The Health of Adolescents

in the Dutch and British Overseas Caribbean Territories

A MULTITERRITORY PROFILE

Pan American Health Organization

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TABLE OF CONTENTS

Acknowledgments 5
Acronyms 5
I. INTRODUCTION 7
II. METHODS 8
III. FINDINGS 10
Sociodemographic Profile of the Adolescents 10
Family, School, Peer, and Community Relations 13
Nutrition, Physical Exercise, and Body Image 16
Mental Health 18
Tobacco, Alcohol, and Other Substances 19
Sexual and Reproductive Health 21
Violence and Bullying 27
Gender Attitudes 27
Access to and Use of Health Services 29
IV. CONCLUSION 32
References 34

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ACRONYMS

AIDS	acquired immunodeficiency syndrome
CDC	Centers for Disease Control and Prevention (United States of America)
GARPR Global	AIDS Response Progress Reporting
GSHS	Global School-based Health Survey
HIV	human immunodeficiency virus
OCTs	Overseas Caribbean Territories
PAHO	Pan American Health Organization
SPSS	Statistical Package for the Social Sciences
SRH	sexual and reproductive health

I. INTRODUCTION

The second decade of life, or adolescence, is a time of opportunity and potential, but also of vulnerability. Young people go through physical and emotional changes. They take on behaviors that can have lasting effects on their health and development.

Many of the health behaviors that are acquired during adolescence, such as nutritional habits, physical activity, and the use of substances, can profoundly impact the health trajectory—and morbidity and mortality. Nevertheless, the majority of adolescent morbidity and mortality is preventable.

In the Caribbean in 2012, the three main causes of adolescent mortality were homicide, traffic injuries, and human immunodeficiency virus (HIV)-related causes (1). Accidental drowning and intentional self-harm or suicide were also among the 10 major causes of adolescent mortality. Suicides moved from mortality cause number 9 in 2011 to number 7 in 2012 (1).

The health and development of adolescents are profoundly affected by the relationships they have with parents, peers, the school, and their communities. There are significant associations between low levels of connectedness or emotional attachment with the family, peers, school, and community and increased risk of negative health outcomes and behaviors, such as anxiety, depression, suicide ideation and attempts, unsafe sex, unplanned pregnancy, and substance use (2,3,4). On the other hand, positive relationships and high levels of connectedness can promote emotional and physical well-being, and protect adolescents from engaging in behaviors that may compromise their health in the short, medium, and long term (5, 6).

In addition to the social environment, health services have a critical role in the promotion, protection, and rehabilitation of the health and well-being of adolescents, through the provision of health information and counseling, diagnosis, treatment, and care services (7). Adolescent health care needs cover a range of issues, including mental health, sexual and reproductive health, nutrition and physical activity, injuries and violence, and substance use. Health services for adolescents need to be adapted to the context of the country and the subgroups within the country, to enable the adolescents to fulfill their right to health. To adequately meet the health needs of adolescents, national authorities, parents, and communities must understand the health issues and challenges of the adolescents, their implications for policies and programs, and how to respond to adolescents' priorities in the face of competing demands.

From 2011 to 2013 the Pan American Health Organization (PAHO) supported the implementation of adolescent health studies in six Overseas Caribbean Territories (OCTs): Aruba, British

“*The objective of the studies* ***was to generate strategic information on the health and wellness of young persons in the OCTs...***”

Virgin Islands (BVI), Cayman Islands, Montserrat, Sint Eustatius, and Sint Maarten. The studies were implemented in the context of a five-year project titled “Strengthening the Integration of the British and Dutch OCTs in the Regional Response to HIV/AIDS,” which was funded by the European Commission.

The objective of the studies was to generate strategic information on the health and wellness of young persons in the OCTs that could help guide efforts to strengthen services and develop targeted interventions to address the sexual and reproductive health (SRH) needs and other health needs of young persons in the OCTs. The health issues and related factors addressed in the studies included HIV and SRH, mental health, substance use, diet, exercise and body image, violence, family, peers, and school and community relations. PAHO supported data analysis and the development of a report for each of the participating territories, to enable optimal use of the collected data on the territory level. This report provides a multiterritory profile of adolescents aged 15–19 years in the OCTs that was generated through analysis of the pooled data collected in the six OCTs.

II. METHODS

The study methodology was developed through a participatory process with OCT stakeholders, with technical support from PAHO and experts from the Johns Hopkins University (Baltimore, Maryland, United States of America). Representatives from the OCTs participated in a 3-day workshop

held in Trinidad in July 2010, followed by further joint work for development and pilot implementation. The data were collected through a school-based survey administered to secondary school students in the six territories.

The survey instrument was developed based on several existing validated survey instruments, including a survey that had been applied in nine Caribbean countries between 1998 and 2000. The existing instruments included the Global School-based Student Health Survey (GSHS), developed by the World Health Organization (WHO) and U.S. Centers for Disease Control and Prevention (CDC); the Behavioral Surveillance Survey (BSS), developed by Family Health International (FHI); and the Caribbean Adolescent Health Survey, developed by PAHO and the University of Minnesota. The draft instrument was pilot tested in four OCTs (Sint Maarten, Aruba, Montserrat, and BVI), followed by adaptation based on the outcomes of the pilots. All the territories used the same core questionnaire, with some additional questions added as territories deemed necessary.

Prior to implementation the study protocol was reviewed and approved by the PAHO Ethical Review Committee (PAHOERC). PAHO provided technical support for study implementation in five territories, and Emory University supported the implementation in Sint Maarten. In all territories except for Aruba, passive parental consent was obtained, which is the standard practice in school surveys in these OCTs. Parents were informed by letter about the survey, and provided the opportunity to decline their child's participation by contacting the school. In Aruba, active parental consent was obtained through signature and return of a consent form. In addition, active assent was obtained from each participant in all the territories through signature of an assent form. The form emphasized that students could refuse to participate, withdraw at any point, or skip questions without consequence. No names or other unique identifiers of respondents were collected, and to reinforce confidentiality, teachers were requested to not be in the classroom, and members of the survey team were instructed to not walk around in the classroom during the administration of the survey.

