National Drug Council
Cayman Islands

CISDUS 2020

CAYMAN ISLANDS STUDENT DRUG USE SURVEY

Years 7 to 12

Cayman Islands Student Drug Use Survey (CISDUS) Report 2020

Acknowledgement

It must be acknowledged that the completion of the Cayman Islands Student Drug Use Survey (CISDUS) would not have been possible without the co-operation, collective effort, support and contributions of many individuals and organisations. There is not space here to list all those who we would wish to thank, however, we do wish to acknowledge the following individuals, companies and public authorities, who over the past year have provided particular assistance to facilitate the completion of CISDUS:

- The Ministry of Education
- The Department of Education
- Numerous volunteers and organizations, who gave their time and allowed employees to participate in this important initiative
- Dr. Ken-Garfield Douglas, consultant to the National Drug Council, who continues to fully support this project
- The students who participated in the survey, as well as the high-level of support of principals and administration, teachers and parents
- The staff of the NDC whose efforts, dedication, and commitment ensured the study was successfully completed.

Mrs. Dorothy Manzanares (nee Scott),
Chair National Drug Council

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Introduction

Introduction

The National Drug Council presents the report of the tenth cycle of the Cayman Islands Student Drug Use Survey (CISDUS), 2020, which was conducted with the objective of estimating the magnitude and characteristics of the consumption of psychoactive substances in the school population, public and private educational centres nationwide.

To achieve the implementation of the survey among students, it was fundamental to ensure that there was a strategic alliance with the schools for the planning, organization, and administration of the questionnaires. The survey questionnaire was divided into two: one specifically for years 7-8 and one specifically for years 9-12, to ensure comprehension of all questions. Survey implementation occurred during the weeks of February 3rd – March 3rd, 2020, utilizing one class period (approximately 40 minutes) and recorded a 99% response rate.

The supply, trafficking, and consumption of drugs is a problem that transcends international borders, public health. It does not discriminate against age, gender, educational accomplishments or religion and its consequences impacting the family nucleus, community, and society. The problem of drug use is a complex task especially around the schools. Therefore, the importance of this study is to, help with the accumulation of scientific evidence and guide decision-making in the definition of programmes for the reduction of drug use.

In the dynamics of supply and demand for drugs, there are institutions, agencies, and communities responsible, who work hard to prevent the consequences as well as the problems that pertain to drugs. Consequently, it is very important that the results of the present study provide the opportunity to work intra- and inter-sectorally, intervene in the multiple factors influencing drug trafficking and consumption such as drug strategies prevention and treatment and rehabilitation.

Objectives and Methodology

General Objective:

To determine the magnitude and characteristics of the consumption of psychoactive substances amongst the school population between the ages of 11 and 18 years old in the Cayman Islands.

Specific Objectives:

1. To understand the nature and extent of the drug problem amongst middle and high school students.
2. To be able to track changes in drug use patterns over time.
3. To aid in the development and strengthening of prevention programmes and policies.
4. To examine and monitor trends in the prevalence and frequency of substance use

Methodology

Conceptual Framework

The World Report on Drugs of the Year 2019[1] mentions; The Global Burden of Disease Study 2017 estimated that, globally in 2017, there were 585,000 deaths and 42 million years of "healthy" life lost as a result of the use of drugs. Around half of the drug related deaths were attributed to untreated hepatitis C.

The OAS/CICAD Report on Drug Use in the Americas 2019[2] analyzing current drug use data indicates that adolescence is considered a critical risk period for the initiation of alcohol use. Studies indicate that people who begin using alcohol or other substances in early adolescence (ages 12-14) have a greater likelihood of developing abuse or dependence over time than those who initiate alcohol use as adults. Research indicates that the earlier someone begins using alcohol, the greater the risk over time for a variety of adverse health effects.

The Report by OAS/CICAD on Cannabis Use Among Youth in the Americas: Findings from the 2019 Report on Drug Use in the Americas - Examining the

[1] World Drug Report, 2019. United Nations Office on Drugs and Crime.

[2] http://www.cicad.oas.org/oid/pubs/PB1%20(002).pdf

health outcome of cannabis use by children and adolescents[3] --found that individuals whose brains are still developing important cognitive reasoning skills are of particular concern to public health and policy when it comes to cannabis use. Though the topic of shifting cannabis policy is one of great public debates in some parts of the Americas, various stakeholders whether in favour or against, often agree that minors should not consume or be exposed to others that consume cannabis in order to safeguard their development. These concerns are valid as research has shown that early initiation and heavy use of cannabis prior to or during early adulthood is associated with a variety of negative outcomes later in life, including lower educational and occupational attainment, reductions in intelligence, and psychosis.

Besides the CISDUS 2020, the Ministry of Health recognizes the use of illicit drugs as a serious health problem that has public impact on the entire population, especially adolescents, young people, and adults of productive age. The beginning of consumption can be with licit drugs as well as illicit, which can lead to tolerance and addiction.

According to the World Health Organization (WHO), a "drug" is any substance that, introduced in the organism by any route of administration, produces an alteration, in some way, of the natural functioning of the central nervous system of the individual. It is also susceptible of creating dependence, be it psychological, physical, or both.

This survey among school-age children allows visualizing the age of onset in the consumption of drugs licit and illicit, helps to describe the pattern of consumption in this age group, as well as to capture the incidence of new drugs. It is also important to define strategies, preventive measures, and for the management of timely treatments in a highly vulnerable population.

Survey Design:

The CISDUS employs a complete census[4] of students enrolled in years 7 to 12. In 2020, 3,478 public and private school students from Grand Cayman and Cayman Brac completed anonymous, self-administered questionnaires during the period of February 3rd to March 3rd, 2020.

[3] http://www.cicad.oas.org/oid/img37.jpg

[3] A census is the procedure of systematically acquiring and recording information about the members of a given population. It is a regularly occurring and official count of a particular population. The census can be contrasted with sampling in which information is obtained only from a subset of a population.

Although sample surveys are preferable for collecting data in large 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 the reliability of your data as well as the public acceptance of it.

Sample Participation and Characteristics:

Sixteen high schools and the University College of the Cayman Islands (just the students in Year 12) in the Cayman Islands participated in 2020. Of the 3485 (approximately) enrolled students, 3478 completed questionnaires at a participation rate of 99%.

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 ganja 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.

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.

Questionnaire Design:

There were changes to the 2020 questionnaires visual design, questions reworded, and some dropped, for example, all questions relating to **"Energy Drinks"** and question asking **"Has a family member ever sold drugs"**.

The 2020 CISDUS presented two questionnaires having six core questions in the demographics section of both. The first questionnaire (six sections) was designed for younger students (Years 7-8) with seventy questions about school environment, experience with drugs (cigarettes, electronic cigarettes, alcohol, and marijuana), use-related risk, violence related behaviours, health and feelings, and family upbringing.

For older students (Years 9 – 12), this questionnaire includes two additional sections:

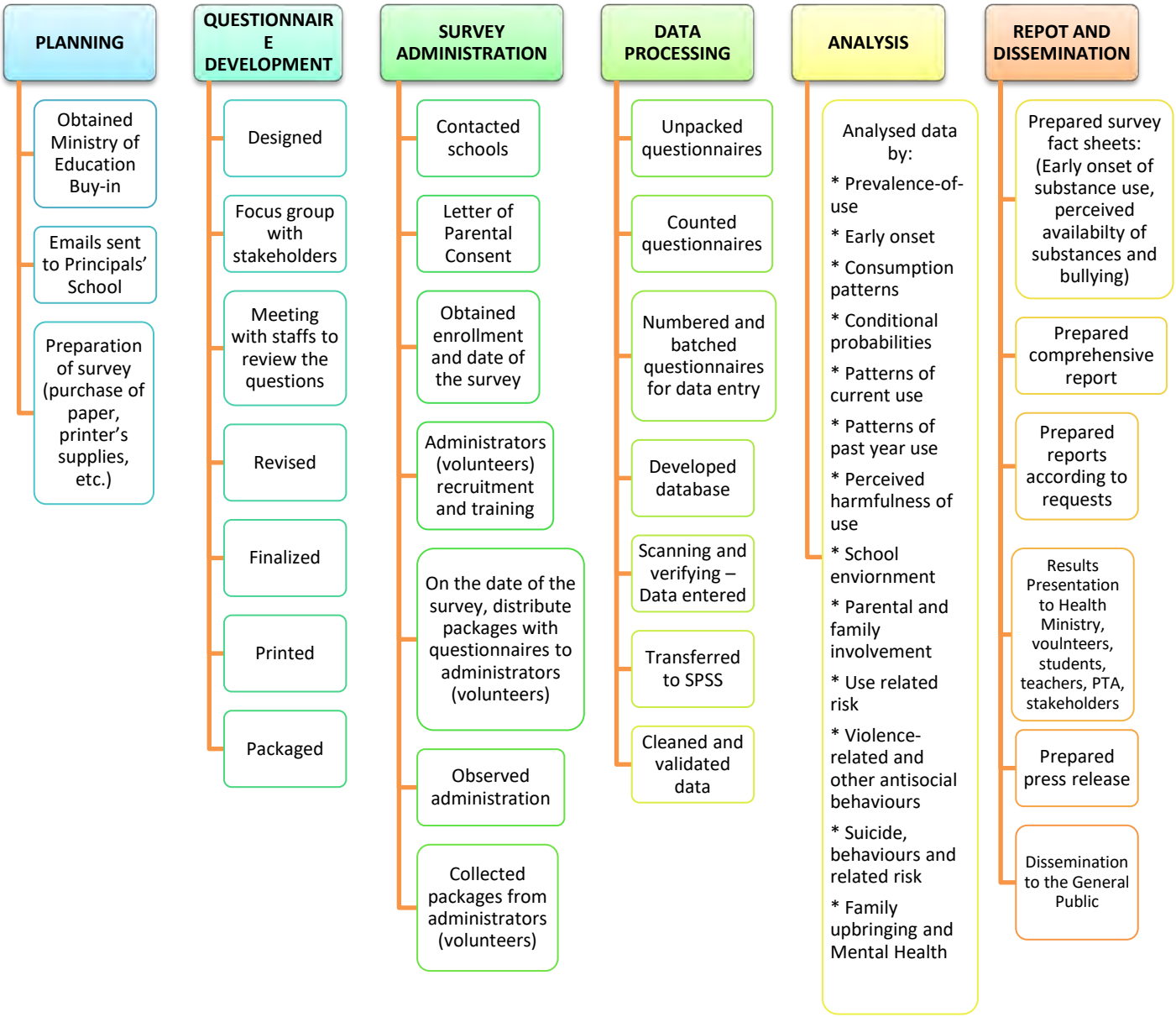
(1) **OTHER DRUGS** to include (crack cocaine, cocaine powder, ecstasy, LSD, tranquilizers, and pain relief pills)

(2) **ABOUT DRUG EXPERIENCE.** A more robust set of questions were added in the section **HEALTH AND FEELINGS** (see questionnaires available at NDC website: www.ndc.ky.

The average completion time was 30 minutes for students in Years 7-8 and 45 minutes for students in Years 9-12. Students were asked to evaluate the comprehension and sensitive nature of the questionnaire whereby more than half of the students (68%) indicated that the questionnaire was "easy" or "very easy" to understand; 10% indicated that the questionnaire was "difficult" or "very difficult". This latter finding provides some reassurance that social desirability should not greatly bias our estimates, even among the youngest students.

Procedure:

Survey procedure has been standard over all survey years. For more information about the procedure, please visit our website, www.ndc.ky, for all prior reports.


PLANNING
Obtained Ministry of Education Buy-in
Emails sent to Principals' School
Preparation of survey (purchase of paper, printer's supplies, etc.)
QUESTIONNAIRE DEVELOPMENT
Designed
Focus group with stakeholders
Meeting with staffs to review the questions
Revised
Finalized
Printed
Packaged
SURVEY ADMINISTRATION
Contacted schools
Letter of Parental Consent
Obtained enrollment and date of the survey
Administrators (volunteers) recruitment and training
On the date of the survey, distribute packages with questionnaires to administrators (volunteers)
Observed administration
Collected packages from administrators (volunteers)
DATA PROCESSING
Unpacked questionnaires
Counted questionnaires
Numbered and batched questionnaires for data entry
Developed database
Scanning and verifying – Data entered
Transferred to SPSS
Cleaned and validated data
ANALYSIS
Analysed data by:
* Prevalence-of-use
* Early onset
* Consumption patterns
* Conditional probabilities
* Patterns of current use
* Patterns of past year use
* Perceived harmfulness of use
* School enviornment
* Parental and family involvement
* Use related risk
* Violence-related and other antisocial behaviours
* Suicide, behaviours and related risk
* Family upbringing and Mental Health
REPOT AND DISSEMINATION
Prepared survey fact sheets: (Early onset of substance use, perceived availabilty of substances and bullying)
Prepared comprehensive report
Prepared reports according to requests
Results Presentation to Health Ministry, voulnteers, students, teachers, PTA, stakeholders
Prepared press release
Dissemination to the General Public

***Data Processing and Analysis*:**

Responses to the survey questions were captured directly onto the questionnaire by the respondents. Data entry and analysis were conducted at the NDC.

At each school site upon student completion, volunteer administrators returned the packages for counting, signing off and transfer to the offices of the NDC. There, packages were unpacked, counted, numbered, and batched for scanning, using OpenText Teleform, software specialized in scanning, reading, and verifying questionnaires. This process spanned approximately four weeks.

After the verification process is complete, data is then exported to SPSS for cleaning and analysis, and sent to Dr. Ken-Garfield Douglas, the external consultant to perform the data analyses, fact sheets and comprehensive report.

Substance Use Measures and 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 specifically 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.

Definition of Variables:

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

Illicit drugs are those whose production, carrying, transportation and marketing is legally prohibited or used without medical prescription. They are distinguished according to their origin in natural drugs (from some plant) or synthetic (made from chemical substances).

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

- Cigarettes
- Electronic Cigarettes
- Alcohol (in any of its forms: wine, beer, hard liquor as whisky, rum, vodka, tequila, etc.)
- Marijuana
- Crack cocaine
- Cocaine powder
- Ecstasy
- LSD
- Tranquilizers without a medical prescription
- Pain killers without a medical prescription (i.e.: oxycodone)

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

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

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

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

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

Early onset: The age of onset is an important indicator in the policies on substance use; therefore, it must be interpreted with great precision. This calculation is done based on, those 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.

Survey Limitations:

Research findings have demonstrated that collecting data on alcohol, tobacco and drug use prevalence among young populations through surveys is the most efficient and frequently used method of collection; the advantage of school surveys is that they are cost-effective and relatively easy to conduct. However, some limitations and disadvantages are associated with school surveys.

Participation: The survey was restricted to students enrolled in public and private schools. Excluded were students from home-schools and school leavers. Students who were absent on the day of survey administration and special education classes were not represented. Three students from two schools were unable to participate due to parental preference.

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.

Literacy: Literacy and language barrier issues posed a challenge to a few students in completing the questionnaire on their own, and therefore, volunteers and teachers (in some schools) were permitted to verbally read the survey questions aloud.

Volunteers: A month and a half prior to the survey information flyers/emails requesting volunteers to participate in the survey were distributed. The response was not as expected, despite the large database of volunteers that we have at NDC, not many volunteers returned to participate in this cycle. Press releases, radio and social media were used to invite the public to participate in this initiative.

Analysis Chapter - Results of Data Analysis

This section presents the 2020 results for 11 selected key themes by four comparison variables: gender, age, location (districts) and grade level. For each theme, the results are shown in tables and charts and they are compared with the unweighted survey averages. The eight key themes are within the questionnaire item and for more detailed information about each them and comparison variables please refer to the master questionnaire and to the result tables. The key themes are listed following:

Early onset of substance use

Consumption Patterns – licit and Illicit Substances

Conditional probabilities of substance use

Patterns of Current Substance Use - use in the last 30 days

Pattern of past year substance use - problematic alcohol use

Perceived harmfulness of substance use

Parental and family involvement

Use related risk

Violence-related and other antisocial behaviours

Suicide, suicide behaviour and related risk

Family Upbringing and Mental Health

Summary of Key Results - Overall

Age of First Use and Early Onset of Substance Use

- The average age of first use of crack cocaine and cigarette (9.3 and 9.4 years respectively) were the lowest average among all substances.
- First use for all other illicit substances except marijuana ranged between 11.7 and 12.9 years.
- Boys were significantly more likely than girls to report an earlier age of first use for cigarette, alcohol, and crack cocaine.
- Girls reported earlier age of first use for ecstasy, tranquillizers, and LSD.
- However, the age of first use of marijuana, pain killers, and e-cigarettes was about the same for boys and girls.

Early Onset of Substance Use

- A low proportion of students (8.6 % or one in twelve) had smoked cigarettes at the age of 13 or younger
- Boys and girls reported similar prevalence for early onset of cigarettes use (8.4% boys and 8.2% girls).
- More than twice as many students (18%, when compared to early cigarette use) had smoked e-cigarettes at the age of 13 or younger
- Three in ten students (30%) reported alcohol use at the age of 13 or younger
- On average, 9.3% of the students reported early onset of marijuana use
- A slightly higher proportion of girls compared to boys reported early onset of marijuana use (9.3% for girls versus 7.8% for girls, $p>0.05$).

Consumption Patterns – licit and Illicit Substances

Cigarette

- Overall lifetime prevalence of cigarettes was 10.2% - one in ten students reported having tried cigarettes. The average lifetime prevalence of cigarette smoking was about the same among boys (9.6%) and girls (9.8%),
- On average, 2.2% of the students in the survey had used cigarettes during the last 30 days. The average rates for boys and girls were

slightly different. The survey average for last 30 days or current prevalence for boys was (2.3%) and girls (1.6%).

E-cigarettes

- Overall lifetime prevalence of e-cigarettes was 29% - a little more than one in three students reported having tried cigarettes. The average lifetime prevalence of e-cigarette smoking was not dis-similar among boys and girls - boys (28.8%) and girls (28.5%),
- On average, 9.5% of the students in the survey had used e-cigarettes during the last 30 days. The average rates for boys and girls were significantly different, and the gender rates also varied considerably in most districts. The survey average for last 30 days or current prevalence for boys was (10.5%) and girls (7.5%), χ^2 =8.70, p=0.003.

Alcohol

- The survey average for lifetime alcohol use was 44.4% (table 6). The lifetime prevalence among the district ranged from 41.1-47.7%. The lifetime average for boys was 43.6% and for girls 45%. This difference was however not statistically significant.
- Overall, 16.8% of the students in the survey had consumed alcohol during the 30 days prior to the survey. On average, significantly more girls than boys reported drinking alcohol during the 30 days prior to the survey (17.9% for girls versus 15.3% for boys), χ^2 =3.86, p=0.04).

Marijuana

- The most prevalent illicit drug reported in the survey is marijuana. On average, 16.5% of the students have used marijuana at least once in their lifetime. On average, girls reported significantly higher proportions of lifetime use than boys (17.3% versus 14.7%) - χ^2 =4.62, p=.031.
- Overall, 7.8% of students in the survey had consumed marijuana during the 30 days prior to the survey. On average, girls reported moderately higher current use prevalence than boys (8.2% versus 6.7%).

Any illicit drug use/other illicit drug use

- Besides cannabis, some students reported use of other illicit substances (crack cocaine, cocaine powder, ecstasy, and LSD).
- The most frequently tried of the other illicit drugs was ecstasy. Prevalence was negligible for all occurrences (0.7% ecstasy (about 25 students).
- In the case of any illicit drugs other than **ecstasy**, on average, 0.-0.5% of the students reported having used them at least once.
- Current use prevalence rates were even more negligible (0.2-0.3%)

Use of pharmaceuticals

- Overall lifetime prevalence of the use of tranquilizers without prescription was 0.4% (about 14 students) with negligible use in the past year and last 30 days at 0.3%.
- On average, use of painkillers without prescription was reported by 2.2% of the students for lifetime, 2.1% for past year and 1.6% for last 30 days or current use

Conditional probabilities of substance use

Cigarette use

- Among students who have used cigarettes at least once (n=318), 78.9% had used e-cigarettes, 89.3% have also used alcohol, 65.4% marijuana, and 8.2% pain killers
- Boys and girls who have used cigarettes at least once were as likely to report a notable high proportion of other substance use
- Girls were notable more likely to report higher proportional use of the four substances (e-cigarettes, alcohol, marijuana, and pain killers) compared to boys.

E-cigarettes use

- Among students who have used e-cigarettes at least once (n=938), 26.8% had used cigarettes, 78.4% have also used alcohol, 43.7% marijuana, and 4.4% pain killers
- Boys and girls who have used e-cigarettes at least once were as likely to report a notable high proportion of other substance use - cigarettes use

(boys, 26.2% versus girls, 27.3%), alcohol (73.0% versus 83.7%), marijuana (39.9% versus 47.5%), and pain killers (3.2% versus 5.5%).
- Again, girls were notable more likely to report higher proportional use of the four substances (e-cigarettes, alcohol, marijuana, and pain killers) compared to boys.

Alcohol use

- Among students that have used alcohol (n=1449), 19.6% tried cigarettes, 50.7% e-cigarettes, 31.4% marijuana and 3.2% pain killers.
- About one-fifth of boys and girls who have used alcohol at least once reported use of cigarettes (19% boys versus 20.1% girls). However, the prevalence of e-cigarettes was notable higher (43.8% versus 53%), as was marijuana use (27.7% versus 34.9%).
- Boys and girls who had used alcohol reported dis-similar proportional use of pain killers (2.6% versus 3.9%).

Marijuana use

- Of the students that have used marijuana (n523), 39.8% have also used cigarettes, 78.4% e-cigarettes, 87% alcohol and pain killers (6.7%).
- Boys and girls who have used marijuana at least once were as likely to report a notable high proportion of cigarette use (40.7% boys versus 39% girls), e-cigarettes (78.8% versus 78%) and alcohol (82.6% versus 90.6%).
- Girls were notable more likely to report higher proportional use of alcohol compared to boys.
- Both boys and girls who had used marijuana reported about similar proportional use of pain killers (6.4% versus 7%).

Patterns of current use

Heavy episodic drinking (binge drinking) in the last 30 days

- Among students who reported drinking in the 30-day period prior to the survey (n=584), more than half of the students, (every second student), (57.3% or 336/584) reported heavy episodic drinking during the last 30 days
- The difference between boys and girls was about 3 percentage points on average, with a generally higher prevalence for boys (60.2%) than girls (57.1%)
- Heavy episodic drinking (binge drinking) in the last 30 days was not significantly correlated with early onset of alcohol use. Some (61.2%) of

students who reported early onset also reported binge drinking. This compares to 57.9% of students who reported late onset, p>0.05.

Problematic alcohol use

- A notable proportion of students (10%) admitted that they were unable to stop drinking once they had started.
- A slightly larger proportion (13%) reported that they have failed to do what was normally expected from them because of drinking.
- A small proportion of students (4.4%) reported that they needed a drink first thing in the morning to get themselves going after a heavy drinking session
- A notable high proportion of students (24%) reported that they had a feeling of guilt or remorse after drinking. This compares with 23.5% of students who reported that they have been unable to remember what happened the night before because they had been drinking.
- **Based on the international audit scoring system – 2.8% of related students were assessed as exhibiting dependence and 29.8% as having alcohol-related problems**

Overall Use-Related Risks and Gender Differences

- The proportion of students who indicated that they have experienced getting into an argument or fight was 35.3%. This was reported by 36% of boys compared to 33.8% of girls.
- The proportion of students who indicated that they have experienced problems with family was 33.7%. A slightly higher proportion of girls (36.4%) compared to boys (30.7%) experiences this.
- The proportion of students who indicated that they tried without success to stop drinking alcohol, ...or taking illicit drugs was 14.4%. A slightly higher proportion of girls (13.5%) compared to boys (12.6%) experiences this.

Violence-related Behaviours - Bullying

- More than half of the students overall (55%) reported been bullied at some time, while bullying in the past 30 days was even lower (12.8%).
- The proportions reported by boys and girls were significantly different for all items. Significantly more girls (63%) compared to boys (47.4%) reported ever been bullied, p<0.001).

- This was also the case for past year bullying (25.9% girls versus 18.6% boys, p<0.01), and for last 30 days (14.8% girls versus 10.6% boys, p<0.05).
- Interestingly, significantly more girls (24%) reported having bullied someone at school or in the community when compared to boys (21.4%), p<0.01.

Weapons in Community or at School

- Overall, 12.5% of students reported that they had carried a weapon in the community or at school (16.3% boys and 8.9% girls).
- In relation to the number of times threatened, a small proportion overall indicated been threatened (10%). Boys (11.5%) were significantly more likely to report this compared to girls (7.9%).

Other Antisocial Behaviours

Delinquency

- Overall, a small proportion of students said they had been arrested (3.4%) or 77/2281 (Year 9-12 students only answered this question)
- Boys (4.1%) were significantly more likely to indicate being arrested compared to girls (2.7%)
- About one in nine students (11.7%) said they had attacked someone with intention of serious harm.
- Significantly more boys (13.2%) compared to girls (9.9%), P<0.05
- A small proportion (4.5%) reported being drunk at school
- Significantly more girls compared to boys (2.5% boys versus 6.1% girls), p<0.05
- Overall, 11.5% of students got suspended because of violence.
- The difference between boys (15.3%) and girls (7.6%) was statistically significant, p<0.05.
- About 4.9% of students overall reported belonging to a gang/crew.
- The difference between boys (5.6%) and girls (3.97%) was not statistically significant, p>0.05.
- Overall, almost four in ten students (38.1%) had been in a fight. Significantly more girls (47.8%) than boys (29.4%) reported this, p<0.01.
- Most common reason given was
    - "to defend myself"
    - to support a friend
    - to defend other members of the family

Suicidal Ideations and Suicide Attempts

- About one in six Year 9-12 students (17%) reported that they had seriously considered attempting suicide (n=387)
- Slightly more girls (17.9%) compared to boys (16.1%)
- The prevalence of actual attempted suicide was 8.9% overall (n=202).
- Again, girls (14.4%) were significantly more likely to report this compared to boys (2.7%), $p<0.01$.
- Of the 387 students who seriously considered suicide, 91 or 23.5% attempted suicide (22 boys and 61 girls with 8 unknown gender).
- Among known gender for students who attempted suicide, 157 were girls and 28 were boys. 17 were of unknown gender.
- About 4.4% of students reported that their suicide attempt had to be treated by a doctor or nurse (n=101 or half of those who had attempted suicide) - (5.9% among girls and 2.9% among boys), significantly different at the $p<0.01$ level.

Suicide and Age

- The relationship between age grouping and the risk of suicide was explored by the chi-square test. There was a significant difference between rates among the younger cohort (those age 13, 14 or 15 with a cumulative prevalence of 22.9%) and the older cohort (those age 16, 17 or 18/19 with a cumulative prevalence of 28.5%), $p<0.01$.

Self-harming Behaviour

- Overall, 27.4% (n=626) of students reported that they have engaged in self-harming behaviours such as:
    - cutting (20.3),
    - scratching /pinching (13%),
    - hitting or banging body parts (12.2%),
    - interfering with wounds (6.7%)
- Again, girls (41.8%) were significantly more likely to report this compared to boys (12.1%).
- Significantly more girls engage in self-harm (40.8% vs 13.7%), most common method- cutting.

Risk for Suicide

- Students who reported self-harming were 7 times more likely [OR=7.401] to have attempted suicide compared to those who had not reported self-harming (22.4% versus 3.7%).

Abuse (physical, sexual and "any or both")

- **Physical abuse** overall was reported by 13.5% of Year 9-12 students overall (n=308)
- Girls (218.9%) were significantly more likely to report this compared to boys (6.9%)

Risks for physical abuse

- About 30.5% of students who were physically abused had attempted suicide compared to about 5.5% of those who had not been physically abused
- Students who were physically abused were 7.5 [OR=7.514] times more likely to attempt suicide compared to those who were not so abused.

- In terms of **sexual abuse**, the prevalence was 4.2% overall (n=96) with girls (6.3%) significantly more likely to report this compared to boys (2.2%).

Risks for sexual abuse

- Students who were sexually abused were 5.5 times more likely [OR=5.516] to have attempted suicide compared to those who were not so abused (33.7% versus 8.4%).

- A variable was computed for "**any abuse**", whether physical or sexual and the prevalence was 14.5% (n=330).
- Almost three times as many girls (20.1%) compared to boys (7.4%) reported either being physically or sexually abused

Risks for any abuse

- Students who had experienced "any abuse" were 7.3 times [OR=7.319] more likely to have attempted suicide compared to those who had not (29.4% versus 5.4%).

Mental Health

Meaning of Mental Health

- About one-third of the Year 9-12 students (33.9%) or (773/2281) - 23.3% boys and 43.8% girls) said they understood what was meant by mental health

- Six in ten students (63.8%) said they were taught about mental health in school
- When asked if they had seen a doctor, nurse, or counsellor about your mental or emotional health, about a third (32.2%) indicated that they had
- 29.9% boys versus 33.7% girls (notable more girls than boys had seen a doctor about mental health issues).

Feelings about Self

- Overall, more than seven in ten (73.3%) of students were satisfied with themselves while 26.7% were not.
- Eight of every ten boys (82.7%) said they were satisfied with themselves. This compares to 65.6% of girls.
- Twice as many girls were not satisfied with themselves compared to boys (34.4% versus 17.3%), $p<0.01$.

