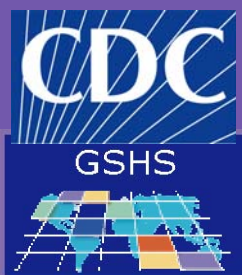


**GLOBAL SCHOOL HEALTH SURVEY**  
**(GSHS ) 2007**

**Tobago Report**



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**GSHS 2007 TOBAGO REPORT.**

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## EXECUTIVE SUMMARY

This report presents findings from the **first** Global School-based Student Health Survey (GSHS) conducted in Tobago by the Ministry of Health and Ministry of Education from 19-24 April 2007.

The Republic of Trinidad and Tobago is a twin island democratic Republic. Tobago has a land area of 300 km<sup>2</sup> (116 mi<sup>2</sup>), is approximately 42 kilometres (26 miles) long and is slightly north of Trinidad. According to the 2000 census the population of Tobago is 54,084. The population consists primarily of Afro- Tobagonians, but there are some Europeans and a growing number of Indo-Trinidadian.

Since 2003, Ministries of Health and Education around the world have been using the GSHS to periodically monitor the prevalence of important health risk behaviours and protective factors among students. To date more than 45 countries have completed the GSHS.

### Purpose

The purpose of the GSHS is to provide accurate data on health behaviours and protective factors among students to:

- Help countries develop priorities, establish programmes, and advocate for resources for school health and youth health programmes and policies;
- Establish trends in the prevalence of health behaviours and protective factors by country for use in evaluation of school health and youth health promotion; and
- Allow countries, international agencies, and others to make comparisons across countries and within countries regarding the prevalence of health behaviours and protective factors.

Prior to this GSHS, the Adolescent Youth Survey (1989) and the Global Youth Tobacco Survey (2000) and (2007) were conducted. However, no comprehensive study of the health behaviours and practices of students in the age group 13-15 years has been done.

### Methodology

The 2007 Tobago GSHS employed a two-stage cluster sample design to produce data representative of all students in Forms 1-4. The first-stage sampling frame consisted of all schools containing any of Forms 1-4. Schools were selected with probability proportional to school enrolment size. Seven (7) secondary schools in Tobago were selected to participate in the GSHS.

The second stage of sampling consisted of randomly selecting intact classrooms (using a random start) from each school to participate. All classrooms in each selected school were included in the sampling frame. All students in the sampled classrooms were eligible to participate in the GSHS. Students completed the 66 item self-administered questionnaire during one classroom period.

The questionnaire addressed the following areas: respondent demographics, alcohol and other drug use, BMI and dietary behaviours, hygiene-related behaviours, mental health issues, physical activity, protective factors, sexual behaviours that contribute to HIV infection, other STI, and unintended pregnancy, tobacco use, and violence and unintentional injury. Survey procedures were designed to protect student's privacy by allowing for anonymous, confidential, and voluntary participation. Computer packages like SUDAAN, SPSS, and EPI INFO were used to analyse the data.

## **Key Results**

The school response rate was 100%, with an overall response rate of 83% and a total of 1,277 students participating in the survey from 19 – 24 April 2007. The weighted results can be used to make important inferences about the priority health–risk behaviours and protective factors of all students. The study population was comprised of 559 males (45.4%) and 698 females (54.6%). In addition, 70.7% of the sample was in the 13-15 age group and 26.6% were from Form 1 and 24.6% were from Form 4.

**Significant differences between male and female students were identified in the areas of alcohol and other drug use, dietary behaviour, mental health issues, physical activity, protective factors, sexual behaviour that contribute to HIV infection other STI and unintended pregnancy, tobacco use, and violence and unintentional injury.**

### **Alcohol and other drug use**

The study found that in Tobago, the prevalence of current alcohol use among students is 51.5% (i.e., drinking at least one drink containing alcohol on one or more days during the past 30 days). The apparent easy access to alcohol and the ingestion of alcohol by students are disturbing findings. In addition, this study revealed that male students were significantly more likely than females to use alcohol and other drugs. The study found that 34.4% of the males and 21.5% of the females reported they drank so much alcohol that they were really drunk one or more times during their life. Most troubling, in the 13-15 age group 32.3% of the males and 22.1% of the females indicated they drank so much alcohol that they were really drunk one or more times during their life. In addition, 20.7% of the male students compared to 10.8% of the females, had a hangover, felt sick, got into trouble with their family or friends, missed school, or got into fights as a result of drinking alcohol during their lifetime. Of great concern, was the fact that 90.0% of the males in the 13-15 age group reportedly had their first drink of alcohol before age 14.

With regards to other drug use, 21.6% of males in comparison to 9.3% of females stated they used drugs such as marijuana, hemp, or cocaine one or more times during their life. In the 13-15 age group, 20.0% of males and 9.0% of females reported the same.

### **Dietary behaviours**

Overall, 8.1% of students went hungry most of the time or always during the past 30 days because there was not enough food in their home. In fact, 19.3% of females as compared to 11.6% of males reported they ate at fast food restaurants on three or more days of the week. In addition, 16.1% of the students reported they ate at fast food restaurants, such as KFC, Church's, Royal Castle, Mario's Pizza Boys, Pizza Hut, or Bos Burger on three or more of the past seven days. Female students (19.3%) are significantly more likely than male students (11.6%) to have eaten at fast food restaurants.

### **Mental health**

Female students (15.5%) are significantly more likely than male students (9.5%) to most of the time or always feel so worried about something that they can not sleep at night. In the 13- 15 age group 14.8% of males in comparison to 22.7% of females reported they seriously considered attempting suicide during the past 12months.

### **Physical activity**

Physical activity among the male students was higher than among the female students, in that 20.6% of males compared to 14.1% of females reported they were physically active for a total of at least 60 minutes per day on all seven days during the past week. On the other hand, 82.6% of female students indicated they did not walk to and from school during the past seven days. In the 13 - 15 age group physical inactivity was higher among the females than male students.

### **Protective factors**

The GSHS revealed that 25.6% of students missed classes or school without permission on one or more of the past 30 days. Male students (31.2%) are significantly more likely than female students (20.7%) to miss classes or school without permission. In the 13 – 15 age group 30.0% of males compared to 20.5% of females reported the same. In addition, 30.2% of students in Form 1 and 37.1% of students in Form 4 also indicated that they missed classes.

### **Sexual behaviours that contribute to HIV infection, other STI, and unintended pregnancy**

The study found that male students in Tobago are more sexually active than females, in that 33.2% reported they had sexual intercourse. Male students (29.6%) are significantly more likely than female students (9.4%) to have initiated sexual intercourse before age 13 years and 29.7% had sexual intercourse with multiple partners during their life. In the 13 – 15 age group, 31.3% of males had sexual intercourse, 30.2% had sexual intercourse before age 13, and 27.0% had multiple partners during their life. On the other hand, 29.5% of the female students compared to 19.2% of males were the ones who would most likely get a condom or rubbers from a pharmacy if they wanted one.

### **Tobacco use**

Male students (15.9%) are significantly more likely than female students (6.8%) to have used any other form of tobacco on one or more of the past 30 days. In this study, 15.0% of males compared to 5.1% of females reportedly used other forms of tobacco such as hemp on one or more days during the past 30 days. Also, in the 13 - 15 age group, 15.2% of males and 4.6% of females reported the same. Overall, 57.8% of students reported that people smoked in their presence on one or more days during the past seven days.

### **Violence and unintentional injury**

*Physical attack* - The study found that being physical attacked, being involved in physical fight, serious injury, and belonging to violent group appeared to be the domain of male students. In Tobago, 38.0% of students reported they were physically attacked one or more times during the past 12 months. Male students (44.3%) are significantly more likely than female students (32.1%) to have been physically attacked one or more times during the past 12 months. In addition, male students (54.0%) are significantly more likely than female students (33.7%) to have been in a physical fight. In the 13 - 15 age group, 55.8% of the males compared to 31.3% of the females reported they were in a physical fight.