With the exception of Sint Maarten, the surveys were administered on paper by survey teams in the classroom. Students were instructed not to put their names on the surveys, and completed surveys were placed in sealed envelopes or boxes. In Sint Maarten the questionnaires were self-completed using laptop computers and a computer program supplied by Emory University (Atlanta, Georgia, United States). PAHO, Emory University, and Johns Hopkins University provided support for data entry, cleaning, and analysis.

For this multiterritory analysis, pooled data from all six territories for respondents in the age group 15–19 were weighted by expansion factors computed as the ratio between the number of subjects in the population divided by the number of subjects actually sampled for each combination of age and sex. The data were analyzed with the Statistical Package for the Social Sciences (SPSS) and the Stata data analysis and statistical software. The data analysis is mostly descriptive,

presenting frequencies disaggregated by age groups (15–16, 17–19) and sex.

Odds ratios were calculated to examine the associations that family and school connectedness exposure variables had with selected mental health, SRH, and substance use outcome variables.

For these calculations, 10 statements or questions related to the family and 10 others related to school were used. Zero points were allocated if the response was "never" or "rarely true," 1 point if the response was "sometimes true," and 2 points if the response was "often" or "always true." This created scales ranging from 0 to 20 points. The point scale was further dichotomized into two levels of family and school connectedness, with 0 to 10 points categorized as very low to low and 11 to 20 points as medium to high. Eight items were used to create a scale for connectedness with adults outside home and school, dichotomized as very low to low for a score of 0 to 4, and medium to high for a score of 5 to 8.

III. FINDINGS

Sociodemographic Profile of the Adolescents

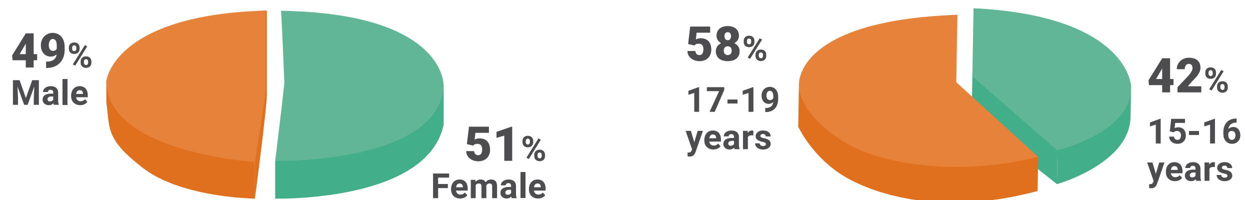
The multiterritory sample size was 4,883, with sample sizes per territory ranging from 107 to 2,911 (Table 1). Aruba had the largest share (60%) of the multiterritory sample size, followed by Cayman Islands (18%), BVI (14%), and a significantly smaller presence (< 5%) from the remaining three OCTs. To adjust for the differences in the samples, the data were weighted for analysis through the use of expansion factors.

Table 1.
Population and sample size by territory

Territory/Total	Population	Sample size	% of total sample
Aruba	103,504	2,911	60
Cayman Islands	55,456	885	18
British Virgin Islands	28,213	679	14
Sint Maarten	40,917	155	3
Montserrat	5,000	146	3
Sint Eustatius	3,600	107	2
Total	**236,690**	**4,883**	**100**

The respondents were nearly equally divided between males (49%) and females (51%), and with slightly more respondents in the older subgroup of 17–19 years (58%) compared to the age group of 15–16 years (42%) (Figure 1).

Figure 1. Sex and age of participants



Over half (55.1%) of participants identified themselves as Black, followed by Mixed (24.6%) (Table 2), and almost three-quarters (73.8%) self-identified as Christian (Table 3).

Table 2. Ethnic distribution of study respondents, by age group and sex

Ethnic Group	Age group (%)		Sex (%)		Total (%)
	15–16	17–19	Females	Males	
Black	51.9	57.3	53.0	57.3	**55.1**
White	8.2	10.7	7.8	11.7	**9.6**
East Indian	3.5	4.1	5.3	2.2	**3.8**
Mixed	26.4	23.3	27.1	21.9	**24.6**
Other	10.0	4.6	6.8	7.0	**6.9**

Table 3. Religious affiliation of study respondents, by age group and sex

Religion	Age group (%)		Sex (%)		Total (%)
	15–16	17–19	Females	Males	
Christian	73.0	74.3	76.5	70.1	**73.8**
Muslim	2.5	2.0	2.1	2.4	**2.2**
Hindu	3.0	2.8	3.9	1.9	**2.9**
Other	12.2	9.0	10.3	14.4	**10.3**
None	9.2	11.9	7.4	14.4	**10.8**

A large majority (88%) of surveyed adolescents lived with parents or stepparents, and about 10% with grandparents. Females reported living alone more often (4%) than did males (<1%) (Table 4).

Table 4. Living arrangements of study respondents, by age group and sex

Living with:	Age group (%)		Sex (%)		Total (%)
	15–16	17–19	Females	Males	
parents/stepparents	88.2	87.6	88.1	87.7	**88.4**
grandparents	11.4	9.5	9.7	10.9	**10.3**
other biological relative	3.1	5.7	5.3	3.9	**4.7**
partner	3.1	5.7	5.3	3.9	**4.7**
nonrelative	3.2	3.7	4.0	2.9	**3.5**
alone	0.7	3.7	4.3	0.5	**2.4**

One-third of the adolescents (33%) reported that they worked for pay in the 4 weeks preceding the survey, with a higher proportion of males and of those 17–19 years old found in this category.

