the last 30 days and 3.1% reported the current consumption of marijuana in the last 30 days. These both represented the lowest percentage of current use reported, demonstrating that current use of a substance tends to be lower among students who also believe that their peers are not using substances.

PERCEIVED HARM/RISK, USE-RELATED RISKS, AND ANTISOCIAL BEHAVIOUR: PERCEPTION OF HARM

Historically, an individual's perception of the risks associated with substance use has been an important determinant of whether he or she engages in substance use.[19] Youth who perceive a high risk of harm are less likely to use drugs than youth who perceive a low risk of harm. Therefore, providing young adults with credible, accurate, and relevant information about the harms associated with substance use is a key component in prevention programming.

Many students within the survey are aware of the risks associated with substance use. According to Table 38, a notably high proportion of students reported great risk of harm for smoking one or more packs of cigarettes a day (66.0%), drinking alcohol daily (48.6%), smoking marijuana regularly (47.2%), and using inhalants (44.9%). Fewer students perceived great risk of harm for trying marijuana once or twice (15.6%) and smoking e-cigarettes (29.5%).

[19] Johnston, L. D., O'Malley, P. M., Bachman, J. G., & Schulenberg, J. E. (2012). Monitoring the Future national survey results on drug use, 1975-2011: Volume I, Secondary school students. Ann Arbor: Institute for Social Research, The University of Michigan. Retrieved from http://monitoringthefuture.org/pubs/monographs/mtf-vol1_2011.pdf

The results presented in this report indicate that many students are aware of the risks of substance use; however, a large percentage still did not believe that there is great risk from substance use. For example, perception of no risk of harm related to the use of the substances indicated ranged from a low of 3.6% for drinking alcohol daily to a high of 24.7% for trying marijuana once or twice. Some 3.7% did not see any risk relating to smoking one or more packs of cigarettes a day, while 5.0% said there was no risk in smoking e-cigarettes, and 7.4% said there was no risk for smoking marijuana regularly.

Additionally, there were significant differences in the perceptions of risk of harm among boys and girls. As it relates to perception of no risk, a slightly higher proportion of boys felt there was no risk of harm within all categories of substance use when compared to girls. For example, 11.4% of boys felt there was no risk of harm from smoking marijuana regularly compared to 5.1% of girls.

Conclusions

With substance use serving as an important contributor to the global burden of disease, the monitoring of adolescent substance use remains imperative for informing effective and appropriate public health measures to prevent and reduce the burden of disease surrounding substance use disorders at the population level.[20] For over twenty years, data from the CISDUS has demonstrated that the trends of youth substance use are constantly changing. Through the monitoring and evaluation of these trends, we can gauge whether the objectives of various policies, prevention programming, and other anti-drug strategies have been achieved.

While the majority of youth continue choosing to not use alcohol and other drugs, we should not dismiss the advantage of implementing evidence-based prevention programming that educates and supports students who are using substances to discontinue their use, while also supporting students who are not using to maintain their healthy lifestyle choices. Although overall substance use has generally been decreasing, it is recommended that prevention programming targets the notably low perception of great risk/harm surrounding substance use, especially with respect to marijuana and e-cigarette use as well as the overall perception of risk among boys.

[20] GBD 2016 Alcohol and Drug Use Collaborators. (2018). The global burden of disease attributable to alcohol and drug use in 195 countries and territories, 1990-2016: A systematic analysis for the Global Burden of Disease Study 2016. *The Lancet Psychiatry*. 5(12), 987-1012.

Recommendations

1. Prioritize prevention programming or campaigns that target students' attitudes and beliefs relating to the risks and harms of substance use, particularly marijuana and e-cigarettes.
2. While community education about mental health is important and should continue, an increase in the provision of mental health resources and support for young people should be prioritized.
3. The high levels of Adverse Childhood Experiences (ACEs) that were reported in this survey is of great concern. The connection between ACEs, youth substance use and other social determinants (such as bullying, carrying a weapon, and other antisocial behaviour) should be factored into prevention efforts and interventions.
4. Students reported a high level of interest in receiving greater drug education at their school. Schools should ensure that evidence-based drug education is included in their school curriculum for young people to be informed about the facts and risks surrounding substance use.