Mental or emotional health

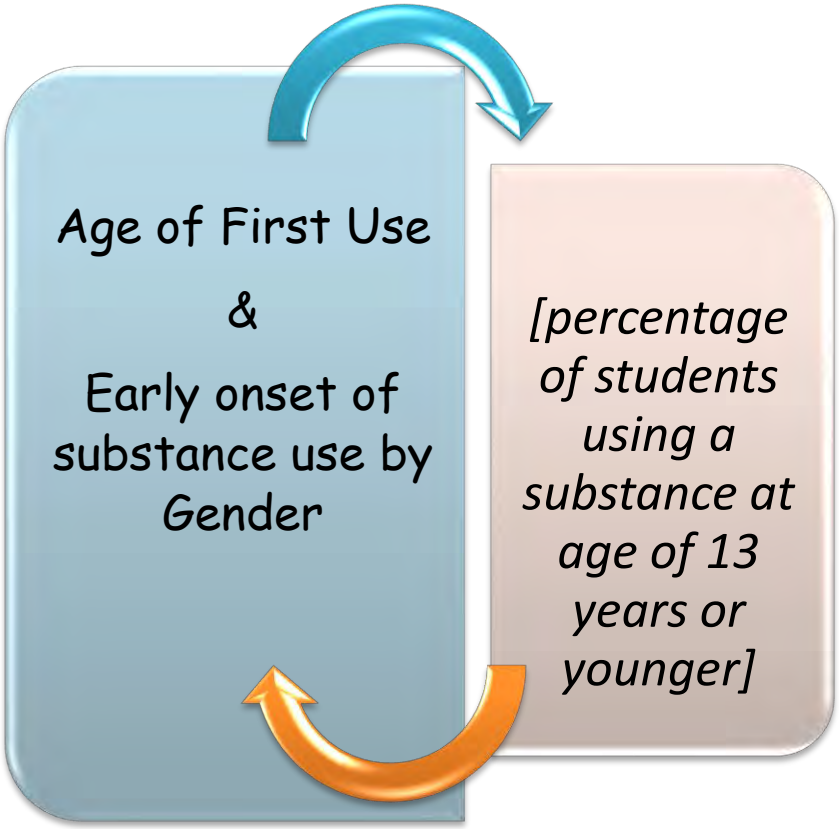
- Some 18.1% of the students (Year 9-12) expressed that their mental health was "excellent"; while 24.1% said "very good"; 24.9% "good"; 21.4% "fair"; and 11.6% "poor"
- Boys were more likely to express that their mental health was "excellent" or "very good"—for example, three times as many boys (26.8%) compared to girls (9.7%) said "excellent".
- Additionally, twice as many girls (29.9%) said it was "fair" compared to boys (14%)

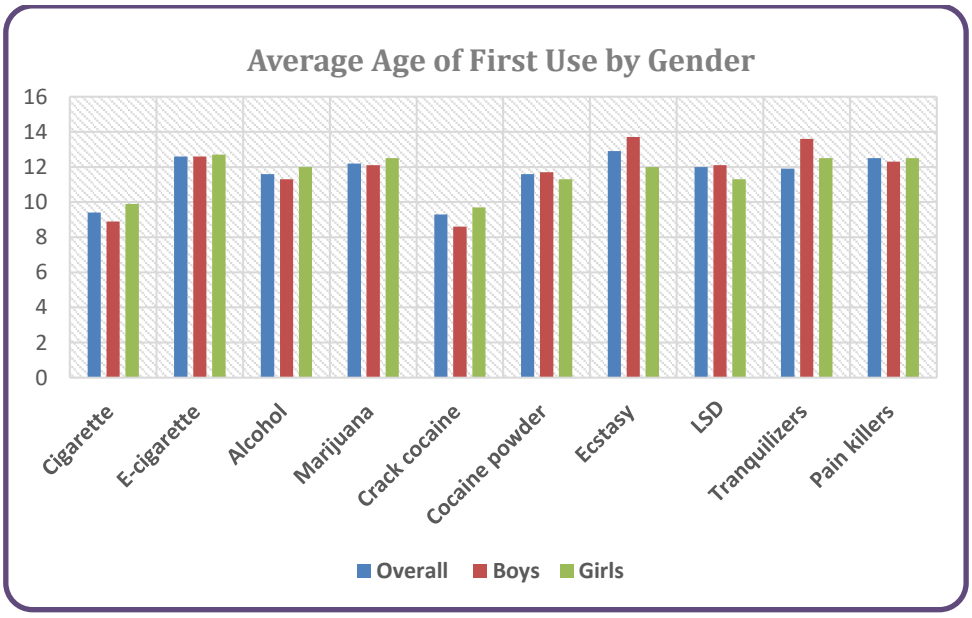
Anxiety and Depression - Gender Differences

- There was a significant difference in the total internalizing scores for girls (Mean=23.8±14.3) compared to boys (Mean=15.5±12.2).
- Girls also reported significantly higher levels of anxiety and depression than boys on all subscales except for generalized anxiety disorder
- Consistent with the literature, girls constantly display higher scores than boys on all sub-scales.
- Taking grade level as a proxy for age, separation anxiety decreased with increasing grade levels, but generalized anxiety increased with increased grade levels.

Summary of Key Results - Boy/Girl Differences

Boys	**Girls**
Carrying a weapon	Being bullied
Belong to gang/crew	Bullying others
Arrested	Consider attempting suicide
Higher rate of attacking someone with intention of serious harm	More reported actual suicide attempted
Suspended from school because of violence	Twice more reporting physical and sexual abuse
Higher rate of mental health as excellent	More self-harm
Threatened by weapons	Not satisfied with self
Binge drinking	Being in a fight
	Drunk at school
	More use of social media
	Higher lifetime, past year and current use of marijuana and pain killers
	Early onset of tranquilizers and pain killers
	More liquor consumption at social events
	More likely to associate risk of harm with the use of substances
	Higher reported social phobia
	Higher reported panic disorder
	Higher reported separation anxiety
	Higher reported generalized anxiety
	Higher reported obsessive compulsive
	Higher reported major depression


Age of First Use
&
Early onset of substance use by Gender
[percentage of students using a substance at age of 13 years or younger]


Average Age of First Use by Gender
16
14
12
10
8
6
4
2
0
Cigarette
E-cigarette
Alcohol
Marijuana
Crack cocaine
Cocaine powder
Ecstasy
LSD
Tranquilizers
Pain killers
Overall
Boys
Girls

Age of First Use and Early Onset of Substance Use

Table 1: Age of First Use of Selected Substances

Substances 2020		Age (years)				
	Freq.	Mean	Median	Mode	Range	Standard deviation
Cigarette	422	9.5	12	13	19	5.858
e-cigarette	1041	12.7	12	13	19	3.059
Alcohol	1531	11.7	12	13	19	3.449
Marijuana	589	12.2	13	13	19	4.229
Crack cocaine	38	9.3	11	11	16	4.193
Cocaine powder	39	11.7	11	11	19	4.175
Ecstasy	43	12.9	15	15	19	4.726
LSD	26	12.1	14	14	16	4.399
Tranquilizer*	26	11.9	13	13	16	4.054
Pain relief pills*	120	12.5	13	13	14	2.429

Age of First Use

As shown in Table 1 above, the average age of first use of crack cocaine and cigarette (9.3 and 9.42 years respectively) were the lowest average among all substances. First use for all other illicit substances except marijuana ranged between 11.7 and 12.9 years. Age of first use for tranquilizers was like that of cocaine and alcohol. Importantly, the use of pain killers without a doctor's prescription began at the same age as marijuana and e-cigarette.

Boys were significantly more likely than girls to report an earlier age of first use for cigarette, alcohol, and crack cocaine. Girls reported earlier age of first use for ecstasy, tranquillizers, and LSD. However, the age of first use of marijuana, pain killers, and e-cigarettes was about the same for boys and girls. (see Table 61 additional tables).

Early Onset of Substance Use

Refers to the prevalence of students experiencing substance use at the age of 13 years or younger.

Table 2: Early onset of substance use (%) by Gender

[percentage of students using a substance at age of 13 years or younger]					
	Survey %	Boys	Girls	Chi square (χ^2)	p-value
Cigarette	8.6	8.4	8.2	0.33	0.848
e-cigarette	18.0	17.2	17.5	0.450	0.798
Alcohol	30.0	30.4	29.5	1.90	0.386
Marijuana	9.3	7.8	9.6	3.78	0.151
Tranquilizer*	0.5	0.1	0.7	11.66	0.003
Pain relief pills*	2.3	1.4	3.1	13.14	0.001

* without a doctor's prescription

Table 3: Early onset of substance use (%) by Location

[percentage of students using a substance at age of 13 years or younger]				
Location	Cig	e-cig	Alc	Mari
Survey Average	8.6	18.0	30.0	9.3
Bodden Town	7.7	20.7	31.7	10.2
East End	16.2	31.3	34.3	13.1
George Town	6.4	14.0	27.7	6.6
North Side	9.6	18.4	26.3	8.8
West Bay	10.6	19.2	30.6	11.6
Cayman Brac	18.5	21.5	36.9	14.6

Cigarettes and E-cigarettes (tables 3 and 60)

A low proportion of students (8.6 % or one in twelve) had smoked cigarettes at the age of 13 or younger (Table 3). The proportions vary considerably across districts, from highs of 18.5% in Cayman Brac, West Bay (10.6%) and East End (16.2%); to lows of 6.4% in George Town and Bodden Town (7.7%). Boys and girls reported similar prevalence for early onset of cigarettes use (8.4% boys and 8.2% girls).

The largest difference between boys and girls was found in East End (19.5% versus 13.5 %). The highest rates among boys were found in Cayman Brac

(17.5%) and East End (19.5%). Cayman Brac (15.4%), East End (13.5%) and North Side (10.6%) had the highest rates among girls.

E-cigarettes

More than twice as many students (18%, when compared to early cigarette use) had smoked e-cigarettes at the age of 13 or younger (Table 3). Overall, a similar proportion of boys (17.2%) compared to girls (17.5%) reported early onset of e-cigarette use – no statistically significant difference among boys and girls with respect to early onset of e-cigarette use, $p>0.05$.

Likewise, the proportions for early onset of e-cigarette vary considerably across districts, from highs of 31.3% in East End, Bodden Town (20.7), West Bay (19.2%) and Cayman Brac (21.5%); to lows of 14% in George Town.

In most individual district, slightly more boys than girls have smoked e-cigarettes at the age of 13 or younger (table 60). The only exceptions were North Side (19.1% girls versus 15.9% boys) and West Bay (20.8% girls versus 17.1% boys). The highest rates among boys were found in East End and Cayman Brac and among girls in East End and West Bay.

Alcohol

Three in ten students (30%) reported alcohol use at the age of 13 or younger (Table 3). The highest proportions of students reporting alcohol use at an early age were found in the districts of Cayman Brac (36.9%), East End (34.3%), and Bodden Town (31.7%). The districts with the lowest rates were George Town (27.7%) and North Side (26.3%).

Overall, a similar proportion of boys (30.4%) compared to girls (29.5%) reported early onset of e-cigarette use – no statistically significant difference among boys and girls with respect to early onset of alcohol use, $p>0.05$.

The highest gender differences were found in Cayman Brac (41.5% for girls versus 29.8% for boys, a difference of 11.7 percentage points) and East End (38.5% for girls versus 29.3% for boys, a difference of 9.2 percentage points).

Marijuana

On average, 9.3% of the students reported early onset of marijuana use (Table 3). The highest proportions were found in Cayman Brac (14.6%), West Bay (11.6%) and East End (13.1%), table 3.

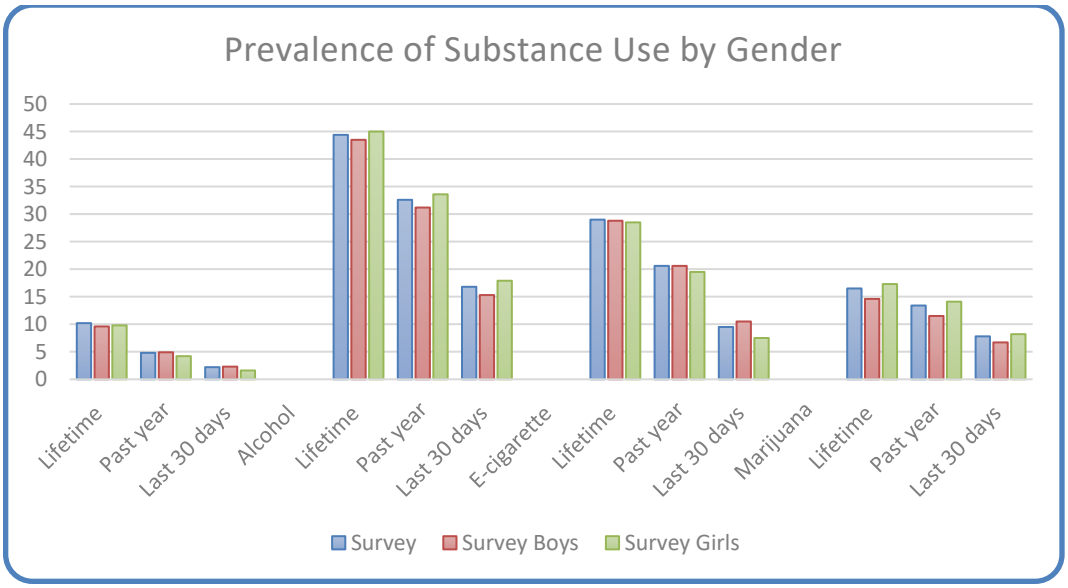
A slightly higher proportion of girls compared to boys reported early onset of marijuana use (9.3% for girls versus 7.8% for girls, p>0.05). The highest gender differences were found in Cayman Brac (18.5% for girls versus 7% for boys, a difference of 11.5 percentage points). The lowest proportion for both boys and girls were reported for George Town and North Side.

Comparison of early onset of substance use by gender (2018 Survey versus 2020 Survey)

There was greater variability in proportions of early onset for the various substances among girls and boys in 2018 compared to 2020. While in 2018 there were statistically significant differences for early onset of cigarette, e-cigarettes and alcohol, the differences in 2020 were not statistically significant. Higher proportion of students reported early onset for cigarette, e-cigarettes, alcohol, and marijuana in 2020 compared to 2018. Early onset among boys for cigarette, e-cigarettes and marijuana were relatively the same for both surveys. However, in 2020, girls reported higher proportions for cigarette, e-cigarettes, and marijuana.

Consumption Patterns – licit and Illicit Substances

Percentage of students reporting use of cigarettes, e-cigarettes, alcohol, marijuana and other illicit drugs for lifetime, past year and last 30 days.



Consumption Patterns – licit and Illicit Substances

Percentage of students reporting use of cigarettes, e-cigarettes, alcohol, marijuana and other illicit drugs for lifetime, past year and last 30 days. Five tables below (Table 4 through Table 10 and Table 69) show the prevalence of lifetime, past year and current use for all students overall and comparisons by gender, the statistical relationship between boys and girls, and lifetime and current use by location.

Table 4: Overall prevalence of substance use (%)

[Percentage of students reporting use of cigarettes, e-cigarettes, alcohol, marijuana and other illicit drugs for lifetime, past year and last 30 days]			
	Lifetime	Past year	Last 30 days
Cigarette	10.2	4.8	2.2
e-cigarette	29.0	20.6	9.5
Alcohol	44.4	32.6	16.8
Marijuana	16.5	13.4	7.8
Crack cocaine	0.3	0.2	0.2
Cocaine powder	0.3	0.2	0.2
Ecstasy	0.7	0.4	0.3
LSD	0.5	0.3	0.2
Tranquilizer*	0.4	0.3	0.3
Pain relief pills*	2.3	2.0	1.6

*without a doctors prescription

Gender comparison - Percentage of students reporting use of cigarettes, e-cigarettes, alcohol, marijuana and other illicit drugs for lifetime, past year and last 30 days.

Table 5: Prevalence of substance use by Gender (%)

Substances	Lifetime		Past year		Last 30 days or current	
	Boys	Girls	Boys	Girls	Boys	Girls
Cigarette	9.6	9.8	4.9	4.2	2.3	1.6
e-cigarette	28.8	28.5	20.6	19.5	10.5	7.5
Alcohol	43.5	45.0	31.2	33.6	15.3	17.9
Marijuana	14.6	17.3	11.5	14.1	6.7	8.2
Crack cocaine	0.8	0.3	0.2	0.3	0.2	0.2
Cocaine powder	0.8	0.4	0.7	0.4	0.2	0.3
Ecstasy	1.7	0.6	0.7	0.6	0.7	0.5
LSD	0.8	0.7	0.8	0.3	0.3	0.0
Tranquilizer*	0.3	0.8	0.2	0.6	0.2	0.6
Pain relief pills*	2.3	4.1	2.8	4.1	1.4	3.4

Location Comparison

Percentage of students reporting use of cigarettes, e-cigarettes, alcohol, marijuana and other illicit drugs for lifetime, past year and last 30 days.

Table 6: Prevalence of Lifetime Use by Location (%)

[percentage of students reporting use of various substances] – Lifetime				
	Substances			
Location	Cigarettes	e-cigarette	Alcohol	Marijuana
Survey Average	10.2	29.0	44.4	16.5
Bodden Town	8.7	29.2	46.3	15.4
East End	12.1	35.4	46.4	14.1
George Town	8.2	27.8	44.1	14.4
North Side	15.8	26.3	42.1	16.7
West Bay	13.4	30.6	47.7	21.2
Cayman Brac	15.4	30.8	41.5	20.0

Table 7: Prevalence of Past Year Use by Location (%)

[percentage of students reporting use of various substances] – Past Year				
	Substances			
Location	Cigarettes	e-cigarette	Alcohol	Marijuana
Survey Average	4.8	20.6	32.6	13.4
Bodden Town	3.5	20.0	29.8	12.2
East End	4.0	22.2	28.3	11.1
George Town	4.0	19.7	34.4	11.6
North Side	10.5	21.9	33.3	14.0
West Bay	6.5	22.6	35.0	17.4
Cayman Brac	7.7	23.1	29.2	16.9

Table 8: Prevalence of Use: Last 30 Days by Location (%)

[percentage of students reporting use of various substances] – Last 30 days				
	Substances			
Location	Cigarettes	e-cigarette	Alcohol	Marijuana
Survey Average	2.2	9.5	16.9	7.8
Bodden Town	1.7	8.5	12.6	8.0
East End	1.0	11.1	12.1	5.1
George Town	1.3	7.8	18.6	6.1
North Side	4.4	14.0	19.3	6.1
West Bay	3.7	12.1	19.8	10.0
Cayman Brac	3.8	12.3	16.9	10.8

Table 9: Prevalence of Use: 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	10.2	8.7	12.1	8.2	15.8	13.4	15.4
Boys	9.7	9.0	9.8	7.6	12.7	13.5	10.5
Girls	9.8	8.1	11.5	9.1	19.1	12.4	15.4
E-cigarettes							
Survey average	29.0	29.2	35.4	27.8	26.3	30.6	30.8
Boys	28.8	30.8	31.7	27.7	27.0	28.2	28.1
Girls	28.6	26.8	36.5	26.8	21.3	33.2	30.8
Alcohol							
Survey average	44.4	43.6	43.4	44.1	42.1	47.7	41.5
Boys	43.6	40.7	36.6	43.9	42.9	48.9	35.1
Girls	45.0	45.7	48.1	43.3	38.3	46.8	47.7
Marijuana							
Survey average	16.5	15.4	14.1	14.4	16.7	21.2	20.0
Boys	14.7	13.8	9.8	12.2	14.3	21.3	10.5
Girls	17.3	15.8	17.3	15.5	19.1	20.5	26.2

Cigarette Use

Lifetime

Overall lifetime prevalence of cigarettes was 10.2% - one in ten students reported having tried cigarettes. Rates of cigarette smoking range between 8.2% (George Town) and 15.4% (Cayman Brac) in the districts (Table 6). In all but two districts – George Town and Bodden Town –students reported rates above the survey average of 10.2%.

The average lifetime prevalence of cigarette smoking was about the same among boys (9.6%) and girls (9.8%), table 9. In four of the six districts surveyed, girls were as likely as boys to have tried cigarettes. Districts with the largest gender differences were Cayman Brac (10.54% for boys versus 15.4% for girls), North Side (12.7% versus 19.1%). The largest gender differences where girls reported higher rates were found in North Side (6.4 percentage points difference).

Last 30 days

On average, 2.2% of the students in the survey had used cigarettes during the last 30 days, table 6. The highest rates were found in North Side (4.4%), Cayman Brac (3.8%), and West Bay (3.7%). All other districts reported last-30-day prevalence at the overall average or below with East End reporting the lowest prevalence (1%), table 8

The average rates for boys and girls were slightly different. The survey average for last 30 days or current prevalence for boys was (2.3%) and girls (1.6%). Districts with high smoking rates (above the average): for boys were North Side (4.8%), West Bay (5%) and Cayman Brac (3.5%); and for girls were North Side (2.1%) and Cayman Brac (3.1%).

E-cigarette

Lifetime

Overall lifetime prevalence of e-cigarettes was 29% - a little more than one in three students reported having tried cigarettes. Rates of e-cigarette smoking within the districts ranged between 26.3% and 35.4% (Table 6). In all but two districts, 29% or more of the students had tried smoking e-cigarettes at least once. The highest prevalence rates were found in the districts of East End (35.4%), followed by Cayman Brac (30.8%) and West Bay (30.6%). North Side reported the lowest prevalence (26.3%).

The average lifetime prevalence of e-cigarette smoking was not dis-similar among boys and girls - boys (28.8%) and girls (28.5%), table 9. Across districts, girls were as likely as boys to have tried e-cigarettes. The three districts where girls reported a slightly higher prevalence than boys were Cayman Brac (30.8% versus 28.1%), West Bay (33.2% versus 28.2%), and East End (36.5% versus 31.7%). District with the largest gender difference was North Side (5.7pp - 27% for boys versus 21.3% for girls).

Last 30 days

On average, 9.5% of the students in the survey had used e-cigarettes during the last 30 days. The highest rate was found in North Side (14%). All other districts except Bodden Town (8.5%) and George Town (7.8% and the lowest prevalence) reported last-30-day prevalence above the overall average

The average rates for boys and girls were significantly different, and the gender rates also varied considerably in most districts. The survey average for last 30 days or current prevalence for boys was (10.5%) and girls (7.5%), χ^2 =8.70, p=0.003. Districts with the largest gender differences (in rank order) were Bodden Town, 5.9pp (11% for boys versus 5.2% for girls), Cayman Brac 5pp (13.8% versus 8.8%) and North Side, 3.7pp (14.3% versus 10.6%). The only districts where girls reported a slightly higher prevalence than boys were Cayman Brac and East End.

Alcohol

Lifetime

The survey average for lifetime alcohol use was 44.4% (table 6). The lifetime prevalence among the district ranged from 41.1-47.7%. The highest rate of lifetime alcohol prevalence (>44.4%) was found in West Bay (47.7%). All other districts reported rates below the survey average.

The lifetime average for boys was 43.6% and for girls 45%. This difference was however not statistically significant. A higher proportion for girls than boys was found in all districts except for George Town and North Side. Large differences between girls and boys were observed in East End (48.1% for girls versus 36.6% for boys; a 11.5 percentage points difference) and Cayman Brac (47.7% versus 35.1%; a 12.6 percentage points difference).

Last 30 days

Overall, 16.8% of the students in the survey had consumed alcohol during the 30 days prior to the survey. The highest rates of last 30 days or current alcohol prevalence were found in North Side (19.3%), West Bay (19.8%) and George Town (18.6%). Districts with rates below the survey average were Bodden Town (12.6%) and East End (12.1%).

On average, significantly more girls than boys reported drinking alcohol during the 30 days prior to the survey (17.9% for girls versus 15.3% for boys), χ^2 =3.86, p=0.04). The districts with particularly large gender differences in this direction were Cayman Brac (20% girls versus 12.3% boys -7.7 percentage points), and North Side (21.3% girls versus 15.9% boys -5.4 percentage points). In all six districts, a larger proportion of girls reported alcohol use during the last 30 days.

Marijuana Use

Lifetime

The most prevalent illicit drug reported in the survey is marijuana. On average, 16.5% of the students have used marijuana at least once in their lifetime (Table 6). The district with the highest lifetime prevalence of marijuana use was West Bay (21.2%). Some 14-21% of students in all districts reported having used marijuana at least once in their lifetime. The lowest levels of marijuana use (14.1%) was reported for East End.

On average, girls reported significantly higher proportions of lifetime use than boys (17.3% versus 14.7%) - χ^2 =4.62, p=.031. This was the case in five of the six districts with the exception being West Bay - boys (21.3%) versus girls (20.5%). A notable higher proportion of girls in Cayman Brac reported lifetime use compared to boys (girls, 26.2% versus 10.5% - 15.7pp difference).

Last 30 days

Overall, 7.8% of students in the survey had consumed marijuana during the 30 days prior to the survey. The highest rates of last 30 days or current marijuana prevalence were found in Cayman Brac (10.8%) and West Bay (10%). Districts with rates below the survey average were George Town (6.1%), East End (5.1%, the lowest prevalence reported) and North Side (6.1%).

On average, girls reported moderately higher current use prevalence than boys (8.2% versus 6.7%). Gender differences (some small and some large) were notable for all districts apart from Bodden Town and West Bay. The largest differences were for Cayman Brac (9.2 percentage points), and North Side (5.3 pp).

Any illicit drug use/other illicit drug use

Besides cannabis, some students reported use of other illicit substances (crack cocaine, cocaine powder, ecstasy, and LSD). The most frequently tried of the other illicit drugs was ecstasy. Prevalence was negligible for all occurrences (0.7% ecstasy (about 25 students). In the case of any illicit drugs other than ecstasy, on average, 0.-0.5% of the students reported having used them at least once. Current use prevalence rates were even more negligible (0.2-0.3% reported use. Reported use was generally higher among boys in all instances.

Use of pharmaceuticals

Percentage of students reporting use of pharmaceuticals (tranquillizers or painkillers without a doctor's prescription.

Tranquillizers

Overall lifetime prevalence of the use of tranquillizers without prescription was 0.4% (about 14 students) with negligible use in the past year and last 30 days at 0.3%. Lifetime use was most prevalent in Cayman Brac (1.5%), (Table 10).

On average, more girls than boys reported use of tranquillizers without prescription (for either lifetime, past year, or current use).

Table 10: Prevalence of Pharmaceutical Use (%)

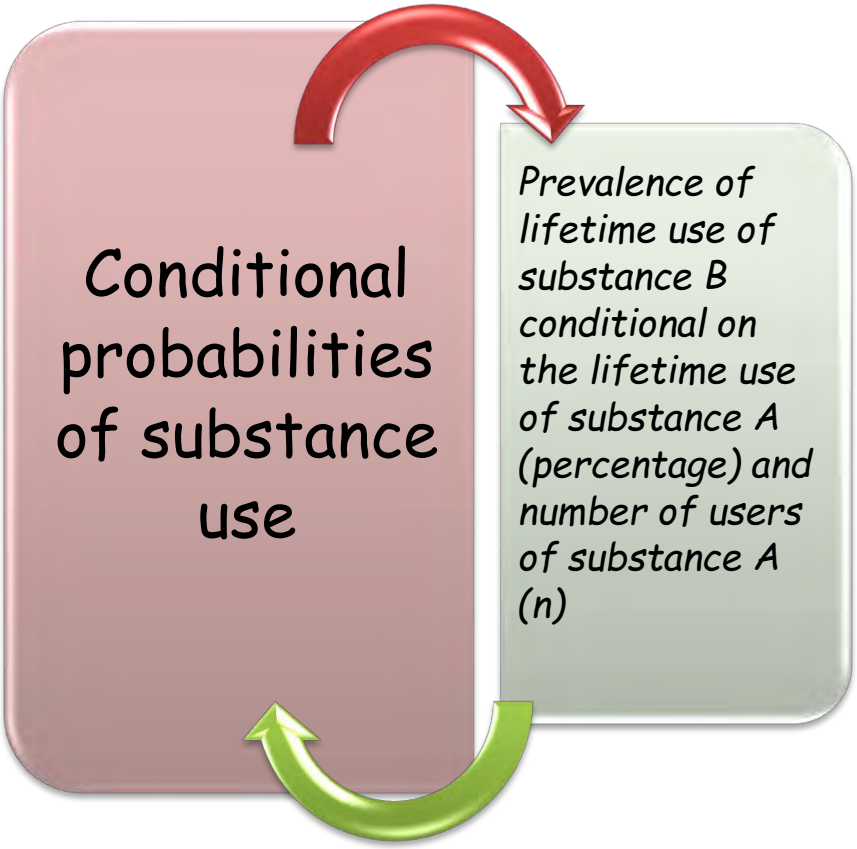
[percentage of students reporting use of tranquillizers or painkillers without a prescription]									
	Survey average	Gender		Districts					
		Boys	Girls	Bodden Town	East End	George Town	North Side	West Bay	Cayman Brac
Tranquilizers*									
Lifetime	0.4	0.2	0.4	0.5	-	0.2	-	0.4	1.5
Past year	0.3	0.1	0.5	0.4	1.0	0.2	0.9	0.4	-
Last 30 days	0.3	0.1	0.4	0.3	-	0.1	-	0.6	-
Painkillers*									
Lifetime	2.2	1.3	2.5	2.5	3.0	2.0	1.8	2.2	2.3
Past year	2.1	1.5	2.5	2.5	3.0	2.3	-	1.3	3.1
Last 30 days	1.6	0.8	2.1	1.8	2.0	0.9	0.9	2.4	2.3

* without a doctor's prescription

Painkillers

On average, use of painkillers without prescription was reported by 2.2% of the students for lifetime, 2.1% for past year and 1.6% for last 30 days or current use (table 10). The district with the highest lifetime prevalence rate was East End (3%). All other districts report prevalence at or below the overall survey average.

Like tranquillizers, slightly more girls (2.5%) than boys (1.3%) reported lifetime use of painkillers—this difference, though small was statistically significant, $\chi^2 = 19.42$, $p < .01$). This was the same in the case of past year, and current use, slightly more girls than boys reporting use of painkillers.



