



# **ADOLESCENT HEALTH AND SEXUALITY**

**A REPORT ON THE ADOLESCENT HEALTH AND SEXUALITY  
SURVEY**

**Cayman Islands  
2013**

# **The Adolescent Health and Sexuality Study**

## **Cayman Islands**

This Adolescent Health and Sexuality Study was developed with the technical support of the Pan American Health Organization and with financial support from the European Commission through the regional project “Strengthening the Integration of British and Dutch Overseas Caribbean Territories in the Regional Response to HIV”.



## ACKNOWLEDGEMENTS

The Adolescent Health and Sexuality Study was conducted collaboratively between the authorities of the Cayman Islands and the Pan American Health Organization (PAHO) as part of the European Commission/ Overseas Caribbean Territories (EC/OCT) project “Strengthening the Integration of British and Dutch OCTs in the Regional Response to HIV”.

The Ministry of Health, Environment, Youth, Sports and Culture recognizes the technical assistance provided by PAHO/WHO in the development of the study protocol and instrument, data collection, data entry, data analysis and the writing of the report. The Ministry of Health, Environment, Youth, Sports and Culture also expresses sincere thanks to the Department of Education and the school management for their partnership, dedication, commitment and understanding that health and education are mutually reinforcing and that collectively both will improve the health of young people. Similarly a word of thanks to the Health Authority and National Drug Council and other key stakeholders from the Public and Private sector for their support and cooperation to the process. Technical support for the development of the study and report-writing were provided by the PAHO HIV Caribbean Office (notably Sandra Jones and Saskia Woodley) and the PAHO regional office in Washington (notably Dr Sonja Caffé). In-depth analysis and writing up of the study were carried out by Dr Caroline Allen and Dr Sergio Munoz, Consultants to PAHO. Lastly, a very special word of appreciation to all young people who have participated in this study, as it would not have been possible to conduct this survey without their input and collaboration.

The following persons were members of the Steering Committee in the Cayman Islands for the Adolescent Health Survey:

- Dr. Kiran Kumar, Medical Officer of Health, Health Services Authority
- Ms. Therese Prehay, Health Promotion Officer, Health Services Authority
- Ms. Laura Whitefield, HIV/STI Programme Co-ordinator, Health Services Authority
- Ms. Janet Flynn, Senior Policy Advisor for Health, Ministry of Health, Environment, Youth, Sports and Culture
- Ms. Joanna Rose-Wright, School Health Coordinator Nurse, Health Services Authority
- Ms. Joan West-Dacres, Executive Director, National Drug Council
- Ms. Luisa McLaughlin, Research and Information Officer, National Drug Council
- Mr. Simon Miller, Prevention Officer, National Drug Council

# CONTENTS

ACKNOWLEDGEMENTS .....	3
CONTENTS .....	4
LIST OF FIGURES .....	5
LIST OF TABLES .....	6
ACRONYMS .....	8
EXECUTIVE SUMMARY .....	9
1. INTRODUCTION .....	18
1.1 Background .....	18
1.2 Existing information on health and sexuality among young people in the OCTs .....	19
1.3 Conceptual framework .....	21
1.4 Objectives.....	24
2. METHODOLOGY .....	24
2.1 Development of the methodology.....	24
2.2. Study population and sampling .....	25
2.3 Instrument design and data collection .....	26
2.3.1 Training of Volunteers .....	27
2.4 Ethical considerations .....	27
2.5 Data management and analysis.....	28
2.6 Calculation of UNGASS and other internationally recommended HIV prevention indicators .....	29
2.7 Multivariate analysis .....	34
3. COUNTRY PROFILE .....	36
4. RESULTS.....	37
4.1 Age and sex distribution of participants .....	37
4.2 Adolescent Health Behavior.....	38
4.2.1 Internationally recommended indicators of sexual behavior among 15-19 year olds.....	38
4.2.2 Other indicators of sexual behavior.....	42
4.2.3 Mental health.....	49
4.2.4 Cigarettes, alcohol and other drugs.....	51
4.2.5 Diet, exercise and body image.....	55

4.2.6 Hygiene .....	62
4.3 Vulnerability and protection in the social environments of adolescents .....	64
4.3.1 HIV knowledge .....	64
4.3.2 Negotiation skills in sexual partnerships .....	67
4.3.3 Gender norms .....	67
4.3.4 Abuse and violence .....	68
4.3.5 Family and community connection and support .....	72
4.3.6 Peer influence .....	80
4.3.7 School connection and support .....	82
4.3.8 Health care access and support .....	87
4.3.9 Religious affiliation and connectedness .....	93
4.3.10 Economic vulnerability.....	93
4.4 Multivariate analyses.....	94
Discussion and conclusion .....	98
APPENDIX 1: Adolescent Health and Sexuality Questionnaire .....	103
APPENDIX 2: Guiding Questions for Focus Group .....	105
APPENDIX 3: Letter sent to school Principals introducing the study.....	107
Appendix 4: List of Frequently Asked Questions provided to school Principals and parents.....	108
Appendix 5: Letter to obtain parental consent.....	109
APPENDIX 6: Youth assent form .....	110

## LIST OF FIGURES

Figure 1: Cayman Islands population pyramid.....	36
Figure 2: Age and sex distribution of the sample .....	37
Figure 3: Cumulative age at sexual debut, by sex.....	43
Figure 4: Number of partners in past 12 months among participants who had ever had sex.....	44
Figure 6: Percentage of adolescents aged 13-15 who had at least one alcoholic drink during the last 30 days: Latin American and Caribbean countries .....	53

Figure 7: Percentages of participants who were forced or threatened to have sexual intercourse at first intercourse and in the past 12 months (of participants who had ever had sex)..... 70

## LIST OF TABLES

Table 1: Studies relating to the health and sexuality of young people conducted in the OCTs in the past five years .....	19
Table 2: Internationally recommended HIV prevention indicators measured in the study .....	30
Table 3: Sexual behavior indicators recommended by UNAIDS and PEPFAR: 15-19 year olds in school in the Cayman Islands .....	39
Table 4: Ever had sex, by sex and age group .....	43
Table 5: Multiple partnerships in the past 12 months, by sex and age group .....	45
Table 6: Consistency of condom use over the past 12 months by sex and age group .....	45
Table 7: Condom use at last sex by sex and age group .....	46
Table 8: "How many times have you been pregnant or gotten someone pregnant?" by sex and age group .....	47
Table 9: Ever had sexual intercourse with a person of the same sex by sex and age group.....	48
Table 10: Same sex or bisexual attraction by sex and age group .....	48
Table 11: Indicators of mental health and suicidal intention, by sex .....	49
Table 12: Involvement in a physical fight in the past 12 months by sex and age group .....	51
Table 13: Prevalence of smoking over the past 30 days by sex and age group.....	52
Table 14: Prevalence of alcohol use over the past 30 days by sex and age group .....	52
Table 15: Prevalence of lifetime marijuana use by sex and age group and type of sample.....	54
Table 16: Consumption of fruit, vegetables, soda and fried food over the past 7 days.....	56
Table 17: Percentages that ate neither fruit nor vegetables in the past 7 days, by sex and age group ....	57
Table 18: Hunger and deficiency in resources for food .....	58
Table 19: Exercise and sedentary behavior .....	59
Table 20: One or more days of physical activity per week by sex and age group .....	59
Table 21: Perceived body weight and body image .....	60
Table 22: Perceived weight and body image by sex and age group .....	61
Table 23: Dental hygiene and hand washing .....	62
Table 24: Cleaned or brushed teeth at least twice a day by sex and age group .....	63
Table 25: Hand washing with soap before eating and after using the toilet by sex and age group .....	63
Table 26: Indicators of HIV knowledge by sex and age group .....	66
Table 27: Confidence in sexual negotiation skills .....	67
Table 28: Prevalence of gender-related attitudes .....	67
Table 29: "The first time you had sexual intercourse, were you forced or threatened into it?" by sex and age group .....	69
Table 30: Type of coercion at first sexual intercourse by sex.....	69
Table 31: Sexual abuse by a family member or other adult, by sex and age group .....	70

Table 32: Physical abuse or mistreatment by a family member or other adult, by sex and age group .....	71
Table 33: Experiences of personal violence by sex and age group.....	72
Table 34: "Who lives with you in the same home?" Co-habitants in place of residence .....	73
Table 35: Parents or adults at home drinking, mental health problems, drug use and violence.....	73
Table 36: Family caring indicators .....	75
Table 37: Family caring scores by age group and sex .....	76
Table 38: Community caring indicators .....	77
Table 39: Community caring scores by sex and age group.....	78
Table 40: Discussions with parents or co-residential adults on health and social issues.....	79
Table 41: Family support for schooling.....	80
Table 42: Peer influence: percentages that thought that most or almost all of their friends were engaging in specified behaviors, by sex and age group .....	82
Table 43: Prevalence of elements of school connectedness .....	83
Table 44: Perceived support from teachers.....	85
Table 45: Topics covered in sex and HIV education in school .....	87
Table 46: Usual source of medical care .....	89
Table 47: Health care access and support by sex and age group .....	91
Table 48: Experienced hunger over the past 30 days because there was not enough food in the house, by sex and age group .....	93
Table 49: "Are you currently working or have you worked in the last 4 weeks?" by sex and age group ..	94
Table 50: Factors associated with having ever had sex: adjusted odds ratios and results of multivariate logistic regression <sup>1</sup> .....	94
Table 51: Sexual debut before the age of 15: adjusted odds ratios and results of multivariate logistic regression.....	95
Table 52: Sex with more than one partner over the past 12 months: adjusted odds ratios and results of multivariate logistic regression <sup>1</sup> .....	95
Table 53: Drank alcohol once or more in past 30 days: adjusted odds ratios and results of multivariate logistic regression <sup>1</sup> .....	96
Table 54: Attempt at suicide in past 12 months: adjusted odds ratios and results of multivariate logistic regression <sup>1</sup> .....	97

## ACRONYMS

AIDS	Acquired Immuno Deficiency Syndrome
BSS	Behavioral Surveillance Survey
CAPE	Caribbean Advanced Placement Examination
CDC	Center for Disease Control and Prevention
CSEC	Caribbean Secondary Education Certificate Examinations
CXC	Caribbean Examination Council
EC	European Commission
GSHS	Global School-based Student Health Survey
HIV	Human Immunodeficiency Virus
KM	Kilometer
N	Number
OCT	Overseas Caribbean Territories
PAHO	Pan American Health Organization
UNGASS	United Nations General Assembly Special Session
SPSS	Statistical Package for the Social Sciences
STD	Sexually Transmitted Disease
STI	Sexually Transmitted Infection
SRH	Sexual and Reproductive Health
SD	Standard Deviation
WHO	World Health Organization



## EXECUTIVE SUMMARY

*Adolescence* is a key stage of the life course that affects health, opportunities and development for the rest of life. It is a time of physical, mental, social and emotional change accompanied by an increasing definition of sexual identity and social status. Managing these changes to achieve optimal health and personal development is challenging and is profoundly affected by social experiences, which vary according to gender, income, education and other factors.

This report presents the findings of the Adolescent Health and Sexuality Survey conducted in the Cayman Islands in November 2012. The study was completed under the project “Strengthening the Integration of British and Dutch OCTs in the Regional Response to HIV” which is financed by the European Commission. One of the priorities in the area of prevention is the strengthening of territory capacity to develop and implement HIV/STI prevention programs for young persons. Given the critical importance of strategic information to facilitate targeted program planning and development for young people, it was decided to support the implementation of a health study among young people, focusing on sexuality and HIV, in the participating territories.

The previous multi-country adolescent health survey supported by PAHO and published in 2000<sup>1</sup> served as the model and starting point for design and implementation of this cycle of surveys. The range of topics covered and the methodology were also informed by reviewing research on adolescent and youth health in the Caribbean. The aim of the current survey was to conduct a holistic assessment of young people’s health, with emphasis on HIV and sexual and reproductive health, to inform the development of targeted interventions and to serve as a baseline.

### Methods

Quantitative and qualitative methods were utilized for the study, respectively a self-administered survey and focus groups. This report concentrates mostly on the results of the quantitative survey.

The target population for the study in the Cayman Islands was young people in school in the age group 15-19 years. Cayman Islands had a target population in that age group of approximately 1186 school-going young persons aged 15-19. A census of in-school youth was utilized, meaning that the study aimed to include all of these persons. Young people in the age group 17-19 years were captured through some of the private schools with students graduating at age 18 years or older. Out of the 1186 potential participants, 955 youth aged 15-19 participated in the survey, representing an 80.5% participation rate.

The study examines a number of health outcomes and behaviors, such as adolescent pregnancy, sexual behaviors associated with increased risk of HIV and sexually transmitted infection (STI), drug and alcohol use, diet, exercise and mental health problems. It looks at the broader social environments that may affect these, such as living arrangements, the family environment, school environment and community

---

1 A portrait of adolescent health in the Caribbean. Pan American Health Organization. 2000. WHO Collaborating Centre on Adolescent Health, University of Minnesota.

environment. Differences by sex are examined to draw out potential gender issues. Differences between younger and older adolescents are also explored. Multivariate analysis looks at associations between key environmental factors and health outcomes and behaviors identified based on previous research to be of particular concern for young people in the Caribbean. The analyses are used to generate evidence-based recommendations to strengthen protective factors and combat risk factors.

## Results

### *Internationally recommended indicators of sexual behavior among 15-19 year olds*

HIV prevention indicators recommended by UNAIDS and PEPFAR have been included in this study. Note that the following results apply to 15-19 year olds, while some internationally recommended indicators recommend application to samples of youth aged 15-24 or to the “reproductive age group” 15-49. Caution should therefore be exercised in making comparisons with other studies.

*Table: UNGASS and other internationally-recommended HIV prevention indicators*

Indicator	% of females	% of males	% of all participants
Percentage of females and male aged 15–19 who have had sexual intercourse with more than one partner in the last 12 months	28.4	51.8	39.9
Percentage of young women and men aged 15–19 who have had sexual intercourse before the age of 15	22.2	27.4	24.8
Median age at first sex for age group 15-19	15	14	14
Age-mixing in sexual relationships (percentage of young women aged 15-19 who have had sex with a man 10 years or more older than themselves the first time they had sex, of all those who have had sex in the last 12 months)	4.3	NA	NA
Percentage of young people aged 15–19 who have never had sex	50.1	51.0	50.6
Condom use at first sex (percentage of young people (aged 15-19) who used a condom the first time they ever had sex, of those who have ever had sex)	54.7	54.2	54.4
Percentage of young people aged 15–19 who both correctly identify ways of preventing the sexual transmission of HIV and who reject major misconceptions about HIV transmission.	29.2	19.3	24.2

In this survey of older adolescents, close to 40% had more than one sex partner over the past year. This percentage was considerably higher among the young men than the young women. Three-quarters of

those who had ever had sex had their first sexual experience before 16, the legal age of consent. A higher percentage of boys than girls had sex before the age of 15. The differences between the sexes are consistent with other Caribbean surveys, most of which have shown lower reported age at first sex among boys than girls and higher percentages of males than females with multiple partners.

While only 4.3% of the girls had their first sexual experience with someone 10 or more years older, a further 53.8% of girls' first partners were 1-5 years older than they were, as compared to 22.3% of boys with first partners older than they were at first intercourse. Thus while the percentage of females with an age gap of ten years or more is small, they had a greater propensity to have older first partners than males did.

Over half of sexually active youth in the survey reported that they used a condom the first time they had sex, with levels of condom use being similar between the males and the females. Other Caribbean youth surveys have found widely varying levels of condom use by sex, with no clear pattern by sex.

### ***Adolescent pregnancy***

Around 1 in 8 sexually experienced participants (12.3%) had either been pregnant or got someone pregnant. The percentages of females and males that had had either been pregnant or got someone pregnant were very similar. Of females who had ever had sex, 7.7% indicated they had had an abortion.

### ***Abuse and violence***

The study uncovered substantial evidence of violence and abuse. This included sexual abuse in childhood. Participants were asked whether they had ever been sexually abused by a member of their family or another person. Approximately one-tenth of participants said that they had, with the prevalence of sexual abuse being six times higher among females (18.6%) than males (3.1%).

Additionally, of those who ever had sex:

- 4.9% stated that they were forced or threatened into sex the first time (raped). A further 8.1% said that they were "sort of" forced or threatened.
- Three times as many females as males responded "Yes" or "Sort of" to the question as to whether they had been forced or threatened into sexual intercourse the first time.
- 5.2% of the females and 11% of the males said they had first sex by the age of 10.
- 9% of the females and 21.5% of the males reported they had first sex by the age of 12.

Thus females were more likely to report sexual abuse or a coercive first sexual encounter while males reported earlier first sexual experiences.

Participants were asked whether they ever been physically abused or mistreated by a family member or other adult, with physical abuse being defined as "when someone causes you to have a scar, black and blue marks, welts, bleeding or a broken bone." According to this measure based on moderate to severe physical injury, 16.5% had been physically abused, with the prevalence being twice as high among females (22.3%) than males (10.4%).

Various other forms of harassment and abuse were reported to have taken place over the past year people:

- 54.4% had been taunted, called names or insulted
- The property of 20.8% had been damaged on purpose
- Property had been stolen from 28.5%
- 15.6% had been physically threatened
- 12.8% had been physically attacked.

All except verbal abuse had been experienced by more of the male than the female young people.

Around a quarter of participants had been involved in a physical fight in the past year, with the percentage being higher for the young men (30.6%) than the young women (23.1%).

### ***Mental health***

The study uncovered substantial levels of mental ill-health, including loneliness, anxiety, depression and suicidal intention. More than half (55.6%) had been depressed in that they had felt so sad and hopeless that nothing seemed worthwhile for more than a day or two over the past year. This is similar to estimates of around 50% of adolescents being depressed in studies in the English-speaking Caribbean. Suicidal thoughts had been experienced by 22.6% over the past year, and of those who had thought about suicide 57.9% had made a plan about how they would attempt to kill themselves, of which 16% had tried to do so once and 39.2% had tried on more than one occasion.

Females indicated significantly poorer mental health than males. Far more of the young women reported loneliness, anxiety, depression and suicidal thoughts. They were also more likely to have made suicide plans but there were no differences by sex in the proportions attempting suicide among those who had planned suicide. These findings are consistent with others in the Caribbean showing poorer mental health among girls and young women.

### ***Cigarettes, alcohol and other drugs***

Only 234 participants answered the question about smoking over the past 30 days. Of these, 43.6% had smoked over the past month, with higher prevalence of smoking among male than female participants and among older than younger adolescents. The low response rate calls into question the reliability of the figure on the prevalence of smoking.

Over the past 30 days, over half of participants (53.3%) had drunk alcohol, with 5.8% being heavy users of alcohol in that they drank on 11 or more days. More of the older than the younger participants drank alcohol over the past month but the difference in alcohol consumption between males and females was small. More than half of participants (51.3%) had ever been “really” drunk, with this having happened on 10 or more occasions to 9% of participants. A minority of respondents, 20.7%, reported having ever got into trouble with family and friends, missed school or got into fights as a result of drinking alcohol.

Marijuana had ever been used by 35.1% of participants, with 8% having first used marijuana by the age of 13, 21.7% having first used it between 13 and 15 years old and 5.3% having first used it at 16 or older. Of those who stated age at first use, 28.3% had used it 1 or 2 times, 41.3% had used it 3-19 times and 28.3% had used it 20 or more times. The percentages that had used marijuana were very similar between the sexes and slightly more of the 17-19 year olds had used marijuana than their younger counterparts.

Use of other drugs was reported to be relatively low; only 6.8% said they had ever used psychoactive drugs other than marijuana, alcohol and cigarettes.

### ***Diet and nutrition***

Only about a third of participants followed the health recommendation of eating fruit or vegetables at least twice a day (36.0% for fruit and 31.8% for vegetables). Around a quarter (25.4%) consumed a drink can, bottle, or glass of soda or pop twice or more per day. The percentage that ate fried food twice or more per day was relatively low (15.9%). The percentages consuming large quantities of sweet drinks and fried food are lower than the percentages eating fruit or vegetables. This is a promising result for the prevention of chronic, non-communicable diseases but the percentages over-consuming sweet drinks and fried food are substantial.

There is evidence of poor nutrition or poverty among substantial minorities of participants. One in ten participants did not eat fruit and one in eight did not eat vegetables in the past ten days. Small but important percentages ate neither fruit nor vegetables over the past week: 3.9% of females and 5.9% of males; 5.2% of 15-16 year olds and 2.0% of 17-19 year olds. Hunger was experienced sometimes, most of the time or always by 17.5% of adolescents and was more frequently experienced by females than males. Similarly, around 15% of participants had eaten less than they thought they should over the past 30 days because of lack of money “a few times” or “many times.”

### ***Exercise***

About one in ten of the young people were highly physically active in that they reportedly exercised for at least 60 minutes for all seven days in the past week. At the other extreme, more young people (13.8%) were not physically active on any day of the past week. More of the males (90.3%) than the females (75.1%) had exercised on at least one day in the past week.

Close to half of survey participants engaged in sedentary behaviors, such as watching television and playing video games, for at least three hours per day (46.7%). Only around one in five of the young people were sedentary for an hour or less per day or did not watch television, play video games or use the computer (19.3%).

### ***Perceived weight and body image***

Only about a minority of participants stated that they were satisfied or very satisfied with their weight and appearance (39.1%). The percentage that reported they were slightly or very overweight was lower than the percentage that was trying to lose weight (26.9% and 40.5% of participants respectively). This

appears to show pressures on young people to be slimmer even when they do not think they are overweight. Roughly twice as many adolescents perceived themselves to be overweight than perceived themselves to be underweight (26.9% and 12.3% respectively). More of the females than the males perceived themselves as slightly or very overweight, were trying to lose weight and were dissatisfied or very dissatisfied with their appearance.

### ***Hygiene***

The majority of the young people reported that they cleaned or brushed their teeth at least twice a day (88.2% of females and 82.1% of males). However, 12.2% of participants only brushed once a day or less than once a day, increasing their risk of oral and dental health problems.

Hand washing before eating did not differ significantly between the sexes but females had a higher propensity than males always to wash their hands after using the toilet. Overall, 59% of participants always or most of the time washed hands before eating and 67.5% always washed their hands after using the toilet.

### ***Family connection and support***

Most of the adolescents lived with their biological mother (79.4%) but only 43.4% lived with their biological father. Marginally more of the females than males lived with one, other or both biological parents; 87.4% of females and 82.7% of males.

Around a third of the females and a quarter of male youth reported one or more of the following taking place among their parents or other adults at home: drinking, mental health problems, drug use or violence.

On the other hand, the majority of participants received family care and support. The areas of highest support or supervision were in expecting the adolescent to follow the rules, caring about the young person, believing s/he would be a success and always wanting the adolescent to do her/his best. Poorer areas of support (below 60%) were in understanding the participant, checking to see homework was done, listening to what the adolescent had to say and really knowing what the adolescent was doing with his/ her spare time. Only 42.2% thought that it was sometimes, often or always true that an adult talked to them about their problems. Overall, male and female youth received roughly equal levels of family support.

Most adolescents had not discussed sex, contraceptive use or HIV with either parent or other adult they lived with, missing out on this important potential source of sexual and reproductive health education. Most participants also had not discussed feeling down and depressed. We saw above remarkably high levels of depression and suicidal feelings, so the absence of discussions with parents and other adults at home is of concern. Discussion of these matters with parents or other adults was more common among the young women than the young men.

### ***School connection and support***

Adolescents in the Cayman Islands seem to be ambitious with regards to their education, with 36.5% to wanting to go on to complete university and 32.7% to progress as far as gaining an advanced degree. There appeared to be greater educational ambition among the girls and young women than among the boys and young men in that 45.8% of the female participants aimed to obtain an advanced degree as compared with only 26.6% of the boys.

The degree of connectedness to school has been shown to be a protective factor for adolescent health. A percentage ranging between round 15% and 33% stated that they were NOT connected to school according to the following indicators:

- They thought teachers never or rarely cared about students
- They never or rarely felt safe at school
- They never or rarely felt a part of school
- They thought schoolwork was hard most or all of the time
- They had no friends in school most or all of the time
- They never or rarely felt happy in school
- They never or rarely thought that students were treated fairly in school

Small percentages were especially vulnerable because they were bullied or threatened in school (3.8%), their parents or guardians did not care if they were in school or not (6.8%), they never or rarely got the help they needed in school (10.6%), they never or rarely felt safe in school (14.8%) or teachers were mean most of the time or always (9%). The school connectedness score, with a potential range from 0 to 11, averaged 5.8 for females and 5.9 for male youth.

Areas where more than three-quarters of participants thought their teachers were supportive included expecting students to do their best (94.8) and receiving extra help with schoolwork if needed (91.4%). Teacher support for personal issues was weaker; 51.3% stated that they could go to a teacher if they were really upset or mad about something, and exactly 50% stated that they could ask teachers for advice about personal problems. Only 33.5% thought they could discuss HIV with their teachers. Female adolescents received higher levels of teacher support overall than the male adolescents.

### ***Health care access and support***

Less than half of adolescents surveyed expressed satisfaction with health care according to various criteria. However, this does not mean that over half were dissatisfied since there were substantial percentages who stated they were “not sure” in relation to each question. Overall, the girls/ young women were less likely to express satisfaction than the boys/ young men. There were substantial gender related differences with respect to perceived confidentiality, ease of getting to a health care facility, opening hours of facilities, knowledge of youth about the services available to them, level of youth involvement in health care design and respect of health care providers for youth. The results suggest that there are significant shortfalls in the responsiveness of health care services with regard to the need of girls and young women especially.

### ***Multivariate analysis***

Multivariate analyses aimed to identify the combination of factors that affected each of a number of key health outcomes. Owing to low response rates to combinations of questions, multivariate analyses could only be conducted on a few outcomes, namely sexual activity, age at sexual debut, multiple partnerships, alcohol use and suicide attempts.

Sexual activity was found to be associated with indicators of violence (sexual abuse, being involved in a physical fight), alcohol use, poor family support and reactionary gender norms. There is also the suggestion that it was associated with poorer economic status, since the young people who had ever worked were more likely to be sexually active.

Early sexual debut (before the age of 15), like sexual activity, was associated with sexual abuse, being involved in a physical fight and reactionary gender norms. It was also associated with use of marijuana, poor connection to school and being male.

Multiple partnerships among adolescents in the Cayman Islands were more likely among those who had experienced violence over the past 12 months or had been physically abused. Males were significantly more likely to report multiple partnerships than females. Poor connection with school was a predictor of multiple partnerships. Alcohol use and depression were important predictors, showing the importance of mental health.

Alcohol use over the past 30 days was more likely if a person had a physical fight over the past 30 days. Surprisingly, it was also more likely if a person had protective sexual attitudes and less likely if they had sex before the age of 15. It should be noted that the outcome variable measures whether or not a person drank at all over the past 30 days. Because of small numbers with full data, it was not possible to examine risk factors for heavy drinking.

Results on suicide attempts confirm the critical importance of abuse and violence in affecting the wellbeing of adolescents. Those who had been sexually abused were 7.5 times more likely than others to have attempted suicide. Those who had a high level of exposure to violence were 4 times more likely than others to have attempted suicide.

## Conclusion

The picture that emerges from these results is of adolescents vulnerable to ill-health and even suicide attempts as a result of a combination of factors including violence and lack of emotional and social support from key institutions, namely the family, school and health care services. These vulnerabilities do not affect all young people equally and it is important to focus attention on those who are more exposed to violence and have less support. The study also showed the highly gendered nature of violence and mental health and thus the effects of gender on key outcomes. Young women and girls generally had poorer mental health and this is at least partially associated with sexual abuse and violence against them, especially in the domestic space. More of the males were subjected to or involved in violence in the public space and this was associated with risk of multiple partnerships and early sexual debut, suggesting that cultural pressures to assert “hard masculinities” may put many



young men and boys at risk. Gender norms supportive of male dominance were found to increase sexual risk. These same cultural features may also help explain lower consumption of fruit and vegetables and higher participation in exercise among the males. Studies that are more focused on the relationships between gender, emotional and social support, mental health and health outcomes are suggested. Initiatives should aim to increase the capacities of families, schools and health care workers to enhance their emotional support and education of young people. In addition, concerted efforts should be made to combat violence and abuse of and between young people. Such efforts should take account of the highly gendered nature of violence and develop complementary programmes for girls/ young women and boys/ young men.