*Seriously injured* - In Tobago overall, 43.6% of students stated that they were seriously injured one or more times during the past 12 months. However, male students (48.9%) are significantly more likely than female students (38.1%) to have been seriously injured. In fact, in the 13 -15 age group 49.0% of males as compared to 37.1% of females reported they were seriously injured.

*Bullied* - Overall, 22.1 % of students were bullied on one or more days during the past 30 days. Among students who were bullied during the past 30 days, 17.7 % were bullied most often by being

hit, kicked, pushed, shoved around, or locked indoors. Male students (23.3%) and female students (13.5%) are equally likely to be bullied most often by being hit, kicked, pushed, shoved around, or locked indoors.

*Violent group membership* - The study revealed that overall, 11.5% of students belong to a violent group and male students (16.5%) are significantly more likely than female students (7.7%) to belong to a violent group.

The findings from this study provide solid evidence that there is an urgent need for interventions and programme to assist students to adapt positive values and make healthy lifestyle choices.

## **Recommendations**

- Teach and actively involving students in Health Education and Health Promotion activities early in their school life.
- Implement the School Health Policy, along with the Health and Family life curriculum in all schools and establish Adolescent Health Services.
- Enforce laws and legislation relating to the sale of alcohol and tobacco products to students.
- Create an environment for students to learn about the health gains from non indulgence in alcohol, drugs, and other illicit substances.
- Students must be taught the importance of healthy eating and benefits of engaging in physical activity must be emphasized.
- Reinforce abstinence messages and encouraging students to postpone sexual activity.
- Provide or refer for confidential counselling and other social services students and or parents who require same.
- Parent must be encouraged and supported to become involved in their children's life through the Parent Teacher Association and other support groups.
- Encourage students to express their feelings and provide sessions on conflict, anger management, and mediation exercises.
- Engage the print and electronic media to report on health and social issues affecting and or afflicting adolescence and provide strategies for a solution.
- A follow up GSHS should be conducted in three years (2010) to obtain data on adolescent health behaviour, determine trends, compare findings, develop policies and programmes, and evaluate school and adolescent health programmes.

# Introduction

In 2001, WHO, in collaboration with UNAIDS, UNESCO, and UNICEF, and with technical assistance from the US Centers for Disease Control and Prevention (CDC), initiated development of the Global School-based Student Health Survey (GSHS).

Since 2003, Ministries of Health and Education around the world have been using the GSHS to periodically monitor the prevalence of important health risk behaviours and protective factors among students.

To date, more than 45 countries have completed a GSHS. This report describes results from the **first** GSHS conducted in Tobago by the Ministry of Health, Ministry of Education, and Tobago House of Assembly during 19- 24 April 2007.

The purpose of the GSHS is to provide accurate data on health behaviours and protective factors among students to:

- Help countries develop priorities, establish programmes, and advocate for resources for school health and youth health programmes and policies;
- Establish trends in the prevalence of health behaviours and protective factors by country for use in evaluation of school health and youth health promotion; and
- Allow countries, international agencies, and others to make comparisons across countries and within countries regarding the prevalence of health behaviours and protective factors.

The GSHS is a school-based survey conducted primarily among students aged 13 - 15 years. It measures behaviours and protective factors related to the leading causes of mortality and morbidity among youth and adults in Tobago:

- Alcohol and other drug use
- Dietary behaviours
- Hygiene
- Mental health
- Physical activity
- Protective factors
- Sexual behaviours that contribute to HIV infection, other STI, and unintended pregnancy
- Tobacco use
- Violence and unintentional injury

In Tobago, there is a scarcity of data on students in the 13-15 age groups comprising all the topics reflected in this GSHS. Prior to this GSHS, the Adolescent Youth Survey (1989) and the Global Youth Tobacco Survey (GYTS) 2000 and 2007 were conducted. However, this GSHS is the first comprehensive source of data comprising all topics in one survey.



# Methods

## Sampling

The 2007 Tobago GSHS employed a two-stage cluster sample design to produce a representative sample of students in Forms 1-4. The first-stage sampling frame consisted of all schools containing any of Forms 1-4. Schools were selected with probability proportional to school enrolment size. Seven (7) schools were selected to participate in the Tobago GSHS.

The second stage of sampling consisted of randomly selecting intact classrooms (using a random start) from each school to participate. All classrooms in each selected school were included in the sampling frame. All students in the sampled classrooms were eligible to participate in the GSHS.

A 66 item self-administered questionnaire was completed by students during one classroom period. Survey procedures were designed to protect students' privacy by allowing for anonymous, confidential, and voluntary participation. Computer packages like SUDAAN, SPSS, and EPI INFO were used to analyse the data.

## Weighting

A weight has been associated with each questionnaire to reflect the likelihood of sampling each student and to reduce bias by compensating for differing patterns of non response. The weighting formula used for calculation was:

$W1$  = the inverse of the probability of selecting the classroom within the school

$f1$  = a school-level non response adjustment factor calculated by class,

$f3$  = a post stratification adjustment factor calculated by Form.

## Use of the weighted results

The weighted results can be used to make important inferences about the priority health-risk behaviours and protective factors of all students in Forms 1, 2, 3, and 4. In addition, weighting allows the results to be applied to the whole population of students in Forms 1-4 in Tobago.

## Response rates

The 2007 GSHS was completed by 1,299 students in 7 schools in Tobago. The school response rate was 100%, the student response rate was 83%, and the overall response rate was 83%. The data were cleaned for inconsistencies and 1,277 questionnaires were usable after data editing. Missing data were not statistically imputed. Software that takes into consideration the complex sample design was used to compute prevalence estimates and 95% confidence intervals. GSHS data are representative of all students in Forms 1-4 in Tobago.

Survey administration occurred from 19<sup>th</sup> to 24<sup>th</sup> April 2007. Survey procedures were designed to protect student privacy by allowing for anonymous and voluntary participation. Students completed the self-administered 66 item questionnaire during one classroom period and recorded their responses directly on a computer-scannable answer sheet. Approximately, 19 Survey Administrators were specially trained to conduct the GSHS.

The Tobago GSHS questionnaire contained 66 questions; 54 questions (1-54) were from the core questionnaire modules and 12 questions (55-66) were from the core expanded GSHS questions and country-specific questions. (See Appendix for details.) The core GSHS questionnaire consists of all core questions addressing the following topics:

- Alcohol and other drug use
- Dietary behaviours
- Hygiene
- Mental health
- Physical activity
- Protective factors
- Sexual behaviours that contribute to HIV infection, other STI, and unintended pregnancy
- Tobacco use
- Violence and unintentional injury.

# Results

## Demographics

The study population was comprised of 559 males (45.4%) and 698 females (54.6%). In addition, 70.7% of the sample was in the 13-15 age group and 26.6% were from Form 1 and 24.6% were from Form 4. The demographic characteristics of the sample are described in the following table.

*Table1: Demographic characteristics of the sample, Tobago, 2007.*

	Sex		Age			Forms			
	Males	Females	12 or younger	13-15	16 or older	1	2	3	4
<b>Tobago</b>	45.5	54.6	13.4	70.7	15.9	26.6	23.7	24.4	24.6

## Alcohol and Other Drug Use

Worldwide, alcohol use causes 3% of deaths (1.8 million) annually, which is equal to 4% of the global disease burden. Across sub-regions of the world, the proportion of disease burden attributable to alcohol use is greatest in the Americas and Europe ranging from 8% to 18% of total burden for males and 2% to 4% of total burden for females. Besides the direct effects of intoxication and addiction, alcohol use causes about 20% to 30% of each of oesophageal cancer, liver disease, homicide and other intentional injuries, epilepsy, and motor vehicle accidents worldwide (1), and heavy alcohol use places one at greater risk for cardiovascular disease (2).