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

		Overall Lifetime prevalence – Substance B				
Substance A and (lifetime prevalence)	# of users (n)	Cigarettes	e-cigarette	Alcohol	Marijuana	Pain killer
Cigarettes	318	-	78.9	89.3	65.4	8.2
E-cigarettes	938	26.8	-	78.4	43.7	4.4
Alcohol	1449	19.6	50.7	-	31.4	3.2
Marijuana	523	39.8	78.4	87.0	-	6.7
Painkillers	62	41.9	66.1	75.8	56.5	-

Conditional Probabilities of Substance 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 11: Conditional Probabilities of Substance Use - Overall

*[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	# of users (n)	***Overall Lifetime prevalence – Substance B***				
		Cigarettes	e-cigarette	Alcohol	Marijuana	Pain killer
Cigarettes	318	-	78.9	89.3	65.4	8.2
E-cigarettes	938	26.8	-	78.4	43.7	4.4
Alcohol	1449	19.6	50.7	-	31.4	3.2
Marijuana	523	39.8	78.4	87.0	-	6.7
Painkillers	62	41.9	66.1	75.8	56.5	-

Table 12: Conditional Probabilities of Substance Use - Boys

Substance A	# of users (n)	***Boys - Lifetime prevalence – Substance B***				
		Cigarettes	e-cigarette	Alcohol	Marijuana	Pain killer
Cigarettes	156	-	78.2	85.9	61.5	6.4
E-cigarettes	466	26.2	-	73.0	39.9	3.2
Alcohol	704	19.0	43.8	-	27.7	2.6
Marijuana	236	40.7	78.8	82.6	-	6.4
Painkillers	21	47.6	71.4	85.7	71.4	-

Table 13: Conditional Probabilities of Substance Use – Girls

Substance A	# of users (n)	***Girls - Lifetime prevalence – Substance B***				
		Cigarettes	e-cigarette	Alcohol	Marijuana	Pain killer
Cigarettes	162	-	79.6	92.6	69.1	9.9
E-cigarettes	472	27.3	-	83.7	47.5	5.5
Alcohol	745	20.1	53.0	-	34.9	3.9
Marijuana	287	39.0	78.0	90.6	-	7.0
Painkillers	41	39.0	63.4	70.7	48.8	-

Cigarette Use

Among students who have used cigarettes at least once (n=318), 78.9% had used e-cigarettes, 89.3% have also used alcohol, 65.4% marijuana, and 8.2% pain killers without a doctor's prescription, (Table 11 through Table 13).

Cigarette - Male/Female Comparison

Boys and girls who have used cigarettes at least once were as likely to report a notable high proportion of other substance use - e-cigarettes use (boys, 78.2% versus girls, 79.6%), alcohol (85.9% versus 92.6%), marijuana (61.5% versus 69.1%), and pain killers (6.4% versus 9.9%). Girls were notably more likely to report higher proportional use of the four substances (e-cigarettes, alcohol, marijuana, and pain killers) compared to boys.

E-Cigarette Use

Among students who have used e-cigarettes at least once (n=938), 26.8% had used cigarettes, 78.4% have also used alcohol, 43.7% marijuana, and 4.4% pain killers without a doctor's prescription, (Table 11 through Table 13).

E-Cigarette - Male/Female Comparison

Boys and girls who have used e-cigarettes at least once were as likely to report a notable high proportion of other substance use - cigarettes use (boys, 26.2% versus girls, 27.3%), alcohol (73.0% versus 83.7%), marijuana (39.9% versus 47.5%), and pain killers (3.2% versus 5.5%). Again, girls were notable more likely to report higher proportional use of the four substances (e-cigarettes, alcohol, marijuana, and pain killers) compared to boys.

Alcohol Use

Among students that have used alcohol (n=1449), 19.6% tried cigarettes, 50.7% e-cigarettes, 31.4% marijuana and 3.2% pain killers.

Alcohol - Male/Female Comparison

Boys and girls who have used alcohol at least once were as likely to report a notable high proportion of other substance use - cigarettes use (boys, 19% versus girls, 20.1%), e-cigarettes (43.8% versus 53%), marijuana (27.7% versus 34.9%), and pain killers (2.6% versus 3.9%). Again, girls were notable more likely to report higher proportional use of the four substances (cigarettes, e-cigarettes, marijuana, and pain killers) compared to boys.

Marijuana Use

Of the students that have used marijuana (n=523), 39.8% have also used cigarettes, 78.4% e-cigarettes, 87% alcohol and pain killers (6.7%).

Marijuana - Male/Female Comparison

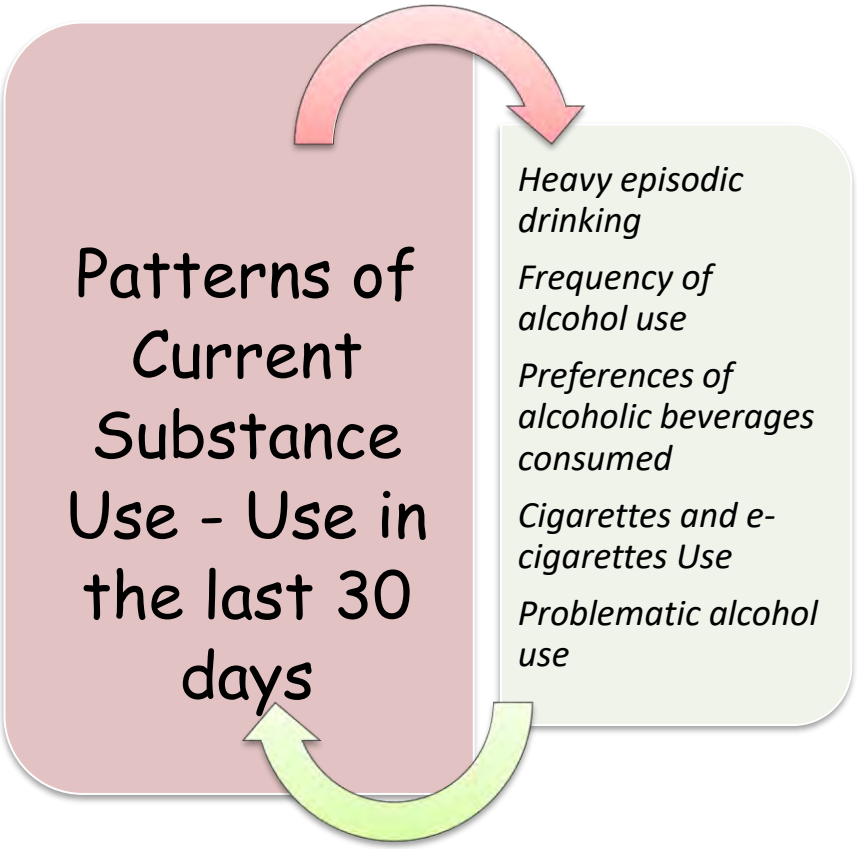
Boys and girls who have used marijuana at least once were as likely to report a notable high proportion of cigarette use (40.7% boys versus 39% girls), e-cigarettes (78.8% versus 78%) and alcohol (82.6% versus 90.6%). Girls were notable more likely to report higher proportional use of alcohol compared to boys. Both boys and girls who had used marijuana reported about similar proportional use of pain killers (6.4% versus 7%).

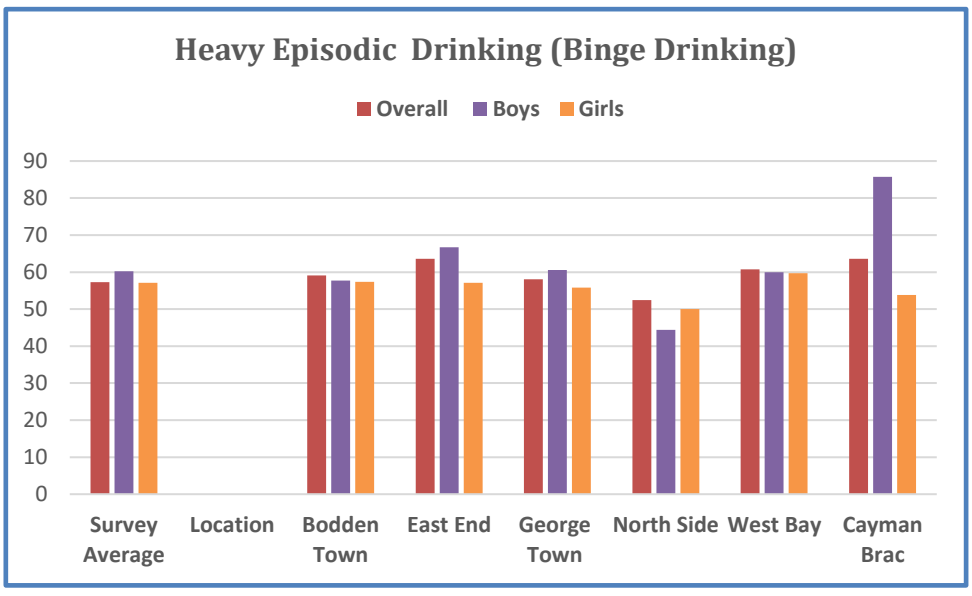
Use of Pain Killers

Among users of pain killers (n=62), 41.9% had also used cigarettes, 66.1% e-cigarettes, 75.8% alcohol and 56.5% have tried marijuana.

Pain Killers - Male/Female Comparison

Boys who have used pain killers reported a significantly higher prevalence of other substance use compared to girls, - cigarette use (47.6% boys versus 39% girls), e-cigarettes (71.4% versus 63.4%, alcohol (85.7% versus 70.7%), and marijuana (71.4% versus 48.8%).


Patterns of Current Substance Use - Use in the last 30 days
Heavy episodic drinking
Frequency of alcohol use
Preferences of alcoholic beverages consumed
Cigarettes and e-cigarettes Use
Problematic alcohol use


Heavy Episodic Drinking (Binge Drinking)
Overall
Boys
Girls
90
80
70
60
50
40
30
20
10
0
Survey Average
Location
Bodden Town
East End
George Town
North Side
West Bay
Cayman Brac

Patterns of current use

Heavy Episodic Drinking (Binge Drinking) In the Last 30 Days

Table 14: Heavy episodic drinking – binge drinking

Binge Drinking - Having five or more drinks in the last 30 days on the same occasion.			
	Overall	Boys	Girls
Survey Average	57.3	60.2	57.1
Location			
Bodden Town	59.1	57.7	57.4
East End	63.6	66.7	57.1
George Town	58.1	60.6	55.8
North Side	52.4	44.4	50.0
West Bay	60.7	60.0	59.7
Cayman Brac	63.6	85.7	53.8

Heavy episodic drinking in the last 30 days - Refers to having five or more drinks in the last 30 days on the same occasion, usually referred to as binge drinking.

Among students who reported drinking in the 30-day period prior to the survey (n=584), more than half of the students, (every second student), (57.3% or 336/584) reported heavy episodic drinking during the last 30 days (Table 14). This drinking pattern was found more often in East End (63.3%), Cayman Brac (63.6%) and West Bay (60.7%).

The difference between boys and girls was about 3 percentage points on average, with a generally higher prevalence for boys (60.2%) than girls (57.1%) (Table 14). The overall gender differences between boys and girls, and among districts were not statistically different, $p>0.05$.

Significant gender differences were found in two of the districts, with the largest differences in Cayman Brac (31.9percentage points) and East End (9.6 pp). However, in Bodden Town and West Bay, similar proportion of girls and boys reported heavy episodic drinking at least once in the last 30 days.

Heavy episodic drinking (binge drinking) in the last 30 days was not significantly correlated with early onset of alcohol use. Some (61.2%) of students who reported early onset also reported binge drinking. This compares to 57.9% of students who reported late onset, $p>0.05$.

Frequency of alcohol use in the last 30 days

Table 15: Frequency of alcoholic use in last 30 days

Frequency of alcoholic use in last 30 days									
	Survey average	Gender		Districts					
		Boys	Girls	Bodden Town	East End	George Town	North Side	West Bay	Cayman Brac
Drank Daily									
Beer	2.2	2.8	1.0	4.2	-	1.3	5.3	2.0	5.6
Wine	0.5	0.4	0.7	0.8	-	-	-	1.3	-
Coolers	4.1	4.4	4.4	7.3	-	2.2	5.3	4.0	15.8
Liquor (spirits)	3.6	3.6	3.7	6.4	-	2.1	-	4.6	4.8
Drank Weekends Only									
Beer	17.0	26.6	8.1	16.8	25.0	19.6	5.3	19.6	-
Wine	10.4	12.1	9.8	10.7	8.7	12.0	15.8	9.3	15.8
Coolers	22.3	22.2	22.6	22.6	9.1	23.0	36.8	25.2	15.8
Liquor (spirits)	21.9	23.4	20.3	24.0	-	23.2	31.6	21.6	19.0
Drank only on some Weekdays									
Beer	17.0	6.9	6.8	4.2	-	6.7	5.3	11.1	11.1
Wine	9.6	8.1	10.9	16.5	16.7	5.8	15.8	9.3	21.1
Coolers	5.9	8.1	8.8	13.7	18.2	7.4	5.3	7.3	21.1
Liquor (spirits)	10.4	11.3	9.8	12.0	25.0	7.3	15.8	11.1	28.6
Only at Social Events									
Beer	24.3	26.6	23.6	19.3	16.7	32.9	26.3	22.9	16.7
Wine	17.8	14.5	21.6	19.0	33.3	22.2	5.3	15.3	15.8
Coolers	32.0	26.2	37.6	31.5	18.2	37.8	21.1	31.1	36.8
Liquor (spirits)	38.7	31.0	45.6	37.6	41.7	43.3	31.6	37.9	38.1

Students were asked to indicate what type of alcoholic beverage they had consumed in the last 30 days prior to the survey and in what frequency. The responses are reported for frequencies of 'daily', 'weekends only', 'only on some weekdays' and 'only at social events'. The beverages indicated in the questionnaire were beer, wine, coolers, and liquor (spirits).

Drank Daily

Among students who had used alcohol in the last 30 days, the prevalence of drinking alcohol beverages daily was 2.2% for beer, 0.5% for wine, 4.1% for coolers, and 3.6% for liquor (Table 15). Boys were more likely than girls to have consumed beer daily - boys were about three times more likely to consume beer (2.8%) compared to girls (1%). Girls consumed about the same proportion of liquor (spirits), 3.7% vs 3.6%.

Students from Cayman Brac reported the highest prevalence for daily beer consumption (5.6%), and daily cooler (15.8%). Students from Bodden Town reported the highest consumption of daily liquor (6.4%); while students from West Bay had the highest daily wine consumption (1.3%).

Drank Weekends Only

Among students who had used alcohol in the last 30 days, the prevalence of drinking alcohol only on weekends was 17% for beer, 10.4% for wine, 22.3% for coolers and 21.9% for liquor (Table 15). Boys were as likely as girls to have consumed these beverages on weekends only. However, significantly more boys consumed beer (26.6% versus 8.1%), and wine (12.9% versus 9.8%). About the same proportion consumed coolers (22.2% versus 22.6%) while boys had more liquor on weekends only.

Students from Bodden Town (24%), George Town (23.2%), and North Side (31.6%) districts consumed liquor on 'weekends only' at a prevalence that was above the survey average of 21.9%. With respect to consuming coolers on weekends only, North Side (36.8%) and West Bay (25.2%) reported higher prevalence above the survey average. East End students reported the lowest prevalence overall (9.1%) for coolers on a weekend only.

Students from North Side (15.8%) and Cayman Brac (15.8%) had the highest prevalence for wine on weekends only. However, George Town students (12%) were slightly above the survey average of 10.4%. East End reported the highest

prevalence for beer consumption on weekends only (25%) with Bodden Town and George Town reporting prevalence above the survey average of 17%.

Drank Only on Some Weekdays

Among students who had used alcohol in the last 30 days, the prevalence of drinking alcohol beverages only on some weekdays only was 17% for beer, 9.6% for wine, 5.9% for coolers, and 10.46% for liquor (Table 15). Boys were as likely as girls to have consumed beer and coolers only on some weekdays only: – beer - boys (6.9%) and girls (6.8%); coolers - boys (8.1%) and girls (8.8%). Slightly higher proportion of girls consumed wine only on some weekdays 10.9% vs 8.1%. Boys consumed a higher proportion of liquor on some weekdays only compared to girls 11.3% vs 9.8%.

Students from Cayman Brac reported the highest prevalence for beer only on some weekdays, both at (11.1%), wine (21.1%), cooler (21.1%), and liquor (28.6%).

Drank Only at Social Events

Among students who had used alcohol in the last 30 days, the prevalence of drinking alcohol beverages only at social events was 24.3% for beer, 17.8% for wine, 32% for coolers, and 38.7% for liquor (Table 15). Boys (26.6%) consumed a slightly higher proportion of beer than girls (23.6%). Girls consumed more wine than boys (21.6% vs 14.5%) as well as more coolers (37.6% vs 26.2%), and more liquor (45.6% vs 31%).

Students from George Town reported the highest prevalence for drinking only at social events for beer consumption (32.9%), cooler (37.8%), and liquor (43.3%). Students from East End reported the highest consumption of wine at social event only (33.3%).

Any 'Daily' or Any 'Weekends Only' or Any Weekday Only or Any Social Events Only Use

Table 16: Frequency of Any Daily, Weekend Only, Weekdays Only or Social Events Only Alcoholic Use in Last 30 days

	Overall	Boys	Girls
Any Daily Use p>0.05	53 (3.3)	4.0	2.6
Any 'Weekends Only' p>0.05	268 (17.6)	18.9	16.5
Any Weekdays Only p>0.05	191 (12.6)	12.8	12.3
Social Events Only p<0.01	564 (37.1)	33.3	40.9

Prevalence was computed for *any 'daily'* use of an alcoholic beverage within the last 30 days as well as *any 'weekends only', 'any weekday only', and 'any social events only'* beverage consumption (table 16). Some 3.3% of students had consumed at least one of the alcoholic beverages mentioned daily—4% for boys and 2.6% for girls. With respect to 'weekends only', 17.6% of students had consumed at least one of the alcoholic beverages mentioned on a 'weekends only' basis during the last 30 days prior to the survey—18.9% for boys and 16.5% for girls.

With respect to 'weekdays only', 12.6% of students had consumed at least one of the alcoholic beverages mentioned on a weekday only basis during the last 30 days prior to the survey—12.8% for boys and 12.3% for girls.

With respect to 'at social events only', 37.1% of students had consumed at least one of the alcoholic beverages mentioned 'at social events only' during the last 30 days prior to the survey—girls were significantly more likely to report this – 40.9% of girls compared to 33.3% for girls, p<0.01.

Preferences of Alcoholic Beverages Consumed in The Last 30 Days

The relative contribution of each beverage to the total amount of alcohol consumed is taken as an indicator of *preference* in alcoholic beverages among student who had consumed alcohol. On average, liquor (38%) and coolers

(36%) were the preferred alcoholic beverages consumed in the last 30 days (Table 17). Preference for wine (24.2%) and beer (24.4%) were slightly lower.

These proportions reported for 2020 survey are similar to those reported for the 2018 survey.

Table 17: Preference of alcoholic beverages consumed in last 30 days

Preference of alcoholic beverages consumed in last 30 days									
Preference for:	Survey average	Gender		Districts					
		Boys	Girls	Bodden Town	East End	George Town	North Side	West Bay	Cayman Brac
Beer	24.4	29.0	18.8*	17.2	16.7	29.8	26.9	27.7	11.3
Wine	24.2	22.3	26.1	24.3	29.2	24.8	25.0	23.3	24.5
Coolers	36.1	30.1	40.9*	34.4	29.2	37.4	32.7	37.0	41.5
Liquor (spirits)	38.1	32.9	42.5*	33.7	35.4	40.3	32.7	42.0	37.7

statistically significant *p<0.01

Gender Differences

All gender differences were statistically significant. The difference between boys (29%) and girls (18.8%) with respect to a preference for beer was about 10 percentage points. This difference was statistically significant, χ^2 =21.77, p<0.01). The difference in preference for wine among boys (22.3%) and girls (26.1%) was not statistically significant, girls were as likely as boys to prefer wine, χ^2 =2.89, p>0.05.

Girls were significantly more like to report a preference for coolers compared to boys (40.9% vs 30.1%). This difference of 10.8pp, was statistically significant, χ^2 =19.24, p<0.01). Girls were significantly more like to also report a preference for liquor compared to boys (42.5% vs 32.9%). This difference of 9.6pp, was statistically significant, χ^2 =15.05, p<0.01.

District Preferences

Preference for beer was highest in West Bay (27.7%) and George Town (29.8%). For wines, the preference was higher in East End (29.2%), (Figure 1). With respect to the preference for coolers, higher proportions were reported in Cayman Brac (41.5%), East End (37.4%), and North Side (37%). The districts with the highest proportion with respect to the preference for liquor were – George Town (40.2%) and West Bay (42%).

Cayman Brac (11.3%) reported the lowest prevalence for consuming beer.

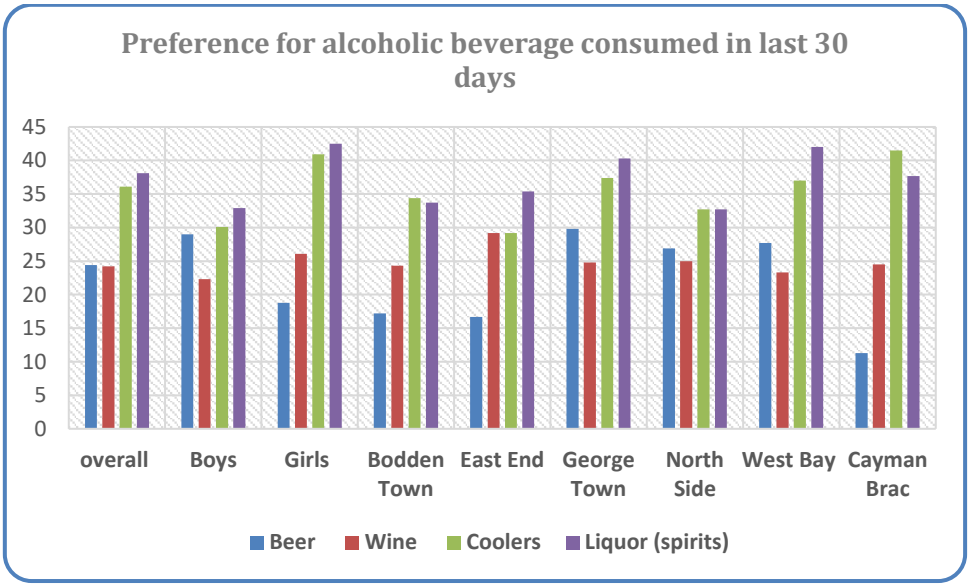


Figure 1: Preference of alcoholic beverage consumed in last 30 days

Cigarettes and e-cigarettes Use in last 30 days

Table 18: Daily Cigarette and E-cigarette Use in last 30 days

No. of cigarettes and No. of refills for e-cigarettes	Cigarettes (65/75 (86.7)			E-cigarettes 230/331 (69.4)		
	Survey average	Gender		Survey average	Gender	
		Boys	Girls		Boys	Girls
1-5	69.4	68.9	72.4	81.3	82.6	83.5
6-10	16.5	17.8	17.2	7.4	7.0	8.2
11-20	1.2	2.2	0.0	3.0	3.5	1.2
More than 20	12.9	11.1	10.3	8.3	7.0	7.1

Daily Cigarette Use

Current use (use in the last 30 days) of cigarette overall was 2.2% or 75/3478. Students were asked to indicate the frequency of daily cigarette use in the last 30 days. Some 65/75 (86.7%) of current users indicated use from 1-5 cigarettes to more than 20 cigarettes per day – 69.4% indicated 1-5, 16.5% indicated 6-10, 1.2% said 11-20 and 12.9% indicated 20 or more cigarette per day, table 18. Frequency of use per day among boys and girls was not dis-similar. Slightly higher proportion of girls reported smoking 1-5 cigarettes (72.4% girls vs 69.4% boys). Only boys reported smoking 11-20 cigarettes per day.

Daily E-cigarette Use

Current use (use in the last 30 days) of e-cigarettes overall was 9.5% or 331/3478. Among students who had smoked e-cigarettes in the last 30 days. Some 230/331 (69.4%) of current users indicated use from 1-5 refills and up to more than 20 refills per day – 81.3% had smoked 1-5 refills daily, a further 7.4% had smoked 6-10 refills, 3% smoked 11-20 refills and another 8.3% had smoked more than 20 refills daily. Girls were more likely to report higher proportions for the smoking 1-5 and 6-10 e-cigarettes refills daily while boys reported higher proportion for (11-20). Boys and girls reported the same proportions for use of >20 refills daily.

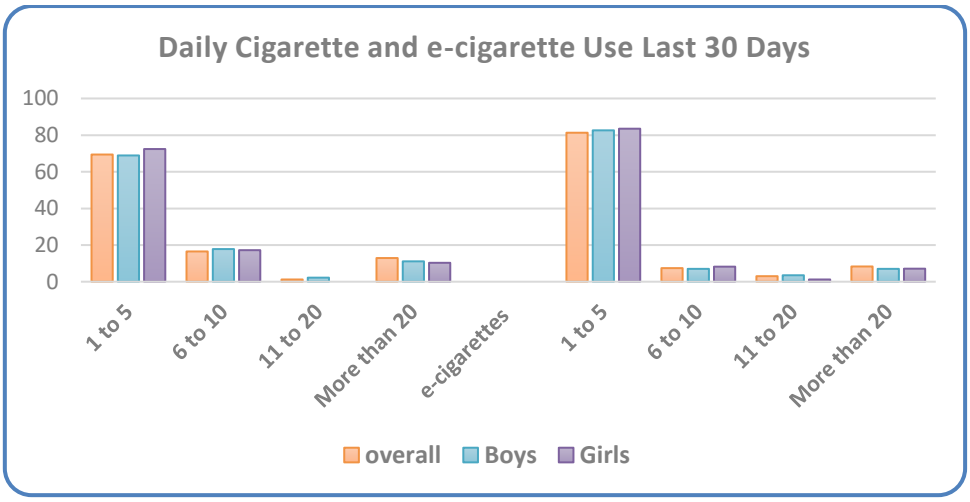
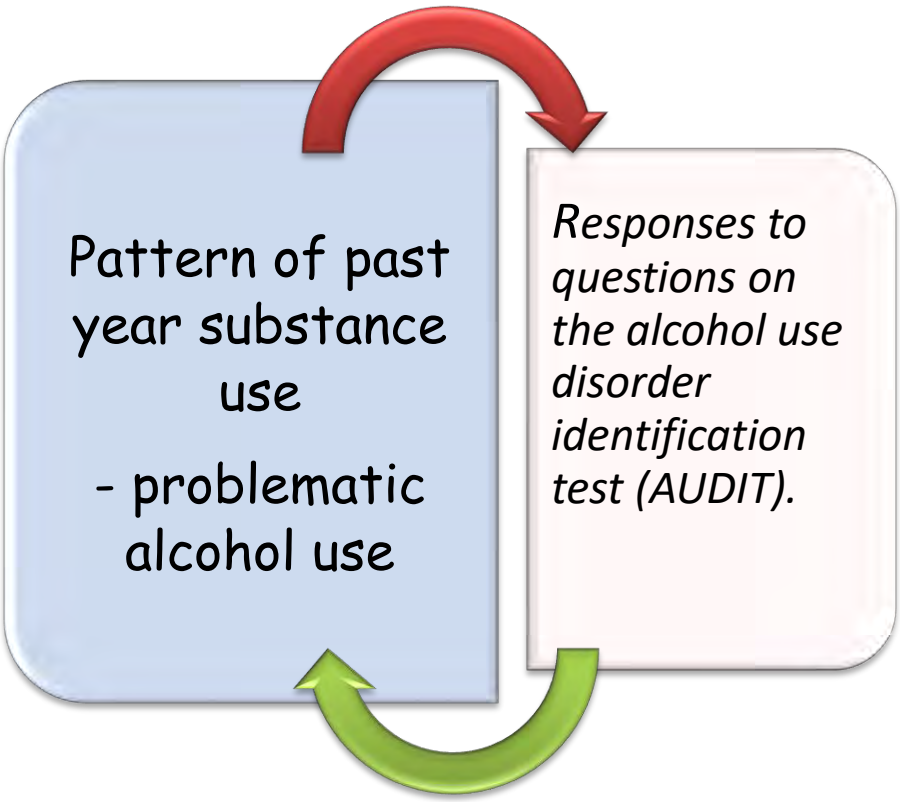
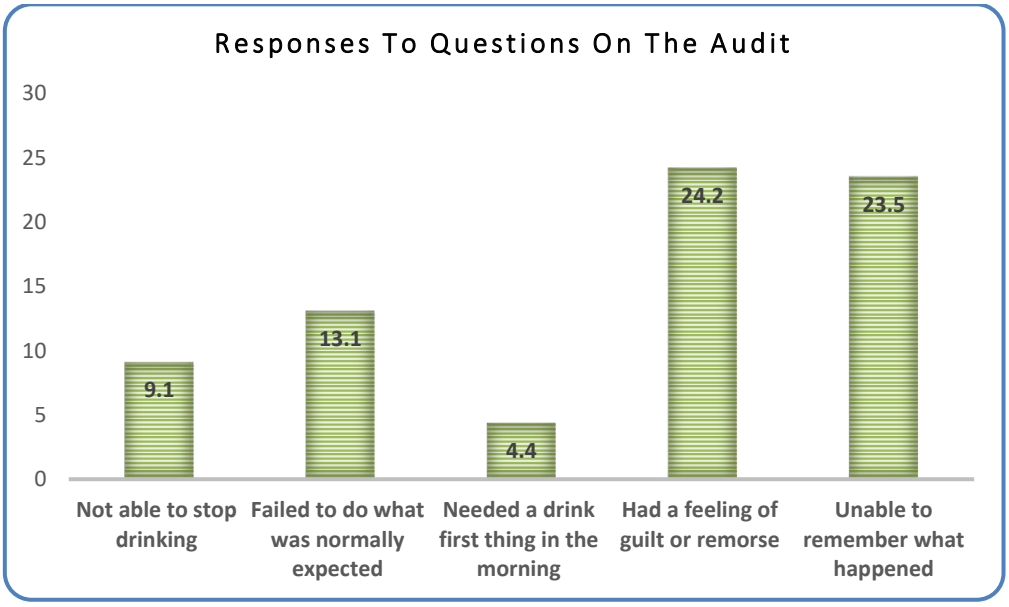


Figure 2: Daily Cigarette and E-cigarette Use Last 30 Days


Pattern of past year substance use
- problematic alcohol use
Responses to questions on the alcohol use disorder identification test (AUDIT).