# 1. INTRODUCTION

## 1.1 Background

The transition from childhood to adulthood that is captured in the term *adolescence* is a time of vulnerability that can affect health, opportunities and development for the rest of life. It is a time of physical and emotional change accompanied by increasing definition of sexual identity and social status. Managing these changes to achieve optimal health and personal development is challenging and is profoundly affected by social experiences. Relationships with parents, friends, other peers and partners are critical, and all these agents have roles and responsibilities in assuring the welfare of adolescents, though some through neglect and abuse damage rather than empower. A wide range of social institutions also affect the prospects of adolescents and thus social and economic development for years to come, especially schools, health care settings, commercial enterprises and governments. Many adolescents in the Caribbean undergo these changes in a context that promotes vulnerability, including (but not restricted to) poverty accompanied by increasing consumerism, leading to sexual and other behaviors with negative consequences such as sexually transmitted infections, HIV and adolescent pregnancy.<sup>2</sup>

The study described in this report is one of a set of studies conducted to examine the status of health of young people and the factors affecting their health in Overseas Caribbean Territories (OCTs). In October 2008, the five-year EC/OCT (European Commission / Overseas Caribbean Territories) project **“Strengthening the Integration of the British and Dutch OCTs in the Regional Response to HIV/AIDS”** was initiated. The project covers five British territories (Anguilla, Montserrat, Cayman Islands, Turks & Caicos Islands and the British Virgin Islands) and six Dutch territories (Curacao, St. Maarten, Bonaire, Aruba, Saba and St. Eustatius). The PAHO HIV Caribbean Office (PHCO) serves as the coordinating entity for this project. All these countries have HIV prevention among young people as a priority in their HIV strategies. Understanding of the risks and protective factors that impact their risk of HIV infection and access to and utilization of services is critical for development, expansion and monitoring of the impact of programs and services.

The study as a whole is designed to generate strategic information on multiple issues affecting the health and wellness of young persons in OCTs. To date, Aruba, the British Virgin Islands (BVI), the Cayman Islands, Montserrat, St. Eustatius and St. Maarten have participated in the study. In addition to the modules related to sexual and reproductive health and HIV, modules on nutrition, physical activity and hygiene have been added upon the request of the participating countries, as this provides an opportunity to “piggy-back” on the infrastructure of the study to collect information on these additional topics, to support development of a comprehensive continuum of health programs and services for young people.

---

<sup>2</sup> Allen C. Situation Analysis of Adolescent Sexual and Reproductive Health in the Caribbean. Washington DC: Pan American Health Organization/ World Health Organization; 2013.

Data has been collected from adolescents attending school, as a way to gain a picture of the issues of the challenges facing young people more broadly and of generating ideas on strategies for prevention, care and support. Adolescents are at a critical developmental stage and data from these studies can provide pointers as to important issues to address to strengthen protective factors and avoid further entrenchment of risks and vulnerabilities during the period of youth and beyond into the general adult population.

This report contains results from the survey conducted in Cayman Islands in November 2012.

## 1.2 Existing information on health and sexuality among young people in the OCTs

The countries participating in this study have not recently undertaken a study on health and sexuality among young people of this magnitude. Among the most recent studies are Global School-based Student Health Surveys (GSHS) conducted in the BVI, Cayman Islands and Montserrat. However, these surveys only focused on younger adolescents, and Montserrat did not include the sexual/reproductive health and HIV modules. As such, the current study complements the limited existing data on the health status of young people available in the OCTs.

**Table 1: Studies relating to the health and sexuality of young people conducted in the OCTs in the past five years**

Countries	Recent studies (past 5 years)
<b>Bonaire</b>	No recent national studies among young persons
<b>Cayman Islands</b>	2007 Global School-Based Student Health Survey
<b>Montserrat</b>	Small annual survey among students in their last year of high school on health and sexuality. This survey is conducted annually as part of a sexual/reproductive health intervention the school authorities implement yearly for their departing students, to prepare them for life after high school.  2008 Global School-based student health survey, form 2-5 (equals grade 7-10, age group 12 – 16) and included modules: physical attacks, violence and injuries; feelings and friendship; substance use; physical activity; experiences at school, home and spiritual life
<b>St. Eustatius</b>	No recent national studies among young persons
<b>Saba</b>	A small survey among the general population of which 57% of the respondents were in the age group 15-18 years. This survey was conducted as part of a World AIDS Day activity and assessed knowledge about HIV and AIDS and condom use (Community survey World AIDS Day 2008)
<b>St. Maarten</b>	In 2005 results were published from a 2001 survey conducted in schools among 1,078 14-18 year olds. This used questions derived from the Centers for Disease Control's (CDC) Youth Risk Behavior Survey (YRBS) to assess health risk behavior prevalence, including tobacco, alcohol, and drug use, and sexual activity.

**Aruba**

2005: Survey on condom use among school young people aged 12-21

**British Virgin Islands (BVI)**

2009 Global School-based student health survey, form 1-5 (equals grade 6-9, age group 11-15) and included modules: height-weight and nutrition; hygiene, physical attacks, violence and injuries; sexual intercourse, HIV, feelings and friendship; substance use; physical activity; experiences at school, home and spiritual life

---

In five of the Dutch Overseas Territories (Bonaire, St. Eustatius, St. Maarten, Saba, Curacao<sup>3</sup>) the estimated adult (15-49 years) HIV prevalence is 2.5% and an estimated 9.8% of all reported HIV cases are in the age group 15-19 years<sup>4</sup>. In Aruba, also a Dutch Overseas Territory, the adult prevalence rate was estimated at 0.4% in 2007<sup>5</sup>. In a study conducted in Aruba in 2005 on condom use among young persons aged 12-21, 25% of the respondents reported sexual initiation before the age of 15 years<sup>6</sup>.

Analysis of the 2001 school survey in St Maarten showed a relatively high rate of risk behavior in this population. Multi-variate analysis showed that a 'great' relationship with both parents, as perceived by the student, was significantly associated with lower rates of tobacco and alcohol use as well as lower rates of sexual activity. Youth who used tobacco, alcohol or drugs were more likely to be sexually active and the use of drugs was associated with a higher number of sex partners. These young people are at high risk of HIV, since research has shown that early initiation into smoking and drinking is related to a higher probability of heavy drinking and reckless sexual behavior in late adolescence and into adulthood. It is important to identify the sets of young people who are at risk of becoming involved in these forms of behavior; the research suggests these might be young people with poorer relationships with their parents.<sup>7</sup>

The Cayman Islands participated in the Global School Health Survey in 2007. The study was conducted among students aged 13-15 years. The study results indicated significant proportions of early sexual initiation and multiple partners. In total 30.8 percent of the boys and girls in this age group were already sexually active, and 22.3 percent had a history of 2 or more sexual partners. Alcohol and other drug use were also significant, 39.4 percent of the respondents had consumed at least one alcoholic drink in the thirty days before the survey, and 28.0 percent had ever been drunk. Almost sixteen percent used drugs one or more times during their life.

In 2007 the National AIDS Programs of Montserrat and the British Virgin Islands (BVI) estimated the adult HIV prevalence at 0.5%<sup>8</sup> and 0.23%<sup>9</sup> respectively. In the 2009 BVI WHO/CDC Global School-based Student Health Survey, among school children aged 11-15 years it was found that 33.4% of the students

---

3 Due to constitutional changes in October 2010, Curacao and St. Maarten became autonomous countries in the Kingdom of the Netherlands, and are no longer part of the Netherlands Antilles

4 Government of the Netherlands. 2010 UNGASS Report Netherlands and Netherlands Antilles

5 Government of Aruba. 2008 Country UNGASS Report

6 Government of Aruba. 2008 Country UNGASS Report.

7 McBride, D. C., M. C. Freier, et al. (2005). "Quality of parent-child relationship and adolescent HIV risk behavior in St. Maarten." *AIDS Care* 17 (Suppl 1): S45-S54.

8 Ministry of Health Montserrat. Children and AIDS. A Stocktaking Report on Montserrat. 2007.

9 Government of BVI. 2008 Country UNGASS Report

drank at least one alcoholic drink during the 30 days preceding the survey, and 19.3% had been really drunk one or more times during their life; 15.7% had seriously considered suicide during the past 12 months and 12.5% had actually attempted suicide during this period. A total of 35.7% had already initiated sexual activity, and of these, 76% had their first sexual intercourse before the age of 14<sup>10</sup>.

### 1.3 Conceptual framework

The study examines a number of health outcomes and behaviors, such as adolescent pregnancy, sexual behaviors associated with increased risk of HIV and sexually transmitted infection (STI), drug and alcohol use, diet, exercise, mental health problems and being involved in a physical fight. It looks at the broader social environments that may affect these, such as living arrangements, the family environment, school environment and community environment. Differences by sex are examined to draw out potential gender issues. Differences between younger and older adolescents are also explored. Multivariate analysis looks at associations between the environmental factors and health outcomes and behaviors identified to be of particular concern for young people in the Caribbean. The analyses are used to generate evidence-based recommendations to strengthen protective factors and combat risk factors.

The choice of variables for this study was guided by previous research by the Pan American Health Organization and collaborating agencies, especially the multi-country Adolescent Health Survey, that identified protective and risk factors for adolescent sexual and reproductive health<sup>11, 12, 13, 14, 15, 16</sup>. Other studies were also reviewed<sup>17,18</sup> to arrive at the following general findings for the Caribbean. These findings, based on studies in a wide range of Caribbean countries, generated ideas for the variables to include and the sorts of analyses that would be conducted in the OCTs:

#### Risk factors

1. *Sexual or physical abuse.* Adolescents with a history of physical or sexual abuse are more likely to be sexually active and not to use a condom.

---

10 Centers for Disease Control. Global School-based Student Health Survey; British Virgin Islands 2009 Fact Sheet. <http://www.cdc.gov/gshs/countries/americas/britishvirginislands.htm>

11 A portrait of adolescent health in the Caribbean. Pan American Health organization. 2000. WHO Collaborating Centre on Adolescent Health, University of Minnesota.

12 Blum R, Halcon L, Beuhring T, Pate E, Campbell-Forrester S, Venema A. Adolescent health in the Caribbean: risk and protective factors. American Journal of Public Health. 2003 Mar;93(3):456-60.

13 Lerand S, Ireland M, Blum R. Individual and environmental impacts on sexual health of Caribbean youth. Thescientificworldjournal. 2006;6:707-17.

14 Halcon L, Blum R, Beuhring T, Pate E, Campell-Forrester S, Venema A. Adolescent Health in the Caribbean: a regional portrait. American Journal of Public Health. 2003;93(11):1851-7.

15 Lerand SJ, Ireland M, Blum RW. Sexual behavior in Caribbean youth. Journal of Adolescent Health. 2004;34(2):142-3.

16 Ohene S, Ireland M, Blum R. The clustering of risk behaviors among Caribbean youth. Maternal & Child Health Journal. 2005;9(1):91-100.

17 Pilgrim N, Blum RW. Protective and Risk Factors Associated with Adolescent Sexual and Reproductive Health in the English-speaking Caribbean: a Literature Review. Journal of Adolescent Health. 2012;50:5-23.

18 Allen C. Situation Analysis of Adolescent Sexual and Reproductive Health in the Caribbean. Washington DC: Pan American Health Organization/ World Health Organization; 2013.

2. *Psychosocial wellbeing and mental health.* Rage, gang membership, and carrying or fighting with a weapon increased the risk of sexual activity for both boys and girls in the Adolescent Health Survey. Girls who experienced depression and those with lower self-esteem were more likely to have experienced a pregnancy.
3. *Drug and alcohol use.* Sexual activity was more likely if adolescents used alcohol or drugs, including marijuana and cigarettes. Higher levels of use of alcohol also increased risk.
4. *Peer influence/ pressure.* Young people who perceived their friends to be sexually active and those who felt their friends would make fun of them if they did not have sex were more likely to be sexually active. The pressure towards sexual activity is higher for boys than for girls.
5. *Attitudes to gender.* Adolescent males who ascribe to the cultural attitude that it is necessary to have sex to prove manhood are more likely to have STIs.
6. *Poverty.* One study found that adolescents from households of low socio-economic status were less likely to use condoms.
7. *Transactional sex.* Transactional sex is associated with lower condom use in some studies. However, others have shown that with transactional sex partners who are considered casual, condom use is more frequent than among regular transactional sex partners. Likewise, among sex workers, condom use is higher with clients than with regular partners.
8. *Sex.* Boys are significantly more likely than girls to report sexual activity. They are also more likely to report multiple partnerships and sexual intercourse at a younger age than girls. However, girls are more likely to have sex with much older partners and to experience sexual violence.
9. *Age.* Not surprisingly, older adolescents are more likely to report sexual activity than younger ones.

### **Protective factors**

1. *Family connectedness.* According to the Adolescent Health Survey, if adolescents felt connected to their families they were less likely to have sex. Connectedness was measured by agreement with statements such as “family pays attention to you”, “family understands you”, “can tell mom/ dad your problems”, “mom/ dad cares about you” and “other family members care”. On the other hand, running away from home was a risk factor for sexual activity. Family violence was found to be a risk factor for multiple partnerships among males in one study.
2. *School connectedness.* In the Adolescent Health Survey it was found that if adolescents felt connected to school they were less likely to have sex. This was measured by the questions, “Do you get along with teachers?” and “Do you like school?” On the other hand, skipping school was a risk factor for sexual activity.

3. *Religion*. Religious attendance and considering oneself or being considered a religious or spiritual person reduced the likelihood of sexual activity.<sup>19</sup>
4. *Individual values*. Values such as endorsing security, tradition, self-direction and universalism are protective against sexual activity.<sup>20</sup>

It should be noted that some of the factors in the above lists may be regarded both as health outcomes and risk or protective factors. For example mental health, drug and alcohol use may be regarded as health outcomes but they have also been shown to affect a wide range of other health outcomes such as sexual and dietary behavior.<sup>21</sup> A variety of conceptual models have been proposed to show relationships between variables in adolescent health but some are not empirically based, they often assume one-way causation and do not present multiple associations between variables. The approach taken in this study is empirically-driven (based on previous research outlined above) while regarding certain variables as key outcomes, some of which may also be regarded as exposure variables. Following presentation of demographic characteristics in section 4.1, this report will present evidence on the following key outcomes in section 4.2:

- Age at first sex
- Number of partners
- Condom use
- Adolescent pregnancy and abortion
- Mental health and suicidal intention
- Cigarettes, alcohol and drug use
- Diet
- Exercise
- Perceived weight and body image
- Hygiene

Section 4.3 then examines the following areas that may be associated with these outcomes based on previous research:

- HIV knowledge
- Abuse and violence
- Mental health and drug use
- Family connection and support
- School connection and support

---

19 Blum R, Ireland M. Reducing risk, increasing protective factors: findings from the Caribbean Youth Health Survey. *Journal of Adolescent Health*. 2004 Dec;35(6):493-500.

20 Pilgrim N, Blum RW. Protective and Risk Factors Associated with Adolescent Sexual and Reproductive Health in the English-speaking Caribbean: a Literature Review. *Journal of Adolescent Health*. 2012;50:5-23.

21 Pilgrim NA, Blum RW. Adolescent mental and physical health in the English-speaking Caribbean. *Pan American Journal of Public Health*. 2012;32(1):62-9.

- Health care access and support
- Gender norms
- Economic vulnerability

## 1.4 Objectives

The goal of this study is to help strengthen HIV/STI prevention, accumulate data and develop and strengthen comprehensive health programs and services for young people in the Cayman Islands.

The general objective of this survey is to conduct a holistic assessment of adolescents' health, with emphasis on HIV and sexual and reproductive health in the Cayman Islands, to strengthen existing services for young people, and to inform the development of targeted interventions, while providing baseline data.

The specific objectives are:

- To measure the protective and risk factors related to the health and wellness of adolescents;
- To measure the knowledge, attitudes, perceptions and behaviors of adolescents related to HIV, sexuality and other sexual and reproductive health issues.

## 2. METHODOLOGY

The methodology for this study was developed by means of a participatory process. Representatives from eleven British and Dutch Overseas territories (British Virgin Islands, Cayman Islands, Montserrat, Anguilla, Turks and Caicos, Saba, St. Eustatius, St. Maarten, Aruba, Bonaire and Aruba) participated in the development of the study protocol and core instruments at a meeting held in Trinidad in July 2010. In addition, Professor Robert W Blum from Johns Hopkins School of Public Health provided technical support, for review and finalization of the study protocol, data collection instruments, and data analysis. Professor Blum had previously been involved in the design and execution of the 2000 Adolescent Health Survey.<sup>22</sup>

### 2.1 Development of the methodology

The survey methodology and tools were developed based on review of methodologies and lessons learned from similar studies in the Caribbean and other parts of the world and the conceptual framework as outlined above. The methodology draws in particular from three surveys: a) the Global School-based Student Health Survey (GSHS), b) the Caribbean Adolescent Health Survey, and c) the Behavioral Surveillance Survey (BSS).

---

22 A portrait of adolescent health in the Caribbean. WHO Collaborating Centre on Adolescent Health, University of Minnesota. Pan American Health organization. 2000.



**a. The Global School-based Student Health Survey (GSHS)<sup>23</sup>.** The GSHS was developed by the World Health Organization (WHO) in collaboration with United Nations' UNICEF, UNESCO, and UNAIDS, and with technical assistance from CDC. GSHS is a school-based survey conducted primarily among students aged 13–15 years. The GSHS was recently implemented in several Caribbean territories, including Cayman Islands (2007), Montserrat (2008), Anguilla (2009), and British Virgin Islands (2009).

**b. Adolescent Health Survey in the Caribbean (2000)<sup>24</sup>.** The Adolescent Health Survey was carried out jointly by the Pan American Health Organization (PAHO) and the University of Minnesota between 1998 and 2000. This survey was the first multi-country survey of young people in the Caribbean. Nine countries implemented the survey: Antigua, The Bahamas, Barbados, British Virgin Islands, Dominica, Grenada, Guyana, Jamaica and Saint Lucia. The sample consisted of in-school adolescents ages 10 through 18.

**c. Behavioral Surveillance Survey.** The Behavioral Surveillance Survey (BSS) guidelines used in this context were developed by Family Health International (FHI) with input from a number of other agencies, including the WHO. The BSS is used globally as a tool to collect HIV-related behavioral information and is recommended to be implemented every 2-3 years as part of comprehensive second generation surveillance. The BSS is typically used to track HIV-related knowledge, perceptions, and behaviors over time in specific vulnerable and high risk groups.<sup>25</sup>

The questionnaire developed from these sources for the quantitative survey is presented in Appendix 1. A topic guide was developed for the focus group discussions and is presented in Appendix 2. The results of the focus group discussions are not presented in this report.

## 2.2. Study population and sampling

In the Cayman Islands, the study focused on the 15-19 age group, as recommended in the study protocol. By agreement between PAHO and the local organizing committee in the Cayman Islands, the study did not include out-of-school youth, because youth aged 15-19 are either in school or in the work force. It was also noted that 17-19 year olds could be captured through some of the private schools that have students graduating at age 18 or 19. Therefore the study had two components:

- A survey among in-school young persons aged 15 – 19 years.
- A qualitative focus group study among in of-school young persons aged 15 – 19 years.

In general school-based sampling is considered a resource-efficient way to conduct research among young persons, in particular in countries with high school enrolment rates. It is also recognized that

---

<sup>23</sup> [www.paho.org/gshs](http://www.paho.org/gshs)

<sup>24</sup> A portrait of adolescent health in the Caribbean. WHO Collaborating Centre on Adolescent Health, University of Minnesota. Pan American Health organization. 2000.

<sup>25</sup> Family Health International. Behavioral Surveillance Surveys (BSS): Guidelines for Repeated Behavioral Surveys in Populations at Risk for HIV. 2000

school-based sampling excludes out-of-school young people, especially those who are unemployed, who might be disproportionately at risk.

Cayman Islands had a target population of approximately 1186 school-going young persons aged 15-19. A census of in-school youth was utilized, meaning that the study aimed to include all of these persons. A letter was sent to school Principals requesting the participation of schools in the study (Appendix 3). All high schools (four public and eight private) in the Cayman Islands participated in the survey. The participating schools were Cayman Islands Further Education Centre, Clifton Hunter High School, John Gray High School, Layman Scott High School, Cayman Academy, Cayman International School, Cayman Prep & High School, Grace Christian Academy, Hope Academy, Saint Ignatius Catholic School, Wesleyan Christian Academy and Triple C School.

Schools were advised of the age groups of the participants and the appropriate date for conducting the survey. Out of the 1186 potential participants, 955 youth aged 15-19 participated in the survey, representing an 80.5% participation rate.

Although sample surveys are preferable for collecting data in large populations, there are several advantages to conducting a census when the population is 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 endeavors. Second, data analysis is less complicated because calculation of sampling error is irrelevant. Third, survey administration is easier, and fourth, a census provides the maximum numbers required to study subgroup differences. In sum, a census can increase reliability of data as well as the public acceptance of it.

For the qualitative component, 4 focus groups were completed in the Cayman Islands. Single sex focus groups were conducted for the age groups 15-16 years and 17-19 years. Some quotations from these discussions are presented under the relevant topic sections in this report.

## **2.3 Instrument design and data collection**

The data collection instruments were developed by the PAHO research team and piloted in four of the eleven OCTs (St. Maarten, Aruba, Montserrat and BVI) after which they were adapted accordingly. In the Cayman Islands, a local team with representatives from the National Drug Council, the Public Health Department of the Health Services Authority and the Ministry of Health coordinated local development of the Survey instruments and methodology. The self-completion questionnaires consisted mostly of questions with multiple answer options. Appendix 1, provided as a separate PDF file, shows the questionnaire used. Appendix 2 shows the topic guide used for focus group discussions.

The Health Services Authority in partnership with the National Drug Council was responsible for the coordination of the study and collaborated with the Ministry of Education and the school Principals in conducting the fieldwork. A survey team was established by the National Drug Council to organize and implement the study. The team consisted of a survey coordinator and survey administrators (volunteers) including representatives from the Health Services Authority, Ministry of Health, Environmental, Youth,

Sports & Culture and the National Drug Council. Survey administrators were selected and trained in the methodology a week prior to the survey administration. The survey was self-administered during one class period, using paper and pencil. Each survey administrator was responsible for a selected class and on the day of the survey he/she gave a standard introduction to students.

### **2.3.1 Training of Volunteers**

More than 50 persons participated as volunteers for the Adolescent Health Survey. Most of the volunteers are regular facilitators from the National Drug Council (NDC).

The staff of the NDC provided training sessions every day over one week. During the sessions, each volunteer received a package with the following documentation:

- Instructions to administer the Adolescent Health Survey – A simple guide with the steps to follow during the survey administration.
- Oath of Confidentiality
- Frequently Ask Questions sheet
- Sample of Administrator's Information Sheet
- Sample of Questionnaire

## **2.4 Ethical considerations**

None of the participating territories have mechanisms for ethical review of research involving human subjects (review boards /committees). The study protocol was submitted to the PAHO Ethical Review Committee (PAHOERC) for review and approval, and the protocol was accepted by that body prior to implementation.

Taking part in this study involved minimal risk. It did not entail collection of biological samples or exposure of human subjects to invasive procedures, but was limited to the administration of a survey and participation in focus groups. However, the subject matter (HIV, sexuality, adolescence) is subject to significant stigma in the participating territories, and linking of individuals with provided information can have negative consequences for respondents. These potential risks were managed by ensuring that no personal identifiers were included in the questionnaires, and that completed questionnaires were not available to unauthorized survey staff.

### **Informed consent**

Given that many of the potential study participants were under the legal age of majority, parental consent was sought for this survey. The school management in collaboration with the National Drug Council and the Department of Education decided to use the passive parental consent procedure, as passive consent has been standard practice in surveys in the Cayman Islands. To ensure that parents were informed of the study, the National Drug Council through the school management distributed a list of Frequently Asked Questions about the study and the consent form to the parents through the students (Appendices 4 and 5). Parents were given the opportunity to decline their child's participation by contacting the school.

Potential participants also received assent forms (Appendix 6) containing background information regarding the study, and inviting their participation. The form emphasized that students could refuse to participate or withdraw at any point with no questions asked and without consequence.

Survey administrators repeated the goal, objectives and content of the survey on the day of data collection. They explained that the study was voluntary and that students had the opportunity to “Opt-Out” of the study if they chose to without any negative consequences. Furthermore, students were informed that they could skip questions they did not feel comfortable responding to and were free to withdraw at any point during the study with no questions asked and without consequences. The survey administrators were advised to check the school principals on the day of the survey for the children who had opted out from the survey and to ensure that they were removed from the designated classroom.

### **Confidentiality**

Teachers were not in the classroom during the administration of the survey. Data collectors and teachers were instructed not to walk around in the classroom during the data collection to reinforce confidentiality. The class furniture was arranged in a manner that provided limited view of the students’ responses. Students were instructed to fill out the forms individually and not to place their names on the survey form. An empty box was placed conspicuously in front of each classroom and students were instructed to deposit their completed questionnaire booklets inside. The closed boxes were delivered by survey administrators to the Survey Coordinator and were not available to unauthorized survey staff.

## **2.5 Data management and analysis**

The boxes with the questionnaires were sent to the PAHO research team who provided the technical assistance in the data entry, cleaning, analysis and reporting of the information. Statistical Package for the Social Sciences (SPSS) version 19 was used for the data entry which took place based on the codebook that was developed by the research team in collaboration with Johns Hopkins University.

For validation, each completed questionnaire was computer checked for accuracy and completeness. Completed questionnaires were also checked for invalid responses and inconsistent responses (e.g. stating that you never used drugs in answer to one item, and indicating that you had drugs within the last 6 months). Inconsistent and invalid responses were not included in the analysis. Through asking the same question in multiple ways, the consistency of the responses was verified.

The data analysis included descriptive results, focused on variables of interest that were disaggregated by sex and age group. Multivariate analyses were conducted to identify factors associated with sexual and reproductive health.

It should be noted that because this study was designed as a census of all students in the chosen age group in the Cayman Islands, standard statistical tests are not necessary and have not been presented in this report. This is because the results from the participants are the “real” results for the population as a whole (insofar as the students provided valid and truthful responses to the questions). Statistical tests such as Chi-square and for categorical variables and Analysis of Variance (ANOVA) for interval variables

are appropriate to present only when a sample has been selected and there is a wish to assess the likelihood that the results apply to a broader population.

It is also important to note, however, that the planned census achieved 80.5% coverage (955/ 1186), not 100%, and therefore the results should not be treated as 100% reliable in reflecting the situation for all students aged 15-19 in the Cayman Islands. The 231 students who did not participate in the survey might differ in some systematic ways from those who participated – for example they may be those who have a greater propensity for absence from school. Therefore caution should be exercised in interpreting the results.

## **2.6 Calculation of UNGASS and other internationally recommended HIV prevention indicators**

The data analysis includes the calculation of a number of internationally recommended HIV prevention indicators. These can facilitate national monitoring and evaluation and comparisons with countries within and outside the Caribbean. However it should be noted that the age group is 15-19 and for some of the indicators the recommended age group is either 15-49 or 15-24. Caution should therefore be made in comparing results from this with other studies.

The following table shows indicators that have been calculated for the OCT AHS studies.