Additional Tables

TABLE 1A: STUDENT'S DEMOGRAPHICS – AGE

Age	Overall	Boys	Girls	Missing
	3608	**1734**	**1837**	**37**
10	13 (0.4)	9 (0.5)	4 (0.2)	0
11	319 (8.8)	137 (7.9)	175 (9.5)	7
12	646 (17.9)	313 (18.1)	326 (17.7)	7
13	667 (18.5)	325 (18.7)	335 (18.2)	7
14	586 (16.2)	285 (16.4)	297 (16.2)	4
15	563 (15.6)	281 (16.2)	276 (15.0)	6
16	489 (13.6)	232 (13.4)	256 (13.9)	1
17	242 (6.7)	106 (6.1)	133 (7.2)	3
18	83 (2.3)	46 (2.7)	35 (1.9)	2

TABLE 2A: STUDENT'S DEMOGRAPHICS – GRADE LEVEL

Grade	Overall	Boys	Girls	Missing
	3608	**1734**	**1837**	**37**
Grade 6	592 (16.4)	276 (15.9)	305 (16.6)	11
Grade 7	694 (19.2)	340 (19.6)	348 (18.9)	6
Grade 8	566 (15.7)	274 (15.8)	286 (15.6)	6
Grade 9	534 (14.8)	258 (14.9)	271 (14.8)	5
Grade 10	589 (16.3)	293 (16.9)	293 (15.9)	3
Grade 11	435 (12.1)	207 (11.9)	225 (12.2)	3
Grade 12	198 (5.5)	86 (5.0)	109 (5.9)	3

TABLE 3A: STUDENT'S DEMOGRAPHICS – LOCATION/DISTRICT

District	Overall	Boys	Girls	Missing
Bodden Town	938 (26.0)	434 (25.0)	496 (27.0)	8
East End	122 (3.4)	64 (3.7)	55 (3.0)	3
George Town	1455 (40.3)	704 (40.6)	733 (39.9)	18
North Side	157 (4.4)	82 (4.7)	71 (3.9)	4
West Bay	778 (21.6)	366 (21.1)	409 (22.3)	3
Cayman Brac	158 (4.4)	84 (4.8)	73 (4.0)	1

TABLE 4A: EARLY ONSET OF USE BY LOCATION & GENDER

Early Onset of Substance Use by Location and Gender (%)												
Substances	**Location**											
	Bodden Town		**East End**		**George Town**		**North Side**		**West Bay**		**Cayman Brac**	
Gender	**M**	**F**	**M**	**F**	**M**	**F**	**M**	**F**	**M**	**F**	**M**	**F**
Cigarettes	6.0	5.6	6.3	3.6	4.3	3.8	3.7	5.6	5.7	5.6	13.1	2.7
E-cigarettes	18.7	25.0	17.2	16.4	14.3	14.3	19.5	26.8	16.9	18.3	19.0	12.3
Alcohol	31.8	34.7	31.3	20.0	27.3	24.0	25.6	35.2	26.8	26.2	26.2	16.4
Marijuana	7.4	7.7	3.1	12.7	5.1	5.0	6.1	9.9	5.2	5.9	4.8	4.1

TABLE 5A: PAST YEAR PREVALENCE BY AGE (%)

Percentage of students reporting use of various substances by Age – Past Year Prevalence (%)										
Substances		**Age**								
	(N)	**10**	**11**	**12**	**13**	**14**	**15**	**16**	**17**	**18**
Cigarette	92	7.7	0.6	0.8	0.4	1.7	3.7	5.3	7.4	7.2
E-cigarette	624	15.4	2.5	4.5	10.6	18.6	24.9	31.7	36.8	25.3
Alcohol	914	7.7	4.1	7.3	14.7	23.4	36.1	46.2	56.2	63.9
Marijuana	339	7.7	0.0	0.9	3.3	7.3	14.6	21.9	24.8	21.7
Inhalants/Solvents	75	15.4	0.9	2.8	1.9	2.4	2.0	1.6	2.1	1.2

TABLE 6A: PREFERENCE OF ALCOHOL BEVERAGES BY LOCATION (%)

Preference of alcoholic beverages consumed in the past year (%)									
		Gender		**Location**					
Alcoholic Beverage	**Survey Average**	**M**	**F**	**Bodden Town**	**East End**	**George Town**	**North Side**	**West Bay**	**Cayman Brac**
Ice Coolers	16.3	14.0	18.5	16.5	14.8	17.8	9.6	16.8	7.0
Beer	10.6	12.6	8.8	10.8	7.4	11.1	5.7	12.6	1.9
Wine	13.8	12.3	15.3	14.3	8.2	15.3	8.3	14.4	5.1
Hard Liquor (e.g., vodka, rum, whisky, scotch)	16.4	15.0	17.9	17.2	14.8	17.0	10.8	18.4	4.4