Family, School, Peer, and Community Relations

The family relations were measured through statements to which the adolescents could respond "never true," "rarely true," "sometimes true," "often true," or "always true." Table 5 presents the perception of the respondents regarding 10 statements indicating positive relations or connections between the adolescent and the adults in their home. In addition to the single responses, an ad hoc, not-validated family connectedness scale was developed, allocating zero points if the response was "never" or "rarely true," 1 point if the response was "sometimes true," and 2 points if the response was "often true" or "always true," thus creating a scale ranging from 0 to 20 points. The point scale was further dichotomized into two levels of family connectedness, with 0 to 10 points categorized as very low to low and 11 to 20 points as medium to high.

Similarly, school relations were measured through statements to which the adolescents could respond on a Likert scale. For this report, 10 statements were analyzed (Table 6). An ad hoc, not-validated school connectedness scale was developed. For the first four statements, the scale allocated zero points if the response was "never" or "rarely," 1 point if the response was "sometimes," and 2 points if the response was "most of the time" or "all of the time." For the last six statements, the scale allocated zero points if the response was "strongly disagree" or "disagree," 1 point if the response was "agree," and 2 points if the response was "strongly agree." Together, the responses to the 10 statements created a scale ranging from 0 to 20 points. The point scale was further dichotomized into two levels of school connectedness, with 0 to 10 points categorized as very low to low and 11 to 20 points as medium to high.

For most of the positive family relation statements, more than half of the respondents felt that this was always or often the case, with the highest scores for feeling that there were caring family members and that there were family members who believed that they would be a success. The lowest scores were for having a family member who understood them, for someone who they could discuss their problems with, and for someone who checks to see if homework is done.

Table 5. Family relations, by sex

In your home there is an adult who often or always:	Females (%)	Males (%)	Total (%)
expects you to follow the rules	67.3	67.6	**67.4**
understands you	36.8	49.2	**42.9**
pays attention to you	59.1	64.4	**61.7**
cares about you	76.2	82.5	**79.3**
checks to see if your homework was done	30.9	31.5	**31.2**
listens when you have something to say	49.8	59.0	**54.3**
helps you out when you really need it	58.5	63.8	**61.1**
really knows what you are doing with your free time	44.7	43.2	**44.0**
believes that you will be a success	71.7	75.3	**73.5**
talks with you about your problems	36.8	50.2	**35.5**

The scores for school relations were markedly lower, with fewer than half of the females and males felt that they were part of the school, or got the help they needed to do well. The lowest scores were for the statements that students were treated fairly and that teachers cared about the students.

Table 6. School relations, by sex

	Females (%)	Males (%)	Total (%)
Most of the time or all the time:			
I get the help I need to be successful in school.	46.6	47.9	**47.2**
I feel a part of school.	35.6	42.1	**38.2**
I feel that students are treated fairly in school.	24.3	26.0	**25.1**
I feel happy at school.	39.5	43.8	**41.6**
Agree or strongly agree:			
I get along with my teachers.	81.2	78.6	**80.0**
I feel that teachers care about students.	26.7	31.3	**28.9**
At least one teacher or other adult in school has gotten to know me really well.	64.2	63.6	**63.9**
I could go to one of my teachers if I am really upset or mad about something.	52.3	49.7	**51.1**
I could ask for advice about personal problems from one of my teachers.	52.0	53.3	**52.6**
I could go to my teacher for extra help with school work if I need it.	85.5	80.4	**83.0**

"fewer than half of the females and males felt that they were part of the school, or got the help they needed to do well"

In addition to the home and school, relations with peers and adults outside the home were also explored in this study. A total of 60.6% of the respondents felt that their friends cared a lot about them, and the remaining felt that their friends cared some or very little about them. More girls felt that their friends cared a lot about them (69.7%) than did boys (50.8%). By contrast, only 23.1% of the adolescents responded it was very likely that they would turn to a friend to discuss personal problems, 36.4% felt it was somewhat likely, and the remaining 40.5% felt that it was unlikely. More girls felt that they would likely turn to a friend for support (26.4%) than did boys (19.5%).

As indicated in Table 7, many adolescents appeared to be able to find at least one caring adult outside of their home and school, including someone whom they could trust, who listened to them, who believed in them, and who encouraged them in various ways to do well. The highest scores were for adults outside of home and school who wanted them to do their best, and who believed that they will be a success.

Table 7. Relations with others outside of home and school, by sex

	Females (%)	Males (%)	Total (%)
Outside your home there is an adult who often or always:			
you trust	53.9	57.6	**55.7**
really cares about you	70.1	59.7	**65.0**
tells you when you do a good job	66.2	62.2	**64.3**
listens when you have something to say	63.3	56.6	**60.0**
notices when you're upset about something	57.8	43.5	**51.0**
notices when you're not there	51.9	44.9	**48.5**
wants you to do your best	78.8	73.9	**76.4**
believes that you will be a success	76.6	69.3	**73.0**

Analysis of the connectedness scales developed for this study indicated that 68.7% of the respondents had a medium to high level of family connectedness, 57.6% a medium to high connectedness with adults outside home or school, and only 17.6% had medium to high school connectedness.

Nutrition, Physical Exercise, and Body Image

A little less than two-thirds of the participants (62.3%) reported eating fruit at least once a day during the 7 days preceding the study, and a similar percentage (68.7%) reported that for vegetables. On the other hand, the reported consumption of sugary drinks (soda, pop) and fried food was also high, with 75.1% drinking a can or bottle of soda at least once a day, and almost one in three (29.0%) drinking a can of soda at least three times a day. About half (52.9%) ate fried food at least once a day.