In most countries, alcohol-related mortality is highest among 45- to 54-year-olds, but the relationship between the age of initiation of alcohol use and the pattern of its use and abuse in adulthood makes the study of alcohol consumption among adolescents important (3).

Intentional and unintentional injuries are far more common among youth and young adults. Unintentional injuries are the leading cause of death among 15- to 25-year-olds and many of these injuries are related to alcohol use (4).

Young people who drink are more likely to use tobacco and other drugs and engage in risky sexual behaviour, than those who do not drink (5,6). Problems with alcohol can impair adolescents' psychological development and influence both the school environment and leisure time negatively (7).

*Table2: Alcohol use and other drug use among students, by sex, Tobago, 2007.*

Questions	Total % (CI)*	Sex	
		Male % (CI)	Female % (CI)
Had at least one drink containing alcohol on one or more days during the past 30 days (i.e., current alcohol use	51.5 (47.2 - 55.8)	55.2 (49.0 - 61.5)	48.3 (43.4 - 53.1)
Among students who reported current alcohol use, those who drank two or more drinks per day on the days they drank alcohol during the past 30 days	40.2 (34.5 - 45.9)	44.7 (36.7 - 52.7)	34.9 (27.6 - 42.2)

Among students who reported current alcohol use, those who usually got the alcohol they drank by buying it in a store, shop, or from a street vendor	16.0 (12.6 - 19.4)	<b>23.8</b> <b>(17.6 - 29.9)</b>	<b>9.4</b> <b>(5.7 - 13.1)</b>
Drank so much alcohol they were really drunk one or more times during their life	27.5 (24.8 - 30.1)	<b>34.4</b> <b>(30.2 - 38.7)</b>	<b>21.5</b> <b>(18.5 - 24.6)</b>
Had a hang-over, felt sick, got into trouble with their family or friends, missed school, or got into fights as a result of drinking alcohol one or more times during their life	15.5 (12.5 - 18.5)	<b>20.7</b> <b>(16.4 - 25.0)</b>	<b>10.8</b> <b>(8.0 - 13.6)</b>
Used drugs such as marijuana, hemp, or cocaine one or more times during their life	14.8 (11.8 - 17.7)	<b>21.6</b> <b>(17.1 - 26.1)</b>	<b>9.3</b> <b>(6.7 - 11.9)</b>
Among students who reported current alcohol use, the percentage who had their first drink of alcohol before age 14	86.8 (83.5 - 90.1)	88.7 ( 85.1 - 92.4)	85.0 (80.3 - 89.6)
Saw during the past 30 days almost daily or daily any alcohol advertisements	37.6 (34.3 - 40.8)	37.4 (32.6 - 42.2)	38.3 (34.1 - 42.6)

\*95% confidence interval.

In Tobago, the prevalence of current alcohol use among students (i.e., drinking at least one drink containing alcohol on one or more days during the past 30 days) is 51.5%. Overall, 40.2% of students drank two or more drinks per day on the days they drank alcohol during the past 30 days. Overall, 16.0% of students usually got the alcohol they drank by buying it in a store, shop, or from a street vendor during the past 30 days. Male students (23.8%) are significantly more likely than female students (9.4%) to usually get the alcohol they drink by buying it from a store, shop, or from a street vendor.

During their life, 27.5% of students drank so much alcohol they were really drunk one or more times. Male students (34.4%) are significantly more likely than female students (21.5%) to drink so much alcohol that they are really drunk one or more times. Overall, 15.5% of students ever had a hang-over, felt sick, got into trouble with their family or friends, missed school, or got into fights as a result of drinking alcohol one or more times during their life. Male students (20.7%) are significantly more likely than female students (10.8%) to have a hang-over, feel sick, get into trouble with their family or friends, miss school, or get into fights as a results of drinking alcohol.

In Tobago, the prevalence of lifetime drug use (using drugs, such as marijuana, hemp or cocaine one or more times during their life) is 14.8%. Male students (21.6%) are significantly more likely than female students (9.3%) to report lifetime drug use.

## Dietary Behaviours

Overweight acquired during childhood or adolescence may persist into adulthood and increase risk later in life for coronary heart disease, diabetes, gallbladder disease, some types of cancer, and osteoarthritis of the weight-bearing joints. Nutritional deficiencies as a result of food insecurity (protein-energy malnutrition, iron, Vitamin A, and iodine deficiency) affect school participation and learning (8).

Fruits and vegetables are good sources of complex carbohydrates, vitamins, minerals, and other substances important for good health. Dietary patterns that include higher intakes of fruits and vegetables are associated with several health benefits, including a decreased risk for some types of cancer (9).

*Table 3: Dietary behaviours by sex, Tobago, 2007.*

Question	Total % (CI)*	Sex	
		Male % (CI)	Female % (CI)
Went hungry most of the time or always during the past 30 days because there was not enough food in their home	8.1 (5.9 - 10.3)	8.5 (5.6 - 11.4)	7.6 (5.3 - 9.8)
Usually ate fruit, such as orange, grapefruit, bananas, apples, melon, or pineapple one or more times per day during the past 30 days	59.5 (56.2 - 62.7)	55.2 (50.2 - 60.1)	62.7 (58.9 - 66.5)
Usually ate vegetables, such as carrots, pumpkin, cabbage, lettuce, cucumber, or tomatoes one or more times per day during the past 30 days	60.3 (57.8 - 62.7)	59.1 (55.1 - 63.2)	61.5 (58.3 - 64.6)
Ate fruits and vegetables five or more times per day during the past 30 days	21.6 (17.9 - 25.2)	21.6 (17.1 - 26.2)	21.6 (17.2 - 25.9)
Usually drank carbonated soft drinks, such as Coke or Sprite, Chubby, Busta , Seven Up, Pepsi, Fanta, Cannings, or Solo two or more times per day during the past 30 days	36.9 (33.5 - 40.2)	34.1 (29.8 - 38.4)	38.6 (34.6 - 42.6)
Ate at fast food restaurants, such as KFC, Church's, Royal Castle, Mario, Pizza Boys, Pizza Hut, or Bos Burger on three or more of the past seven days	<b>16.1</b> <b>(13.6 - 18.6)</b>	<b>11.6</b> <b>(8.1 - 15.1)</b>	<b>19.3</b> <b>(16.2 - 22.4)</b>

\*95% confidence interval.

In Tobago, overall 8.1% of students went hungry most of the time or always during the past 30 days because there was not enough food in their home.

Overall, 59.5% of students usually ate fruit, such as orange, grapefruit, banana, apples, grape, melon, or pineapple one or more times per day during the past 30 days. Overall, 60.3% of students usually ate vegetables, such as carrots, pumpkin, cabbage, lettuce, or tomatoes one or more times per day during the past 30 days. Overall 21.6% of students usually ate fruits and vegetables five or more times per day during the past 30 days.

Overall, 36.9% of students usually drank carbonated soft drinks, such as Coke or Sprite, Chubby, Busta, Seven Up, Pepsi, Fanta, Solo, or Cannings two or more times per day during the past 30 days. Overall, 16.1% of the students ate at fast food restaurants, such as KFC, Church's, Royal Castle, Mario's Pizza Boys, Pizza Hut, or Bos Burger on three or more of the past seven days. Female students (19.3%) are significantly more likely than male students (11.6%) to have eaten at fast food restaurants.