**Table 2: Internationally recommended HIV prevention indicators measured in the study**

Behavioral risk/ protective factor	Indicators	Agency publishing the recommendation	Variable to be calculated in the OCT AHS study	How to calculate (note: only include 15-19 year old respondents)
Multiple partnerships	Percentage of women and men aged 15–49 who have had sexual intercourse with more than one partner in the last 12 months	UNGASS <sup>26</sup>	Percentage of females and male aged 15–19 who have had sexual intercourse with more than one partner in the last 12 months	Q29  Numerator= number of respondents aged 15-19 who had sexual intercourse with more than one person in the last 12 months  Denominator= number of respondents aged 15-19
Age at first sex and age mixing in sexual relationships	Percentage of young women and men aged 15–24 who have had sexual intercourse before the age of 15	UNGASS <sup>27</sup>	Percentage of young women and men aged 15–19 who have had sexual intercourse before the age of 15	Q20  Numerator= number of respondents aged 15-19 who report the age at first sex as under 15 years  Denominator= number of respondents aged 15-19
	Median age at first sex	UNAIDS <sup>28</sup>	Median age at first sex for age group 15-19	Q20  (Create frequency table for Q20)

26 UNAIDS, *Guidelines on Construction of Core Indicators*. 2010 Reporting on UNGASS. 2009, Geneva: UNAIDS.

27 UNAIDS, *Guidelines on Construction of Core Indicators*. 2010 Reporting on UNGASS. 2009, Geneva: UNAIDS.

28 UNAIDS, *National AIDS Programmes: a Guide to Monitoring and Evaluation*. 2000, Geneva: Joint United Nations Programme on HIV/ AIDS.

Behavioral risk/ protective factor	Indicators	Agency publishing the recommendation	Variable to be calculated in the OCT AHS study	How to calculate (note: only include 15-19 year old respondents)
				among 15-19 age group and choose age coinciding with 50 <sup>th</sup> percentile)
	Age-mixing in sexual relationships (percentage of women aged 15-19 who have had non-marital sex with a man 10 years or more older than themselves in the last 12 months, of all those who have had non-marital sex in the last 12 months)	UNAIDS <sup>29</sup>	Age-mixing in sexual relationships (percentage of women aged 15-19 who have had sex with a man 10 years or more older than themselves <b>the first time they had sex</b> , of all those who have had sex in the last 12 months)	Q25 and Q19  Numerator = Number of females age 15-19 who have had sex with a man 10 years or more older than themselves <b>the first time they had sex</b>  Denominator = Number of people age 15-19 who ever had sex
	Percent of never-married young people aged 15–24 who have never had sex	PEPFAR <sup>30</sup>	Percent of young people aged 15–19 who have never had sex	Q19  Numerator = Number of young people aged 15-19 who reported they had never had sex  Denominator = number of young people aged 15-19
	Condom use at first sex	UNAIDS <sup>31</sup>	Condom use at first sex	Q23 and Q19

29 UNAIDS, *National AIDS Programmes: a Guide to Monitoring and Evaluation*. 2000, Geneva: Joint United Nations Programme on HIV/ AIDS.

30 The President's Emergency Plan for AIDS Relief, *Next Generation Indicators Reference Guide*. 2009, Washington DC: PEPFAR.

Behavioral risk/ protective factor	Indicators	Agency publishing the recommendation	Variable to be calculated in the OCT AHS study	How to calculate (note: only include 15-19 year old respondents)
	among youth (percentage of young people (aged 15-24) who used a condom the first time they ever had sex, of those who have ever had sex).		among 15-19 year old youth (percentage of young people (aged 15-19) who used a condom the first time they ever had sex, of those who have ever had sex).	Numerator = Number of respondents aged 15-19 who reported using a condom at first intercourse  Denominator = number of respondents aged 15-19 who report they ever had sex
Condom use	Percentage of women and men aged 15–49 who had more than one partner in the past 12 months who used a condom during their last sexual intercourse	UNGASS <sup>32</sup>	Percentage of females and males aged 15–19 who had more than one partner in the past 12 months who used a condom during their last sexual intercourse	Q 29 and Q35  Numerator= Number of respondents aged 15-19 who reported having had more than one sexual partner in the last 12 months who also reported that a condom was used the last time they had sex  Denominator=number of respondents aged 15-19 who reported having had more than one sexual partner in the last 12 months
Knowledge of HIV	Percentage of young people	UNGASS <sup>33</sup>	Percentage of young	Q53

31 UNAIDS, *National AIDS Programmes: a Guide to Monitoring and Evaluation*. 2000, Geneva: Joint United Nations Programme on HIV/ AIDS

32 UNAIDS, *Guidelines on Construction of Core Indicators. 2010 Reporting on UNGASS*. 2009, Geneva: UNAIDS.



Behavioral risk/ protective factor	Indicators	Agency publishing the recommendation	Variable to be calculated in the OCT AHS study	How to calculate (note: only include 15-19 year old respondents)
prevention methods	aged 15–24 who both correctly identify ways of preventing the sexual transmission of HIV and who reject major misconceptions about HIV transmission.		people aged 15–19 who both correctly identify ways of preventing the sexual transmission of HIV and who reject major misconceptions about HIV transmission.	Numerator= number of respondents aged 15-19 who gave the correct answer to questions a, c, d, e and f. <sup>34</sup>  Denominator= number of respondents aged 15-19

---

33 UNAIDS, *Guidelines on Construction of Core Indicators. 2010 Reporting on UNGASS*. 2009, Geneva: UNAIDS.

34 UNAIDS, in its *Guidelines on Construction of Core Indicators: 2010 Reporting on UNGASS* recommends the inclusion of five indicators in calculating comprehensive, correct knowledge of HIV among young people. These five questions are identical to those used in the indicator for this study, with the exception of “Can a pregnant woman with HIV infect her unborn child?” In the UNAIDS Guidelines, this question was not included in the calculation of the indicator but “Can a person get HIV from mosquito bites?” was included. The question on mother-to-child transmission was substituted for the one on mosquito bites because there was no question on mosquito bites in the OCT study.

## 2.7 Multivariate analysis

All variables described above have been included in analysis that presents differences by sex and age. The study also included multivariate analysis to identify the groups of factors most closely associated with some key outcomes in terms of health and behavior. The choice of outcomes was based on previous research, as reviewed above. Some are also comparable to internationally recommended HIV indicators. Following are the ten outcomes, or dependent variables, explored in the multivariate analysis.

### ***Sexual behavior indicators***

1. Ever had sex (yes/no)
2. Early sexual debut (<15 years old/ 15 and above)
3. Sex with more than one partner in the past 12 months (zero or one/ two or more)
4. Condom use at last sex (yes/ no)
5. Experienced or caused a pregnancy (Never/ once or more)
6. Forced sex in the past 12 months (yes or sort of / no).
7. Comprehensive, correct knowledge of HIV.

### ***Drugs, alcohol use and mental health***

8. Alcohol use in past 30 days (yes/no)
9. Ever use marijuana (yes/no)
10. Ever attempted suicide (yes/no).

The analysis explored the extent of association of these outcomes with certain predictors, chosen based on review of previous Caribbean research on adolescent and youth health.<sup>35</sup> Thus the analysis was theoretically and empirically informed by a body of research evidence. Previous research points to the following categories of variables that are associated with some or all of the key outcomes:

---

35 Allen, C. Review and Gender Analysis of Caribbean HIV Behavioural and Seroprevalence Studies. 2012. Port of Spain, Trinidad and Tobago, PAHO HIV Caribbean Office.

Allen, C. F. Situation Analysis of Adolescent Sexual and Reproductive Health and HIV in the Caribbean: Executive Summary. 2013. Washington DC, Pan American Health Organization.

Blum, R., et al., Adolescent health in the Caribbean: risk and protective factors. American Journal of Public Health, 2003. 93(3): p. 456-60.

Blum, R. and M. Ireland, Reducing risk, increasing protective factors: findings from the Caribbean Youth Health Survey. Journal of Adolescent Health, 2004. 35(6): p. 493-500.

Halcon, L., et al., Adolescent Health in the Caribbean: a regional portrait. American Journal of Public Health, 2003. 93(11): p. 1851-7.

Lerand, S.J., M. Ireland, and R.W. Blum, Sexual behavior in Caribbean youth. Journal of Adolescent Health, 2004. 34(2): p. 142-143.

Ohene, S., M. Ireland, and R. Blum, The clustering of risk behaviors among Caribbean youth. Maternal & Child Health Journal, 2005. 9(1): p. 91-100.

Pilgrim, N. and R.W. Blum, Protective and Risk Factors Associated with Adolescent Sexual and Reproductive Health in the English-speaking Caribbean: a Literature Review. Journal of Adolescent Health, 2012. 50: p. 5-23.

McBride, D. C., M. C. Freier, et al. "Quality of parent-child relationship and adolescent HIV risk behaviour in St. Maarten." AIDS Care, 2005. 17 (Suppl 1): S45-54

- Abuse and violence
- Mental health and drug use
- Family connection and support
- School connection and support
- Health care access and support
- Gender norms
- Economic vulnerability
- HIV knowledge

The associations between the variables in each category and each of the outcomes were explored using forward stepwise multiple logistic regression analysis. This method identifies the variables in order of strongest association with each outcome, starting with the variable with the strongest association. The level of statistical significance was set liberally at 0.2 to ensure that the analysis picked up a range of variables that were strongly associated with each outcome.

### 3. COUNTRY PROFILE

The Cayman Islands are located in the western Caribbean Sea about 150 miles south of Cuba and 167 miles northwest of Jamaica and comprise three Islands: Grand Cayman, Cayman Brac and Little Cayman. Grand Cayman is the largest of the islands with a land area of approximately 76 square miles followed by Cayman Brac and Little Cayman, respectively 15 square and 10 square miles.

The Cayman Islands became a British Dependent Territory with some measure of autonomy in Government in 1976. Under the constitution, the Queen of the United Kingdom is represented by a Governor, who presides over the Executive Council.

The population size was measured as 55,456 during the 2010 census, comprising 30,979 Caymanians and 24,057 non- Caymanians. In the decade 1999 to 2010 the increase in population comprised mostly Caymanians as compared with the previous two decades when non-Caymanians accounted for most of the population growth.<sup>36</sup> The Islands attract settlers with a favorable tax regime and opportunities to work in financial services or tourism.

The majority of the population lives on Grand Cayman. The population sizes on Cayman Brac and Little Cayman are 2,522 and 200 respectively, according to the Situation Analysis of the Cayman Islands, 2011. The official language of the Cayman Islands is English and this is the language of instruction in school.

The Ministry of Education, Financial Services, Training and Employment is responsible for the development, monitoring and execution of policies, laws and regulations with reference to education. In Cayman Islands education is compulsory from age 4 to 16.

Primary education is from approximately 4 to 11 years followed by secondary education. Secondary school final exams include the Caribbean Secondary Education Certificate Examinations (CSEC). In post-secondary education, emphasis is on the CXC (Caribbean Examination Council) and CAPE (Caribbean Advanced Placement Examination) exams. Graduates from post-secondary school who intend to continue can attend various tertiary level institutions. Many continue their studies abroad at the University of the West Indies and Universities in the USA, Canada and the UK.

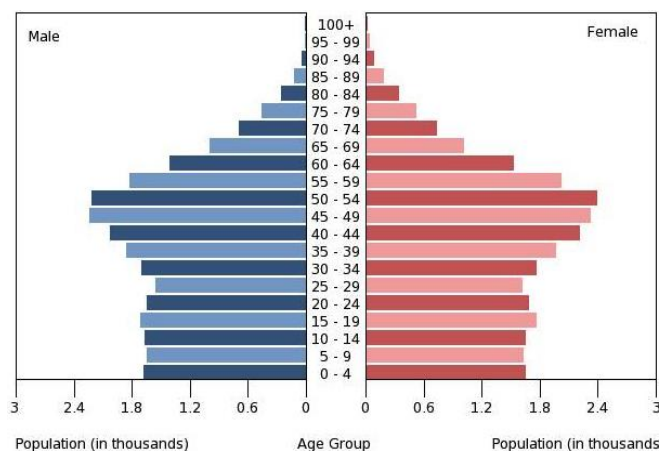


Figure 1: Cayman Islands population pyramid

<sup>36</sup> The Cayman Islands' 2010 Census Report Highlights. Available at: [http://eso.ky/UserFiles/File/1\\_1%20Total%20Population\(5\).pdf](http://eso.ky/UserFiles/File/1_1%20Total%20Population(5).pdf)

## 4. RESULTS

The results begin with a profile of participants in the study in terms of demographic indicators and socio-economic status (Section 4.1).

Key indicators of sexual behavior are then examined, as recommended by UNGASS for measurement in youth populations aged 15-24. The study in the Cayman Islands included the 15-19 year age group only, enabling limited comparisons with other studies (Section 4.2.1).

Other indicators of sexual and reproductive health outcomes and behaviors are then presented, comparing 15-16 year olds and 17-19 year olds. The figures are also compared between male and female participants, as part of gender analysis of the results (Section 4.2.2). Other important health outcomes are examined in subsequent sections, such as mental health (section 4.2.3), involvement in drug and alcohol use (4.2.4), diet, exercise and body image (4.2.5) and hygiene (4.2.6). Again, differences by age group and sex are presented.

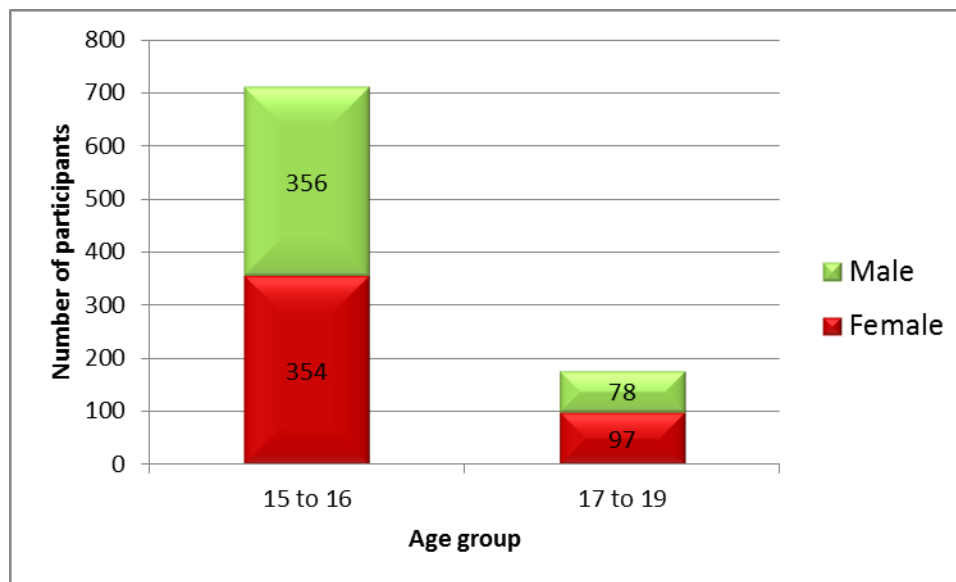
Section 4.3 examines environmental factors that may affect the health outcomes and behaviors presented in section 4.2. These include experiences of violence, peer relationships, family relationships, school and work experiences, gender perceptions and utilization of health services.

### 4.1 Age and sex distribution of participants

A total of 955 young people aged participated in the survey in the Cayman Islands, of which 469 were female (49.1%) and 486 were male (50.9%). A further 55 adolescents who stated that they were under 15 also completed the survey since they were in the same classes as some of the 15 year olds. On request of the Ministry of Health, Environment, Youth, Sports and Culture and to be consistent with the target age group of 15-19, these 55 participants are excluded from the analyses in this report.

The question on current age was responded to by 885 of the 955 participants. Most of these participants were in the younger age group 15 to 16 (710, or 80.2% of respondents), of which 350 were aged 15 and 360 were aged 16. In the older age group 17 to 19, there were 175 participants (19.8%), of which 141 were aged 17, 30 were aged 18, and 4 were aged 19. The following chart shows the distribution of participants by sex and age group.

**Figure 2: Age and sex distribution of the sample**



Note: Data in this chart relates to 885 participants with complete data on age and sex

## 4.2 Adolescent Health Behavior

In this section we examine a number of behaviors that have been shown in research to be directly associated with health outcomes such as HIV, other sexually transmitted infections, adolescent pregnancy, infectious diseases and chronic non-communicable diseases. For sexually transmitted infections and adolescent pregnancy these include age at first sex, number of partners, condom use and sexual violence. For infectious diseases they include dental hygiene and hand washing as well as those mentioned for sexually transmitted infection, and other aspects of behavior that affect immunity. For chronic non-communicable diseases they include smoking, lack of exercise, under-consumption of fruit and vegetables and over-consumption of high calorie, high fat food. The factors affecting chronic non-communicable diseases also affect susceptibility to infectious disease via effects on immunity. As well as evidence on these risk factors we examine specific health outcomes such as the rate of adolescent pregnancy and indicators of mental health. Mental health may be regarded as both a determinant of other health outcomes and an outcome in itself. A further issue that is explored is that of drug and alcohol use which may be associated with mental health and affect other health-related behaviors.

### 4.2.1 *Internationally recommended indicators of sexual behavior among 15-19 year olds*

Here we present results on HIV prevention indicators recommended by UNAIDS and PEPFAR and described in methodology section 2.6. Note that the results in this section apply to 15-19 year olds, while some internationally recommended indicators recommend application to samples of youth aged 15-24 or to the “reproductive age group” 15-49. Caution should therefore be exercised in making comparisons with other studies.

**Table 3: Sexual behavior indicators recommended by UNAIDS and PEPFAR: 15-19 year olds in school in the Cayman Islands**

		Female		Male		Total	
Behavioral risk/ protective factor	Variable calculated in the OCT AHS study	N	%	N	%	N	%
Multiple partnerships <sup>1</sup>	Percentage of females and male aged 15–19 who have had sexual intercourse with more than one partner in the last 12 months	65	28.4	115	51.8	180	39.9
Age at first sex and age mixing in sexual relationships <sup>2</sup>	Percentage of young women and men aged 15–19 who have had sexual intercourse before the age of 15 <sup>2</sup>	104	22.2	133	27.4	237	24.8
	Median age at first sex for age group 15-19 <sup>3</sup>	15		14		14	
	Age-mixing in sexual	10	4.3	NA	NA	NA	NA

		Female		Male		Total	
Behavioral risk/ protective factor	Variable calculated in the OCT AHS study	N	%	N	%	N	%
	relationships (percentage of young women aged 15-19 who have had sex with a man 10 years or more older than themselves <b>the first time they had sex</b> , of all those who have had sex in the last 12 months) <sup>3</sup>						
	Percent of young people aged 15–19 who have never had sex	235	50.1	248	51.0	483	50.6
Condom use	Condom use at first sex among 15-19 year old youth (percentage of young people	128	54.7	129	54.2	257	54.4



		Female		Male		Total	
Behavioral risk/ protective factor	Variable calculated in the OCT AHS study	N	%	N	%	N	%
	(aged 15-19) who used a condom the first time they ever had sex, of those who have ever had sex) <sup>3</sup>						
Knowledge of HIV prevention methods	Percentage <sup>4</sup> of young people aged 15–19 who both correctly identify ways of preventing the sexual transmission of HIV and who reject major misconceptions about HIV transmission.	137	29.2	94	19.3	231	24.2

NOTES : 1. The question on number of partners was answered by 229 females and 222 males. These are the demoninators used for number of partners.

2. Data on age at first sex is available for 469 females and 486 males aged 15- 19 =955.

3. Number of females aged 15-19 who had ever had sex=234. Number of males aged 15-19 who had ever had sex=238. Number in 15-19 age group who had ever had sex=472.

4. Denominators are numbers who answered all the knowledge questions: 451 females, 434 males, 855 total

A key indicator of HIV risk is the percentage of young people who have never had sex, known as primary abstinence. As shown in the Table above, 50.6% reported they had never had sex, with very similar percentages of females and males reporting primary abstinence.

Of those who had ever had sex (49.4% of participants), half had sex by age 14. Median age at first sex was 15 for girls and 14 for boys, indicating earlier age at first sex for boys. There is evidence of child sexual abuse among those who were sexually experienced, as by age 7, 3.0% had had sex, by age 10, 8.1% had had sex, and by age 12, 15.3% had had sex. Notably, 75% of the sexually active had their first sexual experience before 16, the legal age of consent. A higher percentage of boys than girls had sex before the age of 15 (27.4% and 22.2% respectively). The differences between the sexes are consistent with other Caribbean surveys, most of which have shown lower reported age at first sex among boys than girls.<sup>37</sup>

There is concern in the Caribbean about “inter-generational sex”, usually defined as children having sex with someone 10 or more years their senior. UNAIDS specifies it as the percentage of young women 15-19 who had their first sexual experience with someone ten or more years older. In the Cayman Islands among 15-19 year olds, only 4.3% of the female participants had their first sexual experience with someone 10 or more years older. None of the males had their first experience with someone ten or more years older. Of the females, 53.8% had their first sexual experience with someone 1-5 years older while 22.3% of the males had a first partner 1-5 years older. Thus while the percentage of females with an age gap of ten years or more is small, they had a greater propensity to have older first partners than males did.

Over half of sexually active youth in the survey reported that they used a condom the first time they had sex (54.4%), with levels of condom use being similar between the males and the females. Other Caribbean youth surveys have found widely varying levels of condom use by sex, with no clear pattern by sex.<sup>38</sup>

Results on comprehensive, correct HIV knowledge show more of the females than the males display this knowledge. This result will be explored below in the more detailed section on HIV knowledge.

## **4.2.2 Other indicators of sexual behavior**

### **4.2.2.1 First sexual experience**

First sexual experience is important for a number of reasons. When it takes place before the legal age of consent to sex it constitutes child abuse. Sexual exploitation, coercion and abuse of children can lower self-esteem, mental health and lead to risk-taking behavior in later life.<sup>39</sup> Between older men and girls, it usually manifests unequal gender power relations. The earlier it is, the greater the chance of sexually transmitted infection, including HIV, and adolescent pregnancy. On the other hand, under circumstances of equal and mutual respect and consent between partners the first sexual experience can be fulfilling and boost self-esteem

---

37 Allen CF, Edwards P, Gennari F, Francis C, Caffé S, Boisson E, Jones S, Jack N. Evidence on delay in sexual initiation, multiple partnerships and condom use among young people: review of Caribbean HIV behavioral studies. *West Indian Medical Journal*. 2013;62(4 (HIV/AIDS Special Issue)). Available at: <http://myspot.mona.uwi.edu/fms/wimj/article/839>

38 Allen, Edwards et al, *ibid*.

39 Ohene S, Ireland M, Blum R. The clustering of risk behaviors among Caribbean youth. *Maternal & Child Health Journal*. 2005;9(1):91-100.

and encourage healthy and satisfying future sexual experiences. It is assumed by law that children cannot consent to sex under conditions of equality and mutual respect with their partners.

Section 4.2 presented some data on first sexual experience for 15-19 year olds. We saw that around a quarter of them had their first sexual experience before the age of 15. Of the sexually active, half had sex by age 14 and over half used a condom at first sex.

The following table shows that around half of participants had ever had sex with the percentage being substantially higher among older than younger participants. The percentages of females and males who were sexually experienced were very similar overall, indicating that by late adolescence there is little difference between the sexes in the percentages that are sexually active. This is in contrast to many Caribbean surveys among adolescents and youth in which higher percentages of males than females report they have ever had sex.<sup>40</sup>

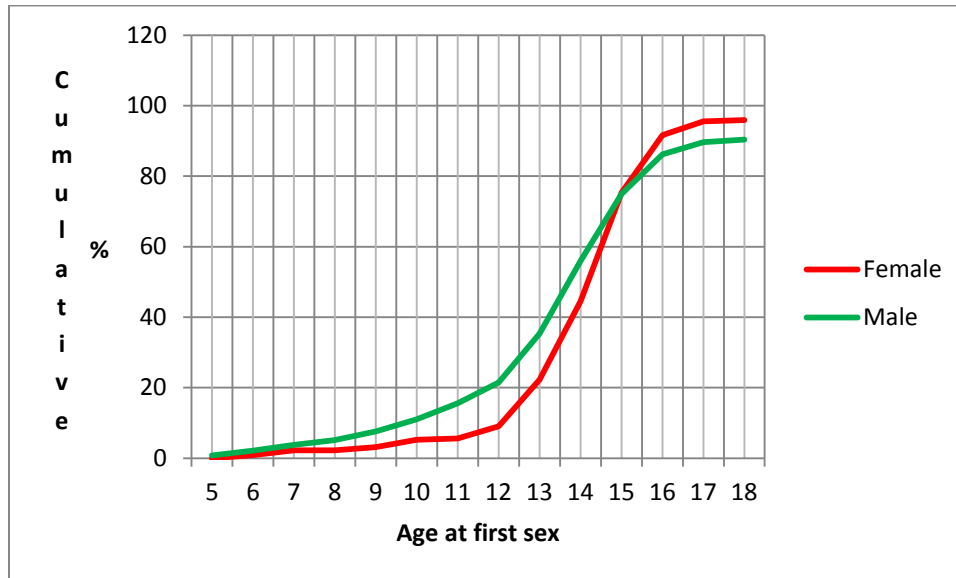
Table 4: Ever had sex, by sex and age group

	Female		Male		Age 15-16		Age 17-19		Total	
	N	%	N	%	N	%	N	%	N	%
Yes	234	49.9	238	49.0	326	45.9	109	62.3	472	49.4
No	235	50.1	248	51.0	384	54.1	66	37.7	483	50.6
Total	469	100	486	100	710	100	175	100	955	100

Participants were asked to recall the age at which they first had sex. Half of sexually experienced participants had sex by the age of 14 (50.3%) and a further quarter by the age of 15 (24.8%). Median age at first sex was 14 for boys and 15 for girls. The following diagram shows that the sexually active males generally started having sex at an earlier age than the sexually active girls. There is important evidence of child abuse. Of those who ever had sex, 5.2% of the females and 11% of the males said they had first sex by the age of 10. By the age of 12, 9% of the sexually active females and 21.5% of the sexually active males had their first sexual experience.

Figure 3: Cumulative age at sexual debut, by sex

40 Allen CF, Edwards P, Gennari F, Francis C, Caffé S, Boisson E, et al. Evidence on delay in sexual initiation, multiple partnerships and condom use among young people: review of Caribbean HIV behavioural studies. *West Indian Medical Journal*. 2013;62(4 (HIV/AIDS Special Issue)).



NOTES: Percentages are calculated for participants who have ever had sex. They do not add up to 100% because a few of these participants did not answer the question on age at first sex.

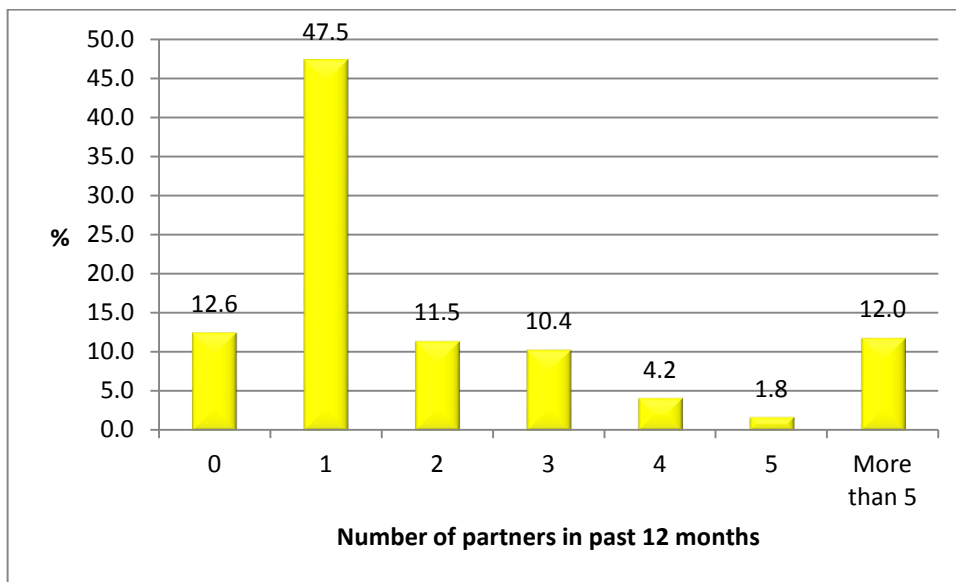
The figures on age at first sex, it should be remembered, apply only to the half of participants who had sex. Nevertheless, the findings are startling in that most of these adolescents were sexually active before the legal age and many were unlikely to have been able to give consent to sex, especially the very young participants.

Young ages at first sex raise issues of sexual coercion, rape and child sex abuse. Data on these critical issues will be presented in section 4.3.4 below.