Responses To Questions On The Audit
30
25
20
15
10
5
0
9.1
13.1
4.4
24.2
23.5
Not able to stop drinking
Failed to do what was normally expected
Needed a drink first thing in the morning
Had a feeling of guilt or remorse
Unable to remember what happened

Use in the past 12 months - Problematic alcohol use

Relates to the percentage distribution of responses to questions on the alcohol use disorder identification test (AUDIT).

Table 19: Percentage distribution of responses to questions on the alcohol use disorder identification test (AUDIT).

Percentage distribution of responses to questions on the alcohol use disorder identification test (AUDIT). (asked only of students in Year 9-12)					
Audit items	Response categories				
How often in the past 12 months have you …….	Cumulative (yes)	Less than monthly	Monthly	Weekly	Daily or almost daily
(a) Found that you were not able to stop drinking once you had started?	9.1	5.2	1.7	1.1	1.1
(b) Failed to do what was normally expected of you because of drinking?	13.1	10.0	1.8	0.9	0.4
(c) Needed a drink first thing in the morning to get yourself going after a heavy drinking session the day before?	4.4	2.6	1.0	0.2	0.6
(d) Had a feeling of guilt or remorse after drinking?	24.2	17.1	4.0	1.6	1.5
(e) Been unable to remember what happened the night before because you had been drinking?	23.5	16.0	4.0	1.8	1.7

A notable proportion of students (9.1%) admitted that they were unable to stop drinking once they had started. A slightly larger proportion (13.1%) reported that they have failed to do what was normally expected from them because of drinking. A small proportion of students (4.4%) reported that they needed a drink first thing in the morning to get themselves going after a heavy drinking session (table 19).

A notable high proportion of students (24.2% or almost a quarter of the students) reported that they had a feeling of guilt or remorse after drinking. This compares with 23.5% of students who reported that they have been unable to remember what happened the night before because they had been drinking.

Scoring the AUDIT Items

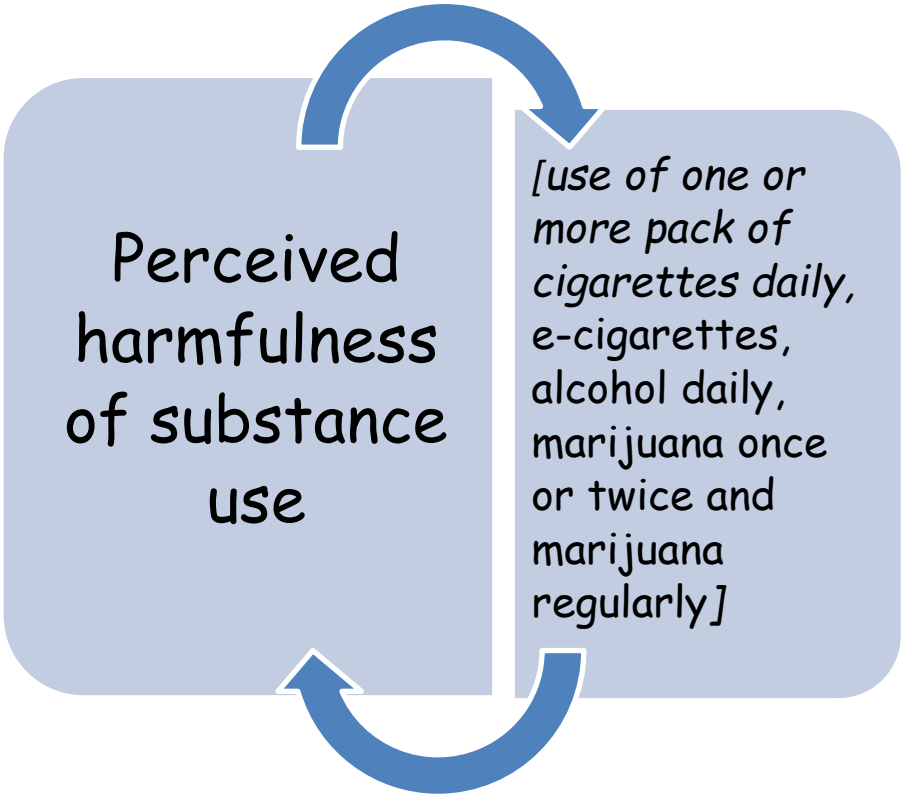
The five items derived from the AUDIT questionnaire (table 19) were scored as per the audit scoring guidelines[5] when used to determine dependence (items a, b and c) or when used to determine alcohol-related problems (items d and e) as shown in table 20.

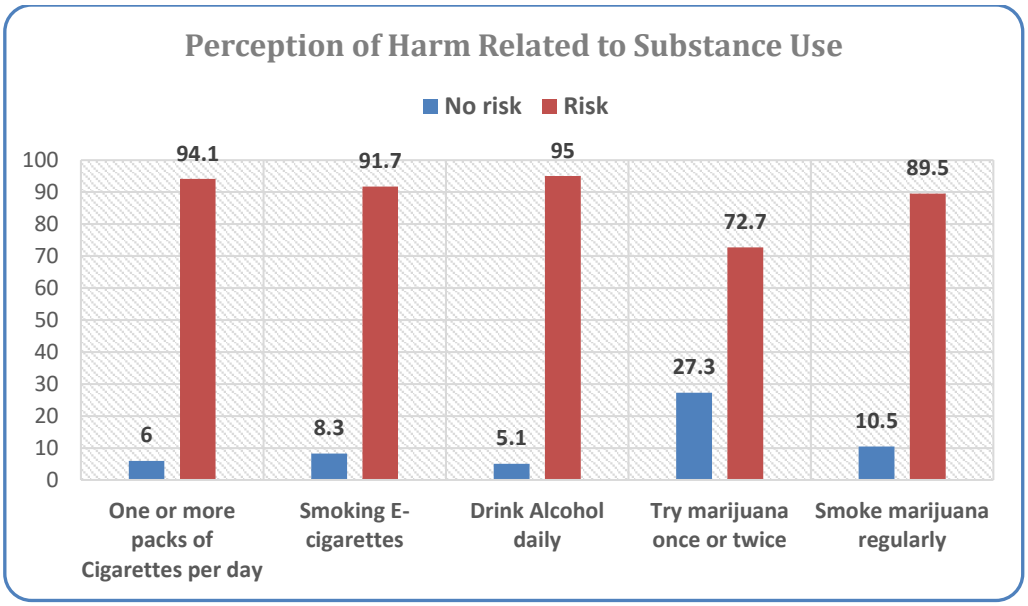
Table 20: Dependence and Alcohol-related Scores as per AUDIT Items

Dependence and Alcohol-related Scores as per AUDIT Items			
How often in the past 12 months have you …….	Overall	Boys	Girls
Dependence items			
Found that you were not able to stop drinking once you had started?	25/1133 (2.2%)	10/404 (2.5%)	11/484 (2.3%)
Failed to do what was normally expected of you because of drinking?			
Needed a drink first thing in the morning to get yourself going after a heavy drinking session the day before?			
Alcohol-related Problems			
Had a feeling of guilt or remorse after drinking?	345/1133 (30.5%)	130/404 (32.2%)	188/481 (39.1%)
Been unable to remember what happened the night before because you had been drinking?			

With respect to the dependence scores (for students who had consumed alcohol in the past year), 2.2% of students overall (2.5% boys and 2.3% girls) scored 4 or more as a subtotal for the three items. For alcohol-related problems, an exceptionally large proportion (30.5% or just about one in every three students) had a score of one or more (range 1-8) on the two items – (32.2% for boys and 39.1% for girls). This difference was statistically significant, $\chi^2 = 4.45$, $p<0.05$), girls were significantly more likely to be assessed as having an alcohol-related problem compared to boys.

[5] The general guidelines for interpreting scores note that a secondary dependence score of 4 or more as a subtotal of the items 'a' to 'c' suggests the possibility of alcohol dependence (and therefore the need for more intensive intervention if further assessment confirms dependence). Alcohol-related problems score: any scoring on questions 'd' and 'e' warrants further investigation to determine whether the problem is of current concern and requires intervention.


Perceived harmfulness of substance use
[use of one or more pack of cigarettes daily, e-cigarettes, alcohol daily, marijuana once or twice and marijuana regularly]


Perception of Harm Related to Substance Use
No risk
Risk
100
90
80
70
60
50
40
30
20
10
0
94.1
91.7
95
72.7
89.5
6
8.3
5.1
27.3
10.5
One or more packs of Cigarettes per day
Smoking E-cigarettes
Drink Alcohol daily
Try marijuana once or twice
Smoke marijuana regularly

Perceived Harmfulness of Substance Use

Students were asked: How much do you think people risk harming themselves physically or in other ways if there were to try using the indicated substances. Perception of no risk of harm related to the use of the substances indicated ranged from a low of 5.1% for drinking alcohol daily to a high of 27.3% for trying marijuana once or twice. Some 6% of students did not see any risk of harm for smoking one or more packs of cigarettes daily, while 8.3% said there was no risk to smoking e-cigarettes and 10.5% said there was no risk for regularly smoking marijuana (Table 21).

Table 21: Perception of harm related to use of cigarettes, e-cigarettes, alcohol, and marijuana (%)

Perception of Harm related to use of cigarettes, e-cigarettes, alcohol, and marijuana (%)				
	No risk	Slight risk	Medium risk	Great risk
One or more packs of cigarettes per day	6.0	7.2	20.8	66.1
Smoking E-cigarettes	8.3	26.2	39.0	26.5
Drink Alcohol daily	5.1	9.1	28.5	57.4
Try marijuana once or twice	27.3	38.8	22.2	11.7
Smoke marijuana regularly	10.5	13.1	27.8	48.6

On the other hand, a notable high proportion of students reported great risk of harm for smoking one or more packs of cigarettes daily (66.1%), drinking alcohol daily (57.4%), regularly smoking marijuana (48.6%), smoking e-cigarettes (26.5%), and using marijuana once or twice (11.7%).

Overall, the perception of greatest harm (slight, medium, or great harm cumulated) was reported for drinking alcohol and smoking cigarettes, followed by smoking e-cigarettes, regular marijuana use, and the least for using marijuana once or twice.

Perception of Risk of Harm and Current Substance Use

Table 22: Perception of Risk of Harm Among Current Substance Users

Substances	Current Users	Perception of Risk			
		No risk	Slight risk	Medium risk	Great risk
Cigarettes (p<0.01)	Yes	15.2	10.6	27.3	47.0
	No	6.2	7.1	20.6	66.1
E-cigarettes (p<0.01)	Yes	14.7	41.0	34.2	10.1
	No	7.9	24.6	39.3	28.1
Alcohol (p>0.05)	Yes	5.2	12.0	28.6	54.3
	No	5.1	8.5	28.3	58.1
Marijuana (once or twice (p<0.01)	Yes	64.4	26.8	5.2	3.6
	No	24.3	39.7	23.6	12.5
Marijuana regularly (p<0.01)	Yes	30.0	33.6	21.2	15.2
	No	9.3	11.3	18.3	51.1

Perception of harm was cross-tabulated with for each of the categories of substances indicated to identify the perception of risk among students who were current users of cigarettes, alcohol, e-cigarettes, and marijuana. The null hypothesis was that perception of risk among students who were current users of the various substances was no different from risk perception among those who were not current users.

The results (Table 22) show that 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, (15.2% versus 6.2%), $p<0.01$. A larger proportion of non-current users also indicated that there was great harm (66.1% versus 47%).

With regards to e-cigarettes smoking, current users of e-cigarettes were also significantly more likely than those who were not current users to indicate that there was no risk of harm from smoking e-cigarettes, (14.7% versus 7.9%), $p<0.01$. A larger proportion of non-current users also indicated that there was great harm (28.1% versus 10.1%).

With regards to alcohol use, current users of alcohol were no different to non-users with regards to perception of harm from drinking alcohol daily. About the same proportion indicated that there was no risk of harm, (5.2% users versus 5.1% for non-users), $p>0.05$.

With regards to smoking marijuana, current smokers of marijuana were significantly more likely than those who were not current users to indicate that there was no risk of harm from trying marijuana once or twice, (64.4% versus 24.3%), $p<0.01$. A larger proportion of non-current users also indicated that there was great harm (12.5% versus 3.6%).

With regards to smoking marijuana, current smokers of marijuana were significantly more likely than those who were not current users to indicate that there was no risk of harm from trying marijuana regularly, (30% versus 9.3%), $p<0.01$. A larger proportion of non-current users also indicated that there was great harm (51.1% versus 15.2%).

Perceptions of Risk of Harm Among Boys and Girls

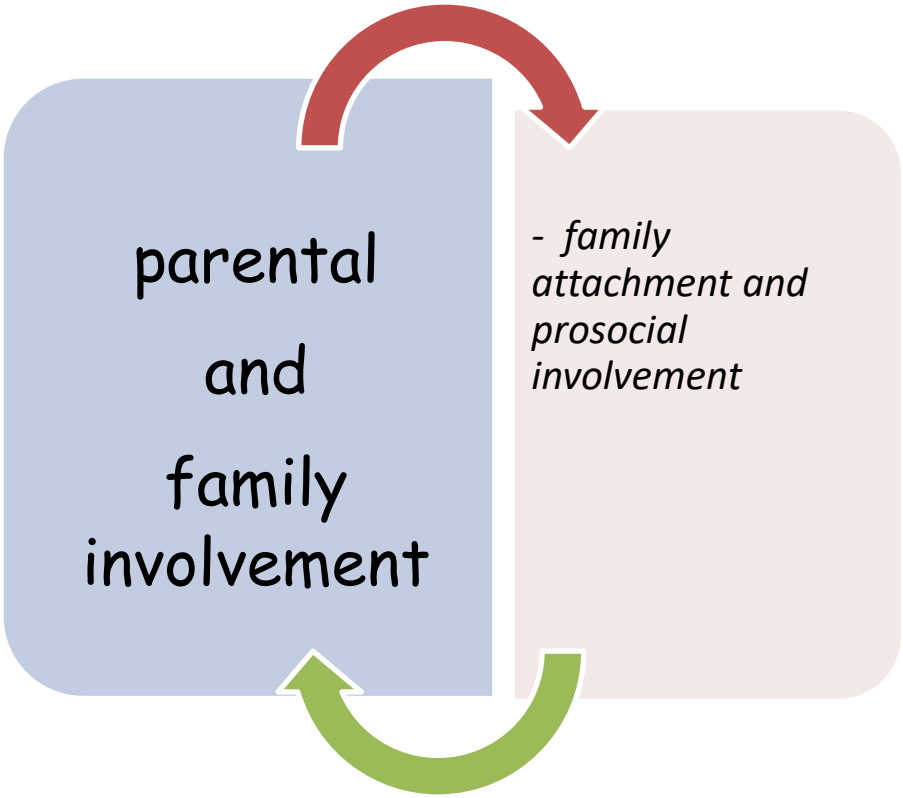
Perceptions of risk of harm was recoded to reflect "no risk" or 'risk" (a combination of slight risk, medium risk, and great risk). Cross-tabulation by gender showed that there were no statistically significant differences between boys and girls with respect to perception of risk related to smoking one or more packs of cigarettes daily, drinking alcohol daily or smoking marijuana regularly, (Table 23).

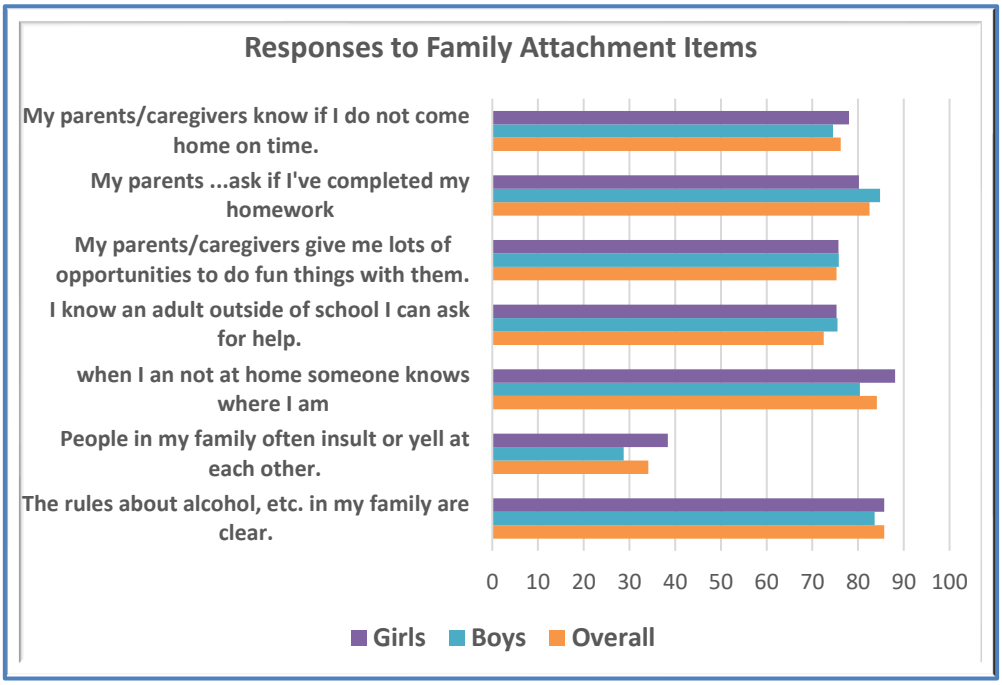
However, significantly more boys than girls felt that there was no risk of harm related to e-cigarettes use (9.5% versus 7.5%, $p<0.05$). This was also the case for risk of harm related to trying marijuana once or twice, (29.3% versus 24.5%, $p<0.01$).

Table 23: Perception of Harm related to use of cigarettes, e-cigarettes, alcohol, and marijuana by gender (%)

Perception of Harm related to use of cigarettes, e-cigarettes, alcohol, and marijuana by gender (%)										
	Cigarettes 1 or more packs daily		E-cigarettes		Alcohol daily		Marijuana once or twice		Marijuana regularly	
	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls	Boys	Girls
No risk	6.1	6.4	9.5	7.5	5.7	4.4	29.3	24.5	11.7	9.6
Risk*	93.9	93.6	90.5	92.5	94.3	95.6	70.7	75.5	88.3	90.4
	p>0.05		p<0.05		p>0.05		p<0.01		p>0.05	

*=slight risk, medium risk and great risk combined


parental
and
family
involvement
- family attachment and prosocial involvement


Responses to Family Attachment Items
My parents/caregivers know if I do not come home on time.
My parents ...ask if I've completed my homework
My parents/caregivers give me lots of opportunities to do fun things with them.
I know an adult outside of school I can ask for help.
when I an not at home someone knows where I am
People in my family often insult or yell at each other.
The rules about alcohol, etc. in my family are clear.
0 10 20 30 40 50 60 70 80 90 100
Girls
Boys
Overall

Family Attachment and Prosocial Involvement

Table 24: Family Attachment and Prosocial Involvement (%) Overall and by Gender

Family Attachment and Prosocial Involvement (%) – Overall and by Gender			
	Overall	Boys	Girls
The rules about alcohol, cigarettes, and other drugs in my family are clear.	85.7	86.6	85.7
People in my family often insult or yell at each other.	34.1	28.7	38.4
When I am not at home, one of my parent(s)/ caregiver(s) knows where I am and who I am with.	84.1	80.4	88.1
If I had a personal problem, I know an adult outside of school I can ask for help.	72.5	75.5	75.3
My parents/caregivers give me lots of opportunities to do fun things with them.	75.3	76.2	75.7
My parents/caregivers ask if I've completed my homework done.	82.5	84.8	80.2
My parents/caregivers know if I do not come home on time.	76.2	74.5	77.1

Students were asked to respond to numerous questions about family involvement in their daily lives. More than eight in ten students (85.7%) overall said the house rules that their family had about alcohol, cigarettes and other drugs were clear (Table 24). About the same proportion of boys and girls reported this (86.6% boys and 85.7% girls).

A little more than one-third of student overall (34.1%) said persons in their family often insult or yell at each other - (a significantly higher proportion of girls (38.4%) compared to boys (28.7%) reported this, $p<0.01$.

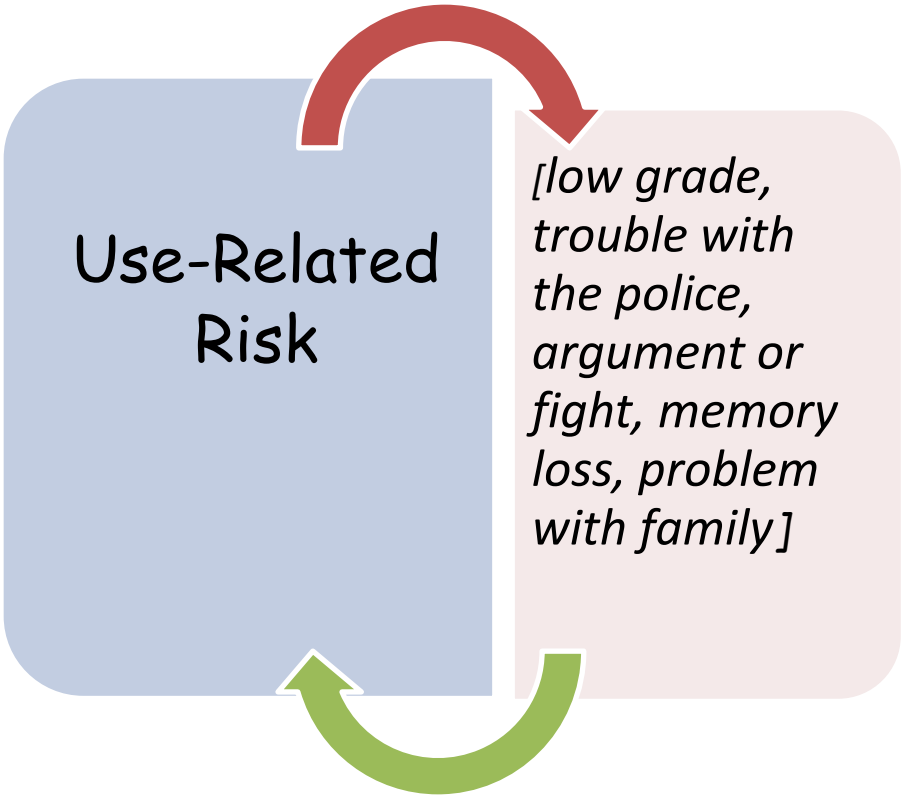
Eight of ten students (84.1%) – (boys 80.4% versus 88.1% girls, $p<0.001$) reported that their parents or caregiver knows where they are when they are not at home. Girls were significantly more likely to indicate that their parents/caregiver would know where they were and who they were with.

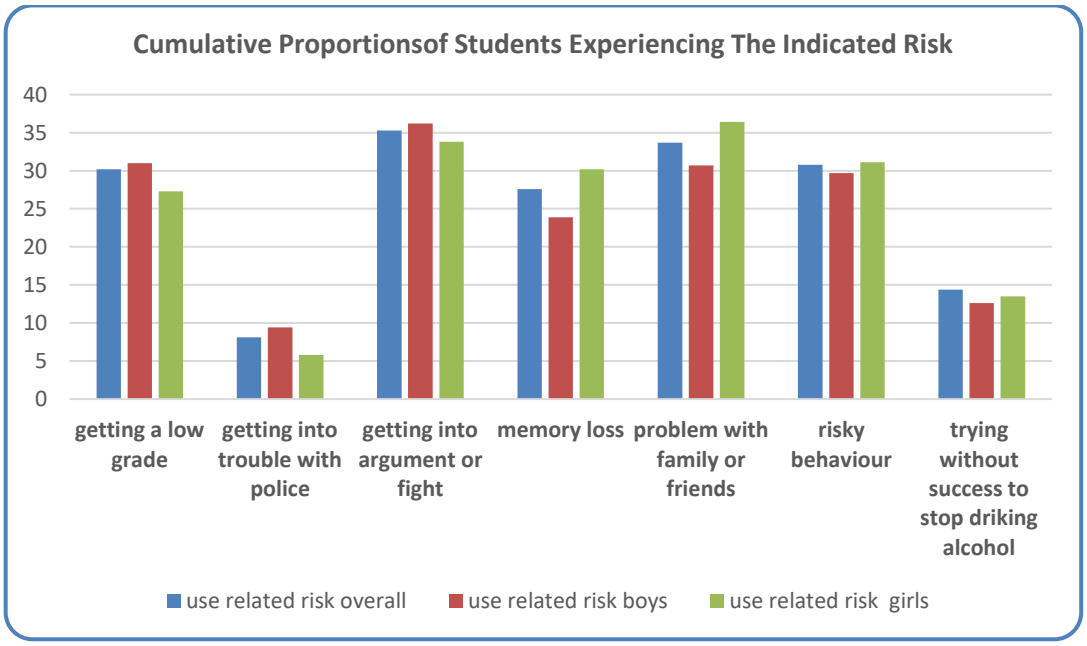
A relatively high proportion of student overall (72.5%) reported knowing someone outside of school to ask for help if they had a personal problem, (boys

75.5% versus 75.3% girls). An equally high proportion of students (75.3%, about three quarters of all students) said that their parents/caregivers gave them lots of opportunities to do fun things with them, about the same proportion of boys (76.2%) as girls (75.7%).

More than eight in ten students overall (82.5%) reported that their parents/caregivers ask if they have gotten their homework done. A significantly higher proportion of boys (84.8%) than girls (80.2% girls), $p<0.01$.

Just about three-quarters of students overall (76.2%) said that their parents or caregiver knows if they had not come home from school on time. A slightly higher proportion of girls (77.1%) compared to boys (74.5%) reported this. This difference though small was statistically significant, $p<0.01$.


Use-Related Risk
[low grade, trouble with the police, argument or fight, memory loss, problem with family]


Cumulative Proportionsof Students Experiencing The Indicated Risk
40
35
30
25
20
15
10
5
0
getting a low grade
getting into trouble with police
getting into argument or fight
memory loss
problem with family or friends
risky behaviour
trying without success to stop driking alcohol
use related risk overall
use related risk boys
use related risk girls

Use-Related Risk

Students were asked to indicate their experience with certain situations because of drinking alcohol or using illicit drugs over the past 12 months (the question was, "**Over the past 12 months, how often have you experienced or been in the following situations because of drinking alcohol or using illicit drugs?"** There were five response categories with the following options: never, rarely sometimes and often. The options of sometimes, often, and rarely were summed and expressed as students' indications of having had the experience. The cumulative column refers to the total proportion of students that have experienced the indicated risk in the past year (table 25).

Table 25: Proportion of students who experienced the indicated use-related risk - Overall

	Never	Rarely	Sometimes	Often	Cum.
Getting a low grade on an important test/ exam or school project	69.8	14.2	13.8	2.2	30.2
Getting into some kind of trouble with the police	91.9	5.2	2.2	0.8	8.1
Getting into an argument or fight	64.7	16.8	14.9	3.6	35.3
Memory loss	72.4	14.4	9.6	3.6	27.6
Problems with your family/**friends**	66.3	14.2	14.1	5.4	33.7
Risky Behaviour*	69.2	14.0	12.5	4.3	30.8
Trying without success to stop drinking alcohol, ...or taking illicit drugs*	85.6	5.9	5.6	2.9	14.4

*-only asked of the Year 9-12 students

Overall Use-Related Risks and Gender and Grade Differences – (Tables 26 and 27 below)

<u>Getting a low grade</u>

The proportion of students who indicated that they have experienced getting a low grade was 30.2%. A slightly higher proportion of boys (31%) compared to girls (27.3%) reported this and this difference was statistically significant,

p<.05. When proportions were compared by grade level, it was noted that the lower grades (grades 6, 7, 8) reported higher proportions (above the overall average of 30.2% and this tended to decrease as grade level increased – the proportion at grade 11 was (26%) and at grade 12 (17.2%).

Trouble with the Police

The proportion of students who indicated that they have experienced trouble with the police was 8.1%. A significantly higher proportion of boys (9.4%) reported this compared to girls (5.8%), p<0.01. When proportions were compared by grade level, it was noted that the lowest grades, grades 6 – (13.8%) and grade 7 – (9%), reported the highest proportions. All other grades reported proportions below the overall average of 8.1% except for grade 10 (9.2%).

Getting into an arguments or fights

The proportion of students who indicated that they have experienced getting into an argument or fight was 35.3%. This was reported by 36.2%boys compared to 33.8% of girls, a difference of 2.4 percentage points that was statistically significant, p<0.05. When the overall average was compared by grade levels, notable high proportions were reported for grades 6,7, and 8 (49.4%, 48.2%, 44.3% respectively) and the remaining grades were well below the overall average.