## Hygiene

Dental caries affect between 60-90% of children in developing countries and is the most prevalent oral disease among children in several Asian and Latin American countries. In Africa, the incidence of dental caries is expected to rise drastically in the near future due to increased sugar consumption and inadequate fluoride exposure (10). In addition to causing pain and discomfort, poor oral health can affect children's ability to communicate and learn. More than 50 million school hours are lost annually because of oral health problems (11). In both developed and developing countries, many

children do not have access to water fluoridation or professional dental care. Daily tooth cleaning or brushing can help prevent some dental disease (12).

Diarrhoeal diseases kill nearly 2 million children every year. Hygiene education and the promotion of hand-washing can reduce the number of diarrhoeal cases by 45% (13). About 400 million school-aged children are infected with worms worldwide. These parasites consume nutrients from children they infect, cause abdominal pain and malfunction, and can impair learning by slowing cognitive development (14).

*Table 4: Hygiene-related behaviours, by sex, Tobago, 2007.*

Question	Total % (CI)*	Sex	
		Male % (CI)	Female % (CI)
Cleaned or brushed their teeth less than 1 time per day during the past 30 days	4.9 (3.3 – 6.4)	5.3 (2.7 – 7.9)	4.1 (2.7 – 5.6)
Never or rarely washed their hands before eating during the past 30 days	15.7 (13.8 – 17.7)	16.3 (13.0 – 19.6)	15.5 (12.9 – 18.1)
Never or rarely washed their hands after using the toilet or latrine during the past 30 days	4.7 (3.2 – 6.2)	5.7 (3.0 – 8.4)	3.6 (2.2 – 4.9)
Never or rarely used soap when washing their hands during the past 30 days	10.9 (9.0 – 12.9)	12.8 (10.2 – 15.4)	9.3 (6.5 – 12.0)

\*95% confidence interval.

In Tobago, the percentage of students who cleaned or brushed their teeth less than 1 time during the past 30 days was 4.9%. Overall, 15.7% of students never or rarely washed their hands before eating during the past 30 days. Overall, 4.7% of students never or rarely washed their hands after using the toilet or latrine during the past 30 days. Overall, 10.9% of students never or rarely used soap when washing their hands during the past 30 days.

## Mental Health

World-wide, approximately 20% of children and adolescents suffer from a disabling mental illness (15). Anxiety disorders, depression and other mood disorders, and behavioural and cognitive disorders are among the most common mental health problems among adolescents. Half of all lifetime cases of mental disorders start by age 14 (16).

Every country and culture has children and adolescents struggling with mental health problems. Most of these young people suffer needlessly, unable to access appropriate resources for recognition, support, and treatment. Ignored, these young people are at high risk for abuse and neglect, suicide, alcohol and other drug use, school failure, violent and criminal activities, mental illness in adulthood, and health-jeopardizing impulsive behaviours. Each year, about 4 million adolescents world-wide attempt suicide. Suicide is the third leading cause of death among adolescents (17,18).

*Table 5: Mental health issues among students, by sex, Tobago, 2007.*

Question	Total % (CI)*	Sex	
		Male % (CI)	Female % (CI)
Most of the time or always felt lonely during the past 12 months	14.1 (12.0 – 16.2)	12.5 (9.5 – 15.6)	15.5 (12.5 – 18.6)
Most of the time or always felt so worried about something that they could not sleep at	12.9 (10.9 – 14.8)	9.5 (7.2 – 11.9)	15.5 (12.4 – 18.5)

night during the past 12 months			
Felt so sad or hopeless almost every day for two weeks or more in a row that they stopped doing their usual activities during the past 12 months	21.2 (17.9 -24.4)	17.8 (13.7 -21.8)	23.2 (19.4 -27.0)
Seriously considered attempting suicide during the past 12months	18.5 (15.5 -21.5)	14.5 (10.7 -18.2)	21.5 (17.8 -25.2)
Made a plan about how they would attempt suicide during the past 12 months	17.8 (14.8- 20.7)	16.3 (12.5 -20.0)	18.2 (15.1 – 21.4)
Have no close friends	11.0 (9.0 – 13.0)	10.7 (7.9 -13.4)	10.7 (8.0- 13.3)
Think of themselves as religious or spiritual person	71.9 (68.4 – 75.3)	69.4 (64.4-74.3)	74.2 (70.3-78.2)

\*95% confidence interval.

In Tobago, 14.1% of students most of the time or always felt lonely during the past 12 months. Overall, 12.9% of students most of the time or always felt so worried about something that they could not sleep at night during the past 12 months. Female students (15.5%) are significantly more likely than male students (9.5%) to most of the time or always feel so worried about something they cannot sleep at night. Overall, 21.2% of students felt so sad or hopeless almost every day for two weeks or more in a row that they stopped doing their usual activities during the past 12 months.

Overall, 18.5% of students seriously considered attempting suicide during the past 12 months. Overall, 17.8% of students made a plan about they would attempt suicide during the past 12 months. Overall, 11.0% of students have no close friends. Overall, 71.9% of students thought of themselves as a religious or spiritual person.

## Physical Activity

Participating in adequate physical activity throughout the life span and maintaining normal weight are the most effective ways of preventing many chronic diseases, including cardiovascular disease and diabetes (19).

The prevalence of type 2 diabetes is increasing globally and now is occurring during adolescence and childhood (20). Participating in adequate physical activity also helps build and maintain healthy bones and muscles, control weight, reduce blood pressure, ensure a healthy blood profile, reduce fat, and promote psychological well-being (21).

Roughly 60% of the world's population is estimated to not get enough physical activity. Patterns of physical activity acquired during childhood and adolescence are more likely to be maintained throughout the life span, thus sedentary behaviour adopted at a young age is likely to persist (22).

*Table 6: Physical activity among students, by sex, Tobago, 2007.*

Question	Total % (CI)*	Sex	
		Male % (CI)	Female % (CI)
Physically active for a total of at least 60 minutes per day on all 7 days during the past seven days	16.8 (14.3 – 19.3)	20.6 (17.1- 24.1)	14.1 (11.3 – 16.8)
Physically active seven days for a total of at least 60 minutes per day during a typical or usual week	16.3 (14.1 – 18.4)	18.5 (15.3 – 21.7)	14.3 (11.8 – 16.9)

Physical active for at least 60 minutes per day on less than five days per week on average	<b>78.1</b> (75.2 -81.1)	<b>72.8</b> (68.3 – 77.4)	<b>82.0</b> (78.8 – 85.2)
Spent three or more hours per day during a typical or usual day sitting and watching television or doing other sitting activities, such as reading a novel	47.6 (43.9 – 51.2)	43.3 (39.0 – 47.5)	51.3 (46.4 – 56.3)
Did not walk or bicycle to and from school during the past seven days	<b>77.5</b> (74.3 – 80.7)	<b>71.5</b> (66.4 – 76.5)	<b>82.6</b> (78.9 – 86.4)
Usually took 29 minutes or less each day to get to and from school during the past seven days	60.2 (57.1 -63.4)	64.2 (60.2 -68.2)	56.4 (52.1 -60.8)
Spent less than 2.5 hours total walking or bicycling to and from school during the past seven days	94.4 (92.8 – 96.0)	94.2 (92.1 – 96.2)	94.7 (92.8 – 96.5)
Went to physical education class 4 or more days each week during the school year	22.7 (18.5 -26.8)	23.0 (17.8 -28.1)	22.4 (17.3 -27.4)

\*95% confidence interval.

In Tobago, 16.8% of students were physically active for a total of at least 60 minutes per day on all 7 days during the past 7 days. Male students (20.6%) are significantly more likely than female students (14.1%) to be physically active for a total of at least 60 minutes per day on all 7 days during the past 7 days. Overall, 16.3% of students were physically active for a total of at least 60 minutes per day on all 7 days during a typical or usual week. Overall, 78.1% of students participated in insufficient physical activity (i.e., participated in physical activity for a total of at least 60 minutes per day on five or fewer days on average). Female students (82.0%) are significantly more likely than male students (72.8%) to participate in insufficient physical activity.