#### 4.2.2.2 Multiple partnerships

Multiple partnerships are of concern as with each additional partner there is an increase in the risk of sexually transmitted infection. As shown in Fig. 4, most participants who had ever had sex did not have multiple partners over the past year. Close to half had only one partner and a further 12.6% had no partner in the past 12 months. Around a quarter (27.9%) had 2 to 5 partners and 12% had more than five partners over the past year.

Figure 4: Number of partners in past 12 months among participants who had ever had sex



Number of partners varied along gender lines. The following table shows that roughly twice as many young men as young women had multiple partners. The female propensity to have just one partner was roughly twice as high as among males. Older adolescents aged 17-19 generally had fewer partners than younger adolescents ages 15-16. More of the older than the younger adolescents reported being monogamous (having only one partner) over the past year.

**Table 5: Multiple partnerships in the past 12 months, by sex and age group**

	Female		Male		Age 15-16		Age 17-19		Total	
	N	%	N	%	N	%	N	%	N	%
Zero	24	10.5	33	14.8	46	14.7	11	10.3	57	12.6
One	140	61.1	74	33.3	137	44.1	46	52.3	214	47.5
2 or more partners	65	28.4	115	51.8	128	41.2	40	37.4	180	39.9

Note: percentages are of the number answering the question: 229 females and 222 males (total 451). Numbers with age group information that answered this question were 311 15-16 year olds and 107 17-19 year olds (total 418).

#### 4.2.2.3 Condom use

The following table shows that, of sexually experienced participants who answered the question, under half (45.1%) stated that they always used a condom during sex over the past year, and a further 11.3% stated that they almost always used one. There were no significant differences in reported consistency of condom use by age group. Considerably more of the males than the females said they always used condoms, and fewer of the males said they never or sometimes used condoms.

**Table 6: Consistency of condom use over the past 12 months by sex and age group**

	Female		Male		Age 15-16		Age 17-19		Total	
	N	%	N	%	N	%	N	%	N	%
Never	42	25.5	34	22.1	45	21.4	22	27.2	76	23.8
Some-	38	23.0	25	16.2	43	20.5	17	21.0	63	19.8

times										
Almost every time	26	15.8	10	6.5	23	11.0	12	14.8	36	11.3
Always	59	35.8	85	55.2	99	47.1	30	37.0	144	45.1
<b>Total</b>	<b>165</b>	<b>100</b>	<b>154</b>	<b>100</b>	<b>210</b>	<b>100</b>	<b>81</b>	<b>100</b>	<b>319</b>	<b>100</b>

Notes: \*319 out of 472 participants who had ever had sex answered this question. 291 of them had information on age group.

Condom use at last sex is generally thought to be a more valid indicator than consistency of condom use, as it is less affected by recall bias.<sup>41</sup> Around half (51.7%) of sexually experienced participants stated that they used a condom the last time they had intercourse. As shown in the following table, condom use was higher among males than females and among younger than older participants.

**Table 7: Condom use at last sex by sex and age group**

	Female		Male		Age 15-16		Age 17-19		Total	
	N	%	N	%	N	%	N	%	N	%
<b>Yes</b>	98	45.0	129	58.4	162	53.5	45	44.6	227	51.7
<b>No</b>	107	49.1	84	38.0	124	40.9	54	53.5	191	43.5
<b>Don't know</b>	13	6.0	8	3.6	17	5.6	2	2.0	21	4.8
<b>Total</b>	<b>218</b>	<b>100</b>	<b>221</b>	<b>100</b>	<b>303</b>	<b>100</b>	<b>101</b>	<b>100</b>	<b>439</b>	<b>100</b>

Notes: \*439 out of 472 participants who had ever had sex answered this question. 404 had age group information.

#### 4.2.2.4 Adolescent pregnancy and abortion

Most pregnancies among adolescents are unintended.<sup>42</sup> Adolescent pregnancy contributes to school dropout and decreases the likelihood of being gainfully employed, thus contributing to poverty and associated health challenges. When pregnancy and childbirth take place during adolescence, the risks of maternal and child morbidity and mortality are increased.<sup>43,44</sup>

In the Cayman Islands, focus group discussion participants believed that “*Teenage pregnancy is high*”, and “*everywhere you go you can find a young person with a baby*”. These perceptions seem to be borne out in

41 Camara B, Allen C, De Groulard M, Kitson-Piggott W, O’Neil C. *Guidelines for Upgrading of HIV/ AIDS/ STI Surveillance in the Caribbean: the third generation surveillance of HIV/AIDS/STI, linking case-reporting, behavioural and care surveillance*. Port of Spain, Trinidad and Tobago: Special Programme on Sexually Transmitted Infections, Caribbean Epidemiology Centre (CAREC), PAHO / WHO; 2002.

42 National Family Planning Board, *Reproductive Health Survey 2002–2003: Jamaica Final Report*, Kingston, Jamaica: National Family Planning Board, 2005.

43 Baumgartner J, Waszak Geary C, Tucker H, Wedderburn M. The influence of early sexual debut and sexual violence on adolescent pregnancy: a matched case-control study in Jamaica. *International Perspectives on Sexual and Reproductive Health*. 2009;35(1):21-8.

44 Buvinic M, The costs of adolescent childbearing: evidence from Chile, Barbados, Guatemala, and Mexico, *Studies in Family Planning*, 1998, 29(2):201–209.

reality, since 12.3% of sexually experienced participants had either been pregnant or got someone pregnant. The percentages of females and males that had had either been pregnant or got someone pregnant were very similar, but more of the males had got someone pregnant twice or more than the females had been pregnant twice or more. Not surprisingly, more of the older adolescents than the younger participants had ever been pregnant or got someone pregnant.

**Table 8: “How many times have you been pregnant or gotten someone pregnant?” by sex and age group**

	Female		Male		Age 15-16		Age 17-19		Total	
	N	%	N	%	N	%	N	%	N	%
Never	195	87.8	180	87.4	259	88.7	86	83.5	375	87.6
Once	21	9.5	16	7.8	27	9.3	9	8.7	37	8.6
Twice or more	6	2.7	10	4.9	6	2.1	8	7.8	16	3.7
Total	222	100	206	100	292	100	103	100	428	100

Notes: 428 out of 472 participants who had ever had sex answered this question. 395 had information on age group.

Focus group participants offered a variety of explanations why pregnancy is so common among young people in the Cayman Islands. These include attention-seeking behaviour:

*“Some students seek attention by becoming pregnant or think it’s cool”*

It was also noted that some adolescents actually wanted to have a child:

*“Most young people have the right information to protect them from pregnancy, but they just want to have a baby.”*

*“Some want to have a baby to feel love”*

These qualitative results suggest the need to counsel young people with respect to the range of difficulties faced by adolescents who *do* get pregnant or get someone pregnant. On the other hand, it is also necessary to make available a range of antenatal and postnatal care facilities to adolescent girls who become pregnant, and to support them to continue their education.

The study questionnaire asked girls to indicate how many times they had an abortion. Of females who had ever had sex (n=234), 18 indicated they had an abortion (7.7%), of which 14 had one abortion (6.0%) and 4 had two or more abortions (1.7%). The rate of abortion was 9.1% among 15-16 year olds and 8.5% among 17-19 year olds, of the 202 female participants who answered this question and also provided their age.

#### 4.2.2.5 Same sex partnerships and attraction

In the Caribbean, there is concern that homophobia and the illegality of anal sex contributes to high rates of HIV found in studies among men who have sex with men.<sup>45, 46</sup> Anal sex is a risky sexual practice, but it should be noted that not all sex acts between men involve anal sex. They may engage in other sexual practices such as

45 Figueroa JP, Weir SS, Jones-Cooper C, Byfield L, Hobbs MM, McKnight I, et al. High HIV Prevalence among Men Who Have Sex with Men in Jamaica is Associated with Social Vulnerability and Other Sexually Transmitted Infections. *West Indian Medical Journal*. 2013;62(4 (HIV/AIDS)).

46 Dominica Ministry of Health, Public Health Agency of Canada, UNAIDS, Pan American Health Organisation. *Behavioural and HIV Seroprevalence Survey among Men who have Sex with Men (MSM) in Dominica*. Roseau, Dominica: Health Information Unit, Ministry of Health; 2011.

oral sex and other factors such as health care and condom usage and multiple partnerships are also important in affecting risk. Homophobia decreases utilization of health care and prevention methods, including condom use, and may contribute to the instability of relationships and high numbers of partners. Thus a combination of factors may contribute to the vulnerability of males who engage in homosexual activity. Issues of discrimination and poor access to specialized health care may also lead to vulnerability among girls and women who have sex with other females.<sup>47</sup> The Adolescent Health Study therefore included measures of same sex activity and same sex attraction.

Forty-four people reported having had sex with someone of the same sex, of which 28 were female and 16 were male. Thus same sex intercourse was reported by 4.6% of all participants and 9.3% of those who had ever had sex. The following table shows the numbers that reported same sex intercourse as percentages of all participants. More of the older than the younger participants and more of the females than the males reported same sex intercourse.

**Table 9: Ever had sexual intercourse with a person of the same sex by sex and age group**

	Female		Male		Age 15-16		Age 17-19		Total	
	N	%	N	%	N	%	N	%	N	%
<b>Ever had a same sex partner</b>	28	6.0	16	3.3	28	3.9	13	7.4	44	4.6

Notes: Percentages are of all respondents (n=955), or 885 who provided age group information.

The following table shows participants who expressed same sex or bisexual attraction as percentages of all those who stated their sexual orientation. Approximately one eighth of participants stated that they were only attracted to the same sex or equally to both sexes. This was almost three times higher than the percentage of participants who stated they had actually had sex with someone of the same sex. Homosexual attraction was stated by 4.2% of respondents; 3.7% of females and 4.6% of males. Bisexual attraction was stated by 8.5% of respondents; 9.1% of females and 8.0% of males. As shown in the following table, roughly equal percentages of males and females expresses same sex or bisexual attraction, and a slightly higher percentage of older than younger adolescents stated same sex or bisexual attraction.

**Table 10: Same sex or bisexual attraction by sex and age group**

	Female		Male		Age 15-16		Age 17-19		Total	
	N	%	N	%	N	%	N	%	N	%
<b>Same sex or bisexual attraction</b>	38	12.8	38	12.6	56	12.4	17	15.2	76	12.7

Notes: \*The percentages are calculated from the responses of 600 participants who stated their sexual orientation.

47 Carr R. Social Exclusion, Citizenship and Rights: Grappling with Vulnerability in the Epidemic of HIV. In: Barrow C, De Bruin M, Carr R, editors. *Sexuality, Social Exclusion and Human Rights: Vulnerability in the Caribbean Context of HIV*. Kingston: Ian Randle Publishers; 2009. p. 71-92.



### 4.2.3 Mental health

Adolescence is a time of considerable emotional change and upheaval, in which social identity, including sexual identity, takes shape and may be challenged by others. Among the challenges commonly affecting adolescents are bullying, sexual abuse and other forms of violence.<sup>48</sup> Evidence of violence affecting young people will be explored in section 4.3. Poor mental health and especially poor self-esteem have been shown to be associated with a wide range of harmful or risky behaviors.<sup>49,50,51</sup>

The following table shows high levels of loneliness, anxiety, depression and suicidal intention among adolescents participating in this study. Over half (50.8%) sometimes or always felt lonely. Anxiety, as shown by being unable to sleep because of worry, was experienced by 43.6% over the past year. More than half (55.6%) had been depressed in that they had felt so sad and hopeless that nothing seemed worthwhile for more than a day or two over the past year. This is similar to estimates of around 50% of adolescents being depressed in studies in the English-speaking Caribbean.<sup>52</sup>

Suicidal thoughts had been experienced by 22.6% over the past year, and of those who had thought about suicide 57.9% had made a plan about how they would attempt to kill themselves, of which 16% had tried to do so once and 39.2% had tried on more than one occasion. These levels are high given that studies in the English-speaking Caribbean have shown 15% to 18% experiencing suicidal ideation.<sup>53</sup>

Females indicated significantly poorer mental health than males. Far more of the females reported loneliness, anxiety, depression and suicidal thoughts. They were also more likely to have made suicide plans but there were no differences by sex in the proportions attempting suicide among those who had planned suicide. These findings are consistent with others in the Caribbean. Eleven of fifteen studies reviewed reported that females were more likely than males to have depressive symptoms, to have attempted suicide and to have experienced suicidal ideation.<sup>54</sup>

**Table 11: Indicators of mental health and suicidal intention, by sex**

	Female		Male		Total	
	N	%	N	%	N	%
<b>How often do you feel lonely?</b>						

48 UNFPA and Population Council, *Investing when it counts: Generating the evidence base for policies and programmes for very young adolescents. Guide and tool kit*. Preventing HIV, Promoting Reproductive Health. 2006, New York: United Nations Population Fund and Population Council.

49 Pilgrim NA, Blum RW. Adolescent mental and physical health in the English-speaking Caribbean. *Pan American Journal of Public Health*. 2012;32(1):62-9.

50 Ohene S, Ireland M, Blum R. The clustering of risk behaviors among Caribbean youth. *Maternal & Child Health Journal*. 2005;9(1):91-100.

51 Pilgrim NA, Blum RW. Adolescent mental and physical health in the English-speaking Caribbean. *Pan American Journal of Public Health*. 2012;32(1):62-9.

52 Pilgrim NA, Blum RW. Adolescent mental and physical health in the English-speaking Caribbean. *Pan American Journal of Public Health*. 2012;32(1):62-9.

53 Pilgrim NA, Blum RW. Adolescent mental and physical health in the English-speaking Caribbean. *Pan American Journal of Public Health*. 2012;32(1):62-9.

54 54 Pilgrim NA, Blum RW. Adolescent mental and physical health in the English-speaking Caribbean. *Pan American Journal of Public Health*. 2012;32(1):62-9.

	Female		Male		Total	
	N	%	N	%	N	%
Never	42	11.4	101	26.6	143	18.9
Rarely	102	27.7	127	32.8	229	30.3
Sometimes	186	50.5	136	35.1	322	42.7
Always	38	10.3	23	5.9	61	8.1
TOTAL	368	100	387	100	755	100
<b>During the past year, how often have you been so worried about something that you could not sleep at night?</b>						
Never	49	13.0	126	32.1	175	22.7
Rarely	120	31.8	140	35.6	260	33.7
Sometimes	171	45.2	109	27.7	280	36.3
Always	38	10.1	18	4.6	56	7.3
TOTAL	378	100	393	100	771	100
<b>During the past 12 months, did you ever feel so sad or hopeless for more than a day or two that nothing seemed worthwhile?</b>						
Yes	294	66.5	187	44.2	481	55.6
No	148	33.5	236	55.8	384	44.4
TOTAL	442	100	423	100	865	100
<b>During the past year, did you ever <u>seriously</u> think about killing yourself?</b>						
Yes	133	30.7	59	14.2	192	22.6
No	300	69.3	356	85.8	656	77.4
TOTAL	433	100	415	100	848	848
<b>During the past year, did you make a plan about how you would attempt to kill yourself?</b>						
Yes	80	62.5	26	47.3	106	57.9
No	48	37.5	29	52.7	77	42.1
TOTAL	128	100	55	100	183	100
<b>During the past year, how many times did you actually try to kill yourself?</b>						
Never	31	43.1	10	50	41	44.6
1 time	12	16.7	3	15	15	16.3
2 or 3 times	20	27.8	6	30	26	28.3
6 or more times	9	12.5	1	5	10	10.9
TOTAL	72	100	20	100	92	100

Older adolescents experienced higher rates of loneliness and anxiety than younger adolescents. The percentages that sometimes or always felt lonely were 57.9% for 17-19 year olds and 49.9% for 15-16 year olds. The percentages that sometimes or always felt so worried that they could not sleep were 52.3% for 17-19 year olds

and 41.6% for 15-16 year olds. These findings may reflect diminishing social support as adolescents get older. Depression and suicidal ideation, plans and attempts did not differ to a significant extent by age group.

The following table shows evidence on the numbers of adolescents involved in a physical fight. Fighting may of course lead to injury and is an important health outcome for adolescents. The data do not show whether the participants themselves initiated the fight but nevertheless give a picture of an area of vulnerability that may be associated with mental health. Previous research has shown that rage and gang membership and carrying or fighting with a weapon increased the risk of sexual activity for both boys and girls.<sup>55</sup>

**Table 12: Involvement in a physical fight in the past 12 months by sex and age group**

	Female		Male		Age 15-16		Age 17-19		Total	
	N	%	N	%	N	%	N	%	N	%
Zero times	332	76.9	277	69.4	440	71.4	122	76.7	562	72.5
Once	45	10.4	70	17.5	94	15.3	17	10.7	111	14.3
Twice or more	55	12.7	52	13.1	82	13.3	20	12.6	102	13.2
<b>Total</b>	<b>432</b>	<b>100</b>	<b>399</b>	<b>100</b>	<b>616</b>	<b>100</b>	<b>159</b>	<b>100</b>	<b>775</b>	<b>100</b>

NOTES: Percentages are of 775 participants who answered the question.

Most participants had not been involved in a physical fight over the past year but 27.5% had, with the likelihood of fighting being higher for males than females. More of the younger than of the older participants had been involved in a fight.

#### **4.2.4 Cigarettes, alcohol and other drugs**

Drug use, alcohol use and smoking have been shown to be risk factors for early sexual initiation and multiple partnerships in Caribbean countries.<sup>56</sup> They are also important among the “cluster” of factors that place some adolescents at especially high risk.<sup>57,58</sup> Adolescents who use alcohol and drugs may be socially and economically vulnerable as well. In Jamaica, for instance, a study showed that marijuana smoking before sex was associated with STI and also that it was associated with high risk sexual and other behaviors and with lower education, unmarried status and unemployment.<sup>59</sup> In the Caribbean, drug trafficking is attracting some disaffected and impoverished youth with its promise of financial reward, further exposing these young people to ASRH risk factors.<sup>60</sup> Apart from their effects on behavior there are also well-known direct health effects of smoking, such as lung cancer, and of other drugs on mental capacities and mental health.

Focus group participants confirmed the role of economic vulnerability in involvement in drugs:

55 Pilgrim N, Blum RW. Protective and Risk Factors Associated with Adolescent Sexual and Reproductive Health in the English-speaking Caribbean: a Literature Review. *Journal of Adolescent Health*. 2012;50:5-23.

56 Pilgrim NA, Blum RW. Adolescent mental and physical health in the English-speaking Caribbean. *Pan American Journal of Public Health*. 2012;32(1):62-9.

57 Ohene S, Ireland M, Blum R. The clustering of risk behaviors among Caribbean youth. *Maternal & Child Health Journal*. 2005;9(1):91-100.

58 Pilgrim NA, Blum RW. Adolescent mental and physical health in the English-speaking Caribbean. *Pan American Journal of Public Health*. 2012;32(1):62-9.

59 Simeon, D.T., et al., Characteristics of Jamaicans who smoke marijuana before sex and their risk status for sexually transmitted diseases. *West Indian Medical Journal*, 1996. 45(1): p. 9-13.

60 United Nations Development Programme. *Caribbean Human Development Report 2012: Human Development and the Shift to Better Citizen Security*. Bridgetown, Barbados: United Nations Development Programme; 2012.

*“Some use drugs or sell drugs if they need the financial resources”*

They also pointed to cultural influences on the use of drugs among young people:

*“Most musicians sings about it [drug use] in a good way”*

*“The manner in which the media treat the issue of drugs influences us”*

Of those who answered the question on smoking over their lifetime (n=839), approximately two-fifths (39.9%) had ever smoked, with 89.7% of these persons having first tried a cigarette under the age of 16. Only 234 participants answered the question on smoking in the past 30 days. Of these, 56.4% said they had not smoked over the past month, 21.8% reported having smoked on 1-5 days, 6.8% on 5-10 days, 3.9% on 11-19 days and 11.1% on 20 or more days. Most of the parents or guardians of the participants did not smoke or use other tobacco products (64.8%). However, 18.0% of fathers or male guardians and 7.0% of mothers or female guardians did so, and for a further 5.9% both parents smoked. The remaining participants who answered the question did not know about parental smoking habits (4.4%). A minority of participants (8.1%) had used tobacco products other than cigarettes over the past 30 days.

The following table shows the prevalence of smoking, calculated from the data on smoking over the past 30 days. It shows higher prevalence of smoking among males than females and among older than younger adolescents. The response rate to this question was low (n=234) so these figures may not accurately reflect the situation for adolescents as a whole.

**Table 13: Prevalence of smoking over the past 30 days by sex and age group**

	Female		Male		15-16 years		17-19 years		Total	
	N	%	N	%	N	%	N	%	N	%
Smoked 1 or more days	43	38.4	59	48.4	68	40.5	29	54.7	102	43.6

NOTES: 234 participants provided data on smoking in the past month. 221 also provided age group information.

Alcohol use was more prevalent than cigarette use, with 77.8% of those who answered the question on lifetime use (n=853) having ever had a drink of alcohol (excluding a few sips of wine for religious purposes). Sixteen percent had their first alcoholic drink when they were less than 10 years old. Over the past 30 days, 53.3% had drunk alcohol, with 5.8% being heavy users of alcohol in that they drank on 11 or more days. More than half of participants (51.3%) had ever been “really” drunk, with this having happened on 10 or more occasions to 9% of participants. A minority of respondents, 20.7%, reported having ever got into trouble with family and friends, missed school or got into fights as a result of drinking alcohol.

Over the past 30 days, 53.2% of participants had an alcoholic drink on one or more days, with the percentage being similar between females and males and considerably higher among older than younger adolescents.

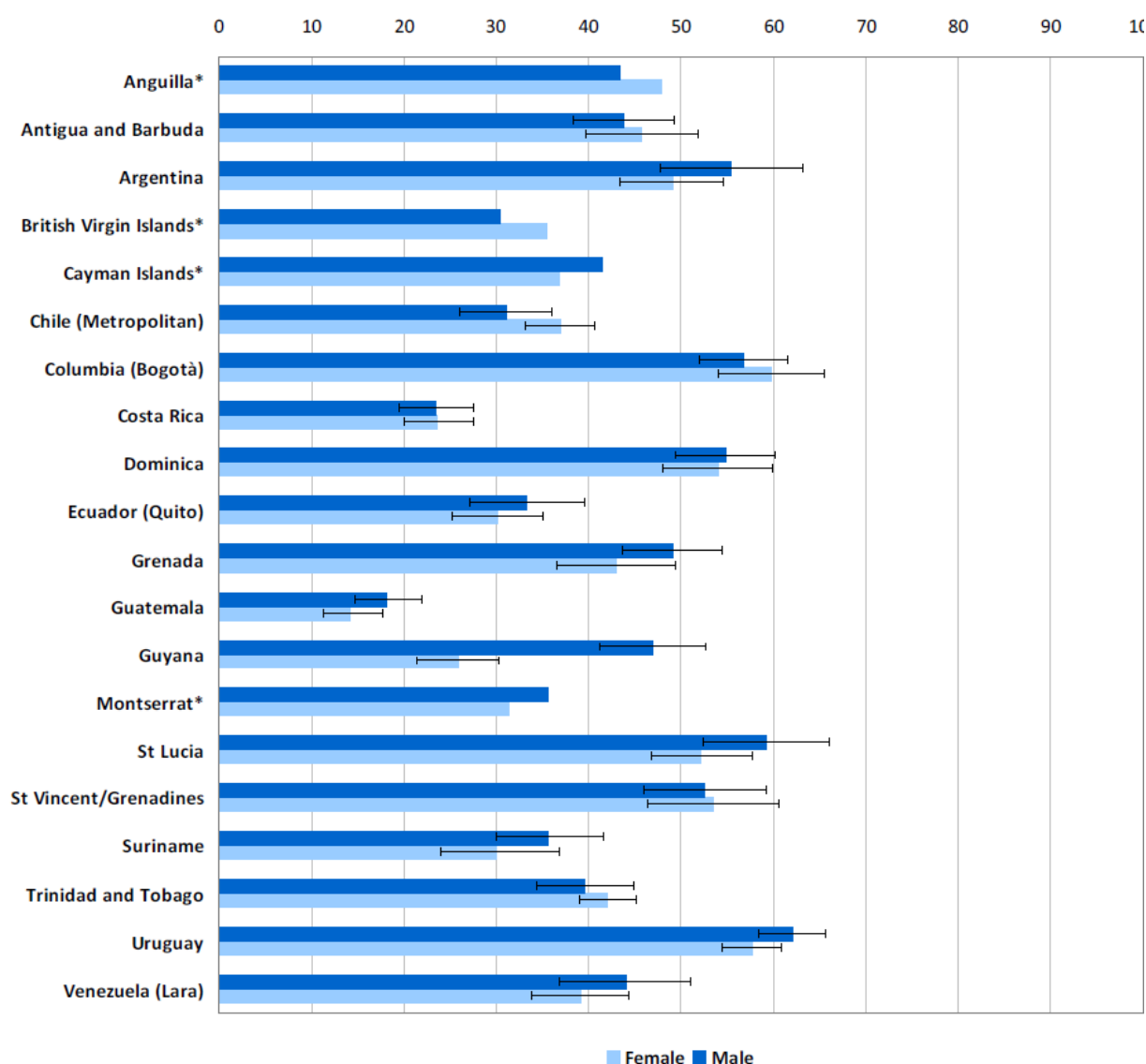
**Table 14: Prevalence of alcohol use over the past 30 days by sex and age group**

	Female		Male		15-16 years		17-19 years		Total	
	N	%	N	%	N	%	N	%	N	%
Used alcohol on 1 or more	193	54.5	148	51.8	232	49.8	90	67.2	341	53.3

NOTES: 640 participants answered the question on alcohol use over the past 30 days. 600 also provided age group information.

It is informative to compare the findings on alcohol use with results of Global School-Based Health Surveys (GSHS) conducted among adolescents aged 13-15 in Latin America and the Caribbean. The following graphic shows the percentages in that age group who had at least one alcoholic drink in the past 30 days and may be compared with the 54.5% of female and 51.8% of male participants in the Cayman Islands who had an alcoholic drink in the past month. It will be immediately noticed that these figures are higher than in most of the countries studied, probably because the age group used in the Cayman Islands (15-19) is older. The graph shows that within the Caribbean, the Windward Islands of Dominica, St. Lucia and St. Vincent and the Grenadines have the highest rates of over 50% among both boys and girls. Rates are no less than 30% in any of the Caribbean countries shown in the graph, while they are less than 30% in the Central American countries of Costa Rica and Guatemala.

**Figure 5: Percentage of adolescents aged 13-15 who had at least one alcoholic drink during the last 30 days: Latin American and Caribbean countries**



**Source:** World Health Organization. Psychoactive Substance Use Among Adolescents in the WHO Region of the Americas: Fact Sheets. 2013 [cited 2013 April 8].

Marijuana had ever been used by 35.1% of participants who answered the question (n=826), with 8% having first used marijuana by the age of 13, 21.7% having first used it between 13 and 15 years old and 5.3% having first used it at 16 or older. Of those who stated age at first use (n=293), 28.3% had used it 1 or 2 times, 41.3% had used it 3-19 times and 28.3% had used it 20 or more times. The following table shows that the percentages that had used marijuana were very similar between the sexes and that slightly more of the 17-19 year olds had used marijuana than their younger counterparts.

**Table 15: Prevalence of lifetime marijuana use by sex and age group and type of sample**

	Female		Male		Age 15-16		Age 17-19		Total	
	N	%	N	%	N	%	N	%	N	%
Ever used marijuana	153	35.7	137	34.5	211	34.1	60	38.5	290	35.1

Use of other drugs was reported to be low; only 6.8% said they had ever used psychoactive drugs other than marijuana, alcohol and cigarettes. One in fifty participants (2.4%) had used such drugs ten or more times in their life.

Focus group participants perceived that drug use was quite prevalent, with statements such as the following:

*“A lot of boys and girls are using alcohol and drugs”*

*“Youths use a lot of drugs all over the place”*

*“A lot of our friends are using drugs”*

*“Marijuana and prescription medications are used often”,*

The quantitative results show that indeed over half of young people used alcohol in the past 30 days and about a third reported that they ever used marijuana. The remarks from focus groups suggest that the figure for marijuana use may underestimate the prevalence; given that the practice is illegal some participants may not have admitted their use of this substance during the survey. The remark about the use of prescription medications suggests the need to examine the possible misuse of these drugs.