Memory Loss

The proportion of students who indicated that they have experienced memory was 27.6%. More girls (23.9%) experiences this compared to 30.2% of boys, this difference (6.3 percentage points) was statistically significant, p<0.01. When proportions were compared by grade level, it was noted that the proportions were variable across all grade levels. Highest proportions reported for grades 10, 11 and 12 and the remaining grades reported proportions below the overall average.

Problems with Family

The proportion of students who indicated that they have experienced getting into an argument or fight was 33.7%. This was reported by 30.7%boys compared to 36.4% of girls, a difference of 5.7 percentage points that was statistically significant, $p<0.05$. When the overall average was compared by grade levels, notable high proportions were reported for grades 6,7, and 8 (43.5%, 42.5%, 36.8% respectively) and the remaining grades were well below the overall average.

Risky Behaviour (asked only of Year 9-12 students)

The proportion of students who indicated that they have experienced risky behaviour was 30.8%. A slightly higher proportion of girls (31.3%) reported this compared to girls (29.7%), $p>0.05$ - not significant. When proportions were compared by grade level, it was noted that, though variable across grades, the lowest grade (grades 8) reported 21.5% and the highest grade (grade 12) reported the highest proportion (40%).

Trying without success to stop drinking or taking illicit drugs (asked only of Year 9-12 students)

The proportion of students who indicated that they have experienced trying without success to stop drinking or taking illicit drugs was 14.4%. A higher proportion (non-significant) of girls (13.5%) reported this compared to boys (12.6%), $p>0.05$. Except for students in grade 10 (20.8%) all other grades reported proportions below the overall average.

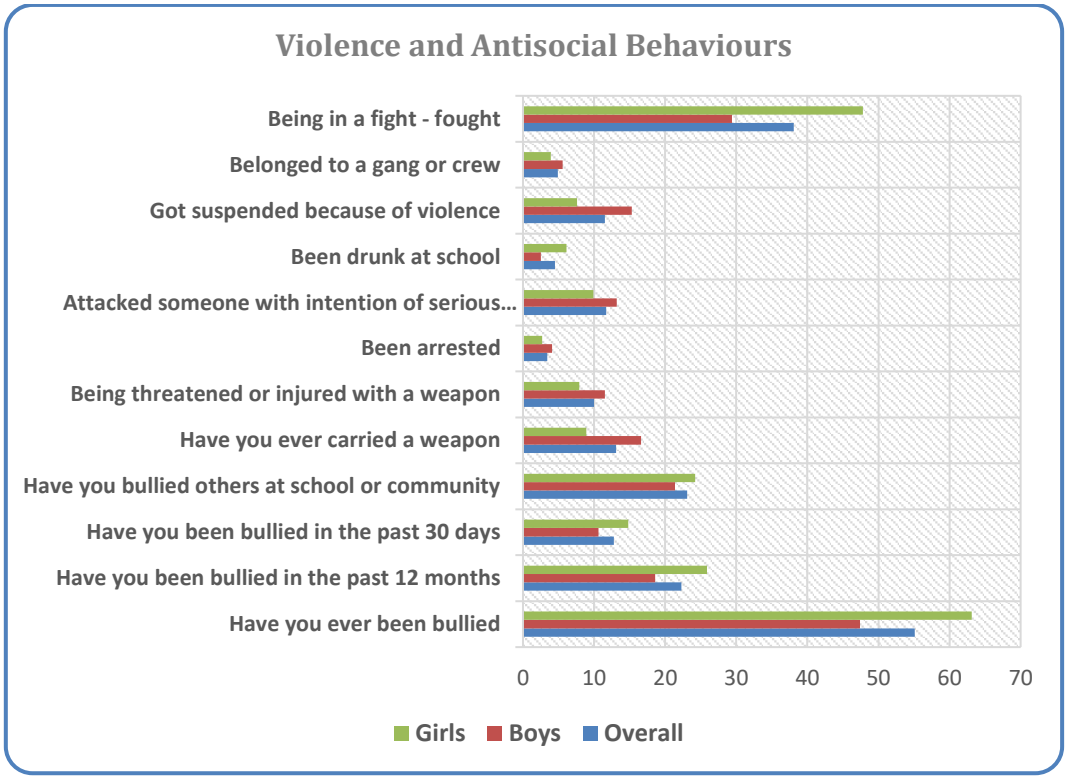
Table 26: Proportion of students who experienced the indicated use-related risk - Boys and Girls

	Never	Rarely	Sometimes	Often	Cum.
Boys					
Getting a low grade on an important test/ exam	67.9	16.2	14.2	1.6	31.0
Getting into some kind of trouble with the police	90.6	5.9	2.5	1.0	9.4
Getting into an argument or fight	63.5	17.6	15.5	3.1	36.2
Memory loss	76.1	12.2	8.7	3.0	23.9
Problems with your family/friends	69.3	13.1	13.1	4.5	30.7
Risky Behaviour	70.3	14.7	11.0	4.0	29.7
Trying without success to stop drinking alcohol, ...	87.4	5.5	4.3	2.8	12.6
Girls					
Getting a low grade on an important test/ exam or	72.7	12.7	12.2	2.4	27.3
Getting into some kind of trouble with the police	94.2	4.0	1.3	0.5	5.8
Getting into an argument or fight	66.2	16.3	14.2	3.3	33.8
Memory loss	69.8	16.3	10.3	3.6	30.2
Problems with your family/friends	63.7	14.9	15.3	6.2	36.4
Risky Behaviour	68.7	13.0	14.0	4.3	31.3
Trying without success to stop drinking alcohol, ...	85.4	5.9	5.9	2.7	13.5

Table 27: Proportion of students who experienced the indicated use-related risk – Grade Level

Statements	Grade Level						
	Grade 6	Grade 7	Grade 8	Grade 9	Grade 10	Grade 11	Grade 12
Getting a low grade on an important test/ exam or	44.4	45.0	31.6	26.5	24.4	26.0	17.2
Getting into some kind of trouble with the police	13.8	9.0	6.0	7.3	9.2	5.6	7.1
Getting into an argument or fight	49.4	48.2	44.3	29.2	32.5	25.5	22.8
Memory loss	23.9	19.5	25.1	24.9	33.0	31.6	33.9
Problems with your family/friends	43.5	42.5	36.8	32.2	30.9	29.1	21.3
Risky Behaviour			21.5	30.2	35.9	30.6	40.0
Trying without success to stop drinking alcohol, ...			10.2	15.8	20.8	12.9	8.9


Violence-related and other antisocial behaviours
- experience with bullying
- carrying weapon in community or at school
- other antisocial behaviours


Violence and Antisocial Behaviours
Being in a fight - fought
Belonged to a gang or crew
Got suspended because of violence
Been drunk at school
Attacked someone with intention of serious...
Been arrested
Being threatened or injured with a weapon
Have you ever carried a weapon
Have you bullied others at school or community
Have you been bullied in the past 30 days
Have you been bullied in the past 12 months
Have you ever been bullied
0
10
20
30
40
50
60
70
Girls
Boys
Overall

Violence-related Behaviours

Bullying

Table 28: Percentage of students who had experienced bullying or had bullied someone –Overall, Gender and Location

	Overall	Gender		District Location					
		Boys	Girls	Bodden Town	East End	George Town	North Side	West Bay	Cayman Brac
Have you ever been bullied? (p<0.001)	55.1	47.4	63.1	57.5	52.5	52.2	55.3	54.7	71.3
Have you been bullied in the past 12 months? (p<0.001)	22.3	18.6	25.9	22.6	20.2	21.8	25.4	21.9	25.6
Have you been bullied in the past 30 days? (p<0.001)	12.8	10.6	14.8	14.4	15.2	12.1	14.0	11.5	11.5
Have you bullied others at your school/ comm (p>0.05)	23.1	21.4	24.2	24.8	27.3	20.5	26.3	23.2	28.5

Overall

More than half of the students overall (55.1%) reported they have been bullied at some time. The proportions who reported been bullied in the past year was notable lower (22.3%, or just over one-fifth) while bullying in the past 30 days was even lower (12.8% or about one in every eight students). A notable high proportion of students reported that they had bullied others at their school or community (23.1%), table 28.

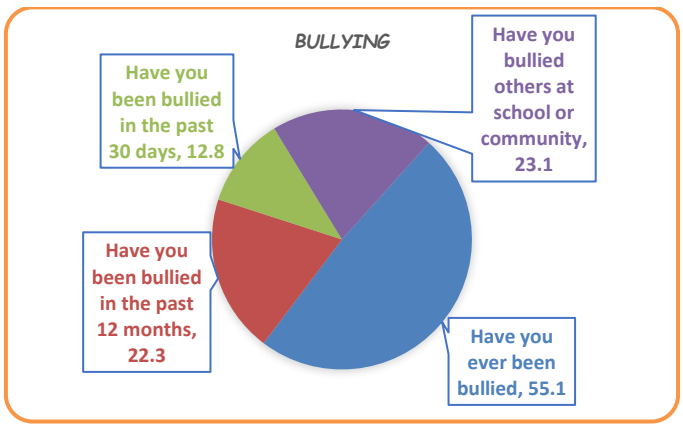


Figure 3: Lifetime, past year, and current bullying

Gender Differences

The proportions reported by boys and girls were significantly different for all items. Significantly more girls (63.1%) compared to boys (47.4%) reported ever been bullied, $p<0.01$). This was also the case for past year bullying (25.9% girls versus 18.6% boys, $p<0.01$), and bullied in the last 30 days (14.8% girls versus 10.6% boys, $p<0.01$). Interestingly, more girls (24.2%), but not significantly more, reported having bullied someone at school or in the community when compared to boys (21.4%), $p>0.05$.

Comparisons by Location

With respect to ever being bullied -proportions higher than the overall average of (55.1%) were reported for Cayman Brac (71.3%) and Bodden Town (57.5%). With respect to last 30 days bullying -proportions higher than the overall average of (12.8%) were reported for East End, (15.2%), North Side (14%) and Bodden Town (14.4%). In terms of bullying someone in your community or school, notable higher proportions were reported for East End (27.3%), North Side (26.3%), and Cayman Brac (28.5%).

Ways students Experienced Bullying

The figure below (figure 4) shows the distribution of ways in which students said they had experienced bullying. The most prevalent method of bullying reported was 'being made fun of because of their body'.

Other forms of bullying reported (>5% of students) were, being left out of activities, made fun of because of race/skin colour, kicked, pushed or shoved.

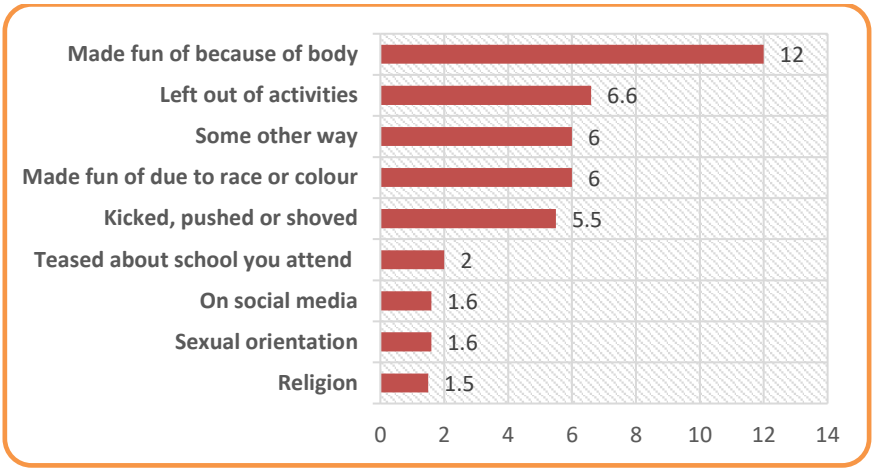


Figure 4: Ways Students Experienced Bullying

Grade Level Comparisons

Grade level comparisons were made between students who were either bullied or have bullied someone in the last 30 days, Table 29. For those who report lifetime bullying (ever been bullied), as expected, the proportions increased as grade level increased. Past year bullying and current bullying tended to decrease as grade level increased (larger proportions reported by lower grade students and proportions decreased as grade level increased).

Table 29: Percentage of students who were bullied or have bullied someone (%) – Grade Level

Percentage of students who were bullied or have bullied someone (%) – Grade Level							
	Grade 6	Grade 7	Grade 8	Grade 9	Grade 10	Grade 11	Grade 12
Have you ever been bullied? p<0.001	52.9	53.3	50.2	58.0	53.9	60.9	64.4
Have you been bullied in the past 12 months? p<0.001	26.0	27.0	23.3	23.1	18.7	15.6	16.1
Have you been bullied in the past 30 days? p<0.001	16.3	14.9	14.0	14.1	10.2	7.0	8.3
Have you bullied others at your school/ comm… p>0.05	20.3	20.9	23.6	28.3	24.3	21.4	21.1

For those who had bullied someone, the proportion varied among grade levels. However, the highest proportions were reported by students in grade 9 (28.3%) and grade 10 (24.3%), both above the survey average of 23.1%).

Weapons in Community or at School

Students were asked to report if they had ever carried a weapon in the community or at school and how many times they were threatened with a weapon. The options to the latter question were recoded to indicate if a student was ever threatened or not threatened and presented in table 30. The table presents the result for cross-tabulation by gender and location.

Table 30: Percentage of students who had carried a weapon - Overall, Gender and Location

	Overall	Gender		District					
		Boys	Girls	Bodden Town	East End	George Town	North Side	West Bay	Cayman Brac
Have you ever carried a weapon	284 (12.5)	159 (16.3)	95 (8.9)	12.6	18.3	11.3	11.8	15.0	14.9
Been threatened or injured with a weapon	348 (10.0)	187 (11.5)	131 (7.9)	8.9	10.1	9.5	8.8	11.1	14.6

Overall, 12.5% of students reported that they had carried a weapon in the community or at school. Significantly more boys (16.3%) compared to girls (8.9%), $p<0.01$. Higher than average proportions were reported for all districts except for George Town (11.3%) and North Side (11.8%). East End students reported the highest prevalence (18.3%).

In relation to the number of times threatened, a small proportion overall indicated been threatened (10%). Boys (11.5%) were significantly more likely to report this compared to girls (7.9%), $p<0.01$. Higher than average proportions were noted for Cayman Brac (14.6%) and West Bay (11.1%). Reported proportions in all other locations were just about the overall average or below.

Grade Level Comparison

From table 31 below, 10.7-15% of students in grade levels (8 through 12) reported carrying a weapon either in the community or at school. The highest proportions were reported for grade 10 (15%) and grade 11 (14.4%). With respect to being threatened, 8% or more in all grade levels reported being threatened (range 8.2-11.7%).

Table 31: Percentage of students who carried a weapon or were threatened (%) – Grade Level

	Grade 6	Grade 7	Grade 8	Grade 9	Grade 10	Grade 11	Grade 12
Have you ever carried a weapon			10.7	12.4	15.0	14.4	12.7
Been threatened or injured with a weapon	10.9	9.7	8.2	9.7	10.6	10.4	11.7

Violence and Aggression (Other Antisocial Behaviours) - only asked of Year 9-12

Overall Prevalence and Gender Differences

Overall, a small proportion of students said they had been arrested (3.4%) (Table 32). Boys (4.1%) were significantly more likely to indicate being arrested compared to girls (2.7%). One in nine students (11.7%) said they had attacked someone with intention of serious harm. Again, significantly more boys (13.2%) compared to girls (9.9%), $p<0.05$.

Table 32: Responses of "yes" to the antisocial behaviour items (%)

Have you ever...	Overall	Boys	Girls
Been arrested	77 (3.4)	4.1	2.7
Attacked someone with intention of serious harm	266 (11.7)	13.2	9.9
Been drunk at school	103 (4.5)	2.5	6.1
Got suspended because of violence	262 (11.5)	15.3	7.6
Belonged to a gang/crew	112 (4.9)	5.6	3.9
Been in a fight (fought)	868 (38.1)	29.4	47.8

A small proportion (4.5%) reported being drunk at school (2.5% boys versus 6.1% girls). Girls were significantly more likely to report being drunk at school, $p<0.05$. Overall, a notable high proportion of students (11.5%) got suspended because of violence. The difference between boys (15.3%) and girls (7.6%) was statistically significant, $p<0.05$.

Some 4.9% of students overall reported belonging to a gang/crew. The difference between boys (5.6%) and girls (3.9%) was not statistically significant, $p>0.05$. Almost four of ten students (38.1%) reported being in a fight. This was reported by significantly more girls (47.8%) than boys (29.4%), $p<0.01$.

Grade Level Comparisons

Table 33: 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	1.7	3.1	4.4	5.0	3.4
Attacked someone with intention of serious harm	10.6	11.8	14.5	11.4	7.9
Been drunk at school	2.3	4.5	6.3	6.2	3.4
Got suspended because of violence	12.1	11.0	11.9	10.9	11.2
Belonged to a gang/crew	3.1	5.0	7.1	5.2	3.9
Been in a fight (fought)	35.4	34.0	37.5	41.9	52.2

Grade 11 students reported the highest prevalence of being arrested (5.0). This was followed by grade 10 (4.4%), table 33. All other grades reported prevalence below the survey average of 3.4%. With respect to attacking someone with the intention to harm them, grade 10 students reported the highest prevalence (14.5%) with all other grades reporting prevalence at or below the survey average of 11.7%.

Prevalence of students reporting being drunk at school varied by grade levels. All grades reported prevalence above the survey average (4.5%) except for grades 8 and 12. Most all grades reported prevalence for having been

suspended because of violence that were at or slightly below the survey average of 11.5%.

Belonging to a gang was most often reported by students from grade 9 (5%), grade 10 (7.1%), and grade 11(5.2%). The reported prevalence was above the survey average of 4.5%. Reported prevalence for other grades were lower. Grade 12 (52.2%) and grade 11 (41.9%) students were notably more likely to report being in a fight than students in the other grades.

Fighting

Overall, 38.1% of students had been in a fight, (table 33 above). Varying reasons were given for having fought. The most common reason given was "to defend myself", to support a friend and to defend other members of the family, (figure 5).

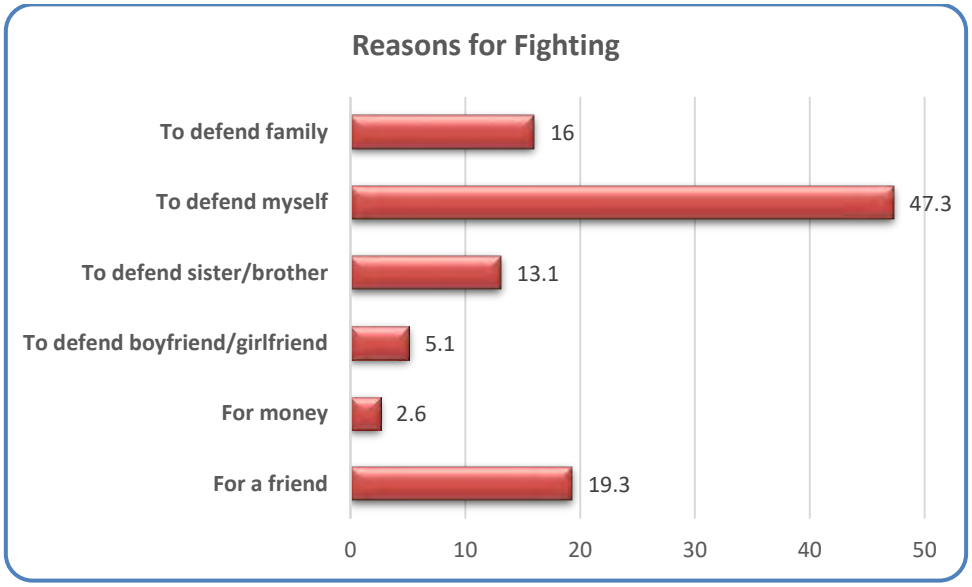
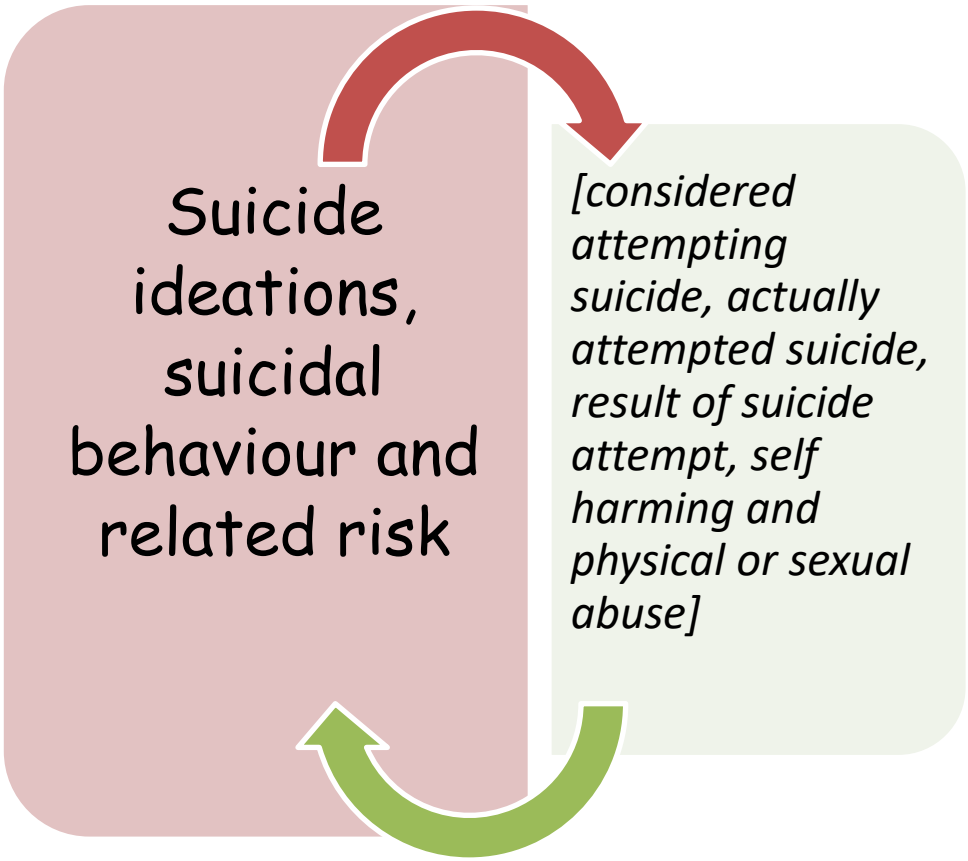
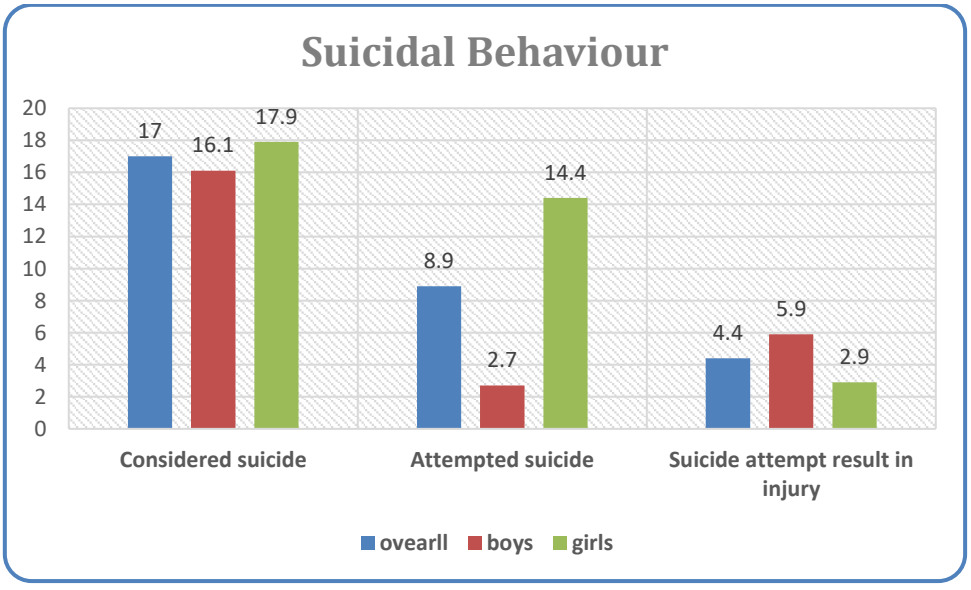


Figure 5: Reasons for Fighting


Suicide ideations, suicidal behaviour and related risk
[considered attempting suicide, actually attempted suicide, result of suicide attempt, self harming and physical or sexual abuse]


Suicidal Behaviour
20
18
16
14
12
10
8
6
4
2
0
17
16.1
17.9
8.9
2.7
14.4
4.4
5.9
2.9
Considered suicide
Attempted suicide
Suicide attempt result in injury
overall
boys
girls

Youth suicide ideations and suicidal behaviours

Table 34: Prevalence of Student's Suicide /Suicide Behaviour and Abuse

Prevalence of Student's Suicide /Suicide Behaviour and Abuse			
Have you ……	Overall	Boys	Girls
Seriously considered attempting suicide?	387 (17.0)	16.1	17.9
Actually, attempted suicide?	202 (8.9)	2.7	*14.4
Did your suicide attempts result in an injury, poisoning, etc.,	101 (4.4)	5.9	*2.9

***significantly difference at p<0.01**

Suicidal Ideations and Suicide Attempts – only asked of Year 9-12 students (N=2281)

About one in six students (17%) reported that they had seriously considered attempting suicide (n=387) – about the same proportion of boys (165 or 16.1%) compared to girls (195 or 17.9%) Table 34. The prevalence of actual attempted suicide was 8.9% overall (n=202). Girls (14.4%) were significantly more likely to report this compared to boys (2.7%), p<0.01. ***Of the 387 students who indicated seriously consider suicide, 91 or 23.5% attempted suicide (22 males and 61 females and 8 unknown gender). Among students who attempted suicide, 157 were girls, 28 boys and 17 were of unknown gender.***

Injury from Suicide Attempt

About 4.4% reported that their suicide attempt had to be treated by a doctor or nurse (n=101) - (a statistically significant difference between boys (5.9%) and girls (2.9%), p<0.01.

Suicidal Thoughts

Students were asked to indicate with whom they would speak when they had thoughts of suicide. From table 35 below, most students reported not speaking to anyone (31.4%) or to a friend (17%), for the most part.

Table 35: Speaking to Someone About Suicide Thoughts (%)

	Freq (%)
Boyfriend/girlfriend	163 (7.1)
Family	182 (8.0)
Friends	400 (17.5)
Parents	140 (6.1)
Pastor / priest / church member	17 (0.7)
Another person	127(5.6)
I don't talk to anyone	717 (31.4)

Self-harming Behaviour

Overall, 27.4% of students reported that they have engaged in self-harming behaviours such as cutting, burning, scratching, hitting, or banging body parts, pinching, etc. (more than one in every four students). This was reported by over 600 students. Again, girls (41.8%) were significantly more likely to report this compared to boys (12.1%). Figure 6 below shows the main types of self-harming behaviours reported by students.

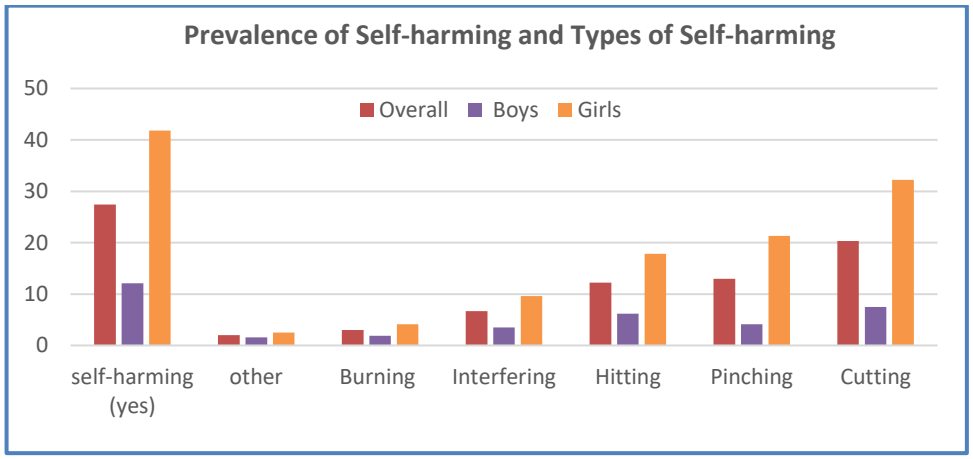


Figure 6: Types of Self-harming Behaviours

Table 36: Prevalence of Abuse (physical and sexual)

	Overall	Boys	Girls
Been physically abused?	308 (13.4)	6.9	18.9*
Been sexually abused?	96 (4.2)	2.2	6.3*
Any abuse (computed variable)	330 (14.5)	7.4	20.1*

*statistically significant p<0.01

Abuse (physical, sexual and "any" abuse)

Physical abuse overall was reported by 13.4% of students (n=308), table 36. Girls (18.9%) were significantly more likely to report this compared to boys (6.9%). In terms of sexual abuse, the prevalence was 4.2% overall (n=96) with girls (6.3%) significantly more likely to report this compared to boys (2.2%) – these differences were statistically significant at the p<0.01 level.

A variable was computed to reflect "any abuse", whether physical or sexual, and the prevalence of 'any abuse' was 14.5% (n=330). Almost three times as many girls (20.1%) compared to boys (7.4%) reported either being physically or sexually abused, p<0.01 (Table 36).

Suicide ideations, suicidal behaviour, and related risk by Age

There was some amount of variability in the proportion of students who reported considering suicide when ages were compared (range was 14.4% - 19.3%) – lowest proportions were reported in the two lowest ages cohorts (13 and 14-year-old), table 37. Similarly, the proportion of students who attempted suicide was lower for the lowest age cohort except for those 18 years old who reported (6.2%). However, a higher proportion of students in the lower cohort reported that their suicide attempt resulted in an injury that had to be treated.