"75.1% of respondents reported drinking a can of soda at least three times a day"

Almost half (45.2%) of the adolescents reported being physically active for at least 60 minutes on 1 to 3 days in the week preceding the survey, and 32.2% reported that for 4 or more days during the week. In total, 76.5% of the adolescents were physically active at least 1 day during the week.

Table 8. Number of days with at least 60 minutes of physical activity in the preceding week, by sex

Number of days	Sex (%)		Total (%)
	Females	Males	
0	31.7	14.8	**23.5**
1	17.9	9.7	**13.9**
2-3	31.2	31.3	**31.3**
4-5	11.3	21.1	**16.1**
> 5	7.9	23.1	**15.2**

Males tended to report more physical activity than females, with over 30% of the females reporting zero days of exercise, as compared to 15% of the males.

The adolescents were also asked about the time spent on sedentary activities, defined as the time spent watching television, sitting, playing video or computer games, talking with friends, using the computer for something, or doing other sitting activities on a typical day. Only 20.9% reported less than one hour spent on sedentary activities, half of the adolescents (50.1%) reported 2 to 4 hours, and almost one in three (29.0%) reported 5 or more hours a day of sedentary activities. Sedentary activities did not vary by sex, and also not by level of physical activity. This suggests that adolescents can be physically active and at the same time spend a substantial portion of their day on sedentary activities.

When asked to describe their own weight, half of the adolescents felt that they were about the right weight (Table 9).

The females who considered themselves slightly underweight had the highest levels of satisfaction with their weight (50.6%), followed by those who considered themselves about the right weight (42.0%) and by those who considered themselves very underweight (40.1%). The responses from males showed a slightly different pattern, with the highest level of satisfaction with their weight among the males who considered themselves about the right weight (41.4%), followed by those who considered themselves very underweight (38.4%) and those who considered themselves slightly underweight (24.2%). Predictably, the girls who considered themselves slightly or very overweight reported the lowest levels of satisfaction with their body weight. Notably, even among boys and girls who indicated being very satisfied or satisfied with their weight, substantial numbers (46.9% of girls and 54.8% of boys) reported that they were trying to lose weight.

Table 9. Perception of body weight, by age group and sex

	Age group (%)		Sex (%)		Total (%)
	15–16	17–19	Females	Males	
Very underweight	4.8	4.5	2.9	6.5	**4.6**
Slightly underweight	12.7	14.6	14.5	13.1	**13.8**
About the right weight	51.0	50.1	47.9	54.0	**50.1**
Slightly overweight	24.4	24.0	27.4	20.7	**24.2**
Very overweight	7.2	6.2	7.4	5.8	**6.6**

“ Almost one in three females and one in six males had seriously considered suicide in the preceding year”

Mental Health

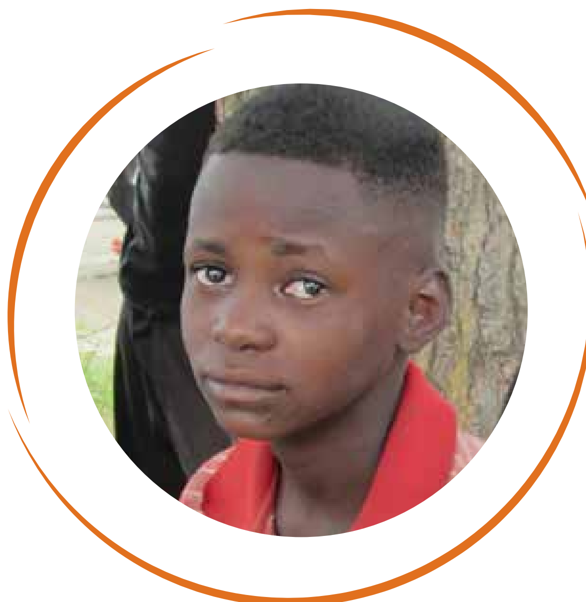
The survey responses indicated significant levels of worry, anxiety, and sadness among the respondents, in particular among the females (Table 10). In total, 20.3% of the respondents felt lonely most of the time or always, with that being true for almost one in four girls and about one in six boys. In addition, 51.0% had felt so sad or hopeless for more than a day or two in the preceding 12 months that nothing seemed worthwhile.

Almost one in three females and a smaller percentage of males (15.5%) had seriously considered suicide in the preceding year. Of those who considered suicide, more than one in four (26.0%) also followed through with a plan and more than half of those who made a plan also attempted suicide. The data also suggest peer influence when it comes to suicide attempts, considering that 65% of those who attempted suicide thought that most or all of their friends had also attempted suicide.

Table 10. Mental health issues, by sex

Issue	Females (%)	Males (%)	Total (%)
Feeling lonely most of the time or always	23.4	16.7	**20.3**
Often have been so worried about something during the past year that they could not sleep at night	24.2	14.6	**19.9**
Felt so sad or hopeless for more than a day or two that nothing seemed worthwhile during the past year	58.8	42.6	**51.0**
Seriously thought about killing themselves in the past year	31.2	15.5	**23.6**
Made a plan to kill themselves in the past year (of those who seriously though about killing themselves)	34.9	15.4	**26.0**
Attempted suicide in the past year (of those who made a plan)	70.6	45.5	**63.8**

Statistically significant associations were found between mental health and connectedness. Respondents with very low to low family and school connectedness were more likely to feel sad or hopeless for more than a day, to consider suicide, and to attempt suicide (Table 11).



Tobacco, Alcohol, and Other Substances

Almost one-third (31.6%) of the adolescents had never smoked a cigarette, with more girls and younger adolescents (15–16 years) indicating never having smoked (Table 12). Experimenting with smoking appeared to start early, considering that around one in five of the females and males smoked their first cigarette by the age of 10, and at the age of 15, 52.0% had already smoked their first cigarette.