#### **4.2.5 Diet, exercise and body image**

Lack of exercise and overweight during adolescence are associated with negative health outcomes including cardiovascular diseases and adverse psychological and social consequences later in life. Excess weight acquired during childhood or adolescence may persist into adulthood and increase risk later in life for coronary heart disease, diabetes, some types of cancer, and osteoarthritis of the weight-bearing joints. Fruits and vegetables are good sources of complex carbohydrates, vitamins, minerals, and other substances important for good health. In the English-speaking Caribbean, 13% to 27% of adolescents are estimated to be overweight and 6% to 13% are estimated to be obese, suggesting poor diet and lack of exercise in the adolescent population.<sup>61</sup>

Some major Caribbean initiatives have sought to address chronic diseases and particularly the lifestyle factors associated with them that often manifest in childhood and adolescence in the region. In the Declaration of Port of Spain, “Uniting to Stop the Epidemic of Chronic Non-Communicable Diseases”, governments of the Caribbean in 2007 noted that the region is the worst affected by non-communicable diseases in the whole of the Americas.<sup>62</sup> This declaration is among several notable initiatives to combat chronic non-communicable diseases, including the establishment of a civil society alliance called the Healthy Caribbean Coalition<sup>63</sup> and the inclusion of non-communicable diseases in the Caribbean Cooperation in Health Initiative III 2010-2015.<sup>64</sup> All these

---

61 Pilgrim NA, Blum RW. Adolescent mental and physical health in the English-speaking Caribbean. *Pan American Journal of Public Health*. 2012;32(1):62-9.

62 Caribbean Community Secretariat, *Declaration of Port of Spain: Uniting to Stop the Epidemic of Chronic NCDs*. Georgetown, Guyana: Caribbean Community Secretariat: 2007.

[http://www.caricom.org/jsp/communications/meetings\\_statements/declaration\\_port\\_of\\_spain\\_chronic\\_ncds.jsp](http://www.caricom.org/jsp/communications/meetings_statements/declaration_port_of_spain_chronic_ncds.jsp)

63 [http://www.healthycaribbean.org/about\\_us.html](http://www.healthycaribbean.org/about_us.html), accessed 19 December 2013.

64 Caribbean Community Secretariat, *Caribbean Cooperation in Health III: Chronic Non-Communicable Diseases Regional Programme Area*. Georgetown, Guyana: Caribbean Community Secretariat: 2010.

[http://www.caricom.org/jsp/community\\_organs/health/cch\\_iii\\_non\\_communicable\\_diseases.pdf](http://www.caricom.org/jsp/community_organs/health/cch_iii_non_communicable_diseases.pdf), accessed 19 December 2013.

initiatives include attention to children and adolescents, to increase awareness through schools and communications methods and encourage healthy diet and exercise patterns. For instance, the Declaration of Port of Spain includes the following commitment:

That we will mandate the re-introduction of physical education in our schools where necessary, provide incentives and resources to effect this policy and ensure that our education sectors promote programmes aimed at providing healthy school meals and promoting healthy eating.<sup>65</sup>

#### 4.2.5.1 Diet

The following table enables analysis of dietary patterns among survey participants. Around a third of them ate fruit or vegetables two or more times per day (36.0% for fruit and 31.8% for vegetables). Thus only about a third followed the health recommendation of eating fruit or vegetables at least twice a day. Around a quarter (25.4%) consumed a drink can, bottle, or glass of soda or pop twice or more per day. The percentage that ate fried food twice or more per day was relatively low (15.9%). The percentages consuming large quantities of sweet drinks and fried food are lower than the percentages eating fruit or vegetables. This is a promising result for the prevention of chronic, non-communicable diseases but the percentages over-consuming sweet drinks and fried food are still substantial.

On the other hand, important minorities of adolescents are not receiving adequate nutrition in that they reported not eating fruit and vegetables or eating them less than daily. One in ten participants did not eat fruit and one in eight did not eat vegetables in the past ten days.

**Table 16: Consumption of fruit, vegetables, soda and fried food over the past 7 days**

	N	%
<b>Times per day ate fruit during past 7 days</b>		
Didn't eat fruit during past 7 days	92	9.6
Less than 1 time per day	128	13.4
1 time per day	210	22.0
2 to 3 times per day	265	27.7
4 or more times per day	79	8.3
Not stated	181	19.0
Total	955	100
<b>Times per day ate vegetables during past 7 days</b>		
Didn't eat veg during past 7 days	119	12.5
Less than 1 time per day	130	13.6
1 time per day	208	21.8
2 to 3 times per day	242	25.3
4 or more times per day	62	6.5
Not stated	195	20.4
Total	955	100

<sup>65</sup> [http://www.caricom.org/jsp/communications/meetings\\_statements/declaration\\_port\\_of\\_spain\\_chronic\\_ncds.jsp](http://www.caricom.org/jsp/communications/meetings_statements/declaration_port_of_spain_chronic_ncds.jsp), accessed 19 December, 2013.



	N	%
<b>Times per day usually drank can, bottle, or glass of soda or pop during past 7 days</b>		
Didn't drink soda or soft drink during past 7 days	180	18.9
Less than 1 time per day	203	21.2
1 time per day	138	14.5
2 to 3 times per day	183	19.2
4 or more times per day	59	6.2
Not stated	192	20.1
Total	955	100
<b>Times per day ate fried food during past 7 days</b>		
Didn't eat fried food during past 7 days	193	20.2
Less than 1 time per day	241	25.2
1 time per day	167	17.5
2 to 3 times per day	120	12.5
4 or more times per day	32	3.4
Not stated	202	21.2
Total	955	100

Combining on fruit consumption and on vegetable consumption allows us to calculate that 3.7% of all respondents, or 4.5% of those who answered the questions, ate *no fruit or vegetables* over the past 7 days. The percentage that did not eat fruit or vegetables was lower among females than males and lower among older than younger participants, as shown in the table below. While the numbers are small, it is of great concern that some adolescents are not adequately nourished in that they do not eat these essential nutrients.

**Table 17: Percentages that ate neither fruit nor vegetables in the past 7 days, by sex and age group**

	Female		Male		Age 15-16		Age 17-19		Total	
	N	%	N	%	N	%	N	%	N	%
Ate neither fruit nor vegetables	13	3.2	22	5.9	30	5.2	3	2.0	35	4.5

Focus group responses provided some context to the results. Young people noted that the availability of fast food and the lack of healthy meal options at school and home influence consumption:

*"Fast food places should be limited in the number of outlets on the island"*

*"Junk food places are near the schools"*

*"Healthy meals are not available enough in schools"*

*"Parents should make healthy choices at home for their children"*

Along with evidence of under-consumption of fruit and vegetables and over-consumption of sweet drinks and fried food, the survey included rough measures of nutritional deficiency. This can contribute to weakness and poor immune function and affect the cognitive abilities of young people. A focus group participant noted that some young people *“Cannot afford healthy food due to cost.”* Around half of participants reported that they had not felt hungry or lacked food because of lack of money in the past 30 days. On the other hand, 17.5% had experienced hunger sometimes, most of the time or always. Similarly, around 15% had eaten less than they thought they should over the past 30 days period because of lack of money “a few times” or “many times.” In section 4.3.10 on “economic vulnerability” it is shown that hunger was higher among females than males but there was little difference according to age.

**Table 18: Hunger and deficiency in resources for food**

	N	%
<b>"During the past 30 days, how often did you go hungry because there was not enough food in your home?"</b>		
Never	458	48.0
Little of the time	117	12.3
Sometimes	114	11.9
Most of the time	33	3.5
Always	20	2.1
Not stated	213	22.3
Total	955	100
<b>During the past 30 days, did you ever eat less than you felt you should because there wasn't enough money to buy food in your home?</b>		
Not in last 30 days	492	51.5
Once	101	10.6
A few times	104	10.9
Many times	39	4.1
Not stated	219	22.9
Total	955	100

#### 4.2.5.2 Physical activity

Some focus group participants expressed concern about lack of exercise and sporting activity among their peers:

*“Most of my friends do not exercise”*

*“There is a lack of sport participation, fear of being a loser.”*

About one in ten of the young people in the quantitative survey were highly physically active in that they reportedly exercised for at least 60 minutes for all seven days in the past week. At the other extreme, more young people (13.8%) were not physically active on any day of the past week. In between, around a third took low to moderate exercise, being physically active for an hour on one to three days (35.2%), and 18.9% exercised more, being physically active on four to six days.

Close to half of survey participants engaged in sedentary behaviors, such as watching television and playing video games, for at least three hours per day (46.7%). Only around one in five of the young people were sedentary for an hour or less per day or did not watch television, play video games or use the computer (19.3%).

**Table 19: Exercise and sedentary behavior**

	N	%
<b>Number of days physically active for a total of at least 60 minutes per day during past 7 days</b>		
Zero days	132	13.8
1 day	95	10.0
2 days	128	13.4
3 days	113	11.8
4 days	80	8.4
5 days	65	6.8
6 days	35	3.7
7 days	94	9.8
Not stated	213	22.3
<b>Total</b>	<b>955</b>	<b>100</b>
<b>Number hours during a typical or usual day engaging in sitting activities</b>		
Don't watch TV, play video games or use computer	46	4.8
Less than 1 hr. per day	80	8.4
1 hr. per day	58	6.1
2 hrs. per day	133	13.9
3 hrs. per day	154	16.1
4 hrs. per day	89	9.3
5 or more hrs. per day	203	21.3
Not stated	192	20.1
<b>Total</b>	<b>955</b>	<b>100</b>

The following table shows that a far higher percentage of males than females exercised over the seven days preceding the survey. The younger and older participants had similar percentages that exercised.

**Table 20: One or more days of physical activity per week by sex and age group**

	Female		Male		Age 15-16		Age 17-19		Total	
	N	%	N	%	N	%	N	%	N	%
1 or more days of physical activity	295	75.1	315	90.3	454	82.4	114	79.2	610	82.2

NOTES: Percentages are calculated for the participants who answered the questions. Numbers were:

- 695 with data on age group and days of physical activity (551 aged 15 to 16 and 144 aged 17 to 19 )
- 742 who answered the questions on physical activity (393 female and 349 male).

#### 4.2.5.3 Perceived weight and body image

Body satisfaction and perception of one's body weight have implications for adolescent social and mental well-being. A minority of the young people thought that they were "about the right weight" (39.9%), but fewer were trying to stay the same weight or not trying to do anything about their weight (27.1%). A minority stated that they were satisfied or very satisfied with their weight and appearance (39.1%).

The percentage that reported they were very or slightly underweight (12.3%) was quite consistent with the percentage that was trying to gain weight (12.8). However, the percentage that reported they were slightly or very overweight was lower than the percentage that was trying to lose weight (26.9% and 40.5% of participants respectively). This appears to show pressures on young people to be slimmer even when they do not think they are overweight.

At the two extremes of weight perception, higher numbers of young people thought they were very overweight (4.8%) than very underweight (2.8%). Combining the "very" and "slightly" categories, we see that roughly twice as many adolescents perceive themselves to be overweight than perceive themselves to be underweight (26.9% and 12.3% respectively). The percentage describing themselves as dissatisfied or very dissatisfied with their appearance (18.9%) is lower than the percentage perceiving themselves as overweight. This suggests some degree of pressure on young people to lose weight even when they think their weight is acceptable.

Small minorities are very dissatisfied with their weight or appearance or describe themselves as very under- or overweight. This suggests the need for a targeted approach for the most vulnerable. Overall the young people expressed more concern about being overweight than being underweight, with around a quarter believing they weighed more than they should and around 40% trying to lose weight.

**Table 21: Perceived body weight and body image**

	N	%
<b>How do YOU describe your weight?</b>		
Very underweight	27	2.8
Slightly underweight	91	9.5
About the right weight	381	39.9
Slightly overweight	211	22.1
Very overweight	46	4.8
Not stated	199	20.8
Total	<b>955</b>	100
<b>Which of the following are you trying to do about your weight?</b>		
Lose weight	387	40.5
Gain weight	122	12.8
Stay same weight	129	13.5
Not trying to do anything about weight	130	13.6
Not stated	187	19.6
Total	<b>955</b>	100
<b>How satisfied are you with the way you look and your body size?</b>		
Very satisfied	136	14.2
Satisfied	238	24.9

Neither satisfied or dissatisfied	166	17.4
Dissatisfied	111	11.6
Very dissatisfied	70	7.3
Never thought about it	40	4.2
Not stated	194	20.3
Total	955	100

The following table disaggregates the results by age group and sex and percentages are based on the numbers of participants who answered each question.

There were clear gender-related differences with regard to these indicators. More of the females than the males perceived themselves as slightly or very overweight, were trying to lose weight and were dissatisfied or very dissatisfied with their appearance. More of the males than the females thought they were about the right weight, were trying to stay the same weight, gain weight or not trying to do anything about their weight and were satisfied or very satisfied with the way they looked and their body size. These findings suggest pressures on adolescents and young women to focus on their appearance and to conform with particular norms of appearance and body size. The findings suggest that more of the females than the males may be overweight. This is consistent with the findings on lower levels of exercise among females as shown above.

Perceived weight and efforts to change weight were similar between age groups. However, fewer of the older participants than the younger participants were satisfied or very satisfied with their appearance and body size.

**Table 22: Perceived weight and body image by sex and age group**

	Female		Male		Age 15-16		Age 17-19		Total	
	N	%	N	%	N	%	N	%	N	%
<b>How do YOU describe your weight?</b>										
Very underweight	16	4.0	11	3.1	22	3.9	4	2.7	27	3.6
Slightly underweight	47	11.8	44	12.4	71	12.7	17	11.6	91	12.0
About the right weight	169	42.3	212	59.6	274	48.9	75	51.4	381	50.4
Slightly overweight	130	32.5	81	22.8	156	27.9	43	29.5	211	27.9
Very overweight	38	9.5	8	2.3	37	6.6	7	4.8	46	6.1
Total	400	100	356	100	560	100	146	100	756	100
<b>Which of the following are you trying to do about your weight?</b>										
Lose weight	239	59.5	148	40.4	285	50	83	57.2	387	50.4
Gain weight	59	14.7	63	17.2	87	15.3	23	15.9	122	15.9
Stay same weight	55	13.7	74	20.2	97	17.0	20	13.8	129	16.8
Not trying to do anything about weight	49	12.2	81	22.1	101	17.7	19	13.1	130	16.9
Total	402	100	366	100	570	100	145	100	768	100
<b>How satisfied are you with the way you look and your body size?</b>										
Very satisfied	59	14.8	77	21.3	100	17.7	20	13.8	136	17.9

	Female		Male		Age 15-16		Age 17-19		Total	
Satisfied	98	24.5	140	38.8	183	32.4	38	26.2	238	31.3
Neither satisfied or dissatisfied	98	24.5	68	18.8	126	22.3	33	22.8	166	21.8
Dissatisfied	69	17.3	42	11.6	74	13.1	30	20.7	111	14.6
Very dissatisfied	59	14.8	11	3.1	52	9.2	16	11.0	70	9.2
Never thought about it	17	4.3	23	6.4	30	5.3	8	5.5	40	5.3
Total	400	100	361	100	565	100	145	100	761	100

#### 4.2.6 Hygiene

Dental cavities and diarrheal diseases affect a large proportion of children and young people in the developing world. Daily tooth cleaning or brushing of the teeth can help prevent some dental disease and frequent hand washing, especially before eating and after using the toilet can help to prevent diarrheal diseases. The following table provides data on dental hygiene and hand washing among survey participants in the Cayman Islands.

**Table 23: Dental hygiene and hand washing**

	N	%
<b>How many times per day do you usually clean or brush your teeth?</b>		
Less than 1 time per day	14	1.5
1 time per day	102	10.7
2 times per day	472	49.4
3 times per day	167	17.5
4 or more times per day	34	3.6
Not stated	166	17.4
Total	955	100
<b>Frequency of hand washing before eating</b>		
Never	20	2.1
A little of time	51	5.3
Sometimes	249	26.1
Most of time	245	25.7
Always	215	22.5
Not stated	175	18.3
Total	955	100
<b>Frequency of hand washing with soap after using the toilet or latrine</b>		
Never	22	2.3
A little of time	18	1.9
Sometimes	58	6.1
Most of time	151	15.8
Always	517	54.1
Not stated	189	19.8
Total	955	100

The majority of the young people reported that they cleaned or brushed their teeth at least twice a day (85.3%). However, 12.2% of participants only brushed once a day or less than once a day, increasing their risk of oral and dental health problems. The following table shows that higher percentage of females than males and younger than older participants brushed their teeth twice or more every day, with the gap between the sexes being larger than that between the age groups.

**Table 24: Cleaned or brushed teeth at least twice a day by sex and age group**

	Female		Male		Age 15-16		Age 17-19		Total	
	N	%	N	%	N	%	N	%	N	%
Brushed teeth at least twice a day	365	88.2	308	82.1	499	85.5	126	81.8	673	85.3

NOTES: Percentages are calculated for the participants who answered the question on tooth-brushing. Numbers were:

- 738 with data on age group and tooth-brushing (584 aged 15-16 and 154 aged 17-19)
- 789 who answered the question on tooth-brushing (414 female, 375 male)

Around a third of the young people (33.5%) only washed their hands before eating sometimes, a little of the time or never washed their hands. After using the toilet or latrine, hand washing was more common, with the percentage that did so sometimes, a little of the time or never being substantially lower, at 10.3% of participants. As shown in the table below, hand washing before eating did not differ significantly between the sexes but females had a higher propensity than males always to wash their hands after using the toilet. Washing hands before a meal was more common among older than younger participants but there was no significant age-related difference in the propensity always to wash hands after using the toilet.

**Table 25: Hand washing with soap before eating and after using the toilet by sex and age group**

	Female		Male		Age 15-16		Age 17-19		Total	
	N	%	N	%	N	%	N	%	N	%
Always or most of the time washed hands before eating	218	56.9	242	61.0	333	56.7	91	66.4	460	59.0
Always washed hands after using the toilet	295	73.0	222	61.3	377	66.7	107	71.3	517	67.5

NOTES: Percentages are calculated for the participants who answered the questions on hand-washing. Numbers were:

- 724 with data on hand-washing before eating and age group (587 aged 15-16 and 137 aged 17-19)
- 715 with data on hand-washing after using the toilet and age group (565 aged 15-16 and 150 aged 17-19)
- 780 who answered the questions on hand-washing (383 female, 397 male)

The data on hygiene reveal that while the majority of participants have hygienic dental health and hand washing practices, there remain substantial minorities that do not and there is a need for continuing sensitization of adolescents on the importance of these hygiene practices. More of the adolescent females than males reported hygienic practices.

### 4.3 Vulnerability and protection in the social environments of adolescents

Section 4.2 presented health status and direct risk factors for adolescent health outcomes. In this section we contextualize these findings by looking more broadly at social determinants of health that are embedded in the social environments of adolescents. We look at a number of areas that contribute to vulnerability and protection and that have been shown in previous research (as shown in the conceptual framework section above) to be influential. These are:

- Gender norms
- Abuse and violence
- Family and community connection and support
- School connection and support
- Health care access and support
- Economic vulnerability

We also examine HIV knowledge which previous research has generally shown to be necessary but not sufficient to promote safe and responsible sexual behavior. It has been argued that responses to health promotion messages are likely to be conditioned by social contextual factors such as violence, family connection and so on.<sup>66, 67</sup> HIV knowledge is also a product of environmental conditions such as family communication and the scope of school health and family life education. Likewise, perceived ability to negotiate for safer sexual practices is likely to be affected by the social environment. Before turning to social environmental conditions, we begin this section by exploring the evidence on HIV knowledge and HIV negotiation.

#### 4.3.1 HIV knowledge

The following table shows that HIV knowledge was highest on the following indicators:

- An HIV positive pregnant woman can infect her unborn child (78.5% of participants indicated that this was true)
- A healthy-looking person can be infected with HIV (89.2%)

For both of these indicators, considerably more of the females than the males responded correctly and the percentage with correct answers was similar between the age groups but slightly higher among older participants.

Other indicators that the majority of young people answered correctly were:

- A person cannot get HIV infection by sharing food with someone who is infected (69.7%)

---

66 De Bruin M. Jamaican Adolescents' Sexual Behaviour Analysed from a Gender Perspective. In: Roberts D, Reddock R, Douglas D, Reid S, editors. *Sex, Power and Taboo: Gender and HIV in the Caribbean and Beyond*. Kingston, Jamaica: Ian Randle Press; 2009. p. 191-215.

67 Barrow C. Adolescent Girls, Sexuality and HIV/AIDS in Barbados: the Case for Reconfiguring Research and Policy. *Caribbean Journal of Social Work*. 2006 December;5:62-80.



- A person protect herself or himself from HIV infection or AIDS by having one uninfected faithful partner (one uninfected partner who has no other partner (53.8%)
- A woman with HIV or AIDS can infect her newborn child through breastfeeding (51.1%)
- A person can protect herself or himself from HIV infection by using a condom correctly every time they have sexual intercourse (68.0%)

For the first three of these, again the percentage responding correctly was considerably higher for the females than the males. As regards the effectiveness of condom use, the responses of males and females were similar. For all these indicators the percentages of each age group answering correctly were similar but with a tendency for the older age group to get more of the answers correct.

It is notable that few of the respondents got the answers incorrect and greater percentages indicated that they did not know the answers to these questions (except regarding condom use where more indicated that they did not think they were effective than indicated that they did not know whether they were effective). These results indicate gaps in knowledge on these topics among substantial minorities of adolescents, and the need to correct misconceptions among some.

Only about a third of young people knew that a person cannot get HIV from mosquito bites (35%). More of them did not know an answer to this question than indicated “Yes” or “No” (41.1%). The responses showed no clear pattern by sex or age group. These results suggest a high degree of uncertainty about mosquitoes as a potential source of HIV transmission.

As well as lack of education on specific areas of HIV knowledge such as the risks of breastfeeding, mosquito bites and the effectiveness of sexual fidelity in preventing HIV, the responses may reflect some confusion and skepticism given that institutions including schools, families, media, churches and other sources may be providing contradictory messages.<sup>68</sup> It is notable that in general females had higher levels of knowledge than males and this suggests the need for tailoring HIV prevention messages to males. The figures also suggest that younger adolescents should receive more attention in HIV education.

The percentage with comprehensive, correct knowledge of HIV was calculated from responses to questions 1 to 5 in the table below.<sup>69</sup> Around a quarter of the young people (24.2%) got answers to all of these questions right. Comprehensive correct knowledge was higher among older than younger participants (23.1% of 15-16 year olds and 29.7% of 17-19 year olds correctly answered all the questions). A considerably higher percentage of females than males had comprehensive correct knowledge (29.2% and 19.3% respectively). These results reinforce the need to increase the overall HIV education of adolescents, while an approach targeting specific elements of HIV knowledge for males may also be needed.

---

68 Kang Dufour M-S, Maiorana A, Allen C, Kassie N, Thomas M, Myers J. How Faith Based Organizations’ Doctrines Regarding Sexuality Affect Their Participation in the Public Health Response to HIV in the Eastern Caribbean. *Sexuality Research and Social Policy*. 2013;10(3):221-32.

69 UNAIDS, in its *Guidelines on Construction of Core Indicators: 2010 Reporting on UNGASS* recommends the inclusion of five indicators in calculating comprehensive, correct knowledge of HIV among young people. These five questions are identical to those used in the indicator for the PAHO OCT studies, with the exception of “Can a pregnant woman with HIV infect her unborn child” which was substituted for “Can a person get HIV from mosquito bites?” in the calculation of comprehensive correct knowledge.

**Table 26: Indicators of HIV knowledge by sex and age group**

	Female		Male		Age 15-16		Age 17-19		Total	
	N	%	N	%	N	%	N	%	N	%
1. Can a pregnant woman with HIV infect her unborn child? YES	372	82.3	333	74.7	524	77.9	131	79.4	705	78.5
NO	25	5.5	31	7.0	43	6.4	11	6.7	56	6.2
DON'T KNOW	55	12.2	82	18.4	105	15.6	23	13.9	137	15.3
2. Can a person get HIV infection or AIDS by sharing a meal (food) with someone who is infected? YES	28	6.2	55	12.5	58	8.7	19	11.5	83	9.3
NO	340	75.1	282	64.1	458	68.7	122	73.5	622	69.7
DON'T KNOW	85	18.8	103	23.4	151	22.6	25	15.1	188	21.1
3. Can a healthy-looking person be infected with HIV? YES	424	93.9	369	84.8	585	88.2	156	94.0	793	89.2
NO	5	1.1	17	3.9	17	2.6	1	0.6	22	2.5
DON'T KNOW	25	5.5	49	11.3	61	9.2	9	5.4	74	8.3
4. Can a person protect herself or himself from HIV infection or AIDS by using a condom correctly every time they have sexual intercourse? YES	312	69.5	292	66.5	440	66.6	119	72.1	604	68.0
NO	72	16.0	85	19.4	118	17.9	28	17.0	157	17.7
DON'T KNOW	65	14.5	62	14.1	103	15.6	18	10.9	127	14.3
5. Can a person protect herself or himself from HIV infection or AIDS by having one uninfected faithful partner (one uninfected partner who has no other partner)? YES	260	58.3	213	49.2	342	52.2	98	60.0	473	53.8
NO	72	16.1	83	19.2	117	17.9	27	16.5	155	17.6
DON'T KNOW	114	25.6	137	31.6	196	29.9	39	23.8	251	28.6
6. Can a woman with HIV or AIDS infect her newborn child through breastfeeding? YES	272	59.8	184	42.0	342	51.4	86	51.8	456	51.1
NO	58	12.8	88	20.1	101	15.2	31	18.7	146	16.4
DON'T KNOW	125	27.5	166	37.9	223	33.5	49	29.5	291	32.6
7. Can a person get HIV from mosquito bites? YES	107	23.8	105	23.9	148	22.4	47	28.1	212	23.9
NO	159	35.4	152	34.6	239	36.1	55	32.9	311	35.0
DON'T KNOW	183	40.8	182	41.5	275	41.5	65	38.9	365	41.1

Note: Percentages are calculated based on numbers that answered the questions.

### 4.3.2 Negotiation skills in sexual partnerships

The following table shows that most participants were confident in their ability to negotiate with their partner regarding safe sex and HIV testing. Further analyses revealed that fewer of the males than the females were confident they could refuse sex if their partner wanted it. Males were also less confident than females that if their partner wanted to have sex without a condom and they didn't, they would be able to refuse sex. On the other hand, males were more confident than females that they could ask their partner to have an HIV test. Only small gender differences were found on the other indicators. Answers to these questions did not differ substantially by age group.

**Table 27: Confidence in sexual negotiation skills**

	Not at all confident/ A little confident	Confident/ Very confident
If you DIDN'T want to have sex with your partner, how confident are you that you could refuse?	22.1	71.3
How confident are you that you could ask your partner to take an HIV test?	27.0	66.4
How confident are you that you could get your partner to use a condom if he/she did not want to?	10.7	81.7
If your partner wanted to have sex without a condom and you didn't, how confident are you that you could refuse to have sex?	19.4	72.2
How confident are you that you can discuss with your partner ways to prevent pregnancy or HIV?	16.7	75.3

NOTE: Percentages do not add up to 100% as some participants did not answer the questions.

### 4.3.3 Gender norms

The following table shows that only minorities of participants agreed with each statement supportive of traditional gender norms that generally backed up male sexual and domestic dominance.