For the most part, a large proportion of students in all age cohort reported self-harming – ranged from 14.8% among 18-year-old to 29.8% among 15-year-old.

Higher proportions of 15, 16, and 17-year-old students in the reported physical abuse (about 15.5%). For sexual abuse, there was some amount of variability

in proportions among age cohorts (the proportions ranged from 1.3% reported by those 18 years old to 5.9% among those 15 years old.

Table 37: Prevalence of Student's Suicide Behaviour, Self-harming and Abuse by Age

	Age					
	13 yrs.	14 yrs.	15 yrs.	16 yrs.	17 yrs.	18/19 yrs.
Seriously considered attempting suicide	14.4	15.1	19.3	17.7	18.6	18.5
Actually, attempted suicide	5.2	7.7	10.3	11.9	10.4	6.2
Suicide attempt resulted in an injury	7.4	5.6	3.3	3.2	2.2	2.5
Engaged in self-harming behaviours	24.8	27.0	29.8	29.5	28.1	14.8
Been physically abused	11.9	10.4	15.7	15.3	15.6	11.1
Been sexually abused	3.6	4.5	5.9	5.5	3.8	1.3
Any abuse	12.9	11.7	17.2	16.6	15.6	11.1

Risk Factors for Suicide Among Students

Table 38 presents the association between the predictor variable and attempted suicide (outcome variable). The Odds Ratio (OR) and 95% confidence intervals are presented to determine the evidence of the association.

Numerous risk factors are associated with youth suicide. In this survey we explored the association between attempted suicide and physical and sexual abuse, bullying, binge drinking, alcohol problems, student diagnosed with mental health illness, and self-harming behaviour (Table 38). The table below shows that in all factors explored there was a statistically significant risk associated with the exposure and attempting suicide. ***Exposure to the predictors significantly increases the odds of the outcome.***

Ever Been Bullied

The prevalence of being bullied overall was 55.1%. Students who were bullied were 4.2 times more likely [OR=4.272] to have attempted suicide compared to those who were not bullied (13.1% versus 3.4%).

Being through a life-threatening event

The prevalence of being through a life-threatening event overall was 41.3% for year 9-12 students). Students who reported this were 2.2 times more likely [OR=2.201] to have attempted suicide compared to those who had not reported this (12.9% versus 6.3%).

Table 38: Risk for Suicide Among Students

Risk for Suicide Among Students				
Exposure	*Attempted suicide [n (%)] – Outcome*		*Odds ratio*	*95% Confidence interval CI*
	No	*Yes*		
Ever bullied				
No	*964 (96.6)*	*34 (3.4)*	*4.272*	*2.926 - 6.238*
Yes	*1115 (86.9)*	*168 (13.1)*		
Being through a life-threatening event				
No	*1104 (93.7)*	*74 (6.3)*	*2.201*	*1.626 - 2.981*
Yes	*820 (87.1)*	*121 (12.9)*		
Ever physically abused				
No	1867 (94.5)	109 (5.5)	7.514	5.505 – 10.255
Yes	212 (6.53)	93 (30.5)		
Ever sexually abused				
No	1781 (91.6)	164 (8.4)	5.516	3.501 – 8.690
Yes	63 (66.3)	32 (33.7)		
Any physical or sexual abuse – "any abuse"				
No	1846 (94.6)	105 (5.4)	7.319	5.380 – 9.957
Yes	233 (70.6)	97 (29.4)		
Binge drinking				
No	668 (90.1)	73 (9.9)	1.726	1.233– 2.435
Yes	403 (84.1)	76 (15.9)		
Student diagnosed with mental health illness				
No	1670 (92.7)	132 (7.3)	3.163	2.251 – 4.444
Yes	228 (80.0)	57 (20.0)		
Self-harming				
No	1593 (96.3)	62 (3.7)	7.401	5.397 – 10.150
Yes	486 (77.6)	140 (22.4)		
Alcohol problem				
No	823 (91.8)	74 (8.2)	2.735	1.936 – 3.865
Yes	309 (80.3)	76 (19.7)		

Abuse (physical or sexual)

Physical abuse overall was reported by 13.5% of students. About 30.5% of students who were physically abused had attempted suicide compared to about

5.5% of those who had not been physically abused. Students who were physically abused were 7.5 [OR=7.514] times more likely to attempt suicide compared to those who were not so abused.

Sexual abuse overall was reported by 4.2% of students. Students who were sexually abused were 5.5 times more likely [OR=5.516] to have attempted suicide compared to those who were not so abused (33.7% versus 8.4%).

Binge Drinking

The prevalence of binge drinking overall was 59.7% (among those students in Year 9-12 who had used alcohol in the last 30 days). Students who reported binge drinking were 1.7 times more likely [OR=1.726] to have attempted suicide compared to those who had not reported binge drinking (15.9% versus 9.9%).

Self-harming Behaviours

The prevalence of self-harming overall was 27.4%. Students who reported self-harming were 7 times more likely [OR=7.401] to have attempted suicide compared to those who had not reported self-harming (22.4% versus 3.7%).

Student diagnosed with mental health issue/illness

The association between being diagnosed with a mental health issue or illness and the risk of suicide also showed strong evidence that students reporting this condition were three times more likely to attempt suicide (OR=3.163) compared to those who had not reported been diagnosed with a mental health issue (20% versus 7.3%).

Alcohol problem (assessed from AUDIT Questions)

The prevalence of alcohol problem overall was 30%. Students who were assessed as having an alcohol problem were 2.7 times more likely [OR=2.735] to have attempted suicide compared to those who had no alcohol problem (19.7% versus 8.2%).

Age and Attempted Suicide

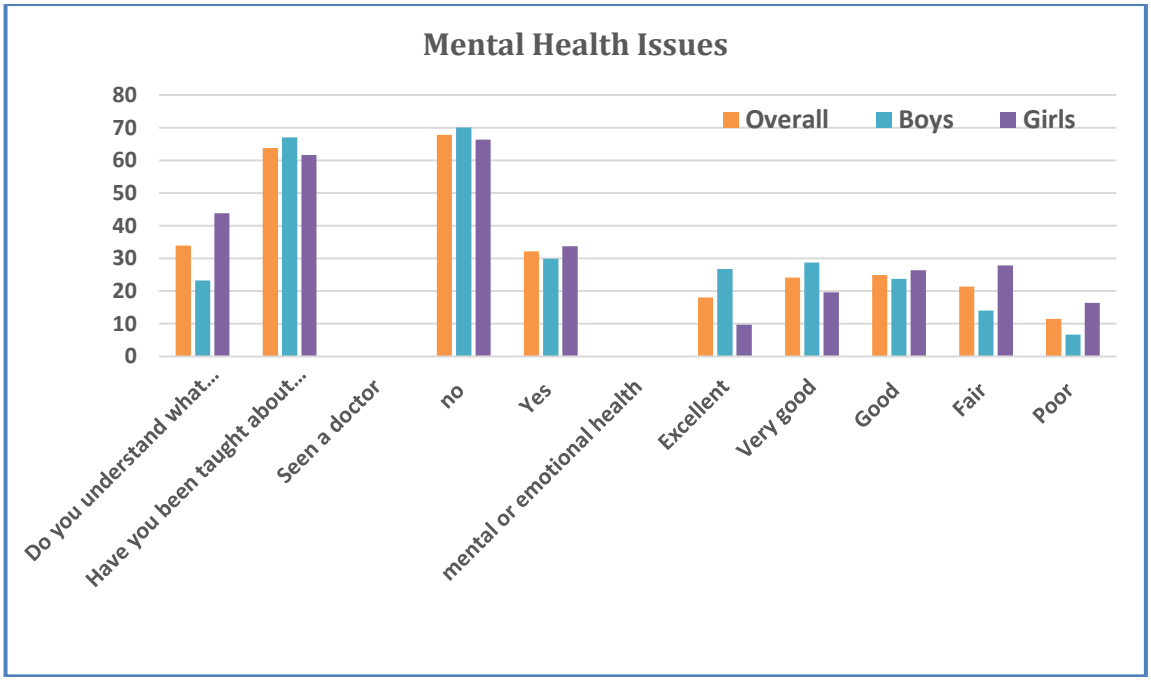
The relationship between age and suicide showed lower prevalence among the 13-year-old (5.2%), 14-year-old (7.7%), and 18/19-year-old (6.2%) students, table 39. The highest prevention was reported by the 16-year-old students (11.9%).

Table 39: Relationship between suicide attempts and age

	Overall		Gender (yes, n=202))		
	Yes	No	Boys	Girls	Missing
13 years	21 (5.2)	383 (94.8)	4	16	1
14 years	44 (7.7)	531 (92.3)	8	35	1
15 years	53 (10.3)	464 (89.7)	4	46	3
16 years	55 (11.9)	409 (88.1)	10	36	9
17 years	24 (10.4)	207 (89.6)	2	19	3
18/19years	5 (6.2)	76 (93.8)	0	5	0
Total	202	2070	28	157	17

There was a significant difference between rates among the younger cohort (those age 13, 14, or 15 with a cumulative prevalence of 22.9%) and the older cohort (those age 16, 17 18, or 19) with a cumulative prevalence of 28.5%, $p<0.01$.


Mental Health
&
Anxiety and Depression
- general mental health questions
- question on the Revised Child Anxiety and Depression Scale (RCAD)


Mental Health Issues
80
70
60
50
40
30
20
10
0
Overall
Boys
Girls
Do you understand what...
Have you been taught about...
Seen a doctor
no
Yes
mental or emotional health
Excellent
Very good
Good
Fair
Poor

Health – Mental Health

Table 40: Student's Responses of "yes" to Questions About Mental Health

Student's Responses of "yes" to Questions About Mental Health (Asked only of Year 9-12 students)			
	Overall	Boys	Girls
Do you understand what mental health is?	33.9	23.3	43.8
Have you been taught about mental health in school?	63.8	67.0	61.6
In the past 12 months, how many times have you seen a doctor, nurse, or counsellor about your mental or emotional health?			
I didn't see a doctor, nurse or counsellor	67.8	70.1	66.3
Once	11.0	10.5	11.4
2-5 times	13.1	13.4	12.4
6-10 times	3.6	3.7	3.5
More than 10 times	4.6	2.3	6.3
How would you rate your mental or emotional health?			
Excellent	18.1	26.8	9.7
Very good	24.1	28.7	19.6
Good	24.9	23.7	26.4
Fair	21.4	14.0	27.9
Poor	11.5	6.7	16.4

Meaning of Mental Health

Just over one-third of students in Year 9-12 (33.9% overall – 23.3% boys and 43.8% girls) said they understood what was meant by mental health (table 40). However, six of every ten students (63.8%) said they were taught about mental health in school. When asked if they had seen a doctor, nurse, or counsellor about your mental or emotional health in the past 12 months, about a third (32.2%) indicated that they had (29.9% boys versus 33.7% girls). Responses for girls and boys were somewhat dis-similar with respect to this question.

Mental or Emotional Health

A notable low proportion of students believed that their mental or emotional health was optimal. Only 18.1% believed it was "excellent" while 24.1% said "very good", 24.9% "good", 21.4% "fair" and 11.5% "poor". Boys were more likely to express that their mental health was "excellent" or "very good" compared to girls —for example, almost three times as many boys (26.8%) compared to girls (9.7%) said that their mental health as "excellent". Girls

were notably more likely to say their mental health was "fair" (27.9% versus 14% boys) or "poor" compared to boys (16.4% versus 6.7%), (table 40).

Table 41: Student's Responses of "yes" to Questions About Mental Health and Personal Experiences

	Overall	Boys	Girls
On a whole, I am satisfied with myself.			
Agree	73.3	82.7	65.6
Disagree	26.7	17.3	34.4
Have you ever been diagnosed with a mental health issue/illness?	285 (12.5)	96 (10.2)	166 (16.3)
If yes, have you ever sought help for your mental health?	242/285 (84.9)	76/96 (79.2)	145/166 (87.3)
Is there an app that would allow you to express your feelings in a private and safe way, would you use it?	40.0	32.9	51.8
Do you currently express your feelings using social media?	17.9	20.0	23.7
Have you ever witnessed violence and aggression?	57.3	59.4	55.2
If yes, where?			
At home	23.4	18.2	28.4
At school	36.3	36.6	36.0
In the community	27.4	28.7	25.7
Have you been through a life-threatening event	39.7	44.8	40.3
Do your parent(s) suffer from any mental illness (don't know =21.8%)	5.7	4.6	7.3

***blue shading indicates questions asked only of Year 9-12 students**

Satisfaction with Self

This question was asked of Year 9-12 students only. Overall, more than seven in ten students (73.3%) were satisfied with themselves while 26.7% were not. Eight of every ten boys (82.7%) said they were satisfied with themselves (table 41). This compares to 65.6% of girls. Twice as many girls were not satisfied with themselves compared to boys (34.5% versus 17.33), $p<0.01$.

Opinion and use of Social Media

Four in ten students (40%) said they would use a social media App to express their feelings in a private and safe way if one was available. Girls indicated a notably higher proportion than boys in response to this question (51.8% versus 32.9% respectively), (table 41).

In response to the question – Do you currently express your feelings using social media? – 17.8% of students said yes, (23.7% girls and 20% boys). For the most part, students were using Instagram, Snapchat, and WhatsApp for social media communication, Figure 7.

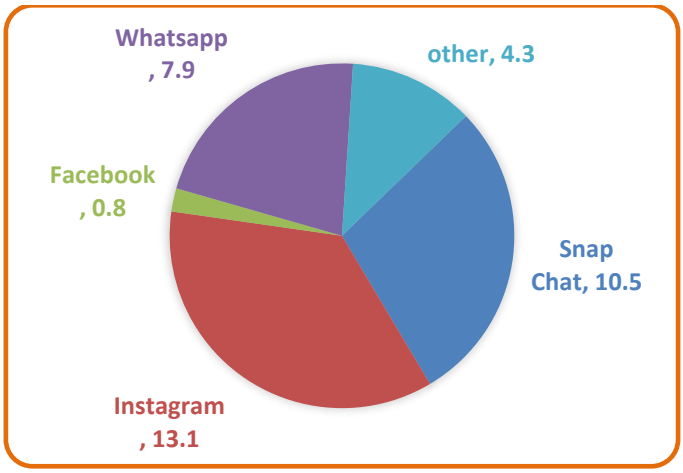


Figure 7: Social Media Apps Currently Used by Students

Violence and Aggression/Life-Threatening Event

More than half of the students (57.3%) reported that they have witnessed violence and aggression (59.4% boys and 55.2% girls). Most students had witnessed this at school (36.3%) followed by in the community (27.4%), and then at home (23.4%). About one in four (39.7%) have been through a life-threatening event (44.8% boys and 40.3% girls) – significantly more boys compared to girls, $p<0.05$.

Family History of Mental Illness

Some 197 students or 5.7% overall indicated that a parent or parents suffer from a mental illness. This was indicated by 4.6% (69) of boys and 7.3% (115)

of girls. When asked if they had ever been diagnosed with a mental illness, 12.5% (n=285) of Year 9-12 students said they had been so diagnosed, -- (96 or 10.2% boys) and (166 or 16.3% girls).

Overall, 84.9% (242/285) of those who said they have been diagnosed said they had sought 'help' for their condition. Girls were more likely to have sought help (145/166 or 87.3%) compared to boys (76/96 or 79.2%).

For the most part, respondents sought help from counseling services, medication, and family doctor. The main reasons given for not seeking help related to feeling that they did not need it, not knowing if it would help, fear of judgment and being embarrassed to access support or help, (table 42).

Table 42: the reasons why the student did not seek support/help (%)

Reasons	Percent
I don't need it	50.3
I don't know if it would be helpful	19.3
Fear of judgment	12.2
I am embarrassed to access support or help	9.7
Other	5.9
I don't know how or where to access support/get help	4.5
I can't afford it	4.5
I feel disappointed with the service	3.5
There is a wait list	1.3

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)[6] original questionnaire that measures total depression and anxiety. This is the child self-report questionnaire with six subscales as shown in table 43.

Table 43: 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

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

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

Table 44:Percentage Responses to Items in the RCADs

Items	Percentage Responses			
	Never	Sometimes	Often	Always
a) I feel sad or empty	21.6	43.5	21.3	8.9
b) I worry when I think I have done poorly at something	11.6	39.0	25.4	18.8
c) I would feel afraid of being on my own at home	69.8	18.6	3.8	2.6
d) Nothing is much fun anymore	36.5	38.0	12.7	7.1
e) I Worry that something awful will happen to someone in my family	28.8	35.0	15.0	16.0
f) I am afraid of being in crowded places (like shopping etc.)	57.3	26.2	6.2	5.5
g) I worry what other people think of me	30.8	33.7	13.9	16.7
h) I have trouble sleeping	38.4	37.1	12.5	7.1
i) I feel scared if I have to sleep on my own	76.1	14.1	2.5	2.3
j) I have problems with my appetite	56.7	24.5	8.1	5.5
k) I suddenly become dizzy or faint when there is no reason for this	66.0	19.0	6.6	3.6
l) I have to do some things over and over again (like washing my hands, cleaning)	51.4	25.0	8.8	9.5
m) I have no energy to do things	35.2	41.8	12.5	5.6
n) I suddenly start to tremble or shake when there is no reason for this	64.5	19.2	6.9	4.1
o) I can't think clearly	38.2	40.7	11.3	4.6
p) I feel worthless	50.8	24.4	10.4	9.1
q) I have to think of special thoughts (like numbers or words) to stop bad things from happening	6.9	16.2	6.3	4.8
r) I think about death	36.3	35.1	12.5	10.9
s) I feel like I don't want to move	46.9	31.8	9.6	6.2
t) I worry that I suddenly get a scared feeling when there is nothing to be afraid of	54.4	26.7	8.7	4.7
u) I am tired a lot	24.4	37.4	18.3	14.5
v) I feel afraid that I will make a fool of myself in front of people	30.3	35.4	14.2	14.2
w) I have to do some things in just the right way to stop bad things from happening	50.9	28.5	8.6	5.7
x) I feel restless	48.0	31.0	9.6	5.1
y) I worry that something bad will happen to me	37.9	36.1	10.5	9.3

Table 44 above shows the distribution of responses to the items in the questionnaire.

Summary findings:

- In five items (20%, items highlighted orange), greater than 30% of students indicated that the things outlined had happened to them often or always
- For another six items (24%, items highlighted green), about 20% and up to 29% of students indicated that the things outlined had happened to them often or always.

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 sub-scale is added together to get the 'sub-scale 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.*

Reliability Statistics for RCADS-25 Survey Items

The 25-item questionnaire used in this survey showed '**excellent**' internal consistency reliability. The alpha coefficient (Cronbach's alpha) was 0.946. all subscales also showed acceptable to good internal reliability (SP .74, PD .75, SAD .78, GAD .77, OCD .77 and MDD .82). **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.

Gender Differences

To measure gender differences, independent samples t-tests were performed on RCADS total score and on all the subscales. There was a significant difference in the total internalizing scores for girls (Mean=23.8±14.3) compared to boys (Mean=15.5±12.2). Girls also reported higher levels of anxiety and depression than boys on all subscales (see table 45). The mean gender difference for the total internalizing scale was 8.4 with a significant t-test statistic (t=18.25, CI 7.48-9.26). The t-test was statistically significant on all subscales except for generalized anxiety disorder.

Table 45: Gender differences on RCADS total scores and subscales scores

RCADS	Mean (SD)		Mean Diff.	T-statistics	95% CI	
	Boys (n=1553)	Girls (n=1623)			Upper	Lower
Total internalizing	15.5 (11.2)	23.8 (14.3) **	8.4	18.25	7.48	9.28
Social phobia	3.0 (2.2)	4.5 (2.6) **	1.5	17.36	1.32	1.66
Panic disorder	.91 (1.4)	2.1 (2.2) **	1.2	17.72	1.04	1.35
Separation anxiety disorder	.81 (1.3)	1.6 (1.7) **	.77	13.72	0.63	0.84
Generalized anxiety disorder	2.4 (2.1)	3.6 (2.5)	1.1	13.67	0.97	1.29
Obsessive compulsive disorder	1.6 (1.9)	2.1 (2.2) **	.53	7.28	0.39	0.67
Major depressive disorder	6.8 (5.3)	10.1 (6.7) **	3.3	15.27	2.88	3.73

****p<0.01**

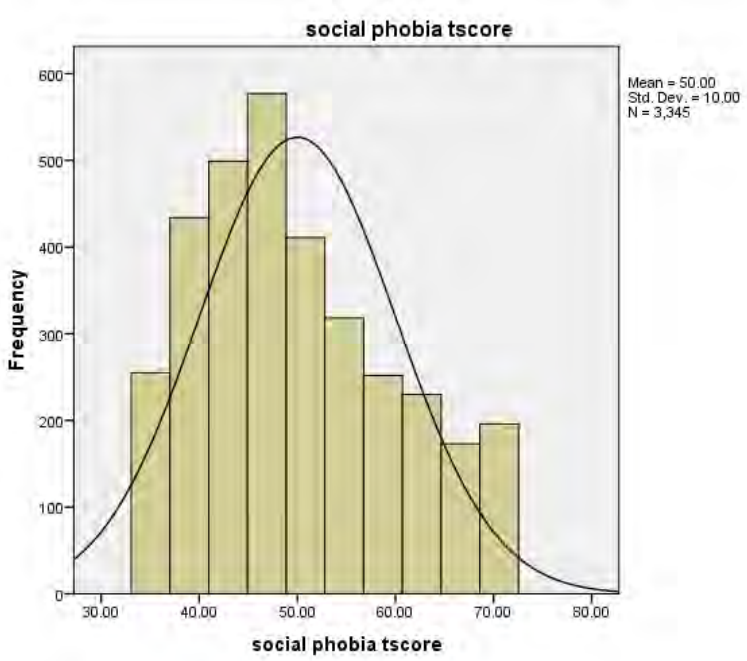
Disorders/Syndromes and T-Score Classifications

Table 46: Percentage of scores T>=65, Overall, Boys vs Girls and Grade

Disorders/Syndromes and score classifications	*Percentage of t-scores >=65, Overall, Boys vs Girls and for Grade Levels*									
	Over all	Gender		Grade Level						
		Boys	Girls	6	7	8	9	10	11	12
Social Phobia (n=3345)										
T >=65 (at borderline clinical threshold	10.6	4.6	**16.4**	6.7	**11.0**	9.0	**12.0**	**12.9**	**10.8**	**15.6**
T >=70 (above clinical threshold)	5.6	2.2	**9.1**	3.4	5.0	4.6	**7.1**	**7.7**	**5.0**	**8.9**
Panic Disorder (n=3318)										
T >=65 (at borderline clinical threshold	8.8	3.1	**14.3**	5.6	8.0	8.2	11.7	11.4	8.1	**9.4**
T >=70 (above clinical threshold)	5.3	1.9	**8.8**	3.1	5.4	5.7	6.8	6.6	4.1	5.0
Separation Anxiety Disorder (n=3346)										
T >=65 (at borderline clinical threshold	8.1	4.6	**11.5**	7.8	7.6	7.4	**10.0**	**8.9**	7.2	7.2
T >=70 (above clinical threshold)	4.6	2.7	**6.2**	4.2	4.5	3.6	**6.3**	**5.4**	4.1	3.3
Generalized Anxiety Disorder (n=3344)										
T >=65 (at borderline clinical threshold	10.1	4.7	**14.7**	7.4	8.6	**11.5**	**11.2**	**11.2**	**11.5**	8.3
T >=70 (above clinical threshold)	5.1	2.0	**7.8**	3.6	4.7	4.9	**6.4**	**5.4**	**5.6**	4.4
Obsessive Compulsive Disorder (n=3318)										
T >=65 (at borderline clinical threshold	11.2	8.1	**14.4**	**13.9**	**14.0**	10.0	10.0	9.8	10.6	6.7
T >=70 (above clinical threshold)	6.6	4.4	**8.7**	**8.5**	**7.4**	6.1	6.4	5.2	6.3	4.4
Major Depressive Disorder (n=3355)										
T >=65 (at borderline clinical threshold	8.4	3.3	**13.0**	3.4	4.1	**8.9**	**12.2**	**9.5**	**11.5**	**13.9**
T >=70 (above clinical threshold)	4.4	1.7	**6.8**	1.6	2.0	4.6	**6.1**	**6.0**	**6.5**	**5.0**
Total Anxiety and Depression (n=3328)										
T >=65 (at borderline clinical threshold	8.6	3.3	**14.1**	4.2	7.1	**9.2**	**12.5**	**12.2**	**9.5**	**10.1**
T >=70 (above clinical threshold)	4.2	1.2	**7.2**	1.8	3.2	3.9	**6.3**	**6.3**	**4.9**	**5.8**

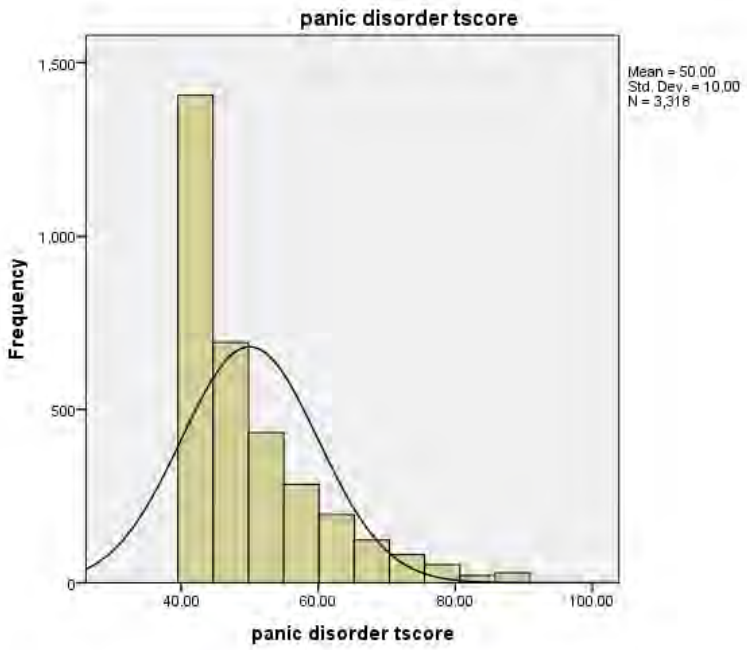
Sub-scale – Social Phobia (table 46)

Some 10.6% of the t-scores were 'at the borderline clinical threshold' with 5.6% 'above clinical threshold' for the social phobia sub-scale. A significantly higher proportion of girls compared to boys were 'at the borderline clinical threshold' (16.4% versus 4.6%), as well as t-scores 'above clinical threshold' (9.1% versus 2.2%). Apart from students in grade 6 (6.7%) and grade 8 (9%), all other grades had proportions that were above the overall average (10.6%) for 'at the borderline clinical threshold'. In addition, students in three grades had above average proportions (5.6%) for t-scores 'above clinical threshold': grade 9 (7.1%), grade 10 (7.7%), grade 12 (8.9%).



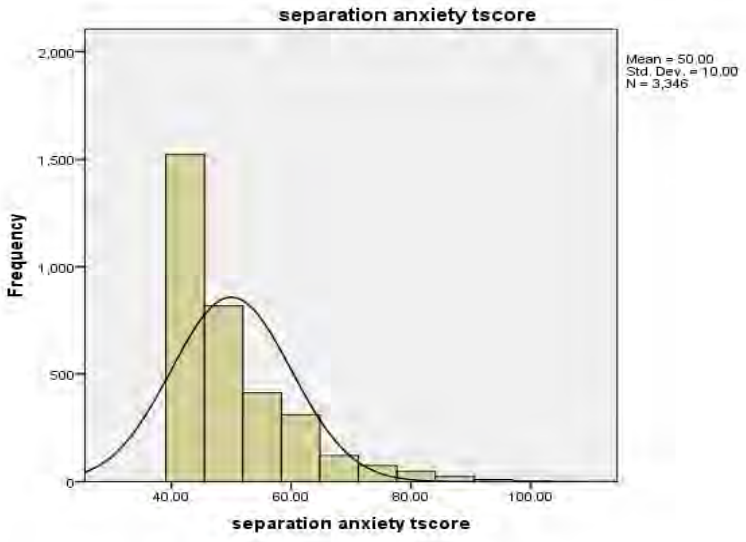
Sub-scale – Panic Disorder (table 46)

Some 8.8% of the t-scores were 'at the borderline clinical threshold' with 5.3% 'above clinical threshold' for panic disorder. A significantly higher proportion of girls compared to boys were 'at the borderline clinical threshold' (14.3% versus 3.1%), as well as t-scores 'above clinical threshold' (8.8% versus 1.9%). Students in grade 9 (11.7%), grade 10 (11.4%) and grade 12 (9.4%) were more likely than students in the other grades to report t-scores that were higher than the overall average (8.8%) for 'at the borderline clinical threshold'. Students in grades 9 and 10 recorded scores slightly higher than the overall average (5.3%) for panic disorder t-scores 'above clinical threshold'.