Table 11. Associations between family and school connectedness and mental health

	Females (%)		Males (%)	
Association with low family connectedness ($P < 0.05$)	**Odds ratio**	**95% CI**	**Odds ratio**	**95% CI**
Feeling sad or hopeless for more than a day	2.9	2.5–3.3	1.8	1.6–2.1
Suicidal thoughts	3.4	3.0–4.0	1.8	1.5–2.3
Suicide plan	3.6	3.1–4.3	3.3	2.9–3.8
Association with low school connectedness ($P < 0.05$)				
Feeling sad or hopeless for more than a day	2.2	1.8–2.5	1.8	1.5–2.3
Suicidal thoughts	2.2	1.8–2.8	2.1	1.5–2.9
Suicide plan	2.1	1.6–2.7	2.1	1.4–3.0

Table 12. Age of first tobacco use, by age group and sex

Age	Age group (%)		Sex (%)		Total (%)
	15–16	17–19	Females	Males	
10 years or younger	22.8	20.3	20.2	22.5	21.3
11-12 years	12.6	12.7	9.7	15.8	12.6
13-15 years	19.7	17.0	15.4	21.0	18.1
≥ 16 years	6.0	23.2	21.2	11.2	16.4
Never smoked	38.4	26.9	33.5	29.6	31.6

In terms of current tobacco use, 19.2% of the adolescents had smoked in the 30 days prior to the survey, with this being true for more girls (22.1%) than boys (16.2%).

More than half of the females (58.2%) and the males (57.7%) had consumed alcohol in the 30 days prior to the study. Predictably, the percentage of those who consumed alcohol increased with age (Table 13).

"More than half of the females (58.2%) and the males (57.7%) had consumed alcohol in the 30 days prior to the study"

Table 13. Percentage of adolescents using alcohol in the preceding 30 days, by age

Age (years)	%
15	46.9
16	50.8
17	54.9
18	66.2
19	73.7
Overall	58.0

From those who had drunk alcoholic beverages during the 30 days prior to the survey, 23.0% indicated that on the days they drank, they had one or two drinks. An alarming 19.2% indicated that they usually had four or more drinks on the days they drank alcoholic beverages. Of those who drank, 41.5% had gotten really drunk at least once during their lifetime, including 5.4% who had gotten really drunk more than 10 times.

Slightly more girls (58.2%) reported drinking in the preceding 30 days compared with boys (57.7%), but more boys had gotten really drunk at least once

(44.0%) than had girls (39.1%). In total, 11.9% of the respondents had gotten in trouble at least once with family or friends, missed school, or gotten into fights as a result of drinking alcohol.

Marijuana was the most frequently used illicit substance. In total, 41.6% of the respondents had ever used marijuana, and 3.9% had ever used other substances, not counting tobacco, alcohol, or marijuana. Alcohol was most frequently reported for current use and marijuana for lifetime use.

For both females and males, significant associations were found between connectedness and the use of marijuana and other drugs (Table 14).

Sexual and Reproductive Health

This section of the report describes the findings related to sexual identity and behavior, sexual violence, pregnancy, abortion, contraceptive use, and HIV-related knowledge.

Among the adolescents, almost two-thirds of them reported being attracted only to the opposite sex, 4.1% being attracted to only the same sex, and 5.4% equally attracted to both sexes (Table 15). More than a quarter of the respondents (28.1%) were not sure or did not understand the question.

Table 14. Associations between low family and school connectedness and substance use

	Females		Males	
Association with low family connectedness ($P < 0.05$)	**Odds ratio**	**95% CI**	**Odds ratio**	**95% CI**
Used alcohol in past 30 days	1.7	1.4–1.9	1.5	1.3–1.8
Got really drunk at least once	2.2	1.9–2.5	1.8	1.5–2.2
Ever used marijuana	3.0	2.4–3.6	2.6	2.2–2.9
Ever used other drugs	2.8	2.0–4.2	3.2	2.5–4.2
Association with low school connectedness ($P < 0.05$)				
Used alcohol in past 30 days	2.1	1.7–2.5	1.6	1.4–1.8
Got really drunk at least once	2.3	1.8–2.9	1.8	1.5–2.3
Ever used marijuana	3.4	2.5–4.6	2.5	1.9–3.2
Ever used other drugs	2.1	1.2–4.3	2.9	1.5–6.3

Table 15. Sexual attraction, by age and sex

Sexual attraction	Age group (%)		Sex (%)		Total (%)
	15–16	17–19	Females	Males	
Only to same sex	3.4	4.6	2.8	5.5	4.1
Equally to both sexes	3.9	6.5	8.7	2.0	5.4
Only to opposite sex	64.8	62.5	63.9	63.0	63.4
Not sure	9.6	12.6	10.5	12.3	11.4
Don't understand question	18.4	13.8	14.1	17.3	16.7

In total, 59.0% of the respondents aged 15–19 years were already sexually active. Around a quarter (26.6%) of all respondents reported becoming sexually active before the age of 15 (23.2% of the girls and 30.1% of the boys) (Table 16), representing 44.7% of the sexually initiated respondents.

Table 16. Selected sexual and reproductive health indicators, by sex

Indicator	Females (%)	Males (%)	Total (%)
Sexual initiation before age 15	23.2	30.1	26.6
More than one sexual partner in past 12 months	27.7	41.33	34.6
Experienced at least one pregnancy (girls)	18.6	NA[a]	18.6
Caused at least one pregnancy (boys)	NA[a]	10.9	10.9
Received or gave someone money or goods in exchange for sexual intercourse	8.2	8.1	8.2

[a]NA= not applicable

The mean age at sexual initiation was the same for females and males, at 13.2 years. A noticeable portion felt that their first sexual experience was forced or coerced (Table 17). In total, 39.1% of the girls reported being forced at first intercourse, and an additional 15.2% being "sort of" forced, meaning that for over half of the girls their first sexual encounter was not entirely voluntary. Surprisingly, 50.1% of the boys reported that their first sexual encounter was forced, and an additional 4.2% said that their first sexual encounter was "sort of" forced.