**Table 28: Prevalence of gender-related attitudes**

Statement	Disagree	Agree
Men need to have more than one sexual partner (girlfriend), often at the same time	81.3	11.3
Boys think it is important to have sex to feel like a man	34.6	58.9
Girls think it is important to have a baby to feel like a woman	71.7	19
It is okay for a man or boy to sometimes hit his woman or girlfriend	90	3.4
It is okay for a boyfriend to force his girlfriend to have sex	90.7	2.5
It is the woman's responsibility to use something to avoid pregnancy	58.8	34.6
It is the man's responsibility to use something to avoid pregnancy	30.2	60.2
Condoms take away the feelings that a guy has during sex	52.4	33.7
Housework, such as work in the kitchen or caring for the children, is the woman's work	69.8	21.3
Men are very important in raising children	7.4	83.8

Men should always have financial responsibility towards their children and family	9.2	82.7
It is ok for a woman to have more than one sexual partner or relationship at the same time	87.1	4.7

Not surprisingly, males were more inclined to agree with statements that supported male dominance. For instance:

- More males than females agreed that men need to have more than one sexual partner, often at the same time
- More males than females agreed that it is OK for a man or a boy to sometimes hit his woman or girlfriend
- More males than females agreed that it is OK for a boyfriend to force his girlfriend to have sex
- More males than females agreed that condoms take away the feelings that a guy has during sex
- More males than females agreed that housework, such as work in the kitchen or caring for the children, is woman's work

Interestingly, each of the sexes was more inclined to think the opposite sex needed sex to affirm their masculinity/ femininity:

- Fewer males than females agreed that boys think it is important to have sex to feel like a man
- More males than females agreed that girls think it is important to have sex to feel like a woman

These results appear to show beliefs that the opposite sex requires sex, while this is less the case than believed. Hence some young people may feel pressure to have sex with their partners when this is not needed to affirm the person's feelings of masculinity or femininity.

The following finding seems to suggest that norms of masculinity prevent boys from revealing when they have been sexually abused:

- More males than females agreed that if a girl or boy is being sexually abused, it is better if s/he stays quiet

An interesting finding was that most young people agreed that men should be responsible for avoiding pregnancy. Fewer thought that it is the woman's responsibility to avoid pregnancy, and this may result from a perception that responsibility should be shared between men and women.

Differences by age group in gender norms were not substantial.

#### **4.3.4 Abuse and violence**

##### **4.3.4.1 Sexual coercion and child sex abuse**

Young ages at first sex shown in section 4.2.2.1 raise the question of sexual coercion or rape. Participants were asked whether they were forced or threatened into sex the first time. The following table provides the responses, which apply only to those who had ever had sex.

Of participants that had ever had sex, 4.9% were clear that they were forced or threatened into it (raped). A further 8.1% said that they were “sort of” forced or threatened, perhaps indicating more subtle forms of coercion. Differences by age group were small. Coercion at first sex was substantially more common for girls/ young women than for boys/ young men. In fact, three times as many females as males responded “Yes” or “Sort of” to the question as to whether they had been forced or threatened into sexual intercourse the first time.

**Table 29: "The first time you had sexual intercourse, were you forced or threatened into it?" by sex and age group**

	Female		Male		Age 15-16		Age 17-19		Total	
	N	%	N	%	N	%	N	%	N	%
Yes	17	7.6	5	2.3	15	4.9	5	4.8	22	4.9
Sort of	27	12.1	9	4.1	28	9.1	7	6.7	36	8.1
No	179	80.3	208	93.7	264	86.0	93	88.6	387	87.0
<b>Total</b>	<b>223</b>	<b>100</b>	<b>222</b>	<b>100</b>	<b>307</b>	<b>100</b>	<b>105</b>	<b>100</b>	<b>445</b>	<b>100</b>

Notes: \*445 out of 472 participants who had ever had sex answered this question. 412 of them had information on age group.

The following table explores further the type of coercion experienced by the 58 participants – 44 female and 14 male – who stated they were forced or threatened at first intercourse.

Of the nine males who specified the type of coercion used, four stated that they had been held down, two that they had been beaten, two that they had been physically threatened and one that he had been verbally threatened. Far more of the females than the males had submitted to verbal threats or being held down. Rape involving physical restraint apparently affected half of the females who had experienced coercive first intercourse. Some of the participants who had experienced coercive first intercourse did not state that any of these forms of coercion were used, indicating perhaps that other forms of persuasion (such as seduction) or force (such as financial threats) may have been used.

**Table 30: Type of coercion at first sexual intercourse by sex**

	Female		Male		Total	
	N	%	N	%	N	%
Verbal threats, such as threatening to leave you	9	20.5	1	7.1	10	17.2
Physical threats, such as threatening to beat, slap, or kill you	6	13.6	2	14.3	8	13.8
Holding you down	23	52.3	4	28.6	27	46.6
Beating (slapping) you	3	6.8	2	14.3	5	8.6

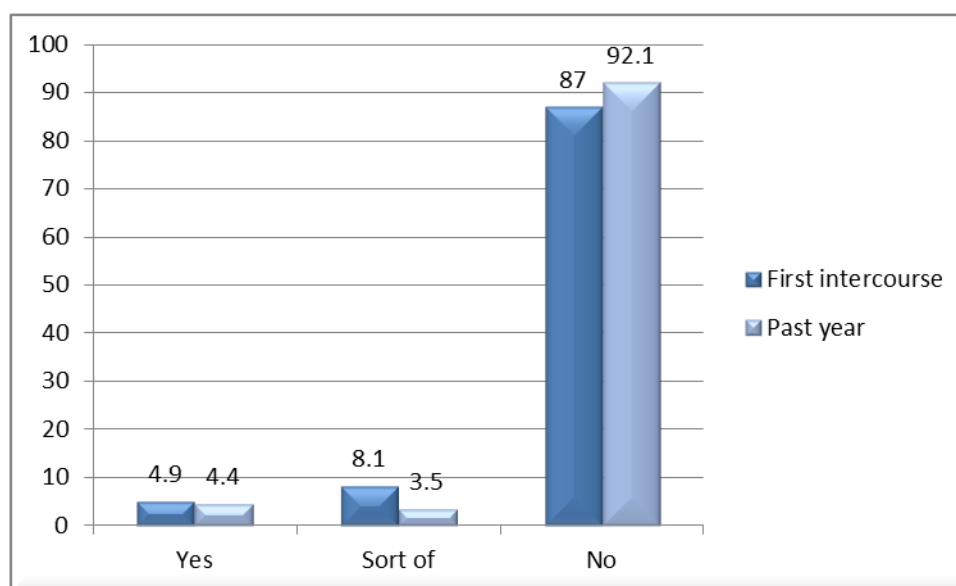
Notes: This table presents data for the 58 participants, of which 44 were female and 14 male, who said they had been forced or threatened at first intercourse.

These figures are small but support the idea that females are more likely than males to be physically forced at first intercourse. At the same time it should be noted that there may be a gender bias in the figures, with males

less likely to admit that they were coerced into sex than females.<sup>70,71</sup> Caribbean qualitative studies have noted the societal pressure on boys to prove their masculinity by having sex at an early age<sup>72</sup>; this is a form of coercion that is difficult to measure in a quantitative survey.

Participants were also asked whether they had been forced or threatened into having sexual intercourse over the past 12 months. The following chart shows that slightly fewer of the participants reported coercion during sexual intercourse over the past year as compared with the first time they ever had sex. When asked about the type of force or threat in the past year, the numbers reporting verbal, physical threats and beatings were the same or similar to first intercourse, but the number reporting “holding down” was lower over the past 12 months than at first intercourse (9 and 23 respectively).

**Figure 6: Percentages of participants who were forced or threatened to have sexual intercourse at first intercourse and in the past 12 months (of participants who had ever had sex)**



Participants were asked whether they had ever been sexually abused by a member of their family or another person. Approximately one-tenth of participants said that they had. As shown in the following table, sexual abuse was more than six times more commonly reported among females than males, but there was little difference by age group.

**Table 31: Sexual abuse by a family member or other adult, by sex and age group**

	Female		Male		Age 15-16		Age 17-19		Total	
	N	%	N	%	N	%	N	%	N	%
Sexual abuse or	87	18.6	15	3.1	76	10.7	22	12.5	102	10.7

70 Plummer ML, Ross DA, Wight D, Chagalucha J, Mshana G, Wamoyi J, Todd J, Anemona A, Mosha FF, Obasi AIN. "A bit more truthful": the validity of adolescent sexual behaviour data collected in rural Northern Tanzania using five methods. *Sexually Transmitted Infections*. 2004;80(suppl. II):ii49-ii56.

71 Plummer D, Geofroy S. When Bad is Cool: Violence and Crime as Rites of Passage to Manhood. *Caribbean Journal of Gender Studies*. 2010;4.

72 Chevannes B. *Learning to be a man: culture, socialisation and gender identity in five Caribbean communities*. Mona, Jamaica: University of the West Indies Press; 2001.

NOTE: Percentages are calculated for all participants (n=955). Age group information was provided by 855 participants.

Transactional sex, defined as receiving or giving someone money or goods in exchange for having sex, has received attention in some Caribbean sexual behavior studies as it raises the roles of economic power and inequality in driving sexual behavior.<sup>73, 74</sup> Among in-school participants in the Cayman Islands, only 19 persons (2.0%) stated that they had “ever received or given someone money or goods (including drugs, food, place to stay) in exchange for having sexual intercourse with a person.” Of these, 11 persons were female, 8 were male; 16 were aged 15-16 and 3 were aged 17-19. Percentages who had transactional sex by sex and age group did not differ significantly. In interpreting these results it should be noted that transactional sex may be stigmatized and therefore underreported.

#### 4.3.4.2 Physical abuse

Participants were asked, “Have you ever been physically abused or mistreated by anyone either in your family or another adult?” with physical abuse being defined as “when someone causes you to have a scar, black and blue marks, welts, bleeding or a broken bone.” According to this measure, 16.5% of those who answered this question had been physically abused. More than twice as many of the females as the males had been physically abused. Rates of physical abuse were similar between the age groups.

It is important to note that the definition of physical abuse focuses on clear evidence of injury and excludes abuse that results in only minor injury or pain. The figures may therefore underestimate the prevalence of physical abuse.

**Table 32: Physical abuse or mistreatment by a family member or other adult, by sex and age group**

	Female		Male		Age 15-16		Age 17-19		Total	
	N	%	N	%	N	%	N	%	N	%
Physical abuse or mistreatment by a member of the family or another adult	101	22.5	47	10.4	113	16.8	25	15.0	148	16.5

Notes: \*898 of 955 participants answered this question, of which 448 were female and 450 were male. 838 of them had information on age group, of which 671 were aged 15-16 and 167 were aged 17-19.

Of 148 participants who reported physical abuse, 136 answered the question about their relationship with the person who abused them. Most commonly, the perpetrator identified was an adult who lived with them (44.1%; 41.4% of females and 50% of males). Another adult who did not live with them was the perpetrator for 16.2% (18.1% of the females and 11.9% of the males). Physical abuse by a brother, sister or another teenager who lived with them was experienced by 9.6% and was more commonly experienced by the males (14.3%) than the females (7.5%). None of the participants reported that a boyfriend, girlfriend, or another teenager who did

73 Hawkins K, Joseph J, Longfield K, Best T. *‘Money make the nookie go ‘round’: Young women and sexual relationships in two locations in Trinidad*. Port of Spain: Options Consulting Limited and Population Services International; 2007

74 Perks C, Drakes N, Hambleton IR, Kumar A, Quimby K, Patel R, et al. Transactional and Inter-Generational Sex with older men (TIGSex Survey): A survey in Barbadian girls aged 15-19. *European Public Health Conference*; 2010 Nov. 10th; Amsterdam. 2010.

not live with them was the perpetrator. Thus physical abuse was often perpetrated by people who lived with the adolescents and the home was not a place of safety for these young people. About one third (30.2%) of those who had been abused refused to identify the perpetrator. The females more commonly refused to identify who physically abused them (33.0%) than the males (23.8%). The balance between types of perpetrator was similar between the two age groups.

#### 4.3.4.3 Experiences of personal violence

The following table shows that over half of adolescents surveyed experienced taunts in the form of making fun, name-calling and insults. Around one in five participants experienced deliberate property damage and 28.5% experienced someone stealing from them. Physical threats were experienced by 15.6% and around one in every eight participants had been sexually threatened or assaulted or physically attacked. All these types of violence except physical attacks were experienced slightly more often by younger than older adolescents. All except verbal taunting and sexual threats and attacks were experienced slightly more often by males than females.

These findings are consistent with the finding in section 4.2.3 that males were more likely to have been involved in a physical fight and previous research in the English-speaking Caribbean that showed that, with the exception of sexual assault, males are more likely to experience violence.<sup>75</sup> Results also suggest a need to develop strategies to address abuse against younger adolescents.

**Table 33: Experiences of personal violence by sex and age group**

Over the past 12 months, how often did someone...	Female		Male		Age 15-16		Age 17-19		Total	
	N	%	N	%	N	%	N	%	N	%
Make fun of you, called you names or insulted you?	240	56.2	209	52.4	338	55.1	84	53.5	449	54.4
Damage something of yours on purpose?	83	19.5	86	21.9	132	21.7	29	18.5	169	20.8
Steal something from you?	117	28.1	113	29.0	182	30.3	39	25.5	230	28.5
Threaten you with force?	65	15.5	61	15.7	98	16.3	22	14.5	126	15.6
Threaten or touched you sexually in a way you did not want?	71	16.9	33	8.6	81	13.5	16	10.5	104	12.9
Physically attack you?	46	11.0	56	14.7	74	12.5	24	15.8	102	12.8

NOTES: Percentages are calculated for the number of participants that answered the questions; this varied from 798 to 826 between the different questions. Some of the participants who answered the questions did not provide data on their age.

#### 4.3.5 Family and community connection and support

This section explores a number of dimensions of family characteristics and support that may be associated with adolescent health outcomes.<sup>76, 77, 78</sup>

75 Pilgrim NA, Blum RW. Adolescent mental and physical health in the English-speaking Caribbean. *Pan American Journal of Public Health*. 2012;32(1):62-9.

76 Pilgrim NA, Blum RW. Adolescent mental and physical health in the English-speaking Caribbean. *Pan American Journal of Public Health*. 2012;32(1):62-9.

77 Blum R, Halcon L, Beuhring T, Pate E, Campbell-Forrester S, Venema A. Adolescent health in the Caribbean: risk and protective factors. *American Journal of Public Health*. 2003 Mar;93(3):456-60.



#### 4.3.5.1 Living arrangements

The following table shows the types of people that the young people lived with. They most frequently lived with their biological mother and slightly fewer than half lived with their biological father. Sixteen percent lived with a stepfather and 3% with their mother's boyfriend. Fewer lived with a stepmother (3.8%) or with their father's girlfriend (1.1%) perhaps reflecting that fewer overall lived with their father than their mother. We see some evidence of extended family arrangements, with 8.9% living with grandparents, 5.7% with an aunt, 3.1% with an uncle and 7.8% with other relatives. Since the participants were in late adolescence, it is not surprising that a few of them were living with their spouse (3.0%) or with their boyfriend/ girlfriend (0.9%).

**Table 34: "Who lives with you in the same home?" Co-habitants in place of residence**

Co-habitant	Percentage of sample (n=955)
Biological mother	79.0
Biological father	43.4
Stepfather	15.6
Stepmother	3.8
Father's girlfriend	1.1
Mother's boyfriend	3.0
Husband/ wife	3.0
My boyfriend/ girlfriend	0.9
Grandparents	8.9
Aunt	5.7
Uncle	3.1
Sibling	47.4
Other relatives	7.8
Other non-relatives	5.1
I live alone	0.6

Most participants lived with their biological father, biological mother or both (85.0%), while the remaining participants (15.0%) lived with neither biological parent. Percentages that lived with one, other or both biological parents were similar in the two age groups studied. Marginally more of the females than males lived with one, other or both biological parents; 87.4% of females and 82.7% of males.

#### 4.3.5.2 Difficulties within the family

The following table shows fairly low prevalence of individual difficulties among parents or adults in adolescents' homes. Drinking was the most frequent difficulty and drug use the least frequently occurring of the four. However, around one third of participants experienced at least one of these problems (30.4%). The percentage scarcely differed by age group but more of the females than the males reported one or more of the challenges; 34.5% of females and 26.4% of males.

**Table 35: Parents or adults at home drinking, mental health problems, drug use and violence**

---

78 Pilgrim N, Blum RW. Protective and Risk Factors Associated with Adolescent Sexual and Reproductive Health in the English-speaking Caribbean: a Literature Review. *Journal of Adolescent Health*. 2012;50:5-23.

At any time in the past 5 years, has any of your parents or adults you live with ever had problems because of the following?	N	%
Drinking	62	19.6
Mental health problems	34	10.7
Drug use	24	7.6
Violence	42	13.3

Note: Percentages are calculated for all participants (n=955)

As regards tobacco use by parents or guardians, 15.9% of participants reported that their father or male guardian regularly used tobacco and 6.2% reported that their mother or female guardian did so. Some survey participants did not answer the question on parental tobacco use (11.4%). Rates of parental tobacco use were similar between the age groups and the sexes.

Around a third of participants did not answer the question on family suicide attempts (35.3%), challenging the reliability of this question as an indicator of prevalence. Nevertheless it is disturbing that 13.9% of all adolescents in the survey reported that a family member had ever tried to kill themselves: 10.6% reported that the person had lived and 3.3% that they had died. The percentage of younger and older participants reporting a family suicide attempt was similar. A far higher percentage of females than males reported a family suicide attempt; 30.0% of females and 14.1% of males. We saw above that females also reported poorer mental health and higher suicidal ideation than males; it may be that knowledge of family suicide attempts is associated with these outcomes among adolescents.

#### 4.3.5.3 Family caring and supervision

Support, caring and supervision from a parent or another adult at home have been shown in previous adolescent health surveys in the Caribbean to reduce the likelihood of sexual activity, perpetrating violence, substance abuse, depressive symptoms and attempting suicide and to increase the likelihood of higher social functioning, self-confidence and vocational attitudes.<sup>79, 80</sup>

The majority of participants had a supportive parent on every one of the indicators (Table 36). The only exception was “talks to you about your problems”; only 42.2% thought that it was sometimes, often or always true that an adult did this. This is consistent with other findings from the Caribbean; a qualitative study with adolescents in the Windward Islands showed that they were concerned about lack of parent-child communication about personal problems.<sup>81</sup> It also appears consistent with comments from the focus group participants in the Cayman Islands:

*“Adults do not understand the issues, they do not understand the reality of young people”*

*“Adults including parents are old fashion and do not understand that the times are different and our experiences as young people are different from their experiences. They cannot compare us”.*

<sup>79</sup> Pilgrim N, Blum RW. Protective and Risk Factors Associated with Adolescent Sexual and Reproductive Health in the English-speaking Caribbean: a Literature Review. *Journal of Adolescent Health*. 2012;50:5-23.

<sup>80</sup> Pilgrim NA, Blum RW. Adolescent mental and physical health in the English-speaking Caribbean. *Pan American Journal of Public Health*. 2012;32(1):62-9.

<sup>81</sup> Allen C, Thomas-Purcell K. Strengthening the Evidence Base on Youth Sexual and Reproductive Health and Rights in the Eastern Caribbean: Final Report. Bridgetown, Barbados: United Nations Population Fund; 2012.

The lack of parental communication may also reflect a lack of trust; one focus group participant said, “*Adults do not trust young people.*”

The areas of highest support or supervision were in expecting the adolescent to follow the rules, caring about the young person, believing s/he would be a success and always wanting the adolescent to do her/his best. Poorer areas of support (below 60%) were in understanding the participant, checking to see homework was done, listening to what the adolescent had to say and really knowing what the adolescent was doing with his/her spare time. Again, this seems to reflect a certain lack of direct engagement and supervision of adolescents. In the words of a focus group participant:

*“Students have great potential but due to lack of parental supervision and guidance, they miss out on a host of opportunities.”*

**Table 36: Family caring indicators**

In your home, there is an adult who	N	%
<b>Checks to see if your homework was done</b>		
Never true	129	13.5
Rarely true	146	15.3
Sometimes true	217	22.7
Often or always true	257	26.9
<b>Expects you to follow the rules</b>		
Never true	45	4.7
Rarely true	38	4.0
Sometimes true	115	12.0
Often or always true	550	57.6
<b>Understands you</b>		
Never true	151	15.8
Rarely true	149	15.6
Sometimes true	262	27.4
Often or always true	202	21.2
<b>Pays attention to you</b>		
Never true	70	7.3
Rarely true	102	10.7
Sometimes true	226	23.7
Often or always true	322	33.7
<b>Cares about you</b>		
Never true	29	3.0
Rarely true	39	4.1
Sometimes true	100	10.5
Often or always true	645	67.5
<b>Believes that you will be a success</b>		
Never true	49	5.1
Rarely true	57	6.0
Sometimes true	136	14.2
Often or always true	518	54.2
<b>Is too busy to pay much attention to you</b>		
Never true	277	29.0
Rarely true	272	28.5

In your home, there is an adult who	N	%
Sometimes true	232	24.3
Often or always true	64	6.7
<b>Talks with you about your problems</b>		
Never true	201	21.1
Rarely true	198	20.7
Sometimes true	224	23.5
Often or always true	179	18.7
<b>Always wants you to do your best</b>		
Never true	22	2.3
Rarely true	28	2.9
Sometimes true	78	8.2
Often or always true	689	72.2
<b>Listens when you have something to say</b>		
Never true	89	9.3
Rarely true	131	13.7
Sometimes true	224	23.5
Often or always true	265	27.8
<b>Always helps you out when you really need it</b>		
Never true	66	6.9
Rarely true	93	9.7
Sometimes true	203	21.3
Often or always true	353	37.0
<b>Really knows what you are doing with your free time</b>		
Never true	125	13.1
Rarely true	148	15.5
Sometimes true	205	21.5
Often or always true	259	27.1

Notes: Percentages do not add up to 100% because of non-response, which ranged from 14.9% to 24.6% of participants by question.

A simple scoring system was derived from answers to the questions on parental/ adult caring, allocating one point per question if the participant indicated that there was a caring adult and zero points if not. The potential range of the scale was from 0 to 12 points. Scores were generally low, around an average score of 5.3 and with a median score of 5 and an inter-quartile range of 2 to 8 points. Mean scores did not differ significantly by age group or sex.

The point scale was further graded into levels of parental/ adult caring based on quintiles of the overall distribution of scores, with 0 to 2 points categorized as “very low/ none”, 3 or 4 points categorized as “low”, 5 or 6 points categorized as “medium”, 7 to 9 points categorized as “high”, and 10 to 12 points categorized as “very high”. The following table compares the scores. Notably, over a quarter of participants were in the very low/ no family caring category. The percentage in the very low/ no family caring category was similar between the age groups and between the sexes (28.2% for 15-16 year olds and 31.0% for 17-19 year olds; 29.3% for the females and 27.8% for the males). The overall distribution of scores did not differ significantly between males and females or by age group.

**Table 37: Family caring scores by age group and sex**

	Female		Male		Age 15-16		Age 17-19		Total	
	N	%	N	%	N	%	N	%	N	%
Very low/ None	137	29.3	133	27.8	199	28.2	54	31.0	270	28.6
Low	97	20.8	101	21.1	161	22.8	30	17.2	198	21.0

Medium	91	19.5	77	16.1	115	16.3	37	21.3	168	17.8
High	82	17.6	90	18.8	133	18.9	25	14.4	172	18.2
Very high	60	12.9	77	16.1	97	13.8	28	16.1	137	14.5
<b>TOTAL</b>	<b>467</b>	<b>100</b>	<b>478</b>	<b>100</b>	<b>705</b>	<b>100</b>	<b>16.1</b>	<b>100</b>	<b>945</b>	<b>100</b>

#### 4.3.5.4 Community caring and supervision

The survey also examined the extent to which there were supportive adults outside the home setting. Over two-thirds of participants thought that it was sometimes, often or always true that outside the home there was an adult who always wanted them to do their best. Community support was lower for other indicators. However, the majority of participants thought that outside the home there was an adult who really cared about them, who they trusted, who told them when they had done a good job, noticed when they were not there, noticed when they were upset about something, listened when they had something to say and believed that they would be a success. A small but considerable minority (16.8%) thought there was an adult outside the home who was mean to them.

**Table 38: Community caring indicators**

Outside of your home, there is an adult who...	N	%
<b>Really cares about you</b>		
Never true	59	6.2
Rarely true	51	5.3
Sometimes true	171	17.9
Often or always true	445	46.6
<b>Tells you when you do a good job</b>		
Never true	49	5.1
Rarely true	84	8.8
Sometimes true	193	20.2
Often or always true	360	37.7
<b>Notices when you're not there</b>		
Never true	80	8.4
Rarely true	96	10.1
Sometimes true	210	22.0
Often or always true	318	33.3
<b>Is mean to you</b>		
Never true	461	48.3
Rarely true	249	26.1
Sometimes true	112	11.7
Often or always true	49	5.1
<b>Always wants you to do your best</b>		
Never true	39	4.1
Rarely true	41	4.3
Sometimes true	134	14.0
Often or always true	506	53.0
<b>Listens when you have something to say</b>		
Never true	61	6.4
Rarely true	69	7.2
Sometimes true	209	21.9
Often or always true	345	36.1
<b>Believes that you will be a success</b>		

Outside of your home, there is an adult who...	N	%
Never true	39	4.1
Rarely true	49	5.1
Sometimes true	126	13.2
Often or always true	450	47.1
<b>Notices when you're upset about something</b>		
Never true	77	8.1
Rarely true	113	11.8
Sometimes true	208	21.8
Often or always true	313	32.8
<b>You trust</b>		
Never true	101	10.6
Rarely true	90	9.4
Sometimes true	159	16.7
Often or always true	396	41.5

Notes: Percentages do not add up to 100% because of non-response, which ranged from 8.8% to 30.5% of participants by question.

A scoring system was devised from answers to questions on community caring, allocating one point per question if the participant indicated that it was often or always true that there was a caring adult. The potential range of scores was from 0 to 9 points. The mean score was 3.42. The average score for females was higher (3.61) than for males (3.24). Age groups had similar scores (3.43 for 15-16 year olds and 3.47 for 17-19 year olds).

The point scale was graded according to the overall distribution of scores into levels of community caring, with 0 points categorized as “none”, 1 point categorized as “low”, 2 to 4 categorized as “medium”, 5 or 6 categorized as “high” and 7 to 9 categorized as “very high”. Similar patterns of scores were found between the age groups and between the sexes.

**Table 39: Community caring scores by sex and age group**

	Female		Male		Age 15-16		Age 17-19		Total	
	N	%	N	%	N	%	N	%	N	%
None	112	24.2	137	29.4	184	26.6	44	25.7	249	26.8
Low	89	19.2	96	20.6	138	19.9	38	22.2	185	19.9
Medium	75	16.2	64	13.7	109	15.7	18	10.5	139	15.0
High	70	15.1	71	15.2	97	14.0	30	17.5	141	15.2
Very high	117	25.3	98	21.0	165	23.8	41	24.0	215	23.1
<b>TOTAL</b>	463	100.0	466	100.0	693	100	171	100	929	100.0

The score was reconfigured to compare those with “none” or “low” scores with those with higher scores. The difference between the age groups was not statistically significant according to this measure; 53.5% of 15-16 year olds had these lower scores compared with 52.1% of 17-19 year olds. No or low community caring was more commonly experienced by the males (50%) than the females (43.4%).

#### 4.3.5.5 Discussions with parents on health and social issues

Discussing emotional feelings, drug and alcohol use, sex, contraception and HIV are important aspects of health and social education that may be carried out by parents or other adults at home. Such discussions may play an

important role in prevention but some research has shown that Caribbean adolescents feel the need for more discussions with their parents about these matters.<sup>82</sup>

In the Cayman Islands, most adolescents had not discussed sex, contraceptive use or HIV with either parent or other adult they lived with, missing out on this important potential source of sexual and reproductive health education. Most participants also had not discussed feeling down and depressed. We saw above remarkably high levels of depression and suicidal feelings, so the absence of discussions with parents and other adults at home is of major concern. Most also had not discussed tobacco use, but over 60% of participants had discussed alcohol use.

**Table 40: Discussions with parents or co-residential adults on health and social issues**

Which of the following, if any, have you discussed with one or both parents or other adults you live with?	N responding "Yes"	% responding "Yes"
Tobacco use (cigarettes, snuff)	398	43.1
Alcohol Use (beer, wine, hard alcohol) or drugs (e.g. marijuana, cocaine, crack)	570	62.2
Feeling down or depressed	380	41.7
Sex (e.g. your feelings, what to do if you want to have sex)	431	47.4
Contraceptive use (e.g. condoms, pill, etc.) and/or HIV (e.g. how to avoid it)	418	46.2
HIV	359	39.8

Note: Percentages are calculated based on numbers that answered each question, ranging from 902 to 923.