Overall, 47.6% of students spent three or more hours per day during a typical or usual day sitting and watching television or doing other sitting activities. Overall, 77.5% of students did not walk or bicycle to and from school during the past 7 days. Female students (82.6%) are significantly more likely than male students (71.5%) to not walk or bicycle to and from school during the past 7 days.

Overall, 60.2% of students usually took 29 minutes or less to get to and from school during the past 7 days. Overall, 94.4% of students spent less than 2.5 hours total walking or bicycling to and from school during the past seven days. Overall, 22.7% of students went to physical education class 4 or more days each week during school year.

## Protective Factors

For most adolescents, school is the most important setting outside of the family. School attendance is related to the prevalence of several health risk behaviours including violence and sexual risk behaviours (23).

Adolescents who have a positive relationship with teachers, and who have positive attitudes towards school are less likely to initiate sexual activity early, less likely to use substances, and less likely to experience depression. Adolescents who live in a social environment which provides meaningful relationships, encourages self-expression, and also provides structure and boundaries, are less likely to initiate sex at a young age, less likely to experience depression, and less likely to use substances (24).



Being liked and accepted by peers is crucial to young people's health development, and those who are not socially integrated are far more likely to exhibit difficulties with their physical and emotional health. Isolation from peers in adolescence can lead to feelings of loneliness and psychological symptoms. Interaction with friends tends to improve social skills and strengthen the ability to cope with stressful events (25).

Parental bonding and connection is associated with lower levels of depression and suicidal ideation, alcohol use, sexual risk behaviours, and violence (26).

*Table 7: Protective factors among students, by sex, Tobago, 2008.*

Question	Total % (CI)*	Sex	
		Male % (CI)	Female % (CI)
Missed classes or school without permission on one or more of the past 30 days	25.6 (21.5 -29.8)	31.2 (26.0 -36.3)	20.7 (16.2 – 25.2)
Reported that most of the students in their school were kind and helpful never or rarely during the past 30 days	47.3 (44.2 -50.4)	49.3 (45.0 -53.6)	46.7 (42.5 – 50.9)
Students whose parents or guardians never or rarely checked to see if their homework was done during the past 30 days	48.6 (44.6 – 52.5)	47.5 (42.4 -52.6)	49.0 (43.9 -54.1)
Student whose parents or guardians never or rarely understood their problems and worries during the past 30 days	47.7 (44.1 – 51.2)	46.1 (41.6 – 50.5)	49.3 (44.3 – 54.3)
Students whose parents or guardians never or rarely knew what they were doing with their free time during the past 30 days	38.7 (35.1 – 42.3)	39.8 (34.4 – 45.2)	38.8 (33.8 – 42.7)

\*95% confidence interval.

In Tobago, 25.6% of students missed classes or school without permission on one or more of the past 30 days. Male students (31.2%) are significantly more likely than female students (20.7%) to miss classes or school without permission.

Overall, 47.3% of students reported that most of the students in their school were kind and helpful never or rarely during the past 30 days. Overall, 48.6% of students reported their parents or guardians never or rarely checked to see if their homework was done during the past 30 days.

Overall, 47.7% of students reported their parents or guardians never or rarely understood their problems and worries during the past 30 days. Overall, 38.7% of students reported their parents or guardians never or really know what they were doing with their free time during the past 30 days.

### **Sexual Behaviours that Contribute to HIV Infection, Other STI, and Unintended Pregnancy**

AIDS has killed more than 25 million people since 1981. As of 2005, an estimated 40.3 million people were living with HIV. In that year alone, roughly 3.1 million people died of HIV and another 4.9 million people became infected with HIV (27). Young people between the ages of 15 and 24 are the most threatened group, accounting for more than half of those newly infected with HIV. At the end of 2003, an estimated 10 million young people aged 15 to 24 were living with HIV. Studies show that adolescents who begin sexual activity early are likely to have sex with more partners and with partners who have been at risk of HIV exposure and are not likely to use condoms. In many countries, HIV infection and AIDS is reducing average life expectancy, threatening food security and nutrition, dissolving households, overloading the health care system,

reducing economic growth and development, and reducing school enrolment and the availability of teachers (28).

STIs are among the most common causes of illness in the world and have far-reaching health consequences. They facilitate the transmission of HIV and, if left untreated, can lead to cervical cancer, pelvic inflammatory diseases, and ectopic pregnancies (29). Worldwide, the highest reported rates of S T Is are found among people between 15 and 24 years; up to 60% of the new infections and half of all people living with HIV globally are in this age group (30).

*Table 8: Sexual behaviours that contribute to HIV infection, other STI, and unintended pregnancy among students, by sex, Tobago, 2007.*

Question	Total % (CI)*	Sex	
		Male % (CI)	Female % (CI)
Ever had sexual intercourse	<b>26.3</b> (21.7 – 30.9)	<b>33.2</b> (27.1 – 39.3)	<b>21.4</b> (16.5 -26.2)
Had sexual intercourse for the first time before age 13 years	<b>18.4</b> (15.6 -21.3)	<b>29.6</b> (24.8 – 34.3)	<b>9.4</b> (7.0 -11.8)
Had sexual intercourse with two or more people during their life	<b>22.0</b> (17.7 -26.3)	<b>29.7</b> (23.7- 35.7)	<b>15.7</b> (11.6 -19.7)
Had sexual intercourse during the past 12 months	25.8 (21.8 -29.9)	30.0 (24.7 -35.3)	22.4 (17.6 -27.3)
Among students who had sexual intercourse during the past 12 months, those who used a condom at last sexual intercourse	60.8 (54.4 – 67.3)	62.0 (53.3 -70.6)	59.3 (50.5 -68.1)
Students who would most likely get a condom or rubbers from a pharmacy or hospital if they wanted one	<b>24.6</b> (21.2 – 28.1)	<b>19.2</b> (15.8 – 22.6)	<b>29.5</b> (25.0 - 33.9)
Among students who had sexual intercourse during the past 12 months, those who most of the time or always used a method of birth	26.6 (20.5 – 32.6)	NA**	NA**

\*95% confidence interval.

\*\*Not available. Subgroup contains <100 students

In Tobago, 26.3% of students had sexual intercourse during their life. Male students (33.2%) are significantly more likely than female students (21.4%) to have had sexual intercourse. Overall, 18.4% of students had sexual intercourse for the first time before age 13 years. Male students (29.6%) are significantly more likely than female students (9.4%) to have initiated sexual intercourse before age 13 years. Overall, 22.0% of students had sexual intercourse with multiple partners (i.e., two or more) during their life. Male students (29.7%) are significantly more likely than female students (15.7%) to have had multiple partners.

Overall, 25.8% of students had sexual intercourse during the past 12 months. Among students who had sexual intercourse during the past 12 months, 60.8% used a condom at last sexual intercourse. Overall, 24.6% of students would most likely get a condom or rubbers from a pharmacy or hospital if they wanted one. Female students (29.5%) are significantly more likely than male students (19.2%) who would most likely get a condom or rubbers from a pharmacy or hospital if they wanted one.

Overall, 26.6% of students who had sexual intercourse during the past 12 months, most of the time or always used a method of birth control with their partner.

## Tobacco Use

About 1.1 billion people worldwide smoke and the number of smokers continue to increase. Among these, about 84% live in developing and transitional economy countries. Currently 5 million people die each year from tobacco consumption, the second leading cause of death worldwide. If present consumption patterns continue, it is estimated that deaths from tobacco consumption will be 10 million people per year by 2020 (31). The overwhelming majority of smokers begin tobacco use before they reach adulthood. Among those young people who smoke, nearly one-quarter smoked their first cigarette before they reached the age of ten.