Table 17. Types of force experienced at first sex, by age group and sex

Types of force	Age group (%)		Sex (%)		Total (%)
	15–16	17–19	Females	Males	
Verbal threats	27.4	20.3	23.8	21.4	**22.9**
Physical threats	15.4	10.2	14.4	8.2	**12.1**
Holding down	51.8	38.0	52.4	26.0	**43.0**
Beating/slapping	4.4	6.9	6.5	5.1	**6.0**

By contrast, in describing last sex, 3.8% reported being forced, and 4.6% being "sort of" forced. The most common threats reported by girls at first sex were being held down, verbal threats, physical threats, and being beaten. Moreover, 8.0% of the sexually initiated adolescents reported being sexually abused or mistreated by a family member or other adult, with significantly more females (14.0%) reporting sexual abuse by an adult than did males (3.0%).

Around one-third of the sexually active participants (more than one in four girls and almost half of the boys) had had more than one sexual partner in the 12 months preceding the study. Age mixing, or having a first sexual partner more than 10 years older, was reported by about 2% of females. Males and females engaged equally in transactional sex, at around 8% (Table 16).

Almost one in five sexually active girls (18.6%) reported at least one pregnancy, and 10.9% of the boys had caused at least one pregnancy (Table 16). A total of 8.9% of the girls reported that they had had an abortion (3.6% of girls in the age group 15–16 years old, and 12.4% of girls in the age group 17–19). Almost half (44.1%) of these girls had had more than one abortion.

Significant associations were found between low family connectedness and early sexual initiation and pregnancy, and low school connectedness and pregnancy (Table 18).

" The mean age at sexual initiation was the same for females and males, at 13.2 years"

Table 18. Associations between family connectedness, school connectedness, early sexual initiation, and pregnancy

	Females		Males	
	Odds ratio	95% CI	Odds ratio	95% CI
Association with low family connectedness ($P < 0.05$)				
Sexual initiation before age 15	1.4	1.1–1.8	1.3	1.0–1.5
At least one pregnancy (girls)	2.8	2.2–3.5	NA[a]	NA[a]
Association with low school connectedness ($P < 0.05$)				
Had at least one pregnancy (girls)	2.9	2.0–4.6	NA[a]	NA[a]
Caused at least one pregnancy (boys)	NA[a]	NA[a]	2.0	1.3–3.1

[a]NA= not applicable

Of the sexually active respondents, over half of the males and females reported using a condom at first sex (Table 19). The majority of sexually active respondents or their sexual partners used a contraceptive at first and last sex to prevent pregnancy. Condoms were the most frequently reported type of contraceptive used by males and females, followed by the birth control pill for the girls. Markedly, none of the respondents marked the "didn't use" survey box for contraceptive use at last sex, even though 7.3% indicated not being sure if a contraceptive was used at last sex.

Table 19. Type of contraceptive used at first and last sex, by age group and sex

Contraceptive	Age group (%)				Sex (%)					
	15–16		17–19		Female		Male			
	First sex	Last sex	First sex	Last sex	First sex	Last sex	First sex	Last sex	Total first sex (%)	Total last sex (%)
Didn't use	9.5	0.0	11.9	0.0	11.9	0.0	10.6	0.0	11.3	0.0
Birth control pills	16.1	34.1	14.2	36.3	13.2	36.6	16.3	34.8	14.8	35.7
Condoms	67.7	46.0	69.4	42.4	70.3	34.4	67.6	51.6	68.9	43.4
Depo/IUD[a]	1.0	3.5	0.3	3.9	0.4	4.9	0.5	2.7	0.5	3.7
Withdrawal	1.9	8.4	2.4	8.3	2.4	11.5	2.2	5.5	2.3	8.4
Other method	0.9	1.9	0.4	1.5	0.4	1.8	0.7	1.4	0.6	1.6
Not sure	2.8	6.3	1.4	7.7	1.5	10.8	2.0	4.1	1.8	7.3

[a]Depot medroxyprogesterone acetate is a long-acting injectable hormonal contraceptive, marketed under the brand name Depo Provera. IUD refers to a t-shaped intrauterine device inserted into the uterus to provide birth control.

The most frequently reported source to obtain contraceptives was the pharmacy (50%). Nevertheless, over a quarter of the respondents reported not knowing where to find contraceptives.

In general the respondents reported high levels of perceived ability to negotiate sexual practices, including refusal of sex, negotiating condom use, and discussing important topics such as pregnancy and HIV prevention, with girls and older adolescents consistently reporting higher levels of perceived self-efficacy (Table 20).

Table 20. Respondent perception of their skill to negotiate or practice safer sexual practices, by age group and sex

Sexual practice	Age group (%)		Sex (%)		Total (%)
	15–16	17–19	Females	Males	
Refuse if partner wants sex and you don't	68.7	75.8	81.3	63.9	72.8
Ask partner to take HIV test	69.8	76.5	77.8	69.4	73.7
Get partner to use condom	84.0	87.1	89.1	82.3	85.8
Refuse sex without condom	75.6	78.3	87.1	65.6	77.1
Discuss pregnancy and HIV prevention with partner	80.2	88.8	88.3	82.1	85.3

"Significant associations were found between low family connectedness and early sexual initiation and pregnancy, and low school connectedness and pregnancy"

Table 21 below provides an overview of selected SRH and HIV-related indicators commonly used in global reporting, including the Global AIDS Response Progress Reporting (GARPR).