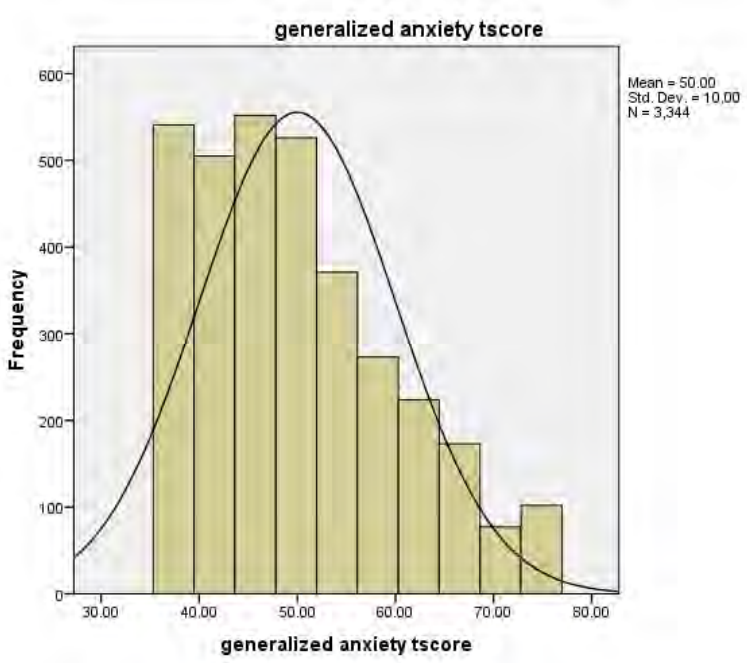
Sub-scale - Separation Anxiety Disorder (table 46)

Some 8.1% of the t-scores were 'at the borderline clinical threshold' with 4.6% 'above clinical threshold' for separation anxiety. A significantly higher proportion of girls compared to boys were 'at the borderline clinical threshold' (11.5% versus 4.6%), as well as t-scores 'above clinical threshold' (6.2% versus 2.7%). Students in grade 9 (10%), grade 10 (8.9%) were more likely than students in the other grades to report t-scores that were higher than the overall average (8.1%) for 'at the borderline clinical threshold'. Students in grades 9 and 10 recorded scores slightly higher than the overall average (4.6%) for separation anxiety t-scores 'above clinical threshold'.



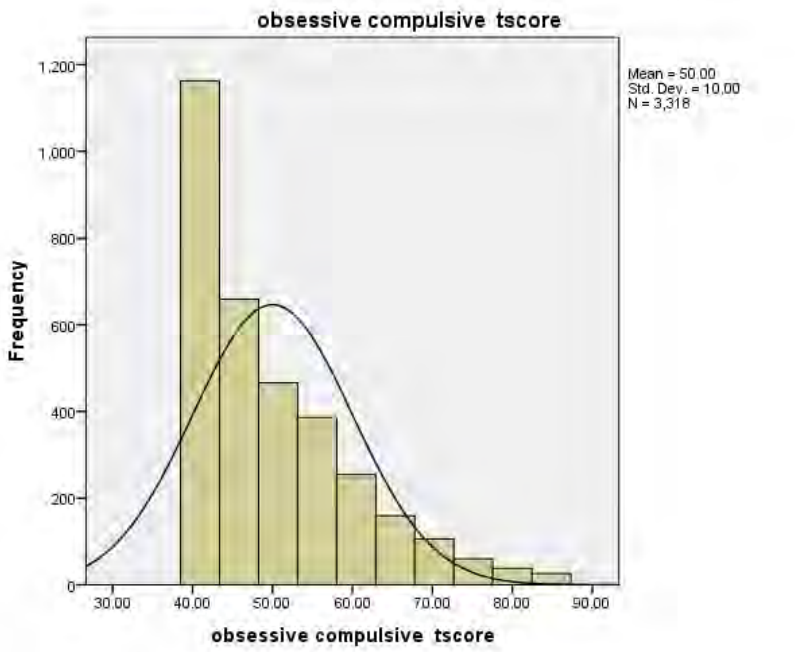
Sub-scale - Generalized Anxiety Disorder (table 46)

Some 10.1% of the t-scores were 'at the borderline clinical threshold' with 5.1% 'above clinical threshold' for generalized anxiety. A significantly higher proportion of girls compared to boys were 'at the borderline clinical threshold' (14.7% versus 4.7%), as well as t-scores 'above clinical threshold' (7.8% versus 2%). Students in grade 8 (11.5%), grade 9 (11.2%), grade 10 (11.2%) and grade 11 (11.5%) were more likely than students in the other grades to report t-scores that were higher than the overall average (10.1%) for 'at the borderline clinical threshold'. This compares to students in grade 9 (6.4%), grade 10 (5.4%) and grade 11 (5.6%) recording scores slightly higher than the overall average (5.1%) for generalized anxiety t-scores 'above clinical threshold'.



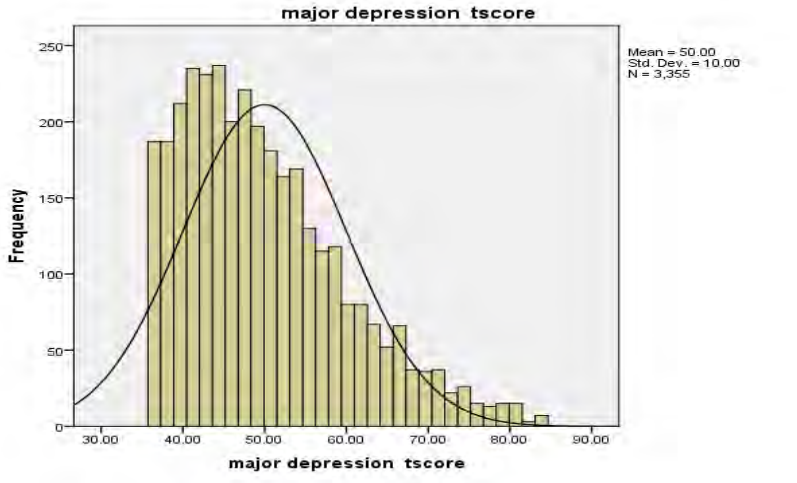
Sub-scale Obsessive Compulsive Disorder (table 46)

Some 11.2% of the t-scores were 'at the borderline clinical threshold' with 6.6% 'above clinical threshold' for obsessive compulsive disorder. A significantly higher proportion of girls compared to boys were 'at the borderline clinical threshold' (14.4% versus 8.1%), as well as t-scores 'above clinical threshold' (8.7% versus 4.4%). Students in all grades recorded scores that were below the overall average (10.1%) 'at the borderline clinical threshold'. This compares to students in the two lower grades, (grade 6 (8.5%) and grade 7 (7.4%), as the only grades recording scores slightly higher than the overall average (6.6%) for obsessive compulsive disorder t-scores 'above clinical threshold'.



Sub-scale Major Depressive Disorder (table 46)

Some 8.4% of the t-scores were 'at the borderline clinical threshold' with 4.4% 'above clinical threshold' for major depression. A significantly higher proportion of girls compared to boys were 'at the borderline clinical threshold' (13.3% versus 3.3%), as well as t-scores 'above clinical threshold' (6.8% versus 1.7%). Students (of Year 9-12) in grade 8 (8.9%), grade 9 (12.2%), grade 10 (9.5%), grade 11 (11.5%) and grade 12 (13.9%) were more likely than students in the other grades (Year7-8) to report t-scores that were higher than the overall average (8.4%) for 'at the borderline clinical threshold'. This compares to students in grade 9 (6.1%), grade 10 (6%) and grade 11 (6.5%) and grade 12 (5%) recording scores slightly higher than the overall average (4.4%) for major depression t-scores 'above clinical threshold'.



Total Anxiety and Depression (Total Internalizing) (table 46)

Some 8.6% of the t-scores were 'at the borderline clinical threshold' with 4.2% 'above clinical threshold' for total anxiety and depression. A significantly higher proportion of girls compared to boys were 'at the borderline clinical threshold' (14.1% versus 3.3%), as well as t-scores 'above clinical threshold' (7.2% versus 1.2%). All students in grades above grade 7 (all students in Year 9-12) recorded scores higher than the overall average (8.6%) for 'at the borderline clinical threshold'. This compares to students in grade 9 (6.3%), grade 10 (6.3%), grade 11 (4.9%) and grade 12 (5.8%) recording scores slightly higher than the overall average (4.2%) for total anxiety and depression t-scores 'above clinical threshold'.

Comparative Results – T-scores for Various Syndrome/Disorder 2020 Survey versus 2018 Survey

For comparison, table 47 and figure 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 2018. Comparisons are for social phobia disorder, panic disorder, generalized anxiety, and depression.

Social phobia – there was a slightly higher proportion 'at the borderline clinical threshold' in 2020 survey (10.6% vs 9.9%). This was also noted for the proportion of students in 2020 'above clinical threshold' (a 2.2 percentage points increase – 5.3% versus 3.2%).

Panic Disorder – the overall proportion of students classified 'at the borderline clinical threshold' and 'above clinical threshold' in both survey periods were practically the same.

Anxiety - the overall proportion of students classified 'at the borderline clinical threshold' and 'above clinical threshold' in both survey periods were relatively the same for both periods (proportion 'at the borderline clinical threshold' was one percentage points higher in the 2020 survey.

Depression - the overall proportion of students classified 'at the borderline clinical threshold' and 'above clinical threshold' in both survey periods were practically the same.

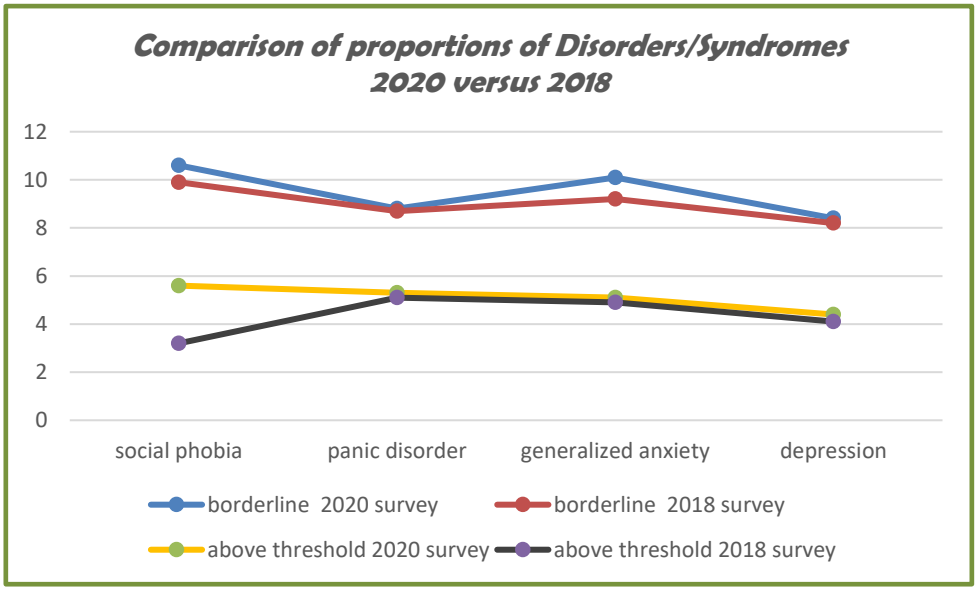


Figure 8: Comparison of Clinical Threshold for the two survey periods, 2020 and 2018

Table 47: Comparative Table 020 vs 2018 Clinical Threshold

	borderline		above threshold	
	2020 survey	2018 survey	2020 survey	2018 survey
Social phobia	10.6	9.9	5.6	3.2
Panic disorder	8.8	8.7	5.3	5.1
Generalized anxiety	10.1	9.2	5.1	4.9
Depression	8.4	8.2	4.4	4.1

Regression Analysis

Table 48: Dichotomous Variables in the Regression Analysis

		Male n=1650	Female n=1657
Satisfaction with self	1574 (73.3)	82.7	65.6
Threatened with injury	340 (10.0)	11.5	7.9
Sexual abuse	96 (4.2)	2.2	6.3
Physical abuse	308 (13.5)	6.9	18.9
Any abuse	330 (14.5)	7.4	20.1
Alcohol dependence	37 (2.8)	3.2	2.0
Alcohol problem	388 (30.0)	26.6	31.6
Binge drinking	336 (57.5)	60.2	57.1
Parent diagnosed with mental illness	197 (5.7)	4.6	7.3
Student diagnosed with mental illness	285 (12.5)	10.2	16.3
Student sought help for mental illness	242 (10.6)	7.4	13.3
Through life threatening event	1381 (39.7)	44.8	40.3
Self-harming	626 (27.4)	12.1	41.8
Considered suicide	387 (17.0)	16.1	17.9
Attempted suicide	202 (8.9)	2.7	14.4
Ever bullied	1915 (55.1)	47.4	63.1
Bullied in past year	775 (22.3)	18.6	25.9
Bullied last 30 days	445 (12.8)	10.6	14.8
Past year cigarette	168 (4.8)	80 (4.8)	69 (4.2)
Current cigarette	75 (2.2)	38 (2.3)	27 (1.6)
Past year e-cigarettes	718 (20.6)	334 (20.6)	323 (19.5)
Current e-cigarettes	331 (9.5)	170 (10.5)	125 (7.5)
Past year alcohol	1133 (32.6)	506 (31.2)	557 (33.6)
Current alcohol	584 (16.8)	248 (15.3)	296 (17.5)
Past year marijuana	465 (13.4)	186 (11.5)	234 (14.1)
Current marijuana	270 (7.8)	108 (6.7)	136 (8.2)
Gender (boy/girl)	2112	1023	1089
Grade 8	567	277 (17.1)	290 (17.5)
Grade 9	538	258 (15.9)	280 (16.9)
Grade 10	439	214 (13.2)	225 (13.6)
Grade 11	417	211 (13.0)	206 (12.4)
Grade 12	171	79 (4.9)	92 (5.6)

Multiple Linear Regression - Predicting Total Anxiety and Depression

Multiple Linear Regression analysis was conducted to assess if the independent variables (predictors, e.g. – seriously considered attempting suicide, gender, grade, satisfaction with self, engaging in self harming behaviour and abuse, etc.) predict the dependent variable ***(total anxiety and* depression).** The results of the analysis are shown in table 49 below.

Table 49: Model Summary for Linear Regression - Total Anxiety and Depression (2020 Survey)

	Adjusted R^2	F Change	Significant (p-value)
a. Predictors: (Constant), self-harming behaviour new variable	.294	396.427	.000
b. Predictors: (Constant), self-harming behaviour new variable, Q2=2.0	.352	85.453	.000
c. Predictors: (Constant), self-harming behaviour new variable, Q2=2.0, bullied in past year new variable	.389	58.640	.000
d. Predictors: (Constant), self-harming behaviour new variable, Q2=2.0, bullied in past year new variable, ever physically abused recoded	.416	44.782	.000
e. Predictors: (Constant), self-harming behaviour new variable, Q2=2.0, bullied in past year new variable, ever physically abused recoded, student diagnosed with mental illness	.432	28.057	.000
f. Predictors: (Constant), self-harming behaviour new variable, Q2=2.0, bullied in past year new variable, ever physically abused recoded, student diagnosed with mental illness, alcohol problem based on the audit scores	.447	25.446	.000
g. Predictors: (Constant), self-harming behaviour new variable, Q2=2.0, bullied in past year new variable, ever physically abused recoded, student diagnosed with mental illness, alcohol problem based on the audit scores, considered suicide new variable	.458	21.148	.000
h. Predictors: (Constant), self-harming behaviour new variable, Q2=2.0, bullied in past year new variable, ever physically abused recoded, student diagnosed with mental illness, alcohol problem based on the audit scores, considered suicide new variable, being through a life threatening event	.460	4.515	.034
Dependent Variable: Total anxiety and depression			

From the table 49 above, at least eight variables are significant predictors of total anxiety and depression in this group of students, namely:

1. Gender (female)
2. Engaging in self harming behaviour
3. Bullied in the past year
4. Physically abuse
5. Student diagnosed with mental illness
6. Alcohol problems
7. Seriously considered attempting suicide
8. Been through life threatening event

Based on the R^2 statistics (.460), (table 49) - 46% 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 predictor variables are significant contributors to the outcome (total anxiety and depression, 46% of the time.

Comparison of Significant Independent Variables (Predictors) of Total Anxiety and Depression in the 2020 Survey compared to Total Anxiety in the 2018 Survey

2020 significant predictors of Total Anxiety and Depression	**2018 significant predictors of Total Anxiety**
Gender (female)	Gender (female)
Engaging in self harming behaviour	Engaging in self harming behaviour
Bullied in the past year	Ever been bullied
Physically abuse	Physically abuse
Seriously considered attempting suicide	Seriously considered attempting suicide
Alcohol problems (determined from the AUDIT)	Satisfaction with self
Student diagnosed with mental illness	Grade level
Been through life threatening event	Family history of alcohol and drug problem

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 Suicide – Attempted Suicide

Binary Logistic Regression analysis was conducted to predict the odds of a student attempting suicide - "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 202 students or 8.9% of grades 9 through 12 (n-2281) indicated that they had attempted suicide. The 18 predictor variables of interest in this prediction model are shown in table 50 following:

Table 50: - Binary Logistic Regression Predicting Attempted Suicide

Predictor variables in the Equation	Sig.	Exp(B)	95% C.I for EXP(B)	
			Lower	Upper
Gender- female	.002	5.454	1.905	15.612
Satisfied with self	.131	.520	.223	1.215
Threaten injury	.319	1.643	.619	4.366
Alcohol dependence	.043	5.700	1.056	30.778
Alcohol problem	.105	1.958	.868	4.416
Sought help for mental issue or illness	.562	.745	.276	2.013
Parent suffer from mental illness	.286	1.728	.633	4.717
Student diagnosed with mental illness	.692	.803	.271	2.379
Witnessed life threatening event	.187	.566	.243	1.318
Self-harming	.981	.987	.339	2.873
Considered suicide	.004	3.443	1.482	7.995
Lifetime bullied	.727	1.197	.437	3.274
Past year bullied	.213	.459	.134	1.564
Currently bullied	.193	2.385	.644	8.824
Sexual abuse	.051	2.838	.995	8.089
Physical abuse	.021	3.082	1.189	7.990
Past year cigarette use	.034	2.997	1.085	8.282
Past year marijuana use	.775	.885	.384	2.039

dependent variable – actually attempted suicide

Results Summary

- Being female is a positive and significant predictor of the probability of attempting suicide, with the Odds Ratio (OR) indicating that for every one-unit increase on this predictor the odds of attempting suicide change by a factor of 5.454 (meaning the odds are increasing).
- Alcohol dependence is also a positive and significant predictor of the probability of attempting suicide, with the OR indicating that for every one-unit increase on this predictor the odds of attempting suicide change by a factor of 5.7 (meaning the odds are increasing).
- Physical abuse is also a positive and significant predictor of the probability of attempting suicide, with the OR indicating that for every one-unit increase on this predictor the odds of attempting suicide change by a factor of 3.082 (meaning the odds are increasing).
- Cigarette use in the past year is also a positive and significant predictor of the probability of attempting suicide, with the OR indicating that for every one-unit increase on this predictor the odds of attempting suicide change by a factor of 2.997 (meaning the odds are increasing).
- Considered suicide is also a positive and significant predictor of the probability of attempting suicide, with the OR indicating that for every one-unit increase on this predictor the odds of attempting suicide change by a factor of 3.443 (meaning the odds are increasing).

- There were no significant negative predictors of suicide – which would indicate that for every one-unit increment on the predictor, attempting suicide increase by a factor less than one (meaning that the odds are decreasing).
- All other predictor variables are positive but non-significant – the computed OR is not significantly different from the null OR of 1.0 If 1.0 falls between the lower and upper bound for a given confidence interval, then the computed odds ratio is not significantly different from 1.0 (indicating no change as a function of the predictor).

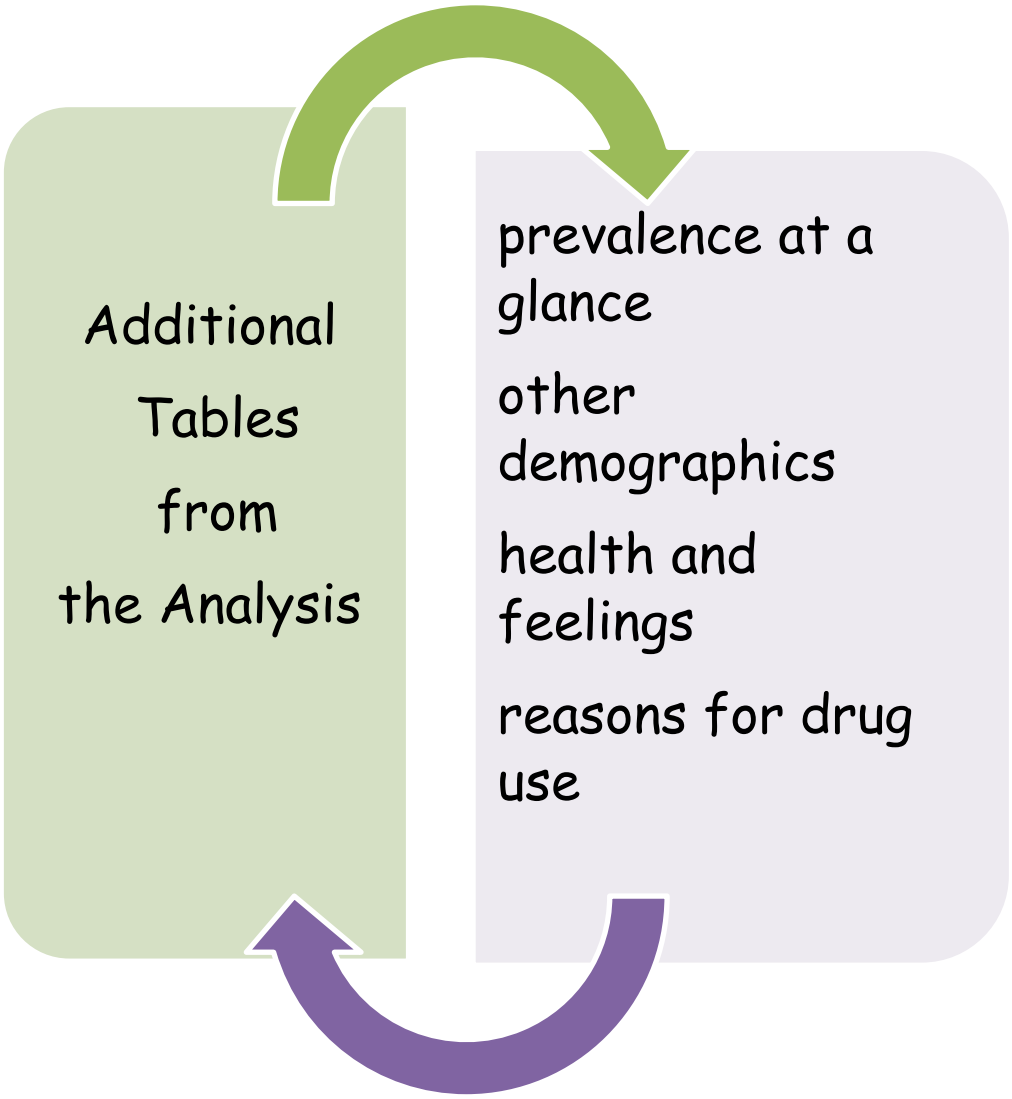

Additional Tables from the Analysis
prevalence at a glance
other demographics
health and feelings
reasons for drug use

Table 51: PREVALENCE AT A GLANCE

	Overall N=3478	Gender		Grade Level	
		Male n=1650	Female n=1657	Year 7-8 n=1110	Year 9-12 n=2281
Satisfaction with self	1574 (73.3)	82.7	65.6		
Sexual abuse	96 (4.2)	2.2	6.3		
Physical abuse	308 (13.5)	6.9	18.9		
Any abuse	330 (14.5)	7.4	20.1		
Parent diagnosed with mental illness	197 (5.7)	69/1495 (4.6)	115/1571 (7.3)	48 (4.3)	148 (6.9)
Student diagnosed with mental illness	285 (12.5)	95/926 (10.2)	166/1012 (16.3)		
Student sought help for mental illness	242/285 (84.9)	76/96 (79.2)	145/166 (87.3)		
Through life threatening event	1381 (39.7)	44.8	40.3	408 (36.8)	941 (41.3)
Self-harming	626 (27.4)	12.1	41.8		
Considered suicide	387 (17.0)	16.1	17.9		
Attempted suicide	202 (8.9)	2.7	14.4		
Suicide attempt result in injury	101 (4.4)	5.9	2.9		
Ever bullied	1915 (55.1)	47.4	63.1	593 (53.4)	1283 (56.2)
Bullied in past year	775 (22.3)	18.6	25.9	297 (26.8)	465 (20.4)
Bullied last 30 days	445 (12.8)	10.6	14.8	178 (16.0)	262 (11.5)
Past year cigarette	168 (4.8)	80 (4.8)	69 (4.2)	10 (0.9)	153 (6.7)
Current cigarette	75 (2.2)	38 (2.3)	27 (1.6)	3 (0.3)	71 (3.1)
Past year e-cigarettes	718 (20.6)	334 (20.6)	323 (19.5)	63 (5.7)	637 (27.9)
Current e-cigarettes	331 (9.5)	170 (10.5)	125 (7.5)	21 (1.9)	300 (13.2)
Past year alcohol	1133 (32.6)	506 (31.2)	557 (33.6)	131 (11.8)	982 (43.1)
Current alcohol	584 (16.8)	248 (15.3)	296 (17.5)	36 (3.2)	538 (23.6)
Past year marijuana	465 (13.4)	186 (11.5)	234 (14.1)	23 (2.1)	429 (18.8)
Current marijuana	270 (7.8)	108 (6.7)	136 (8.2)	11 (1.0)	249 (10.9)
Alcohol dependence	37 (2.8)	3.2	2.0		
Alcohol problem	388 (30.0)	26.6	31.6		
Binge drinking	336(57.7)	60.2	57.1	15 (41.7)	316 (59.7)
Carried a weapon	284 (12.5)	16.3	8.9		
Threatened with injury	348 (10.0)	11.5	7.9	118 (10.6)	222 (9.7)
Been arrested	77 (3.4)	4.1	2.7		
Attacked someone with intention of serious harm	266 (11.7)	13.2	9.9		
Been drunk at school	103 (4.5)	2.5	6.1		
Got suspended because of violence	262 (11.5)	15.3	7.6		
Belonged to a gang/crew	112 (4.9)	5.6	3.9		
Been in a fight (fought)	868 (38.1)	29.4	47.8		
Witnessed violence and aggression	1994 (57.3)	962 (59.4)	915 (55.2)	557 (50.2)	1393 (61.1)
Ride with someone who have been drinking	892 (25.6)	379 (23.4)	458 (27.9)	230 (20.7)	640 (28.1)

Table 52: Student's Demographics - Grade Level

	Overall	Boys	Girls	Missing
Total N (%)	**N=3478**	1620 (46.6)	1657 (47.6)	201 (5.8)
Year/Grade				
Year 7 / Grade 6	612 (17.6)	319 (19.7)	289 (17.4)	4
Year 8 / Grade 7	537 (15.4)	261 (16.1)	274 (16.5)	2
Year 9 / Grade 8	609 (17.5)	277 (17.1)	290 (17.5)	42
Year 10 / Grade 9	590 (117.0	258 (15.9)	280 (16.9)	52
Year 11 / Grade 10	482 (13.9)	214 (13.2)	225 (13.6)	43
Year 12 / Grade 11	443 (12.7)	211 (13.0)	206 (12.4)	26
Year 13 / Grade 12	180 (5.2)	79 (4.9)	92 (5.6)	9
Missing	25 (0.7)	1	1	23

Table 53: Student's Demographics - Age

	Overall	Boys	Girls	Missing
Total N (%)	**N=3478**	1620 (46.6)	1657 (7.64)	201 (5.8)
Age				
11 years	361 (10.4)	189 (11.7)	170 (10.3)	2
12 years	560 (16.1)	269 (16.5)	288 (17.4)	4
13 years	629 (18.1)	299 (18.5)	295 (17.8)	35
14 years	595 (17.1)	268 (16.5)	289 (17.4)	38
15 years	523 (15.0)	219 (13.5)	251 (15.1)	53
16 years	471 (13.5)	216 (13.3)	218 (13.2)	37
17 years	231 (6.6)	115 (7.1)	106 (6.4)	10
18/19 years	84 (2.4)	45 (2.8)	36 (2.2)	3
Missing	24 (0.7)	1	4	19

Table 54: Student's Demographics – Grade Level and Gender

	Grade Level			Total
	Year 7-8	Year 9-12	Missing	
Total	1110 (31.9)	2281 (65.6)	87	3478
Boys	557 (34.4)	1023 (63.1)	40	1620
Girls	549 (33.1)	1089 (65.7)	19	1657
Missing	4	169	28	201

Table 55: Student's Demographics – Location Level and Gender

District	**Overall**	Boys	Girls
Bodden Town	1020 (29.3)	455 (28.3)	519 (31.5)
East End	99 (2.8)	41 (2.5)	52 (3.2)
George Town	1288 (37.0)	631 (39.2)	593 (36.0)
North Side	114 (3.3)	63 (3.9)	47 (2.9)
West Bay	782 (22.4)	362 (22.5)	370 (22.5)
Cayman Brac	130 (3.7)	57 (3.5)	65 (3.9)

Table 56: Who do you talk to when you have thoughts about using drugs

Who do you talk to when you have thoughts about using drugs to resist the urge (Q57)			
	Overall	Boys	Girls
Counselor	69 (2.0)	32 (2.0)	33 (2.0)
Family	224 (6.4)	108 (6.7)	98 (5.9)
Friend	320 (9.2)	129 (8.0)	171 (10.3)
Parent	161 (4.6)	77 (4.9)	74 (4.5)
Pastor	32 (0.9)	21 (1.3)	10 (0.6)
On social media	82 (2.4)	36 (2.2)	44 (2.7)
Don't talk to anyone	793 (22.8)	330 (20.4)	417 (25.2)
Other persons	175 (5.0)	84 (5.2)	79 (4.8)

Table 57: Drive with someone who was drinking

Drive with someone who was drinking (Q59)			
	Overall	Boys	Girls
Never	1986 (57.1)	957 (62.8)	926 (57.8)
Once	323 (9.3)	148 (9.7)	157 (9.8)
Two or more times	569 (16.4)	231 (15.1)	301 (18.8)
Can't recall	424 (12.2)	189 (12.4)	218 (13.6)
Missing	176 (5.1)		

Table 58: Who do you feel comfortable taking to about ATOD

	(Q69) - Who do you feel comfortable taking to about ATOD			
2018 Overall	**Talking to about ATOD**	2020 Overall	Boys (2020)	Girls (2020)
244 (7.8)	Teachers	91 (2.6)	46 (3.2)	38 (2.5)
236 (7.2)	Counsellors	211 (6.1)	78 (5.4)	118 (7.6)
23 (0.7)	Coaches	25 (0.7)	13 (0.9)	9 (0.6)
66 (2.1)	Police Officers	37 (1.1)	27 (1.9)	10 (0.6)
103 (3.3)	Older Students	147 (4.2)	74 (5.1)	64 (4.1)
10 (0.3)	Security Guards	7 (0.2)	3 (0.2)	2 (0.1)
26 (0.8)	Pastor/Priest	26 (0.7)	18 (1.2)	6 (0.4)
1120 (35.7)	Parents	1321 (38.0)	666 (46.0)	604 (39.1)
930 (29.7)	Peers	737 (21.2)	300 (20.7)	401 (26.0)
180 (5.7)	Other	527 (15.2)	213 (14.7)	280 (18.1)
	Godparent	22 (0.6)	9 (0.6)	12 (0.8)
	Missing	327 (9.4)		

Table 59: Counselor and Counseling Services

Q70, 71 and 72 -Does your school have a counselor, do you have access to the counselor, is the counselor accessible, why don't you use the service of the counselor?