Smokers have markedly increased risks of multiple cancers, particularly lung cancer, and are at far greater risk of heart disease, strokes, emphysema and many other fatal and non-fatal diseases. If they chew tobacco, they risk cancer of the lip, tongue and mouth. Children are at particular risk from adults' smoking. Adverse health effects include pneumonia and bronchitis, coughing and wheezing, worsening of asthma, middle ear disease, and possibly neuro-behavioural impairment and cardiovascular disease in adulthood. Many studies show that parental smoking is associated with higher youth smoking (32).

*Table 9: Tobacco use among students, by sex, Tobago, 2007.*

Question	Total % (CI)*	Sex	
		Male % (CI)	Female % (CI)
Smoked cigarettes on one or more days during the past 30 days	7.9 (5.9 – 10.0)	10.7 (7.3 -14.1)	5.3 (3.3 -7.4)
Used any other form of tobacco, such as hemp, on one or more days during the past 30 days	<b>9.8</b> <b>(7.0 – 12.7)</b>	<b>15.0</b> <b>(10.7- 19.4)</b>	<b>5.1</b> <b>(3.1 -7.1)</b>
Used any tobacco on one or more of the past 30 days	<b>11.0</b> <b>(8.2 -13.8)</b>	<b>15.9</b> <b>(11.6 -20.3)</b>	<b>6.8</b> <b>(4.1 – 9.5)</b>
Among students who smoked cigarettes during the past 12 months, those who tried to stop smoking cigarettes	60.2 (50.4 - 70.1)	NA**	NA**
Reported people smoked in their presence on one or more days during the past seven days	57.8 (55.4 – 60.3)	62.0 (56.7 – 67.2 )	54.8 (51.1 – 58.5)
Had a parent or guardian who uses any form of tobacco	19.1 ( 16.6 – 21.6 )	19.4 (15.7 -23.1)	18.5 (15.1 -21.9)
Probably or definitely think they will smoke a cigarette during the next 12 months	7.1 ( 5.2 – 9.1)	9.3 (6.0 -12.5)	5.6 (3.5 -7.8)
Probably or definitely would smoke if one of their best friends offered them a cigarette	7.3 (5.2 -9.3)	9.6 (6.7 – 12.5)	5.5 (3.6 – 7.4)

\*95% confidence interval.

\*\*Not available. Subgroup contains <100 students.

In Tobago, 7.9% of students smoked cigarettes on one or more days during the past 30 days. Overall, 9.8% of students used any other form of tobacco, such as hemp, on one or more days during the past 30 days. Male students (15.0%) are significantly more likely than female students (5.1%) to use any other form of tobacco, such as hemp, on one or more days during the past 30 days. Overall, 11.0% of students used any tobacco on one or more of the past 30 days. Male students (15.9%) are significantly more likely than female students (6.8%) to use any tobacco on one or more of the past 30 days. Among students who smoked cigarettes during the past 12 months, 60.2% tried to stop smoking cigarettes.

Overall, 57.8% of students reported that people smoked in their presence on one or more days during the past seven days. Overall, 19.1% of students reported they have a parent or guardian who used any form of tobacco.

Overall 7.1 % of students probably or definitely think they will smoke a cigarette during the next 12 months. Overall, 7.3% of students probably or definitely would smoke if one of their best friends offered them a cigarette.

## Violence and Unintentional Injury

Unintentional injuries are a major cause of death and disability among young children (33). Each year, about 875,000 children under the age of 18 die from injuries and 10 to 30 million have their lives affected by injury. Injury is highly associated with age and gender. Males aged 10-14 have 60% higher injury death rates than females. Teenagers aged 15-19 have higher rates than those aged 10-14 years (64 compared to 29 per 100,000).

Estimated global homicide death rate for males aged 15-17 is 9 per 100,000 (34). For every youth homicide, approximately 20 to 40 victims of non-fatal youth violence receive hospital treatment (35). Many unintentional injuries lead to permanent disability and brain damage, depression, substance abuse, suicide attempts, and the adoption of health risk behaviours. Victims of bullying have increased stress and a reduced ability to concentrate and are at increased risk for substance abuse, aggressive behaviour, and suicide attempts (36).

*Table 10: Violence and unintentional injury among students, by sex, Tobago, 2007.*

Question	Total % (CI)*	Sex	
		Male % (CI)	Female % (CI)
Were physically attacked one or more times during the past 12 months	38.0 (39.7 – 41.4)	44.3 (39.8 – 48.9)	32.1 (27.5 – 36.8)
Were in a physical fight one or more times during the past 12 months	43.2 (39.2 – 47.3)	54.0 (48.6 – 59.5)	33.7 (29.2 – 38.3)
Were seriously injured one or more times during the past 12 months	43.6 (39.3 – 47.9)	48.9 (43.7 – 54.2)	38.1 (32.9 – 43.4)
Among students who were seriously injured during the past 12 months, those whose most serious injury happened to them while they were playing or training for a sport	30.3 (26.1 – 34.5)	39.0 (33.4 – 44.6)	21.5 (15.3 – 27.8)
Among students who were seriously injured during the past 12 months, those whose most serious injury was the result of a fall	28.1 (23.7 – 32.5)	29.9 (24.8 – 34.9)	26.9 (19.6 – 34.2)
Among students who were seriously injured during the past 12 months, those who most serious injury was the result of them hurting themselves by accident	42.7 (37.3 – 48.1)	45.5 (38.1 – 53.0)	40.1 (32.7 – 47.5)
Among students who were seriously injured during the past 12 months, those who had a broken bone or dislocated joint as their most serious injury	17.6 (14.0 - 21.2)	19.6 (14.4 - 24.8)	16.2 (10.6 - 21.8)
Were bullied on one or more days during the past 30 days	22.1 (18.8 – 25.8)	22.5 (17.7 - 27.4)	21.1 (17.0 - 25.2)
Among students who were bullied during the past 30 days, those who were bullied most often by being hit, kicked, pushed, shoved around, or locked indoors	17.7 (12.1 – 23.4)	23.3 (14.7 - 31.8)	13.5 (6.4 - 20.6)

Belonged to a violent group	<b>11.5</b> <b>(9.1 -14.0)</b>	<b>16.5</b> <b>(12.3 -20.7)</b>	<b>7.7</b> <b>(5.0 – 10.3)</b>
Never or rarely used a belt when riding in a motor vehicle driven by some one else during the past 30 days	52.7 (48.8 – 56.6)	57.3 (51.8 – 62.8)	49.3 (44.4 – 54.1)

\*95% confidence interval.

In Tobago 38.0% of students were physically attacked one or more times during the past 12 months. Male students (44.3%) are significantly more likely than female students (32.1%) to have been physically attacked one or more times during the past 12 months. Overall, 43.2 % of students were in a physical fight one or more times during the past 12 months. Male students (54.0%) are significantly more likely than female students (33.7%) to have been in a physical fight.

Overall, 43.6% of students were seriously injured one or more times during the past 12 months. Male students (48.9%) are significantly more likely than female students (38.1%) to have been seriously injured. Among students who were seriously injured during the past 12 months, 30.3% were playing or training for a sport when their most serious injury happened to them, 28.1% had their most serious injury caused by a fall, 42.7% had their most serious injury occurring as a result of hurting themselves by accident, and 17.6% experienced a broken bone or dislocated joint as their most serious injury.

Overall, 22.1% of students were bullied on one or more days during the past 30 days. Among students who were bullied during the past 30 days, 17.7% were bullied most often by being hit, kicked, pushed, shoved around, or locked indoors.