A score was devised with up to one point being allocated for each topic discussed with parents or other adults (potential range 0 to 5). The average score was 2.33. Average scores were higher among older than younger adolescents (2.58 and 2.29 respectively) and among females than males (2.48 and 2.21 respectively).

A minority of participants (21.3%) had not discussed any of the five issues with a parent or another adult they lived with. This percentage was slightly higher for younger participants (22.0%) than older participants (18.5%) and substantially higher among males (23.5%) than females (19.0%). Again we see that the younger participants and the male adolescents had relatively few discussions of these important health issues with adults at home.

#### **4.3.5.6 Family support for schooling and learning**

Participants were asked about how much support they were receiving for various aspects of their schooling.

Reflecting findings shown above on high levels of family and community support for adolescents "doing their best", the following table shows that for almost all participants (95.9%), someone in their family had said it was important to do their best in school, with 78.2% of them experiencing this "all the time". For more than half of participants, someone in the family had met with teachers over the past year or had helped with schoolwork. Perhaps reflecting that participants were older adolescents and young adults, only 17.6% stated that they received too much pressure from family/parents to do well in school.

<sup>82</sup> Allen C, Thomas-Purcell K. *Strengthening the Evidence Base on Youth Sexual and Reproductive Health and Rights in the Eastern Caribbean: Final Report*. Bridgetown, Barbados: United Nations Population Fund; 2012.

**Table 41: Family support for schooling**

The following are statements about your schoolwork and family. Tell us how often these things occur.	N	%
<b>Someone in your family has met with your teachers this year</b>		
Never	228	28.4
Sometimes	394	49.1
All the time	181	22.5
<b>Someone in your family has said that it is important to do your best in school</b>		
Never	33	4.1
Sometimes	141	17.7
All the time	623	78.2
<b>Someone in your family helped with your schoolwork – such as helped you study for tests, checked that you did your homework</b>		
Never	219	27.6
Sometimes	361	45.5
All the time	214	27.0
<b>I receive too much pressure from family/parents to do well in school</b>		
Never	646	82.4
Sometimes	93	11.9
All the time	45	5.7
<b>Someone in your family usually checks up on how you did on tests or examinations</b>		
Never	496	63.4
Sometimes	179	22.9
All the time	108	13.8

Note: Percentages are based on the numbers answering questions on family support for schooling, ranging from 783 to 803 participants.

A “family-school support score” was created, with one point allocated to “sometimes” and two points allocated to “all the time” (potential range 0 to 20). The average score was 9.2, and was slightly higher among older adolescents (9.3) than younger adolescents (9.1) and higher for the females (9.3) than the males (9.0).

### 4.3.6 Peer influence

Peer influence and pressure are cited as reasons that adolescents become involved in a variety of risky behaviors, especially if they lack sufficient guidance and encouragement from adult family and community members.<sup>83</sup> If adolescents believe that most or all of their friends are engaged in a socially deviant behavior, this provides a form of support for them doing likewise. Asking about behaviors most or all of their friends are engaging in also enables participants to provide information that may reveal their own behavior that they may be reluctant to reveal through direct questioning.

It should be noted that not all 955 participants answered the questions about perceived behavior of their peers; the numbers responding ranged from 565 to 817. This indicates that between 14% and 41% either did not know

83 Allen C, Thomas-Purcell K. *Strengthening the Evidence Base on Youth Sexual and Reproductive Health and Rights in the Eastern Caribbean: Final Report*. Bridgetown, Barbados: United Nations Population Fund; 2012.



or chose not to answer the questions about their friends' behavior. The percentages in the table below are calculated based on those who answered the questions.

Around one in every five participants thought most or all of their friends were having sex. Reflecting higher sexual activity in the older age group, more of the older age group thought their friends were having sex. The overall percentage that thought some, most or almost all of their friends were having sex was 47.2%; around the same as the percentage in the survey that said they actually had sex (49.4%).

These results from the quantitative research may be contrasted with the following quote from the qualitative research that indicates the perception that "a lot of our friends are having sex." The quantitative results moderate this by showing that only about one fifth perceive that most or all of their friends are having sex. On the other hand, the quote is supported by the evidence on sexual activity. A roughly equal number of males and females aged 15-19 are indeed having sex: 50% of females and 49% of males according to Table 3 of this report.

*"An equal number of girls and boys are having sex, a lot of our friends are having sex, both male and female are having sex and sex is one of the major problem."*

A higher percentage thought that most or all of their friends used a condom if they had sex (35.4%), and a further 21.6% thought some of them used a condom. This indicates a perceived level of condom use of 57%; higher than the percentage that reported always using a condom (45.1%) and similar to the percentage that reported using a condom at last sex (57.1%).

Percentages indicating that most or all of their friends used tobacco or drugs were under 8%, indicating than only small minorities were in social groups that engaged in these behaviors. Percentages were similar between the sexes and age groups. The percentage that said most or all of their friends sold drugs was 3.3%. Nevertheless it is troubling than even small percentages of adolescents appear to be in groups that are involved in consuming or selling drugs and smoking. Previous research has revealed "clustering" of risks among highly vulnerable adolescents who are engaged in multiple forms of risk behavior.<sup>84</sup>

A total of 28.6% said some, most or almost all of their friends used tobacco, which may be compared with 35.1% of participants who had ever smoked. A similar percentage (30.3%) thought some, most or almost all of their friends used drugs.

Around two-thirds of participants thought that some most or almost of their friends drank alcohol (62.1%): slightly lower than the percentage that had ever drunk alcohol (69.1%) and much higher than the number that had drunk alcohol over the past 30 days (35.7%). The level of perceived alcohol use among friends was substantially higher among girls/young women than boys/young men. Higher alcohol use among females may be associated with mental health, as above we saw evidence of poorer mental health among females and this appears to be corroborated by the fact that 8.9% of the females stated that some, most or almost all their friends had tried to kill themselves, as compared with 3.1% of the males.

---

84 Ohene S, Ireland M, Blum R. The clustering of risk behaviors among Caribbean youth. *Maternal & Child Health Journal*. 2005;9(1):91-100.

A small minority (2.9%) of participants thought that most or almost all of their friends carried weapons. It is not clear whether these adolescents were involved in gangs or whether they were arming themselves for self-defence. There were no significant differences by sex or age group in perceived weapon-carrying by friends. A total of 8.9% of participants who answered the question thought some, most or almost all of their friends carried a weapon.

About 40% of participants thought that some, most or almost all their friends had been involved in a physical fight. This percentage was higher for males (42.4%) than females (38.8%).

Overall the findings suggest that while there were some participants who did not answer questions on their friends' behavior, those that did had a fairly accurate estimation on some indicators of how many of their friends were engaged in various forms of risky behavior or in condom use (a protective behavior). Small minorities may be highly at risk since they perceived most or almost all of their friends to be involved in tobacco use, drug use, selling drugs and carrying weapons. This suggests the need for targeted approaches for highly vulnerable groups of young people.

**Table 42: Peer influence: percentages that thought that most or almost all of their friends were engaging in specified behaviors, by sex and age group**

How many of your friends do you think...?	Female		Male		Sig.*	Age 15-16		Age 17-19		Sig.*	Total	
	N	%	N	%		N	%	N	%		N	%
Are having sex?	72	20.1	73	21.6	.858	96	17.7	40	36.4	.000	145	20.8
Use a condom if they are having sex?	90	32.4	110	38.3	.131	148	34.6	40	40.4	.142	200	35.4
Use tobacco (e.g. cigarettes)?	26	6.7	26	6.8	.543	36	6.1	12	8.8	.125	52	6.7
Drink alcohol (e.g. beer, wine, rum)?	145	41.6	102	27.7	.000	166	30.7	70	53.4	.000	247	34.5
Use drugs (e.g. marijuana, cocaine, crack)	27	6.9	31	8.1	.152	42	7.3	11	7.4	.807	58	7.5
Sell drugs	13	3.2	13	3.3	.712	18	3.0	8	5.2	.318	26	3.3
Carry weapons such as a gun, knife, etc.	7	1.7	16	4.0	.157	16	2.7	6	4.0	.341	23	2.9
Have been in physical fights	47	12.0	79	20.8	.003	93	16.3	18	12.6	.239	126	16.3
Have been arrested	7	1.7	8	2.0	.955	11	1.8	4	2.6	.464	15	1.8
Tried to kill themselves?	7	1.7	5	1.2	.001	8	1.3	4	2.6	.429	12	1.5

NOTES: Percentages are calculated for the numbers that answered each question, which varied from 565 to 817. Some who answered the questions did not provide information on their age.

### **4.3.7 School connection and support**

#### **4.3.7.1 Feelings about school**

Of all the young people surveyed, 0.9% planned to quit school, and 12.5% planned to finish their education as soon as they finished high school. A further 2.0% planned to complete technical or vocational school, 36.5% to complete university and 32.7%, wanted to progress as far as gaining an advanced degree. The remaining survey participants either did not know how far they wished to progress with their education (5.1%) or did not answer the question (10.6%). The overall picture is of generally ambitious adolescents with 71.2% wanting to progress to higher education. This may in part reflect the high degree of parental and adult support for educational

achievement shown in section 4.3.5. There appeared to be greater educational ambition among the girls and young women than among the boys and young men in that 45.8% of the female participants aimed to obtain an advanced degree as compared with only 26.6% of the boys.

Of those who answered the question about feelings about school (n=744), about a quarter (24.4%) liked school a lot, and a further 55.2% liked school “some”. Fewer did not like school much (13.6%) and 6.9% stated that they hated school. The percentage that did not like or hated school was slightly higher among younger (21.9%) than older adolescents (18.4%). It was very similar between females (20.3%) and males (20.6%).

#### 4.3.7.2 School connectedness

The degree of connectedness to school has been shown to be a protective factor for adolescent health.<sup>85</sup> This was measured by a variety of questions leading to the generation of a “school connectedness score.”

A percentage ranging between round 15% and 33% stated that they were NOT connected to school according to the following indicators:

- They thought teachers never or rarely cared about students
- They never or rarely felt safe at school
- They never or rarely felt a part of school
- They thought schoolwork was hard most or all of the time
- They had no friends in school most or all of the time
- They never or rarely felt happy in school
- They never or rarely thought that students were treated fairly in school

Small percentages were especially vulnerable because they were bullied or threatened in school (3.8%), their parents or guardians did not care if they were in school or not (6.8%), they never or rarely got the help they needed in school (10.6%), they never or rarely felt safe in school (14.8%) or teachers were mean most of the time or always (9%)

**Table 43: Prevalence of elements of school connectedness**

Feelings about school	N	%
<b>I feel that teachers care about students</b>		
None of the time/ rarely	151	18.2
Sometimes	314	37.8
Most of the time/ always	366	44.0
<b>I get the help I need to be successful in school</b>		

85 Pilgrim N, Blum RW. Protective and Risk Factors Associated with Adolescent Sexual and Reproductive Health in the English-speaking Caribbean: a Literature Review. *Journal of Adolescent Health*. 2012;50:5-23.

<b>Feelings about school</b>	<b>N</b>	<b>%</b>
None of the time/ rarely	87	10.6
Sometimes	233	23.4
Most of the time/ always	501	61.0
<b>I feel safe at school</b>		
None of the time/ rarely	120	14.8
Sometimes	217	26.7
Most of the time/ always	475	58.5
<b>I feel a part of school</b>		
None of the time/ rarely	179	22.2
Sometimes	237	29.4
Most of the time/ always	390	48.4
<b>I feel that students are treated fairly in school</b>		
None of the time/ rarely	195	24.4
Sometimes	323	40.4
Most of the time/ always	282	35.3
<b>School work is hard</b>		
None of the time/ rarely	149	18.4
Sometimes	397	49.0
Most of the time/ always	264	32.6
<b>Teachers are mean</b>		
None of the time/ rarely	422	52.6
Sometimes	308	38.4
Most of the time/ always	72	9.0
<b>I am bullied or feel threatened in school</b>		
None of the time/ rarely	730	89.7
Sometimes	53	6.5
Most of the time/ always	31	3.8
<b>I have no friends in school</b>		
None of the time/ rarely	640	80.5
Sometimes	61	7.7
Most of the time/ always	94	11.8
<b>I feel happy at school</b>		
None of the time/ rarely	166	20.8
Sometimes	287	36.1
Most of the time/ always	343	43.1
<b>My parents or guardian care if I am in school or not</b>		
None of the time/ rarely	56	6.8
Sometimes	57	6.9
Most of the time/ always	709	86.3

NOTE: Percentages were calculated based on numbers responding to each question. This ranged from 795 to 831.

The school connectedness score had a potential range of 0 to 11 points, with one point being allocated every time a participant gave a response that indicated she or he was connected to school. The average score was 5.9. It was very similar between female and male participants; 5.8 and 5.9 respectively. It was higher among older participants aged 17-19 (6.5) than among younger participants aged 15-16 (5.7). The higher score among older participants may reflect some selection effect as it may be that those who feel connected to school are more likely to continue their education after age 16.

#### 4.3.7.4 Support from teachers

On most indicators, the majority of participants thought that their teachers provided support. The exceptions were in the areas of discussing sex and HIV, indicating deficits in sexual and reproductive health education that will be explored further below. Given that fewer than half of respondents said that they discussed sex, contraception and HIV with their parents or other adults they lived with (section 4.3.5.5), there appears to be an overall deficit in sexual and reproductive health education.

Areas where more than three-quarters of participants thought their teachers were supportive were in caring about their students as individuals (80%), expecting students to do their best (94.8%), expecting students to graduate high school (90.9%), getting along with teachers (84.8%) and receiving extra help with schoolwork if needed (91.4%). Teacher support for personal issues was weaker; 51.3% stated that they could go to a teacher if they were really upset or mad about something, and exactly 50% stated that they could ask teachers for advice about personal problems.

We saw above that 24.4% of participants did not think that students were treated fairly in school. Consistent with this, it was found that 27.2% disagreed or strongly disagreed that their teachers treated students fairly.

**Table 44: Perceived support from teachers**

Perceived support from teachers	N	%
<b>My teachers treat students fairly</b>		
Strongly disagree	53	6.7
Disagree	162	20.5
Agree	463	58.7
Strongly agree	111	14.1
<b>My teachers care about me as a person</b>		
Strongly disagree	34	4.4
Disagree	120	15.5
Agree	475	61.5
Strongly agree	143	18.5
<b>My teachers expect me to do my best</b>		
Strongly disagree	16	2.1
Disagree	24	3.1
Agree	400	51.9
Strongly agree	331	42.9
<b>My teachers expect me to graduate high school</b>		
Strongly disagree	21	2.7
Disagree	27	3.5
Agree	356	45.8
Strongly agree	374	48.1
<b>I get along with my teachers</b>		
Strongly disagree	27	3.5
Disagree	91	11.8
Agree	476	61.5
Strongly agree	180	23.3
<b>At least one teacher or other adult in school has gotten to know me really well</b>		

Strongly disagree	57	7.4
Disagree	160	20.7
Agree	325	42.1
Strongly agree	230	29.8
<b>I could go to one of my teachers if I am really upset or mad about something</b>		
Strongly disagree	133	17.1
Disagree	246	31.7
Agree	250	32.2
Strongly agree	148	19.1
<b>I could ask for advice about personal problems from one of my teachers</b>		
Strongly disagree	141	18.5
Disagree	240	31.5
Agree	247	32.5
Strongly agree	133	17.5
<b>I could go to my teacher for extra help with school work if I need it</b>		
Strongly disagree	29	3.8
Disagree	37	4.9
Agree	398	52.4
Strongly agree	296	39.0
<b>I could discuss sex with one of my teachers</b>		
Strongly disagree	276	36.8
Disagree	244	32.5
Agree	168	22.4
Strongly agree	62	8.3
<b>I could discuss HIV with one of my teachers</b>		
Strongly disagree	259	34.8
Disagree	232	31.2
Agree	197	26.5
Strongly agree	56	7.5

Note: Percentages relate to the numbers who answered each question, which ranged from 744 to 789 participants.

A score was derived from the results, with one point per question if the response indicated teacher support (potential range 0 to 11 points). The average score was 7.2 and was higher among females (7.4) than males (7.1). It was also higher among older participants (7.6) than younger participants (7.2).

The percentage that stated that they received no support on all of the indicators was 3.5%. This percentage was substantially higher for males (5.9%) than for females (1.2%). While the percentages are small, they give cause for concern about the relative vulnerability of some males because they are not supported by their teachers.

It is interesting to note, therefore, that females appeared to receive somewhat more support from teachers than males but that the levels of connectedness to school were quite similar between the sexes.

#### 4.3.7.5 Sex and HIV education in school

We saw above that only 36.8% of participants thought that they could discuss sex and 34.8% thought that they could discuss HIV with one of their teachers. Higher percentages - over half of participants - said that the following topics were presented or discussed in class: how to use a condom, how to avoid HIV infection or AIDS, the benefits of not having sex, the signs and symptoms of HIV infection and AIDS and sexual feelings and

behavior. This indicates that, for these topics, information was presented in class to most students but that some of these students still did not feel able to discuss HIV or sex with their teachers.

Topics covered for only a minority of participants included where to get tested for HIV, how to tell someone that you don't want to have sex with them, how to tell someone that you don't want to have sex with them without a condom, the importance of being kind and supportive to persons with HIV and where to get treatment for HIV and AIDS. These results indicate particular deficits in building sexual negotiation skills, in providing information about HIV testing and care and in seeking to prevent stigma and discrimination against people living with HIV.

**Table 45: Topics covered in sex and HIV education in school**

During the last school year, were the following topics presented or discussed in any of your classes?	Number that responded "Yes"	%
How to use a condom	402	52.3
How to avoid HIV infection or AIDS	511	66.0
The benefits of not having sex	422	57.0
Where to get tested for HIV	301	40.8
How to tell someone that you do not want to have sex with them	322	44.2
How to tell someone you do not want to have sex with them without a condom	303	41.9
The importance of being kind and supportive to persons with HIV or AIDS	306	42.9
The signs and symptoms of HIV infection and AIDS	383	53.6
Where to get treatment for HIV infection and AIDS	311	44.1
Sexual feelings and behavior	410	56.5

NOTE: Percentages are calculated based on the numbers of participants that answered each question. This ranged from 706 to 774.

Of the 10 items of sex and HIV education listed, on average 4.5 had been covered in the past school year per participant. The averages were slightly higher among females (4.7) than among male participants (4.3). They were substantially higher among younger participants (4.9 among 15-16 year olds) than among older participants (2.7 among 17-19 year olds). The striking age related difference may reflect lower emphasis on sex education in educational institutions when adolescents have passed the age of 16.

More than a quarter of participants (28.2%) had not received education on *any* of the 10 items above. This percentage was considerably higher among older adolescents (46.4%) than younger adolescents (24.7%). The percentages that received no sex education was similar between males (28.6%) and females (27.9%).

#### **4.3.8 Health care access and support**

The following table shows that the most common source of medical care for participants by far was the public hospital. Private doctors and public clinics also made important contributions to the health care of adolescents. Only about one in every hundred participants made use of traditional health practitioners.

There were sharp age-related differences in patterns of health care use. The older participants were more likely to use private doctors and less likely to attend the public hospital than the younger participants. Roughly the same percentages of older and younger participants used public clinics.

There were not large differences by sex in the percentages of participants that used public clinics and the public hospital. However, substantially more of the females than the males used private doctors. Slightly more of the males went “nowhere” for health care, suggesting a gender-related tendency by males not to attend medical institutions. A focus group participant confirmed that some young people tend not to use health services:

*“There are health services available but we do not use them.”*

Of the few who reported using traditional health care, all were male.

One of the focus group participants noted that young people sometimes seek health care outside the Cayman Islands.

*“We don’t trust the healthcare professionals and the available facilities, based on our experiences and personal opinion, and that’s why we prefer medical attention overseas.”*

Quantitative data on the use of health care outside the country was not collected in this study.



**Table 46: Usual source of medical care**

Where do you usually go for medical care?	Female		Male		Age 15-16		Age 17-19		Total	
	N	%	N	%	N	%	N	%	N	%
Nowhere	20	5.2	27	7.7	37	6.7	5	3.9	47	6.4
Public clinic (health center, health post, dispensary, polyclinic)	36	9.4	35	10.0	57	10.3	12	9.3	71	9.7
Public hospital	230	60.2	220	62.8	353	64.0	61	47.3	450	61.4
Private hospital	0	0	0	0	0	0	0	0	0	0
Private doctor	92	24.1	57	16.2	92	16.7	49	38.0	149	20.3
Traditional health (herbalist, bush doctor, obeah man)	0	0	9	2.6	8	1.5	1	0.8	9	1.2
Other	4	1.1	3	0.9	5	0.9	1	0.8	7	1.0
TOTAL	382	100	351	100	552	100	129	100	733	100

Results in the table below show that less than half of adolescents surveyed expressed satisfaction with health care according to various criteria. However, this does not mean that over half were dissatisfied since there were substantial percentages who stated they were “not sure” in relation to each question. Overall, the girls/ young women were less likely to express satisfaction than the boys/ young men. Older participants appeared more satisfied with health care than the younger teenagers.

Satisfaction with health services was expressed by only 37.2% of respondents, with a further 46.7% unsure whether youth were satisfied with health services. Levels of satisfaction were highest among males and older youth. Taking the set of questions as a whole, fewer of the females than the males had positive assessments of health care, with substantial gender related differences with respect to perceived confidentiality, ease of getting to a health care facility, opening hours of facilities, knowledge of youth about the services available to them, level of youth involvement in health care design and respect of health care providers for youth. The results suggest that there are significant shortfalls in the responsiveness of health care services with regard to the need of girls and young women especially.

There were substantial levels of concern about confidentiality, with 31% of respondents to the question agreeing with the statement, “If I tell a health care provider, such as a nurse or doctor, something personal, my parents or others in the clinic or community will know,” and a further 38.9% not sure whether a health care worker would do this. Concerns about confidentiality were stated by more of the younger than the older participants. Focus group participants also expressed some mistrust of health care providers:

*“We don’t trust the service as we feel that our parents will find out”*

*“I will not go to the clinic as my parents will find out”*

Several questions explored the level of responsiveness to youth needs. Close to half of respondents (49.4%) thought that health care providers listened carefully to youth, with little differences between the sexes and age groups in answers to this question. A smaller percentage, 37.7%, thought that health care providers were friendly and cared about youth needs, with more of the older than the younger respondents agreeing with this statement. Only about a quarter of respondents (23.3%) thought that youth were involved in or asked about how to provide health services. More of the older than the younger respondents stated that young people were *not* involved. A focus group participant stated that

*“We need to have younger persons in these services as well as we think that we are judge by older persons.”*

With regard to communication about sexual and reproductive health, only about a quarter of respondents (27.8%) agreed that youth feel comfortable discussion reproductive health concerns, such as sex, HIV and birth control with health care providers, and a further 41% unsure about this. Health care providers seem to be more willing to discuss these matters with older adolescents, since substantially more of the 17-19 year olds than the 15-16 year olds affirmed this statement. A focus group participant expressed “*lack of trust and feeling uncomfortable*” with regard to experiences with health care.

**Table 47: Health care access and support by sex and age group**

Based on your own experiences or what you have heard from other people your own age, which of the following statements are true?	Female		Male		15-17 year olds		17-19 year olds		TOTAL	
	N	%	N	%	N	%	N	%	N	%
<b>If I tell a health care provider, such as a nurse or doctor, something personal, my parents or others in the clinic or community will know.</b>										
Yes	162	35.9	111	25.6	209	31.8	47	28.5	273	31.0
No	133	29.5	133	30.9	179	27.2	67	40.6	266	30.2
Not sure	156	34.6	187	43.4	270	41.0	51	30.9	343	38.9
<b>Health care providers listen carefully to youth.</b>										
Yes	218	48.6	214	50.2	317	48.6	90	54.2	432	49.4
No	63	14.0	62	14.6	91	13.9	22	13.3	125	14.3
Not sure	168	37.4	150	35.2	245	37.5	54	32.5	318	36.3
<b>Health care providers are friendly and care about youth needs.</b>										
Yes	159	35.7	169	39.7	231	35.5	75	45.5	328	37.7
No	80	18.0	70	16.4	109	16.8	28	17.0	150	17.2
Not sure	445	46.3	187	43.9	310	47.7	62	37.6	393	45.1
<b>Youth feel satisfied with the services they receive when they visit a health care facility, like a clinic or hospital.</b>										
Yes	154	35.4	156	39.2	218	35.3	73	45.3	310	37.2
No	72	16.6	62	15.6	96	15.6	26	16.2	134	16.1
Not sure	209	48.1	180	45.2	303	49.1	62	38.2	389	46.7
<b>Getting to a health care facility is easy for youth.</b>										
Yes	171	39.6	211	52.6	270	43.8	85	53.1	382	45.9

No	115	26.6	74	18.5	146	23.7	31	19.4	189	22.7
Not sure	146	33.8	116	28.9	200	32.5	44	27.5	262	31.5
<b>The hours health care facilities are open are convenient for youth.</b>										
Yes	170	39.6	201	50.0	277	45.1	67	41.9	371	44.7
No	77	18.0	59	14.7	87	14.2	38	23.8	136	16.4
Not sure	182	42.4	142	35.3	250	40.7	55	34.4	324	39.0
<b>Youth know all about the health services that are available to them and how to obtain them.</b>										
Yes	96	22.3	125	31.2	167	27.0	38	24.4	221	26.6
No	139	32.3	108	26.9	165	26.7	65	41.7	247	29.7
Not sure	195	45.4	168	41.9	286	46.3	53	34.0	363	43.7
<b>Youth are involved in or are asked about how to provide services to youth.</b>										
Yes	81	18.8	113	28.1	142	23.1	36	22.4	194	23.3
No	126	29.2	98	24.4	149	24.2	58	36.0	224	26.9
Not sure	224	52.0	191	47.5	324	52.7	67	41.6	415	49.8
<b>Youth feel comfortable discussing reproductive health concerns, such as sex, HIV and birth control, with health care providers.</b>										
Yes	116	26.7	115	28.9	151	24.4	62	39.0	231	27.8
No	145	33.4	115	28.9	202	32.7	39	24.5	260	31.3
Not sure	173	39.9	168	42.2	265	42.9	58	36.5	341	41.0
<b>Health care providers treat all youth client with equal care and respect.</b>										
Yes	165	38.6	189	48.2	264	43.4	69	44.0	354	43.2
No	52	12.2	52	13.3	68	11.2	26	16.6	104	12.7
Not sure	210	49.2	151	38.5	277	45.5	62	39.5	361	44.1

NOTES: Percentages are calculated for the numbers that answered each question, which varied from 819 to 882. Some who answered the questions did not provide information on their age.

Singling out one aspect of health care concerning sexual and reproductive health care, the survey found that 56 participants had been tested for HIV, of which 50 knew their results. Thus 5.2% of the entire sample had ever been tested for HIV and knew their results. This is a low percentage given campaigns for young people to “know their status” as part of HIV prevention initiatives.

### 4.3.9 Religious affiliation and connectedness

Religious connectedness, as indicated by religious beliefs and attendance at religious services, were found to be protective against substance use, rage and violence in the Adolescent Health Survey in nine Caribbean countries.<sup>86</sup> Religiosity was also found to be protective against suicidal outcomes, depression and alcohol use in other studies.<sup>87</sup> It appears therefore to be protective against negative mental health outcomes.

Around two-thirds (63.6%) of participants said that their religion was Christian, 0.5% were Hindu 0.4% were Muslim and 1.6% were of “other” faith. Around one in five (19.9%) said they had no religious faith and 13.9% did not answer the question. There were few differences by age group in patterns of religious affiliation. However, more of the females than the males said that they were of Christian faith (71.2% and 56.2% respectively).

Participants were asked whether they considered themselves to be religious or spiritual people. Around one in ten participants (10.5%) considered themselves very religious, 36.5% somewhat religious, 24.9% a little religious and 17.1% not at all religious. A further 10.9% did not answer this question. Echoing the percentage that considered themselves very religious, around one in ten reported that they attended church, temple or mosque more than once a week over the past month (9.2%). A further 26.2% reported weekly attendance, 25.2% reported they attended once or twice over the past month, 28.4% reported they never attended and 11% did not answer the question. Thus the majority of participants had some religious faith and attended a religious institution at least monthly.