	Overall	Boys	Girls
School has counsellor			
Yes	2914 (83.8)	1301 (87.4)	1463 (92.9)
No	329 (9.4)	187 (12.6)	111 (7.1)
Missing	238 (6.8)		
Access to counsellor			
Yes	2779(79.9)	1223 (88.0)	1421 (93.7)
No	289 (8.3)	166 (12.0)	96 (6.3)
Missing	410 (11.8)		
Is the counsellor			
Easily accessible	1488 (42.7)	701 (61.1)	720 (53.7)
Somewhat accessible	1019 (29.3)	408 (35.5)	560 (41.8)
Difficult to access	113 (3.2)	39 (3.4)	61 (4.5)
Missing	862 (24.8)		
Why no use of service			
I feel I don't need counseling	1889 (54.3)	902 (55.7)	895 (54.0)
Limited access	113 (3.2)	48 (3.0)	57 (3.4)
I am embarrassed	319 (9.2)	104 (6.4)	207 (12.5)
There is a wait list	98 (2.8)	38 (2.3)	52 (3.1)
Fear of judgment	471 (13.5)	141 (8.75)	312 (18.8)
don't have time	585 (16.8)	259 (16.0)	296 (17.9)
Don't know if ..helpful	751 (21.6)	280 (17.3)	437 (26.4)
Confidentiality	601 (17.3)	207 (12.8)	354 (21.4)
Other	379 (10.9)	145 (9.0)	213 (12.9)
Q73 - Strategy to encourage students to seek out counseling at your school			
Counselling 'app'	1077 (31.0)	513 (31.7)	515 (31.1)
Buddy system -partner	1476 (42.4)	610 (37.7)	789 (47.6)
Know „is confidential	1253 (36.0)	469 (29.0)	715 (43.2)
Counselling website	412 (11.8)	188 (11.6)	209 (12.6)
Telephone hotline	330 (9.5)	148 (9.1)	163 (9.8)
Interactive online chat	420 (12.1)	180 (11.1)	214 (12.9)
On social media	527 (15.2)	267 (16.5)	230 (13.9)
Family support group	622 (17.9)	259 (16.0)	334 (20.2)
Text line	462 (13.3)	195 (12.0)	242 (14.6)
Brochures/pamphlets	189 (5.4)	85 (5.2)	100 (6.0)
Newsletter	340 (9.3)		

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Early onset of substance use

Table 60: Early onset of substance use

Percentage of students using a substance at age of 13 years or younger							
		Districts					
	Overall	Bodden Town	East End	George Town	North Side	West Bay	Cayman Brac
Cigarette							
Survey average	8.6	7.7	16.2	6.4	9.6	10.6	18.5
Boys		7.3	19.5	6.8	7.9	10.2	17.5
Girls		8.1	13.5	5.7	10.6	9.7	15.4
E-cigarettes							
Survey average	18.0	20.7	31.3	14.0	18.4	19.2	21.5
Boys		20.2	31.7	13.9	15.9	17.1	21.1
Girls		19.7	26.9	12.8	19.1	20.8	18.5
Alcohol							
Survey average	30.0	31.7	34.3	27.7	26.3	30.6	36.9
Boys		29.7	29.3	28.8	27.0	34.5	29.8
Girls		32.8	38.5	26.6	23.4	26.8	41.5
Marijuana							
Survey average	9.3	10.2	13.1	6.6	8.8	11.6	14.6
Boys		8.4	12.2	5.1	7.9	11.9	7.0
Girls		11.0	13.5	6.6	8.5	10.5	18.5

Table 61: Average Age (yrs.) of First Use of Substances by Gender

Substances	Survey Average	Average Age of First Use of	
		Boys	Girls
Cigarette	9.4	8.9	9.9
E-cigarette	12.6	12.6	12.7
Alcohol	11.6	11.3	12.0
Marijuana	12.2	12.1	12.5
Crack cocaine	9.3	8.6	9.7
Cocaine powder	11.6	11.7	11.3
Ecstasy	12.9	13.7	12.0
LSD	12.0	12.1	11.3
Tranquilizers	11.9	13.6	12.5
Pain killers	12.5	12.3	12.5

Source of Drugs for the First Time, Usual Sources of Drugs and Place where Drugs used Most Often - Alcohol, Cigarettes, e-Cigarettes and Marijuana

Table 62: Sources of Drugs (first time)

	Cigarettes	e-cigarettes	Alcohol	Marijuana
Parents with permission	2.3	3.5	44.0	1.7
Brothers/sisters with permission	5.8	8.6	4.4	8.1
Other relatives with permission	9.4	7.2	11.9	6.9
My friends	43.5	69.5	21.9	57.6
Boyfriend/girlfriend	2.5	2.9	1.1	3.5
Gas station	6.6	0.7	1.7	
The corner store	4.1	0.9	1.5	
The grocery store	0.3	0.2		
Other sources	25.6	6.6	13.5	9.6
Dealer				11.5
Online				1.0

Table 63: Usual Sources of Drugs

	Cigarettes	e-cigarettes	Alcohol	Marijuana
Home	1.3	1.9	14.9	
From parents	0.3	0.6	12.1	0.5
Brothers/sisters	0.7	2.8	3.3	1.6
Other relatives	1.0	3.1	6.2	2.2
My friends	4.8	20.2	14.9	10.1
Gas station	1.6	1.4	3.3	
The corner store	1.4	1.6		
The grocery store	0.4	0.5		
Dealer				6.4
Other sources	2.6	3.9	6.2	2.3

Table 64: Where Drugs Used Most Often

	Cigarettes	e-cigarettes	Alcohol	Marijuana
Home	2.3	24.9	42.3	24.6
School	0.6	14.5	2.2	6.7
Neighbourhood	1.1	4.4	1.6	12.3
Friend's house	1.6	19.2	9.2	18.7
Sporting events	0.1	0.4	0.3	1.1
Social events/parties	1.4	19.5	26.9	19.5
Street festivals	0.4	6.0	6.4	4.2
Other places	2.0	11.0	12.1	12.9

Table 65: Influence on your decision to remain substance free

Q55 - Who has the most influence on your decision to remain substance free				
	Frequency	Percent	Boys	girls
Have not used any substance described	133	3.8	62 (4.8)	64 (4.7)
Boyfriend/girlfriend	91	3.7	48 (3.7)	34 (2.5)
Celebrities/Entertainers/Artists	30	.9	19 (1.5)	7 (0.5)
Church/Pastor/Religious beliefs	76	2.2	41 (3.1)	35 (2.6)
Friends	147	4.2	74 (5.7)	64 (4.7)
Nanny/Helper	5	.1	2 (0.2)	2 (0.1)
Other relative(s) (e.g., uncle, cousin)	53	1.5	21 (1.6)	28 (2.1)
Parents	1226	35.3	575 (44.1)	600 (44.5)
Personal choice	857	24.6	373 (28.6)	447 (33.1)
Siblings	58	1.7	26 (2.0)	27 (2.0)
Teachers	17	.5	10 (0.8)	6 (0.4)
Other person	95	2.7	53 (4.1)	35 (2.6)

Consumption pattern – Grade Level

Table 66: Prevalence of lifetime, past year and last 30 days: Grade Level (%)

Percentage of students reporting use of various substances							
	Grade level						
	Gr 6	Gr 7	Gr 8	Gr 9	Gr 10	Gr 11	Gr 12
Cigarette							
Lifetime	3.1	3.4	7.7	10.8	17.6	16.7	23.9
Past year	0.7	1.1	2.5	5.3	9.8	7.0	16.7
Last 30 days	0.2	0.4	0.8	2.4	4.6	4.1	7.2
E-cigarettes							
Lifetime	7.0	11.9	28.4	37.8	43.6	47.0	46.1
Past year	5.4	6.3	18.7	27.5	30.9	34.8	37.2
Last 30 days	1.5	2.4	7.9	13.1	15.8	15.3	20.0
Alcohol							
Lifetime	18.3	27.2	41.9	50.2	61.6	68.4	70.6
Past year	8.8	15.3	27.6	36.6	50.4	56.9	62.8
Last 30 days	3.3	3.4	10.0	17.3	28.4	32.5	55.0
Marijuana							
Lifetime	1.0	4.7	10.0	20.2	29.3	34.5	36.0
Past year	0.8	3.5	7.2	15.7	24.1	29.1	31.7
Last 30 days	0.3	1.9	4.3	7.6	14.5	18.1	18.3

Table 67: Lifetime Use by Gender and Location

Percentage of students reporting **lifetime use** by gender and location							
		Districts					
	Overall	Bodden Town	East End	George Town	North Side	West Bay	Cayman Brac
Cigarette							
Survey average	10.2	8.7	12.1	8.2	15.8	13.4	15.4
Boys	9.7	9.0	9.8	7.6	12.7	13.5	10.5
Girls	9.8	8.1	11.5	9.1	19.1	12.4	15.4
E-cigarettes							
Survey average	29.0	29.2	35.4	27.8	26.3	30.6	30.8
Boys	28.8	30.8	31.7	27.7	27.0	28.2	28.1
Girls	28.6	26.8	36.5	26.8	21.3	33.2	30.8
Alcohol							
Survey average	44.4	43.6	43.4	44.1	42.1	47.7	41.5
Boys	43.6	40.7	36.6	43.9	42.9	48.9	35.1
Girls	45.0	45.7	48.1	43.3	38.3	46.8	47.7
Marijuana							
Survey average	16.5	15.4	14.1	14.4	16.7	21.2	20.0
Boys	14.7	13.8	9.8	12.2	14.3	21.3	10.5
Girls	17.3	15.8	17.3	15.5	19.1	20.5	26.2

Table 68: Past Year Use by Gender and Location

Percentage of students reporting past year **use** by gender and location							
		Districts					
	Overall	Bodden Town	East End	George Town	North Side	West Bay	Cayman Brac
Cigarette							
Survey average	4.8	3.5	4.0	4.0	10.5	6.5	7.7
Boys	4.9	3.1	2.4	4.3	9.5	7.7	7.0
Girls	4.2	3.5	5.8	3.2	10.6	.1	6.2
E-cigarettes							
Survey average	20.6	20.0	22.2	19.7	21.9	22.6	23.1
Boys	20.6	20.7	19.5	20.0	22.2	22.7	17.5
Girls	19.5	18.1	23.1	17.9	19.1	22.7	24.6
Alcohol							
Survey average	32.6	29.8	28.3	34.4	33.3	35.0	29.2
Boys	31.2	26.8	24.6	33.1	35.9	21.1	31.3
Girls	33.6	32.2	32.7	34.7	31.9	34.3	35.4
Marijuana							
Survey average	13.4	12.2	11.12	11.6	14.0	17.4	16.9
Boys	11.5	11.4	9.8	9.2	11.1	17.1	5.3
Girls	14.1	12.1	13.5	12.6	17.0	17.0	24.6

Table 69: Current Use by Gender and Location

Percentage of students reporting current u**se** by gender and location							
		Districts					
	Overall	Bodden Town	East End	George Town	North Side	West Bay	Cayman Brac
Cigarette							
Survey average	2.2	1.7	1.0	1.3	4.4	3.7	3.8
Boys	2.3	1.8	0.0	1.1	4.8	5.0	3.5
Girls	1.6	1.5	1.9	1.2	2.1	1.9	3.1
E-cigarettes							
Survey average	9.5	8.5	11.1	7.8	14.0	12.1	12.3
Boys	10.5	11.0	9.8	8.7	14.3	12.7	8.8
Girls	7.5	5.2	11.5	6.1	10.6	11.1	13.8
Alcohol							
Survey average	16.8	12.6	12.1	18.6	19.3	19.8	16.9
Boys	15.3	11.4	9.8	16.6	15.9	18.8	12.3
Girls	17.9	13.5	13.5	19.6	21.3	21.4	20.0
Marijuana							
Survey average	7.8	8.0	5.1	6.1	6.1	10.0	10.8
Boys	6.7	7.9	2.4	4.4	3.2	10.5	5.3
Girls	8.2	7.7	7.7	6.7	8.5	9.5	14.5

Completing the questionnaire - How Easy or Difficult Did You Find This Questionnaire

Table 70: How Easy or Difficult Did You Find This Questionnaire

	Overall	Gender		
		Male	Female	Missing
Very difficult	46 (1.3)	23 (1.4)	15 (0.9)	8 (4.0)
Difficult	50 (1.4)	25 (1.5)	21 (1.3)	4 (2.0)
Somewhat difficult	308 (8.9)	129 (8.0)	164 (9.9)	15 (7.5)
Somewhat easy	845 (24.3)	371 (22.9)	435 (26.3)	39 (19.4)
Easy	1122 (32.3)	519 (32.0)	549 (33.1)	54 (26.9)
Very easy	903 (26.0)	436 (26.9)	413 (24.9)	54 (26.9)
Missing System	204 (5.9)	117 (7.2)	60 (3.6)	27 (13.4)
Total	3478	1620	1657	201

A little over 10% of students (11.6%) found it difficult to complete the questionnaire (10.9% boys and 11.2% girls).

Table 71: – Main Reasons for Using Substances

Reasons for Using Cigarette	Freq.
I think it is cool	37
It is easy to get	40
I was curious	36
To relieve stress	27
To have fun	52
My friends smoke cigarettes	53
My parents/siblings smoke cigarettes	189
To block out certain memories	69
I have nothing else to do or I feel bored	13
When I feel depressed/anxious/nervous	34
I see it in the media,TV/social media	11
I only smoke cigarettes at parties	114
Peer pressure (I do it to fit in)	67
Other reason	68
Reason for Drinking Alcohol	**Freq.**
I think it cool	109
It is easy to get	143
To relieve stress	127
I was curious	194
To have fun	80
To get drunk	123
My friends drink alcohol	658
My parents/siblings drink alcohol	103
To block out certain memories	9
I have nothing else to do (bored)	311
When I feel depressed, anxious	28
I see it in the media, TV/social media	173
I only drink alcohol at parties	517
Peer pressure (I do it to fit in)	204
Other reason	317
Reasons for Using Other Drugs	**Freq.**
I think it cool	19
It is easy to get	32
My friends use other drugs	9
My parents/siblings use other drugs	5
To block out certain memories	39
I have nothing else to do (bored	20
I was curious	59
When I feel depressed, anxious	66

Reasons for using e-cigarette	Freq.
I think it cool	179
They are easy to get	44
I am curious	162
Flavours	30
To relieve stress	68
To have fun	121
My friends smoke e-cigarettes	551
My parents/siblings smoke e-cigs	106
To block out certain memories	33
I have nothing else to do (bored)	337
When I feel depressed, anxious	26
Everyone is using e-cigarettes	97
I see it in the media, TV/social media	42
I only smoke e-cigarettes at parties	192
Peer pressure (I do it to fit in)	221
Other reason:	70
Reasons for Using Marijuana	**Freq.**
I think it cool	59
It is easy to get	59
My friends smoke marijuana	117
My parents/siblings smoke marijuana	30
To block out certain memories	122
I have nothing else to do (bored	51
I was curious	244
When I feel depressed, anxious	168
I see it in the media, TV/social media	8
I only use marijuana at parties	43
Peer pressure (I do it to fit in)	20
To relieve stress	210
To have fun	131
To get high	210
Other reason	56
I see it in the media, TV/social media	7
I only use other drugs at parties	9
Peer pressure (I do it to fit in)	4
To relieve stress	77
To have fun	44
To get high	58
Other reason	76

Discussion Chapter

Discussion

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[7]. 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[8] [9]. 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[10]. 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[11].

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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 in subjects 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[12]. First use for illicit substances except marijuana ranged between 9.3 and 15.2 years in this survey while the average age of first use of alcohol was 12 years – the lowest average among all substances.

Several factors are being examined for their potential contribution to the early onset of substance experimentation:

1. Decreased perception of risk among young people regarding the potential harm of ATOD use.
2. Decreased perception of parental and peer disapproval of ATOD use.
3. Decreased supervision of children and adolescents.
4. Intergenerational transmission of early onset male drinking; and
5. Targeting of young people by licit and illicit drug industries.

The precocious onset of substance use in children signals vulnerability for the development of other problems (conduct disorder, attention disorders and affective disorders, among others) 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

[12] White, W., Godley, M. & Dennis, M. (2003) Early onset of substance abuse: Implications for student assistance programs. Student Assistance Journal, 16(1), 22-25.

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[13]. 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 in this survey cycle. Prevalence is relatively high but there is substantial variability within location (districts) and among boys and girls. Cigarettes lifetime prevalence was still relatively high (10.2%) but decreased considerably for current use (2.2%). 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 (13.4%) surpassed past year cigarette prevalence (4.8%) by a factor of almost three times (2.8 times) and past month prevalence for marijuana (7.8%) was also notably higher than past month cigarette use (2.2%).

As in other CICDUS surveys, alcohol is the most prevalent used substance and marijuana the most prevalence 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.

Overall lifetime prevalence of e-cigarettes was notably high (29%) - about one in three students reported having tried e-cigarettes. The average lifetime prevalence of e-cigarette smoking was not dis-similar between boys (28.8%) and

[13] 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

girls (28.5%). Additionally, the gender rates also varied considerably in most districts and last 30 days or current prevalence difference for boys (10.5%) and girls (7.5%) was notably different.

With regards to e-cigarettes smoking, **current users of e-cigarettes** were also significantly more likely than those who were not current users to indicate that there was no risk of harm from smoking e-cigarettes, (14.7% versus 7.9%). Perception of harm among students is not directly associated with decreased use. It is important to pay attention to the high prevalence of e-cigarettes use reported in this survey.

E-cigarette aerosol can contain chemicals that are harmful to the lungs and youth e-cigarette use is associated with the use of other tobacco products, including cigarettes.

Alcohol Use Among Students

Alcohol use is an excellent place to start screening for risky health behaviours for two main reasons. First, whether parents or teachers, talking with adolescents about alcohol has the potential to save lives. Drinking is associated with three top causes of death among adolescents, the first being unintentional injury, usually by car crashes, followed by homicide and suicide (CDC, 2008). Second, starting with questions about drinking can help you determine whether asking questions about other risk behaviours is a high priority. Alcohol is the drug used by the greatest number of students in this survey and for many young people it is also the first substance they try (have access to). Youth who do not use alcohol are unlikely to use any other substances, whereas youth who are heavily involved with alcohol are at increased risk for using other substances and for other risk-taking behaviours[14].

[14] https://pubs.niaaa.nih.gov/publications/Practitioner/YouthGuide/YouthGuide.pdf. Alcohol Screening and Brief Intervention for Youth: A Practioner's Guide. National Institute on Alcohol Abuse and Alcoholism (NIAAA)

What kinds of alcohol are kids drinking these days? All kinds: beer, coolers, liquor, wine, and "flavoured alcohol beverages." Generally similar to beer in percent alcohol, flavoured alcohol beverages include wine coolers and sweetened malt-based drinks that often derive their alcohol content from spirits. In this survey the preferred beverage choices consumed in the last 30 days, were liquor (38%) and coolers (36%). This means that distilled spirits are gaining on or overtaking beer in popularity with youth and that wine is less preferred (24%).

Alcohol Audit –Dependence versus Alcohol-related Problems

It is important to ask the question, Is alcohol screening and brief intervention effective for youth? The evidence is clear that brief interventions are effective for adults. In fact, in 2004, the U.S. Preventive Services Task Force "recommended screening and behavioural counselling interventions to reduce alcohol misuse by adults" (USPSTF, 2004)[15].

At that time, the evidence was inconclusive about the effectiveness of alcohol brief interventions for adolescents. Since then, however, evidence has been accumulating on the effectiveness of brief interventions for adolescents. ***In addition, in its policy statement "Alcohol Use by Youth and Adolescents: A Paediatric Concern," the American Academy of Pediatrics recommends that clinicians who work with children and adolescents regularly screen for current alcohol use and use brief intervention techniques during office visits[16].***

Why are we asking about past-year drinking instead of past-month drinking, when we know kids have bad memories? All queries about past alcohol use are imperfect in one way or another. Even so, responses to these queries can

15 Screening and behavioral counseling interventions in primary care to reduce alcohol misuse: U.S. preventive services task force recommendation statement.

16 Alcohol Screening and Brief Intervention for Youth: A Practitioner's Guide. https://www.niaaa.nih.gov/publications/clinical-guides-and-manuals/alcohol-screening-and-brief-intervention-youth.

provide us with useful information about how children and adolescents are drinking. While data relating to past-month drinking may be more precise, data on past-year use helps to identify more youth who drink, since drinking by young people is often sporadic. When asked if they have had a drink in the past month, many youths may be able to answer "no" even though they have had alcohol at other times during the year. Additionally, research shows that responses on past-year use are predictive of alcohol-related problems. We ask children about their past-year use not because we know their answers are completely accurate, but because their responses can help predict symptoms and problems.

In this survey, based on questions in the AUDIT screening tool, 30% of students who had reported past year use were assessed as having an alcohol-related problem while 2.8% were assessed as having alcohol dependence. Further investigation needs to be done among students who are displaying signs of alcohol problems to get them clinical help.

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[17]. For example, youth who perceive a high risk of harm are less likely to use drugs than youth who perceive a low risk of harm. Thus, providing young adults with credible, accurate, and relevant information about the harm associated with substance use is a key component in prevention programming.

Many students in this survey are aware of the risks associated with substance use. The results show that a notable high proportion of students reported great risk of harm for smoking one or more packs of cigarettes daily (66%), drinking

[17] 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

alcohol daily (57%) and regularly smoking marijuana (48%). However, fewer students perceived great risk of harm from using marijuana once or twice (12%) and smoking e-cigarettes (27%).

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 of harm from substance use. For example, perception of no risk of harm related to the use of the substances indicated ranged from a low of 6% for drinking alcohol daily to a high of 27% for trying marijuana once or twice. Some 6% of students did not see any risk of harm for smoking one or more packs of cigarettes daily, while 8.3% said there was no risk to smoking e-cigarettes and 11% said no risk for regularly smoking marijuana.

Additionally, there were significant differences in the perceptions of risk of harm among boys and girls. As it relates to perception of no risk, for the most part a slightly higher proportion of boys felt there was no risk of harm within all but one categories of substance use when compared to girls. For example, 11.7% of boys compared to 9.6% of girls felt there was no risk of harm related to smoking marijuana regularly.

Suicidal Behaviour

It is well established that rates of suicide and suicide-related behaviours increase with age and a gender paradox exists about youth suicidal behaviour: i.e., while suicide rates are higher among boys than girls, girls have higher rates of suicidal ideation and attempted suicide. Numerous risk factors are associated with youth suicide as described in the 2018 survey report. Psychiatric disorder is present in up to 80-90% of adolescent suicide victims and attempters from both community and clinical settings[18]. Both in completed

[18] https://www.ncbi.nlm.nih.gov/pmc/articles/PMC2885157/

and attempted suicide, the most common psychiatric conditions are mood, anxiety, conduct, and substance abuse (alcohol and drug) disorders.

This survey found that one in six students (17% of Year 9-12) reported that they had seriously considered attempting suicide (n=387) – both genders equally likely, girls (18%) compared to boys (16%). The prevalence of actual attempted suicide was 9% overall (n=202). Girls (14.4%) were significantly more likely to report this compared to boys (2.7%). About 4% overall or half of those who attempted suicide reported that their suicide attempt had to be treated by a doctor or nurse (n=101) - (6% among boys and 3% among girls).

This survey also found that the following risk factors contribute substantially to the self-reported suicide attempts, especially in the older cohort: physical and or sexual abuse (7 times greater risk), being bullied (4.2 times greater risk), binge drinking (i.e., heavy episodic drinking) -1.7 times greater risk, and self-harming (i.e., cutting, scratching and burning the body) – 7 times greater risk), assess with alcohol-related problems -2.7 times greater risk.

Finding from this and the last survey (CISDUS 2018 report) support a need for both common and developmentally-specific suicide prevention strategies for school-age students in the Cayman Islands.

Mental Health

The data from this survey is congruent with the last survey results and shows a similar pattern to the international figures, where the literature shows that about 20% of adolescents may experience a mental health problem in any given year and 50% of mental health problems are established by age 14. Consistent with the 2018 data, these results also showed a similar age pattern—grades 10 and above showing more clinical threshold. The data show that girls experience higher clinical threshold than boys meaning that our services need to be targeting girl's mental health.

Data regarding mental health education in the community indicated that greater than 60% of the young people had not been taught about mental health

in school and 27% of the student show dissatisfaction to themselves and greater than ten percent (13%) has a diagnosis of mental health difficulties. Meaning that community education about mental health is needed. A positive sign is that over 85% of the student have sought help regarding their difficulties.

Conclusions

Youth drinking, smoking, and drug use are continuously changing. Through ongoing monitoring and evaluation, we can gauge the effects of policies, prevention education programming and campaign objectives have been achieved. The role of education institutions, Ministry of Health, counselling services and other stakeholders involved in the process is notable as they provide support in policy making, counselling and education and prevention programming.

While the majority of youth continue to choose not to use alcohol, tobacco, and drugs, we should not dismiss the advantages of implementing prevention and education programmes and campaigns with the aim of providing support to students who are not using substances in maintaining a healthy lifestyle as well as for those students that consume these substances to educate and support them in discontinuing use, and aiding them in making healthy decisions about substances use.

Prevention efforts (including prevention education training for peer mentors and or prefects) should include a component that targets, youth beliefs and attitudes relating to substance use, specifically, the risks or lack thereof perceived by female students.

Binge drinking should be addressed through School and Community-Based Prevention programmes focused on educating youth and parents about the risks of harm associated with alcohol the number one drug of choice among students. Every second student (336/57.3%) who drank within 30 days of the

survey had 5 drinks on a single occasion, a phenomenon found in this study linked to (403/84%) attempted suicide.

Reduction of access to Alcohol (teens continually report alcohol purchases from various type of liquor establishments) through regulations such as enforcing minimum age laws, restrictions on marketing, and with the implementation of a mandatory server training (TiPS) can reduce substance use among youth.

Recommendations

1. Initiate public awareness campaigns to inform both youth and adults, particularly parents, of the risks of substance use. Many adolescents gain access to substances through parents and other adults, and prevention messages from sources outside of school may help to highlight risks.

2. Priority implementation of both common and developmentally-specific suicide prevention strategies for school-age students in the Cayman Islands.

3. Community education about mental health is needed.

4. Social determinants associated with drug use should be factored into drug prevention efforts. These include but are not limited to bullying, violence and antisocial behaviours and the use of social media.

5. The NDC's in the long-term should seek to partner with the Economics & Statistics Office in piloting a rider survey during one of their bi-annual LFS to establish national household drug use prevalence.

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Appendix 1

The Risk and Protective Factor Model of Prevention[19]

Risk factors are characteristics of school, community, and family environments, as well as characteristics of students and their peer groups that are known to predict increased likelihood of drug use, delinquency, school dropout, teen pregnancy, and violent behaviour among youth. Dr. J. David Hawkins, Dr. Richard F. Catalano and their colleagues at the University of Washington, Social Development Research Group have investigated the relationship between risk and protective factors and youth problem behavior. For example, they have found that children who live in families with high levels of conflict are more likely to become involved in problem behaviours such as delinquency and drug use than children who live in families with low levels of family conflict.

Protective factors exert a positive influence or buffer against the negative influence of risk, thus reducing the likelihood that adolescents will engage in problem behaviors. Protective factors identified through research reviewed by Drs. Hawkins and Catalano include social bonding to family, school, community and peers; healthy beliefs and clear standards for behavior; and individual characteristics. For bonding to serve as a protective influence, it must occur through involvement with peers and adults who communicate healthy values and set clear standards for behaviour.

Research on risk and protective factors has important implications for prevention efforts. The premise of the risk and protective factor model is that in order to promote positive youth development and prevent problem behaviours, it is necessary to address those factors that predict the problem behaviours. By measuring risk and protective factors in a population, prevention programs can be implemented that will reduce the elevated risk factors and increase the protective factors. For example, if academic failure is identified as an elevated risk factor in a community, then mentoring, tutoring and increased opportunities and rewards for classroom participation can be provided to improve academic performance.

[19] http://www.wnyunited.org/uploads/2/6/3/2/26328288/risk_and_protective_factors.pdf