Overall, 11.5% of students belong to a violent group. Male students (16.5%) are significantly more likely than female students (7.7%) to belong to a violent group.

Overall, 52.7% of students never or rarely used a belt when riding in a motor vehicle driven by someone else during the past 30 days.

## Conclusions

The GSHS found that students in Tobago are involved in unhealthy behaviours and are at risk for health problems due to their lifestyle choices and practices. In addition, some disturbing and worrying findings were revealed on health issues among the study population, as such policies and programmes must be implemented to protect these students. This study has also provided hard evidence for the urgent need for Comprehensive School Health and Adolescent Health Services for students.

### **Alcohol and other drug use**

The apparent easy access to purchase alcohol and the ingestion of alcohol by students are disturbing findings. In addition, this study revealed that male students were significantly more likely than females to use alcohol and other drugs. In fact, 23.8% of the males compared to 9.4% of the females reported that they usually got the alcohol they drank by buying it in a store, shop, or from a street vender. In the 13 -15 age group, 25.3% of the males and 5.9% of the females got the alcohol they drank by buying it in a store, shop, or from a street vender.

More so, the study found that 34.4% of the males and 21.5% of the females reported they drank so much alcohol that they were really drunk one or more times during their life. In the 13 - 15 age group, 32.3% of the males and 22.1% females indicated they drank so much alcohol that they were really drunk one or more times during their life. In addition, 20.7% of the male students compared to 10.8% of the females, had a hangover, felt sick ,got into trouble with their family or friends, missed school, or got into fights as a result of drinking alcohol during their lifetime.

With regards to other drugs use, 21.6% males in comparison to 9.3 % females stated they used drugs such as marijuana, hemp, or cocaine one or more times during their life. In the 13 -15 age group, 20.0% of males and 9.0% of females reported the same.

These disturbing practices must be discouraged and stiffer legislation implemented and enforced to prevent and/or reduce the easy access to and availability of alcohol and other drug use by students.

### **Dietary behaviours**

The survey found that female students consumed more fast food, as such they are significantly more likely than males to be at risk for chronic non communicable disease. In fact, 19.3% of females as compared to 11.6% of males reported they ate at fast food restaurants on three or more days of the week. Students must be taught about the importance of eating a balanced meal and the opportunity for them to choose healthy foods must be made available.

### **Mental health issues**

This study showed that female students are more likely than their male peers to most of the time or always feel so worried about something that they could not sleep at night. In the 13 - 15 age group, 14.8% of males in comparison to 22.7% of females reported they seriously considered attempting suicide during the past 12 months. Therefore, parents and teachers must observe students for signs of mood and behavioural changes and make timely intervention and referral.

### **Physical activity**

Physical activity among the male students was higher than among the female students, in that 20.6% of males compared to 14.1% of females reported they were physically active for a total of at least 60 minutes per day on all seven days during the past week. On the other hand, 82.6% of female

students indicated they did not walk to and from school during the past seven days. In the 13 - 15 age group, physical inactivity was higher among the females than male students. In view of the above, all students should be encouraged to participate in some type of organised physical activity in schools. In addition, the students and parents must be educated about the benefits of exercise to good health.

### **Protective factors**

In Tobago, more male than female students reported they missed classes or school without permission on one or more days during the past 30 days. In the 13 – 15 age group, 30.0% of males compared to 20.5% of females reported the same. In addition, 30.2% of Form 1 students and 37.1% of Form 4 students also indicated that they missed classes or school with out permission. This is indeed troubling, since parents would not know where their children are and what type of unsupervised activities they are involved in. This situation lends itself to an increased risk of students engaging in deviant behaviours. Therefore, parents must be encouraged to talk with their children, find out who their friends are and how they spend their leisure time. Generally, parents must be encouraged to become actively involved in their children's lives.

### **Sexual behaviours that contribute to HIV infection, other STI, and unintended pregnancy**

The GSHS found that male students in Tobago are more sexually activity than females, in that 33.2% reported they had sexual intercourse, 29.6% initiated sexual activity before the age of 13, and 29.7 % had sexual intercourse with multiple partners during their life. In the 13 – 15 age group, 31.3% of males had sexual intercourse, 30.2% had sexual intercourse before age 13, and 27.0% had multiple partners during their life. On the other hand, 29.5% of the female students compared to 19.2% of the males were the ones who would most likely get a condom or rubbers from a pharmacy if they wanted one. Interestingly, although a higher percentage of male students were involved in sexual activity, their apparent willingness to access condoms was lower. Attention must be drawn to the fact that students are engaging in sexual activity, without considering some of the consequences that may occur. As such, it is extremely important that all students are exposed to age-appropriate health and family life education early in their school life in a bid to reduce and or prevent these behaviours.

### **Tobacco use**

Despite the warning of smoking being dangerous to one's health, this GSHS found significantly more male students than females smoked. Similarly the GYTS 2000 revealed that male current smokers (19.5%) were greater users of any tobacco products than were female current smokers (11.7%) and the percentage of current smokers who used any tobacco product (i.e. including cigarettes) was 16.3%. In this GSHS, 15.0% of males compared to 5.1% of females used other form of tobacco such as hemp on one or more days during the past 30 days. Also, in the 13 - 15 age group, 15.2% of males and 4.6% of females reported the same. In addition, 15.9% of males indicated they used any tobacco on one or more of the past 30 days. Interestingly, 57.8% of students reported that people smoked in their presence on one or more days during the past seven days. This is an unhealthy situation, since the students are exposed to the added risk of second hand smoking which is then compounded by their smoking. Therefore, there must be strict adherence to and enforcement of the legislation and law which prohibits the sale of tobacco products to minors and bans smoking in public places and spaces. Every contact opportunity must be used to reinforce to students the health gains from not smoking.

## **Violence and unintentional injury**

*Physical attack* - The study found that being physical attacked, being involved in a physical fight, serious injury, and belonging to a violent group appear to be the domain of male students. In Tobago 38.0% of students reported they were physically attacked one or more times during the past 12 months. Male students (44.3%) are significantly more likely than female students (32.1%) to have been physically attacked one or more times during the past 12 months. In addition, male students (54.0%) are significantly more likely than female students (33.7%) to have been in a physical fight. In the 13 - 15 age group, 55.8% of the males compared to 31.3% of the females were in a physical fight.

*Seriously injured* - In Tobago overall, 43.6 % of students stated that they were seriously injured one or more times during the past 12 months. However, male students (48.9%) are significantly more likely than female students (38.1%) to have been seriously injured. In fact, in the 13 - 15 age group 49.0% of males as compared to 37.1% of females reported they were seriously injured.

*Bullied* - Overall, 22.1% of students were bullied on one or more days during the past 30 days. Among students who were bullied during the past 30 days, 17.7% were bullied most often by being hit, kicked, pushed, shoved around, or locked indoors.

*Violent groups* - The study revealed that overall, 11.5% of students belong to a violent group. Male students (16.5%) are significantly more likely than female students (7.7%) to belong to violent group.

Violence among students in school is indeed a cause for serious concern and as such conflict resolution and other coping skills must be taught early in school life of students. In addition students must be encouraged and provided with the opportunity to verbalise their feelings and anger management along with mediation exercises must be taught in schools.

## **RECOMMENDATIONS**

- Teach and actively involving students in Health Education and Health Promotion activities early in their school life.
- Implement the School Health Policy and the Health and Family life curriculum in all schools and establish Adolescent Health Services.
- Enforce laws and legislation relating to the sale of alcohol and tobacco products to students.
- Create an environment for student to learn about the health gains from non indulgence in alcohol, drugs, and other illicit substances.
- Students must be taught the importance of healthy eating and benefits of engaging in physical activity must be emphasized.
- Reinforce abstinence messages and encourage students to postpone sexual activity.
- Provide or refer for confidential counselling and other social services students and or parents who require same.
- Parent must be encouraged and supported to become involved in their children's life through the Parent Teacher Association and other support groups.