### 4.3.10 Economic vulnerability

Questions were asked that assessed the level of economic need of participants. These included, “During the past 30 days, how often did you go hungry because there was not enough food in your home?” Of all survey participants, 11.9% said they had sometimes felt hungry, 3.5% said they felt hungry most of the time and 2.1% said they always felt hungry. The percentage that had gone hungry because of lack of food in the home sometimes, most of the time or always over the past month differed little by age group. However, hunger was substantially more common among females than males. Around one in five girls experienced hunger sometimes, most of the time or always over the past month whereas this was experienced by only about one in every seven boys.

**Table 48: Experienced hunger over the past 30 days because there was not enough food in the house, by sex and age group**

	Female	Male	Age 15-16	Age 17-19	Total

86 Blum, R., L. Halcon, et al. (2003). "Adolescent health in the Caribbean: risk and protective factors." American Journal of Public Health 93(3): 456-60.

87 Pilgrim, N. and R. W. Blum (2012). "Protective and Risk Factors Associated with Adolescent Sexual and Reproductive Health in the English-speaking Caribbean: a Literature Review." Journal of Adolescent Health 50: 5-23.

	N	%	N	%	N	%	N	%	N	%
Experienced hunger in past 30 days	100	21.3	67	13.8	130	18.3	28	16.0	167	17.5

NOTES: Percentages are calculated for all 955 participants in the survey. 885 supplied information on their age group.

Working for pay during adolescence may also be an indicator of economic need, though beyond the age of 16 it may reflect transition into the job market. Around one in five participants had worked in the past 4 weeks, with slightly more of the females than the males having worked. As expected, the percentage that had worked was higher among 17-19 year olds than among the younger 15-16 year olds.

**Table 49: "Are you currently working or have you worked in the last 4 weeks?" by sex and age group**

	Female		Male		Age 15-16		Age 17-19		Total	
	N	%	N	%	N	%	N	%	N	%
Worked for pay in past 4 weeks	109	23.2	100	20.6	147	20.7	50	28.5	209	21.9

NOTES: Percentages are calculated for all 955 participants in the survey. 885 supplied information on their age group.

## 4.4 Multivariate analyses

Multivariate analysis was used to identify the combination of factors associated with a number of key health outcomes. The potential risk and protective factors explored were selected based on a review of previous adolescent health research from the Caribbean and are described in the methodology section.

Sexual activity was found to be associated with indicators of violence (sexual abuse, being involved in a physical fight), alcohol use, poor family support and reactionary gender norms. There is also the suggestion that it was associated with poorer economic status, since the young people who had ever worked were more likely to be sexually active.

**Table 50: Factors associated with having ever had sex: adjusted odds ratios and results of multivariate logistic regression<sup>1</sup>**

Variable	Adjusted Odds Ratio	95% CI	P
Drank alcohol once or more in past 30 days	2.08	1.29-3.34	0.002
Has been sexually abused	2.49	1.25-4.94	0.009
Had a physical fight in past 12 months	1.85	1.08-3.19	0.026
Never worked	0.58	0.35-0.97	0.039
Traditional gender norms <sup>2</sup>	1.52	0.90-2.57	0.114
No or low family care <sup>3</sup>	1.58	0.93-2.67	0.090

- NOTES: 1. Based on 319 participants with full data on all variables  
 2. Scored 6 or more out of maximum 12 marks on the traditional gender norms scale (from question 54)  
 3. Lowest quintile of family caring scale distribution (from question 17)

Early sexual debut (before the age of 15), like sexual activity, was associated with sexual abuse, being involved in a physical fight and reactionary gender norms. It was also associated with use of marijuana, poor connection to school and being male.

**Table 51: Sexual debut before the age of 15: adjusted odds ratios and results of multivariate logistic regression**

Variable	Adjusted Odds Ratio	95% CI	P
Ever used marijuana	2.53	1.64-3.92	<0.001
Had a physical fight in past 12 months	1.99	1.25-3.13	0.003
Has been sexually abused	2.69	1.25-4.94	0.002
Low or no connection to school	1.90	1.21-2.97	0.005
Traditional gender norms <sup>2</sup>	1.60	0.94-2.72	0.081
Male	1.58	0.93-2.67	0.119

- NOTES: 1. Based on 499 participants with full data on all variables  
 2. Scored 6 or more out of maximum 12 marks on the traditional gender norms scale (from question 54)

Multiple partnerships among adolescents in the Cayman Islands were more likely among those who had experienced violence over the past 12 months or had been physically abused. Males were significantly more likely to report multiple partnerships than females. Poor connection with school was a predictor of multiple partnerships. Alcohol use and depression were important predictors, showing the importance of mental health.

**Table 52: Sex with more than one partner over the past 12 months: adjusted odds ratios and results of multivariate logistic regression<sup>1</sup>**

Variable	Adjusted Odds Ratio	95% CI	P
Drank alcohol once or more in past 30 days	2.79	1.14-6.84	0.025
Low school connection <sup>2</sup>	3.05	1.04-9.00	0.043

Variable	Adjusted Odds Ratio	95% CI	P
Female	0.45	0.19-1.10	0.080
Has ever been physically abused	0.47	0.17-1.26	0.136
Traditional gender norms <sup>3</sup>	3.35	1.01-11.14	0.048
Experienced violence over past 12 months <sup>4</sup>	3.03	0.80-11.54	0.104
Depression in past 12 months <sup>5</sup>	0.44	0.14-1.46	0.182

NOTES: 1. Based on 139 participants who had ever had sex and had full data on all variables

2. In lowest quintile of school connection score (from question 90)

3. Scored 6 or more out of maximum 12 marks on the traditional gender norms scale (from question 54)

4. Experienced 3 or more of 6 violent acts in the past 12 months (from question 91)

5. From the question, "During the past 12 months, did you ever feel so sad or hopeless for more than a day or two that nothing seemed worthwhile?" (question 62)

No other sexual behavior variables had sufficient data to conduct multivariate analyses. For the pregnancy variable, there were too few cases of pregnancy to offer the possibility of assessing the differences between the participants who had caused or experienced a pregnancy and those who had not.

Alcohol use over the past 30 days was more likely if a person had a physical fight over the past 30 days. Surprisingly, it was also more likely if a person had protective sexual attitudes and less likely if they had sex before the age of 15. It should be noted that the outcome variable measures whether or not a person drank at all over the past 30 days. Because of small numbers with full data, it was not possible to examine risk factors for heavy drinking.

**Table 53: Drank alcohol once or more in past 30 days: adjusted odds ratios and results of multivariate logistic regression<sup>1</sup>**

Variable	Adjusted Odds Ratio	95% CI	P
Sex before the age of 15	0.49	0.31-0.78	0.003
Had a physical fight in past 12 months	1.57	0.93-2.63	0.091
Protective sexual attitudes <sup>2</sup>	1.48	0.93-2.33	0.096

NOTES: 1. Based on 319 participants with full data on all variables



2. Scored 6 or more out of maximum 11 marks on the positive sexual attitudes scale (from question 54)

Results on suicide attempts confirm the critical importance of abuse and violence in affecting the wellbeing of adolescents. Those who had been sexually abused were 7.5 times more likely than others to have attempted suicide. Those who had a high level of exposure to violence were 4 times more likely than others to have attempted suicide.

**Table 54: Attempt at suicide in past 12 months: adjusted odds ratios and results of multivariate logistic regression<sup>1</sup>**

Variable	Adjusted Odds Ratio	95% CI	P
Sexual abuse	7.54	1.93-29.5	0.004
Experienced violence over past 12 months <sup>2</sup>	3.99	1.21-13.19	0.023

NOTES: 1. Based on 71 participants who said they had thought about suicide and had full data on all other variables

2. Experienced 3 or more of 6 violent acts in the past 12 months (from question 91)

Some cross-cutting factors affected more than one of these outcomes. Violence and abuse increased risk. For instance:

- Adolescents who were sexually abused were 2.5 times more likely to have had sex and 7.5 times as likely to have attempted suicide than those who were not sexually abused
- Those who had been in a physical fight in the past year were 1.9 times more likely to be sexually active and 1.6 times more likely to have drunk alcohol in the past month than those who had not.
- Young people who experienced at least 3 of 6 violent acts in the past year were 4 times more likely to have attempted suicide.

Alcohol use increased the risk of both sexual activity and multiple partnership.

Lack of social support increased vulnerability. Those with no or low family care were more likely to have had sex. Low school connection increased risk of multiple partnerships.

Agreement with gender norms supportive of male dominance increased risk of sexual activity and multiple partnerships.

When combined with other variables, the sex of participants did not affect outcomes significantly, except multiple partnerships, which were more likely if the participant was male.

## Discussion and conclusion

This wide-ranging study of adolescent health included the majority of 15-19 year olds attending educational institutions in the Cayman Islands. It is likely therefore to present quite a valid picture of the status of young people in this age group. However, some notes of caution should be sounded. One is that not all young people attending educational institutions in this age group participated in the study. It is possible that those who did not participate differed in systematic ways from those who did participate, rendering the results less valid as a representation of the population in question. Secondly, the young people were sampled from educational institutions, and out-of-school youth were not included. Out-of-school youth may differ in systematic ways from the population studied and may be more vulnerable than the participants this study. Thirdly, among those who participated in the survey, response rates to individual questions varied widely. Questions with lower response rates provide less reliable data than those with higher response rates. Varying response rates posed challenges to multivariate analyses which is conducted on data from the subset of participants who answered all questions being included in the multivariate model. Less than a third of participants provided answers to all the questions included in the multivariate analyses. However, the results of the multivariate analyses, in terms of the risk and protective factors identified were highly consistent with other results from this study and others on adolescent sexual and reproductive health in the Caribbean, providing some validation of the findings.

Not all young people in the Cayman Islands are at equal risk of HIV. For instance, only about half of 15-19 year olds have ever had sex, and of these, half used a condom at first sex and three-quarters first sex at or over the age of 15. However, substantial minorities have multiple partners and have sex under the age of 15, with the propensity for these risk two behaviors being higher among males than females, reflecting results of other Caribbean youth and adolescent surveys. Being male also emerged as an independent risk factor for sex before the age of 15 in multivariate analyses. The number of boys and girls who had caused a pregnancy or been pregnant (12.3%) is remarkably high, as is the rate of abortion among the girls (7.7%).

In terms of risk factors for chronic, non-communicable diseases, only around a third of young people eat fruit and vegetables at least twice a day, and about one in twenty did not eat either over the past week. More of the males ate neither fruit nor vegetables. On the other hand, the males exercised more frequently than the girls, were less likely to consider themselves overweight and were more satisfied with their appearance.

A cluster of risk factors is of great concern, namely violence, mental ill-health and drug use. Each showed gender differentials in terms of prevalence. Girls experienced higher rates of sexual and physical abuse from people they lived with. About one-tenth of participants stated they had been sexually abused by a member of their family or another person, with the prevalence of sexual abuse being six times higher among females (18.6%) than males (3.1%). Physical abuse or mistreatment by a family member or other adult was twice as high among females (22.3%) as among males (10.4%). Thus domestic abuse appears directed mostly at females. Additionally, sexual coercion at first intercourse, standing at 13% of those who had sex, was three times higher among females than males.

On the other hand, while the males did not report sexual abuse and coercion as much as the females, they reported lower age at first sex, as is consistent with other Caribbean studies<sup>88</sup>. For instance, more than twice as

---

88 Allen, C. F., P. Edwards, et al. (2013). "Evidence on delay in sexual initiation, multiple partnerships and condom use among young people: review of Caribbean HIV behavioural studies." *West Indian Medical Journal* 62(4 (HIV/AIDS Special Issue)).

many males as females reported sex by the age of 12 (9% of females and 22% of males). More of the males than the females also experienced various forms of harassment and abuse such as property damage and theft and physical threats and attacks. More of the young men than the young women had been involved in a physical fight. While the overall levels of violence are of concern, the gendered patterns are also of note. Girls/ young women were more likely to be victims of sexual violence and violence against them was more prevalent in the domestic space than outside. On the other hand, there was more violence against boys/ young men in the “public space” outside the home and they reported sexual activity at earlier ages, mostly below the legal age of consent.

Remarkably high levels of mental ill health were experienced by participants, with about half having been depressed in the past year; a rate similar to those found in other Caribbean studies<sup>89</sup>. Close to a quarter had experienced suicidal thoughts in the past year. Far more of the young women than the young men reported loneliness, anxiety, depression and suicidal thoughts. Females were also more likely to hold negative views about their appearance.

Multivariate analyses showed a clear association between experience of violence and suicide attempts. Those who had been sexual abused were 7.5 times more likely to have attempted suicide, and those with three or more experiences of violence or harassment over the past year were 4 times more likely to have attempted suicide. Multivariate analyses also revealed that sexual abuse was a risk factor for sexual activity and early age at first sex, while physical abuse and involvement in fighting increased the risk of early sexual debut, multiple partnerships and alcohol use. These highly gendered forms of violence must be reduced to preserve the mental and physical health of young people and even to save their lives. Adherence to reactionary gender norms increased the risk of sexual activity, early sexual intercourse and multiple partnerships, reinforcing the critical role of gender attitudes in influencing health outcomes.

Poor mental health may also be associated with drug use, though it was not possible to explore this in multivariate analysis because of low response rates to some questions. Around a third of participants had ever used marijuana and 6.8% other psychoactive drugs. A remark from a focus group participant suggested it may be useful also to research the prevalence of abuse of prescription drugs. More than half had used alcohol in the past month. This may reflect the fact that they are older adolescents; Caribbean studies with younger adolescents aged 13-15 show lower levels of alcohol consumption.

Findings on family and school support suggest highest levels of family support with regard to achievement and adhering to norms (following the rules, believing the child would be a success and always wanting the adolescent to do her/his best). Lower percentages of parents/ adults at home provided support with regard to conversing, attempting to understand the perspectives of young people and providing supervision of their spare time activities. Most adolescents had not discussed sex, contraceptive use, HIV or feeling down or depressed with either parent or other adult they lived with, missing out on these important potential sources of education and support to help prevent and mitigate problems described above. Notably, low level of family support emerged as an independent risk factor for sexual activity in multivariate analysis. It appears some young people may be seeking solace in sexual activity and relationships when they do not feel supported by parents and

---

89 Pilgrim, N. and R. W. Blum (2012). "Protective and Risk Factors Associated with Adolescent Sexual and Reproductive Health in the English-speaking Caribbean: a Literature Review." *Journal of Adolescent Health* 50: 5-23.

adults. Similar factors may also help explain rates of drug and alcohol use and high rates of adolescent pregnancy.

Most of the young people had a positive assessment of school, but between about 15% and 33% of them did not feel connected to school according to various indicators. Results regarding support from teachers were similar to those regarding support from parents. Almost all stated that teachers provided support for educational success but only around half felt they could talk to teachers about problems or feelings and only a third thought they could talk to teachers about HIV. Poor connection with school emerged as a risk factor for multiple partnerships in multivariate analysis.

Young people also showed their concern about the quality of health care. Less than half of adolescents surveyed expressed satisfaction with health care according to various criteria, and substantial minorities were not sure about the answers to most questions. The girls/ young women were more likely than the boys to express concern about confidentiality, ease of getting to a health care facility, opening hours of facilities, knowledge of youth about the services available to them, level of youth involvement in health care design and respect of health care providers for youth. The results suggest that there are significant shortfalls in the responsiveness of health care services with regard to the need of girls and young women especially.

The picture that emerges from these results is of adolescents vulnerable to ill-health and even suicide attempts as a result of a combination of factors including violence and lack of emotional and social support from key institutions, namely the family, school and health care services. These vulnerabilities do not affect all young people equally and it is important to focus attention on those who are more exposed to violence and have less support. The study also showed the highly gendered nature of violence and mental health. Young women and girls generally had poorer mental health and this is at least partially associated with sexual abuse and violence against them, especially in the domestic space. More of the males were subjected to or involved in violence in the public space and this was associated with risk of multiple partnerships, suggesting that cultural pressures to assert “hard masculinities” may put many young men and boys at risk<sup>90</sup>. Gender norms supportive of male dominance were found to increase sexual risk. These same cultural features may also help explain lower reported ages at first sex, lower consumption of fruit and vegetables and higher participation in exercise among the boys. Studies that are more focused on the relationships between gender, emotional and social support, mental health and health outcomes are suggested. Initiatives should aim to increase the capacities of families, schools and health care workers to enhance their emotional support and education of young people. In addition, concerted efforts should be made to combat violence and abuse of and between young people. Such efforts should take account of the highly gendered nature of violence and develop complementary programmes for girls/ young women and boys/ young men.

---

90 Plummer, D. (2010). Is Learning becoming Taboo for Caribbean boys? Challenging HIV and AIDS: A New Role for Caribbean Education. M. Morrissey, M. Bernard and D. Bundy. Paris, France, United Nations Educational, Scientific and Cultural Organization: 174-183.



# **APPENDICES**

## **APPENDIX 1: Adolescent Health and Sexuality Questionnaire**

See separate PDF attachment.





## APPENDIX 2: Guiding Questions for Focus Group

**(M= main question; P= prompt questions; F: follow-up questions)**

1. M: What is it like to be a young person in your community?

P: Is it easy? Is it hard? Please explain why it is easy or hard

2. M: in your opinion, how involved are young people in your community?

P: Can you give some examples?

3. M: What are your feelings about the way adults pay attention to the issues and concerns of young people in school and in the community?

P: Can you give some examples?

F: What could be done to give youth more “voice”?

4. M: From your perspective, what do you see as the top two or three health issues that young people face in your community?

P: What makes you list these? How widespread do you think these are?

5. M: Let’s look at each more closely, for XXX, what can be done to help reduce it as a health problem for your people? **(Ask this for each issue identified)**

F: Who should do it?

6. M: Are there health services especially for young people in your community?

F: If not, should there be and what types of health services?

F: If yes, how do they work? Do you think they are sufficient?

7. M: are young people using those services?

F: If not, why not?

F: If yes, what do they think about the service they receive?

8. M: in your opinion, do adolescents use a lot of alcohol and drugs in your community?

P: Why do you think so (yes or no answer)?

F: what can be done to deal with the problem of alcohol and drug use among young people?

***Now let’s turn to another topic that relates to questions about sex, sexually transmitted diseases, etc.***

9. M: where would young people in your community go and who would they talk to if they have issues or questions about sex, pregnancy or protection (contraception)?

F: If they had concerns that they might be pregnant, or that they had a sexually transmitted disease, where would they go?

10. M: What are the barriers they would face in getting services for these issues?

P: how would they pay? Are services confidential? Are providers capable to deal with young persons? Are the service hours convenient for young persons?

11. M: People say that a lot of kids today are having sex. In your community, is that true?

P: how common is it for girls? How common is it for boys?

F: at what age do you think kids start having sex?

P: why do you think girls have sex at that age? What about boys?

F: Certainly there are kids who are not having sex. Why do you think that some don't?

12. M: When they are having sex, how common do you think it is for boys to use condoms? How often are girls insisting on them?

F: what are the barriers to using condoms?

P: are condoms easy to get here? Are they cheap or expensive?

13. M: do you think young people in your community are aware of HIV/AIDS?

P: Why do you think that (they are aware or not aware)?

F: Do you think they are concerned about getting HIV/AIDS?

P: How concerned are they?

P: If they are not concerned, why not?

F: Where do young people in your community hear about HIV/AIDS?

F: Is there more that could be done to inform young people about HIV/AIDS, and if so, what is it?

### APPENDIX 3: Letter sent to school Principals introducing the study



**(Name of School)**

P.O. Box  
Grand Cayman KY1-1102  
Cayman Islands

Email:

September 21, 2012

Dear Mrs. ,

The Ministry of Health, Environment, Youth, Sports and Culture, is working with The Pan American Health Organization (PAHO), to conduct a study in ALL schools with children ages 15-19 years in the Cayman Islands, to increase the understanding of youth health and sexuality in our country. The Survey will be administered by the National Drug Council with the support of the Public Health Department during October 8th through 12th 2012.

The study explores the behaviors, attitudes, beliefs and perceptions of young person's ages 15-19 years, regarding peer relationships, family relationships, sexual and reproductive health, HIV, substance use, use of health services, social and mental health, nutrition, hygiene, physical health, and the school and work experiences in the Cayman Islands. A representative from our office will be in touch with you very shortly to schedule a convenient date for administering the survey at your school as well as the possible scheduling of a focus group should your school be selected. Your co-operation in making the necessary arrangements at your school is greatly appreciated.

Attached is the letter to be sent to parents and a FAQ on the Adolescent Health Study for your perusal. If you have any questions, please do not hesitate to contact the National Drug Council (Coordination of schools & volunteers) at 949-9000 or Ms. Therese Prehay, Health Promotion Officer at 244-2632.

Thank you for your support and co-operation.

Sincerely,

A handwritten signature in black ink, appearing to be 'Joan West-Dacres'.

---

Mrs. Joan West-Dacres  
Executive Director

Enclosures (2) : HSA 2012 FAQ's and Letter for Parents

## Appendix 4: List of Frequently Asked Questions provided to school Principals and parents



### Adolescent Health Study Frequently Asked Questions (FAQs)

#### What is the Adolescent Health Study?

It is a survey designed to increase understanding of youth health and sexuality. The study explores the behaviours, attitudes, beliefs and perceptions of young persons aged 15-19 years, regarding peer relationships, family relationships, sexual and reproductive health, HIV, substance use, use of health services, social and mental health, nutrition, hygiene, physical health, and the school and work experiences.

#### Why is this survey being conducted?

- ☐ To understand the factors that affect the health, including sexual health of the adolescent population of the Cayman Islands.
- ☐ To improve strategies to support young people in protecting and advancing their health and wellness as they move to adulthood.

#### Who is involved in the survey?

The Ministry of Health, Environmental, Youth, Sports and Culture, The Pan American Health Organization (PAHO), The National Drug Council and the Public Health Department are involved with the study.

#### When will the survey be conducted?

The fieldwork has been scheduled for the week starting Monday, October 8<sup>th</sup>, 2012.

**How will it be conducted?** The survey will be administered in the classroom during a regular class period. Students will answer questions themselves. Student's anonymity will be preserved as they will not be required to write their name or school anywhere on the questionnaire. The completed forms will be placed in sealed envelopes and sent off-island for data entry to ensure confidentiality. Participation is on a voluntary basis.

A Focus Group will be conducted with some students and will last around one and a half hours. The child's name **will not** appear on the report of the session.

#### How can I get more information about the survey?

Please contact Ms. Therese Prehay, Health Promotion Officer at 244-2632 or Luisa McLaughlin, Research Officer on 949- 9000 .

## Appendix 5: Letter to obtain parental consent



September 21<sup>st</sup> 2012

Dear Parent/ Guardian:

### Re: Adolescent Health Study 2012

The Ministry of Health, Environment, Youth, Sports and Culture, is working with The Pan American Health Organization (PAHO), to conduct a study in ALL schools with children ages 15-19 years in the Cayman Islands, to increase the understanding of youth health and sexuality in our country. The Survey will be administered by the National Drug Council with the support of the Public Health Department during October 8<sup>th</sup> through 12<sup>th</sup> 2012. The study explores the behaviors, attitudes, beliefs and perceptions of young person's ages 15-19 years, regarding peer relationships, family relationships, sexual and reproductive health, HIV, substance use, use of health services, social and mental health, nutrition, hygiene, physical health, school and work experiences.

We are asking your son or daughter for their help by being a part of the study.

The students will be asked to complete a questionnaire by themselves, during a regular scheduled class period. Students will be told not to write their names or school anywhere on the questionnaire. The survey will be administered in a manner which will ensure that no personal identifiers are included in the questionnaires, and the surveys will be managed in such a way that individual students cannot be linked with completed questionnaires. In addition, all completed questionnaires will not available to unauthorized survey staff, including teachers and other school authorities. Completed survey forms will be deposited in a box and delivered to the study Coordinator for processing outside the country.

Some schools will have students selected for a *Focus Group* that is a group discussion with 8 to 10 other boys or girls separately. The focus group aims to further explore the opinions and views of the participants addressed in the survey. There will be no way to identify a student or the school that they attend in the focus group report. The main objective of the study is to get a clearer understanding of the knowledge, attitudes and beliefs of the young people in Cayman Islands on health and sexuality.

By allowing your child to be involved in this survey you will be helping to improve the strategies, programs and policies specific to address the issues that are affecting young people, especially as it relates to youth health. ***If you, however, do not wish for your child to participate, please send a note to that effect to the principal at the school.***

For your convenience we have enclosed some information in the form of commonly asked questions about this survey. If you have any further questions, please contact the Health Promotion Officer, Ms. Therese Prehay at 244-2632 or [therese.prehay@hsa.ky](mailto:therese.prehay@hsa.ky) in regards to the questionnaire or Ms. Luisa McLaughlin on 949-9000 or [lmclaughlin@ndc.ky](mailto:lmclaughlin@ndc.ky) in regards to scheduling.

Your support is greatly appreciated and thank you for making this possible.

Sincerely,

A handwritten signature in black ink, appearing to read 'Joan West Dacres'.

---

Joan West Dacres  
National Drug Council

## APPENDIX 6: Youth assent form

Hello!

We want to tell you about a study we are doing. We would like to find out more about the issues affecting young people's health and well-being. The study looks at behaviors, attitudes, beliefs and perceptions of young persons aged 15-19 years, regarding peer relationships, family relationships, sexual and reproductive health, HIV, substance use, use of health services, social and mental health, nutrition, hygiene, physical health, and the school environment. The Ministry of Health, Environment, Youth, Sports and Culture, the Department of Education and the Pan American Health Organization (PAHO) are in charge of the study. You are being asked to join the study because you are between the ages of 15 and 19. If you participate, you will be helping the national authorities to understand the concerns of young people in the country and how they can better help young people.

### **What will happen if I join?**

If you agree to join the study, you will complete a survey about your knowledge, behaviors, experiences and ideas on these topics. The survey will be administered during school hours, and takes around 45 minutes to complete. The survey will be completely private. Your name will not be put on the survey, and after completion you will deposit the survey in a closed box, so no one will be able to link the survey with you. You might also be asked to participate in a focus group, this is like a group discussion with other youth your age. The focus group will also take place in school, and will last around one and a half hour.

Your participation in this study is completely voluntary. That means that you can choose not to participate, even if your parents have given permission for your participation. If you decide not to participate, nothing will happen to you.

### **Are there any risks to being in the study?**

There are no major risks to being in this study. You might feel uncomfortable answering some of the questions about behaviors like drug use and sexual activity. However, you do not have answer any questions that seem too personal or make you feel uncomfortable. And remember, no one will know which survey was completed by you. If at any time, you no longer wish to participate, you are free to stop.

### **Do I get anything from being in the study?**

You will not get anything directly from the study, but the results from the study will be used by the national authorities to help youth in the country.

### **What will happen to the information I share?**

Your answers in the survey will be kept private and since your name will not be placed anywhere on the survey, we will not know your specific answers. Therefore, your name will not appear in any reports that we write.

If you have questions about this study, please call the following number ....., and ask for ..... This person will be able to answer your question. This will also be kept confidential, so no one will know that you have called, apart from the person you speak with.

**What do I do if I do not want to join the study?**

You do not have to join this study. It is up to you. You can say okay now and you can change your mind later. All you have to do is tell us. Nothing will happen if you change your mind.

Please complete the slip below and return to the school before the study date, scheduled to take place in your school on .....

Sincerely,

(Minister of Health, Environment, Youth, Sports and Culture)

---

I have read the foregoing information, or it has been read to me. I have had the opportunity to ask questions about it and any questions I had have been answered to my satisfaction. I consent voluntarily to participate in this study and understand that I have the right to withdraw from the study at any time without in any way affecting my grades or schooling.

Name student: \_\_\_\_\_

\_\_\_\_\_ I agree to take the survey portion of the study.

\_\_\_\_\_ I agree to be a focus group participant.

Date: \_\_\_\_\_ Signature: \_\_\_\_\_