Table 21. Selected sexual and reproductive health and HIV-prevention indicators for adolescents aged 15–19 years in Aruba, British Virgin Islands, Cayman Islands, Montserrat, St. Eustatius, and St. Maarten

Indicator	Females (%)	Males (%)	Total (%)
Percentage of females and males aged 15–19 who have had sexual intercourse	56.8	62.2	59.4
Percentage of females and males aged 15–19 who have had sexual intercourse before the age of 15, among those who have had sex	40.1	48.4	44.7
Percentage of females and males aged 15–19 who have had sexual intercourse with more than one partner in the last 12 months (among those who had sex)	28.0	41.6	34.8
Percentage with more than one lifetime sexual partner among females and males ages 15–19 who have had sex	58.8	69.8	64.4
Percentage with more than two lifetime sexual partners among females and males ages 15–19 who have had sex	40.5	53.9	47.3
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)	2.0	NA[a]	2.0
Condom use at last sex	53.4	61.9	57.7
Experienced or caused a pregnancy	18.2	9.2	13.7
Forced sex in the past 12 months (yes or sort of)	9.4	6.7	8.0
Forced first sex	54.3	54.3	54.3
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	67.6	61.6	64.6

[a]NA= not applicable

Violence and Bullying

The survey asked about experiences of physical violence or bullying in the family, by other adults, and in school. In total 14.5% of the adolescents reported that they had ever been physically abused or mistreated by a family member or other adult. The reported level of physical abuse by an adult was equal across the age groups, but not the sexes, as 18.3% of girls but only 10.5% of boys reported this type of abuse.

On the question of whether they feel safe at school, only 19.3% of the participants responded most or all of the time, 52.6% felt safe sometimes, and the remaining 27.1% rarely or never felt safe in school. Girls more frequently felt unsafe in school, at 30.3%, compared with 23.7% of the boys.

Half of the respondents (50.9%) reported being made fun of or called names in school at least once in the past 12 months, with about half of these more than once. In addition, 21.4% reported that someone intentionally damaged their belongings, 12.1% experienced threats with force, and a similar percentage (12.1%) experienced a physical attack in school.

Gender Attitudes

Evidence suggests that gender norms are among the social structural determinants that influence the health of adolescents, in particular their sexual and reproductive health. Studies show that less egalitarian gender norms are associated with more risky sexual behavior among adolescents in general, and that adolescent girls with less egalitarian gender norms may have greater vulnerability to negative sexual and reproductive health outcomes (8). In the survey, some questions were included to assess the gender norms and attitudes of the adolescents. While the questions were adapted from other studies, they do not constitute a validated gender attitude scale, but rather an impression, upon which more in-depth studies could be based. The study participants could respond to the questions on a four-point Likert scale, ranging from "strongly disagree" to "strongly agree."

Table 22. Experiences of violence or threats in school

	Age group (%)		Sex (%)		Total (%)
	15–16	17–19	Female	Male	
Over the past 12 months, did someone:					
make fun of you, call you names, or insult you?	56.2	47.1	47.7	54.4	50.9
damage something of yours on purpose?	24.3	19.4	19.8	23.3	21.4
threaten you with force?	13.5	11.0	10.2	14.1	12.1
physically attack you?	13.5	11.0	10.2	14.1	12.1

The responses indicate that in general the females and males tended to strongly disagree with most of the gender inequitable norms included in the survey (Table 23). Notable exceptions were the responsibility to avoid pregnancy and the attitude towards housework. The opinions were mixed, as only around 51% strongly disagreed that it is the woman's responsibility to use something to avoid pregnancy, and even more so with assigning the responsibility to the male. Around 6% of the girls and boys agreed or strongly agreed that was the woman's responsibility, and around 10% agreed or strongly agreed that it was the man's responsibility. The sexes differed regarding the statement that housework is the woman's work, as fewer than 2% of the girls agreed or strongly agreed, as compared to almost 7% of the boys.

Table 23. Attitudes of adolescents towards selected gender inequitable norms, by sex

Statement	Strongly disagree (%)		Disagree (%)		Agree (%)		Strongly agree (%)	
	Females	Males	Females	Males	Females	Males	Females	Males
Men need to have more than one sexual partner (girlfriend) at the same time.	93.3	77.2	4.4	21.0	0.3	1.2	2.0	0.7
It is OK for a woman to have more than one sexual partner or relationship at the same time.	93.0	89.2	4.9	10.1	0.2	0.5	1.9	0.1
It is OK for a man or boy to sometimes hit his woman or girlfriend.	96.0	94.3	3.7	5.0	0.02	0.6	0.3	0.2
It is OK for a boyfriend to force his girlfriend to have sex.	98.1	94.8	1.6	4.9	0.02	0.2	0.3	0.2
It is the woman's responsibility to use something to avoid pregnancy.	50.9	52.9	41.9	40.9	5.6	4.7	1.6	1.5
It is the man's responsibility to use something to avoid pregnancy.	38.1	26.9	52.2	63.7	7.2	6.7	2.5	2.8
Housework, such as work in the kitchen or caring for the children, is the woman's work.	75.0	62.3	23.3	31.1	1.3	5.4	0.4	1.2

Access to and Use of Health Services

More than half of the adolescents indicated they usually went to private or public hospitals for medical care (Table 24).

Table 24. Locations adolescents usually go to for health care services

Where do you usually go for medical care?	Age group (%)		Sex (%)		Total (%)
	15–16	17–19	Female	Male	
Nowhere	15.6	14.0	14.0	15.4	14.7
Public clinic	16.6	9.5	12.2	12.7	12.5
Public hospital	23.9	22.3	22.8	23.2	23.0
Private hospital	30.5	36.7	32.7	35.6	34.1
Private doctor	11.9	15.6	16.3	11.6	14.1
Traditional healer	0.2	0.2	0.0	0.3	0.2
Other	1.2	1.2	1.9	1.1	1.2

In order to assess how the adolescents perceived health care services, the respondents were asked to answer "yes," "no," or "not sure" to some statements, based on their own experience or what they had heard from others (Table 25). Therefore, these responses are not solely reflective of personal experiences, but also on what they have heard from others, including their peers.

Table 25. Adolescents' perceptions of access to and satisfaction with health care, based on their own experience or what they have heard from others, by age and sex

Statement		Age group (%)		Sex (%)		Total (%)
		15–16	17–19	Female	Male	
Getting to a health care facility is easy for adolescents.	Yes	34.0	37.2	28.8	43.4	35.9
	No	29.1	28.7	32.9	24.6	28.9
	Not sure	37.0	34.1	38.3	35.1	35.3
If I tell a health care provider, such as a nurse or doctor, something personal, others will know.	Yes	26.7	23.9	28.1	21.9	25.1
	No	26.8	40.8	34.9	35.0	34.9
	Not sure	46.5	35.3	37.0	43.2	40.0
Health care providers listen carefully to adolescents.	Yes	55.0	57.7	57.0	56.1	56.6
	No	8.3	8.9	9.6	7.7	8.7
	Not sure	36.8	33.4	33.4	36.2	34.8
Health care providers are friendly and care about adolescents' needs.	Yes	55.8	46.5	49.5	51.3	50.3
	No	9.0	11.1	11.3	9.1	10.2
	Not sure	35.2	42.4	39.3	39.6	39.4
The hours health care facility are open are convenient for adolescents.	Yes	34.4	35.6	31.6	38.8	35.1
	No	17.5	20.5	19.9	18.6	19.3
	Not sure	48.1	44.0	48.6	42.6	45.7
Adolescents feel comfortable discussing reproductive health concerns, such as sex, HIV, and birth control, with health care providers.	Yes	30.9	36.3	34.6	33.4	34.0
	No	30.4	28.6	32.0	26.5	29.3
	Not sure	38.7	35.2	33.4	40.1	36.7
Health care providers treat adolescent clients with equal care and respect.	Yes	49.9	53.0	50.6	53.0	51.7
	No	11.8	13.2	13.6	11.6	12.6
	Not sure	38.3	33.8	35.9	35.4	35.6

Noticeable percentages of study participants responded "not sure" to most of the statements, ranging from 33.4% to 48.6%, possibly indicating a certain level of ambiguity towards health services among these adolescents. Over half of the respondents felt that health care providers listened carefully to adolescents, but only around one-third felt that health care workers would comply with confidentiality, and a similar percentage felt comfortable discussing reproductive health concerns with health care providers. The respondents who felt that it was easy for adolescents to get to health care facilities, and that opening hours were convenient for adolescents, were also in the minority, at, respectively, 28.9% and 35.1%.

"Over half of the respondents felt that health care providers listened carefully to adolescents, but only around one-third felt that health care workers would comply with confidentiality"

IV. CONCLUSION

Similar to the findings in the 2000 Caribbean adolescent health study (9, 10), the findings of this study provide a mixed picture of the health and wellness of adolescents in the six OCTs. Over 60% of the adolescents had medium to high levels of connectedness with family or other adults, but fewer than one in five had medium to high connectedness with the school. More than half of the adolescents appeared to regularly eat fruits and vegetables, but they also frequently consumed sugary drinks and fried food, while not exercising regularly.

The mental health status of the adolescents raises concern, considering the high numbers that reported loneliness, anxiety, and sadness. Suicidal ideation and suicide attempts were also high. These findings are very much in line with findings from other adolescent health studies conducted in the Caribbean (11) and an analysis of suicide among adolescents in Jamaica (12). The use of tobacco and alcohol was also relatively high and appeared to start early, with less than one-third of the adolescents who had never smoked, and close to 60% of boys and girls having consumed alcohol in the 30 days prior to the study.

Early sexual initiation in this group was common, with close to 60% of the respondents already being sexually active, of whom almost half had become sexually active before the age of 15. A cause for grave concern was the high reported level of forced sexual initiation among both girls and boys, at close to or more than 50%. Among those who were sexually active, the reported use of condoms and other forms of contraceptives was high. However, pregnancy and abortion frequently occurred: almost 1 in 5 girls had experienced at least one pregnancy, almost 1 in 10 girls had had an abortion, and almost 1 in 10 boys had caused at least one pregnancy. HIV-related knowledge was above average, at over 60% for boys and girls.

The adolescents also faced significant levels of violence and bullying, from family members, other adults, and in school. Overall, more than one of four respondents did not feel safe in school, with this being more common for girls. Boys and girls reported high levels of recent bullying, including being made fun of, being called names, purposeful damage of their property, threats, and physical attacks.

Responses to questions regarding the perceptions and experiences with health services indicated that adolescents may have had ambiguous perceptions of and expectations for health care services and providers, including for lack of confidentiality.

The study findings underline the critical importance of a holistic approach towards the health and wellness of

adolescents, including with commitment and efforts from policymakers, parents, schools, community members, and health care providers. To adequately address the needs of adolescents will require a supportive environment, with adults who care for adolescents, invest in building positive relationships with them, and encourage them to do well. The school environment, where adolescents spend a significant portion of the day, should be a safe space, where adolescents feel respected, cared for, and supported to perform to the best of their abilities. Similarly, health services should be transformed into spaces where adolescents can access services at a time convenient for them; can feel safe to discuss sensitive issues, including sexual and reproductive health questions; and can trust that their information will be treated confidentially.

Ensuring that adolescents receive the support needed to not only survive, but also thrive and realize their potential, will require that policymakers, parents, schools, health services, and communities invest and work together in an intersectoral and comprehensive approach that facilitates the realization of the right to health of this critical segment of society.

"Over 60% of the adolescents had medium to high levels of connectedness with family or other adults, but fewer than one in five had medium to high connectedness with the school"

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