- Encourage students to express their feelings and provide exposure to conflict management and mediation exercises.
- Engage the print and electronic media to report on health and social issues affecting and or afflicting adolescents and provide strategies for solutions.
- A follow up GSHS to be conducted in three years (2010) to obtain data on adolescent health behaviour, determine trends, compare findings, develop policies and programmes, and evaluate school and adolescent health programmes.

## References

1. WHO. *World Health Report 2002*. Geneva, Switzerland: WHO, 2002.
2. WHO. *Global Status Report on Alcohol*. Geneva, Switzerland: WHO, 2004.
3. Poikolainen K, Tuulio-Henriksson A, Aalto-Setälä T, Marttunen M, Lonnqvist J. Predictors of alcohol intake and heavy drinking in early adulthood: a 5-year follow-up of 15-19 year-old Finnish adolescents, *Alcohol and Alcoholism*. 36(1): 85-88, 2001.
4. Facy F. *La place de l'alcool dans la morbidité et mortalité des jeunes [Place of alcohol morbidity and mortality of young people]* in *Actes du colloque les jeunes et l'alcool en Europe*. Navarro F, Godeau E, Vialas C. eds, Toulouse, France : Universitaires du Sud, Toulouse, 2000.
5. Hibell B, Andersson B, Ahlstrom S, Balakireva O, Bjarnason T, Kokkevi A, Morgan M. The 1999 ESPAD Report: Alcohol and Other Drug Use Among Students in 30 European Countries. Stockholm, Sweden: Council of Europe, 2000.
6. Bonomo Y, Coffey C, Wolfe R, Lynskey M, Bowes G, Patton G. Adverse outcomes of alcohol use in adolescents. *Addiction* 96 (10): 1485-1496, 2001.
7. *Health and Health Behaviour Among Young People*. Currie C, Hurrelmann K, Settertobulte W, Smith R, Todd J, eds. Copenhagen, Denmark: WHO Regional Office for Europe, 2000.
8. Taras, H. Nutrition and student performance at school. *Journal of School Health* 75 (6): 199-213, 2006.
9. CDC. Nutrition for Everyone: Fruits and Vegetables. Atlanta, Georgia: CDC, 2006. Available on-line at [http://www.cdc.gov/nccdphp/dnpa/nutrition/nutrition\\_for\\_everyone/fruits\\_vegetables/index.htm](http://www.cdc.gov/nccdphp/dnpa/nutrition/nutrition_for_everyone/fruits_vegetables/index.htm)
10. Petersen EP, Bourgeois D, Ogawa H, Estupinan-Day S, Ndiaye C. The global burden of oral diseases and risks to oral health. *Bulletin of the World Health Organization* 83: 661-669, 2005.
11. Kwan SYL, Petersen PE, Pine CM, Borutta A. Health-promoting schools: an opportunity for oral health promotion. *Bulletin of the World Health Organization* 83: 677-685, 2005.
12. Jones S, Burt BA, Petersen PE, Lennon MA. The effective use of fluorides in public health. *Bulletin of the World Health Organization* 83: 670-676, 2005.
13. WHO. Water, Sanitation, and Hygiene Links to Health. Fast Facts. Geneva, Switzerland: WHO, 2004. Available on-line at: [http://www.who.int/water\\_sanitation\\_health/factsfigures2005.pdf](http://www.who.int/water_sanitation_health/factsfigures2005.pdf)
14. Luong TV. De-worming school children and hygiene intervention. *International Journal of Environmental Health Research* 13: S153-S159, 2003.
15. WHO. Child Mental Health Atlas. Geneva, Switzerland: WHO, 2005. Available on-line at: [http://www.who.int/mental\\_health/resources/Child\\_ado\\_atlas.pdf](http://www.who.int/mental_health/resources/Child_ado_atlas.pdf)
16. Kessler RC, Berglund PMBA, Demler O, et al. Lifetime prevalence and age-of-onset distributions of DSM-IV disorders in the National Comorbidity Study Replication. *Arch Gen Psychiatry* 62(6):593-602, 2005.
17. WHO. Mental Health Fact Sheet. Geneva, Switzerland: WHO, 2001. Available on-line at: [http://www.who.int/child-adolescent-health/New\\_Publications/ADH/mental\\_health\\_factsheet.pdf](http://www.who.int/child-adolescent-health/New_Publications/ADH/mental_health_factsheet.pdf)
18. WHO. *The World Health Report 2001 – Mental Health: New Understanding, New Hope*. Geneva, Switzerland: WHO, 2001.
19. WHO. *Diet, Physical Activity and Health: Report by the Secretariat*. Fifty-fifth World Health Assembly, Provisional agenda item 13.11, 2002.
20. Pinhas-Hamiel O, Zeitler P. The Global Spread of Type 2 Diabetes Mellitus in Children and Adolescents. *The Journal of Pediatrics* 146 (5): 693-700, 2005.
21. Warburton DER, Nicol CW, Bredin SSD. Health benefits of physical activity: the evidence. *Canadian Medical Association Journal* 174 (6): 801-809, 2006.

22. WHO. Information Sheet on Physical Activity. Geneva, Switzerland, 2003. Available on-line at: <http://www.who.int/dietphysicalactivity/media/en/gsf pa.pdf>
23. WHO. Protective Factors Affecting Adolescent Reproductive Health in Developing Countries. Geneva, Switzerland, 2004. Available on-line at: [http://www.who.int/child-adolescent-health/New\\_Publications/ADH/ISBN\\_92\\_4\\_159227\\_3.pdf](http://www.who.int/child-adolescent-health/New_Publications/ADH/ISBN_92_4_159227_3.pdf)
24. WHO. Broadening the horizon: Balancing protection and risk for adolescents. Geneva, Switzerland, 2002. Available on-line at: [http://www.who.int/child-adolescent-health/New\\_Publications/ADH/WHO\\_FCH\\_CAH\\_01\\_20.pdf](http://www.who.int/child-adolescent-health/New_Publications/ADH/WHO_FCH_CAH_01_20.pdf)
25. WHO Regional Office for Europe. Young people's health in context Health Behaviour in School-aged Children (HBSC) study: international report from the 2001/2002 survey. Copenhagen, Denmark, 2004. Available on-line at: <http://www.hbsc.org/publications/reports.html>
26. Barber BK. *Regulation, connection, and psychological autonomy: Evidence from the Cross-National Adolescen Project (C-NAP)*. Paper presented at the WHO-sponsored meeting Regulation as a Concept and Construct for Adolescent Health and Development. WHO Headquarters, Geneva, Switzerland, April 16-18, 2002.
27. UNAIDS & WHO. 2005 AIDS Epidemic Update. Geneva, Switzerland, 2005. Available on-line at: [http://www.who.int/hiv/epi-update2005\\_en.pdf](http://www.who.int/hiv/epi-update2005_en.pdf)
28. UNAIDS. *Report on the Global HIV/AIDS Epidemic*. Geneva, Switzerland, 2004. Available on-line at: [http://www.unaids.org/bangkok2004/GAR2004\\_html/GAR2004\\_00\\_en.htm](http://www.unaids.org/bangkok2004/GAR2004_html/GAR2004_00_en.htm)
29. WHO. Sexually transmitted and other reproductive tract infections. Geneva, Switzerland, 2005. Available on-line at: [http://www.who.int/reproductive-health/publications/rtis\\_gep/index.htm](http://www.who.int/reproductive-health/publications/rtis_gep/index.htm)
30. WHO. Sexually Transmitted Infections Among Adolescents: The Need for Adequate Health Services. Geneva, Switzerland, 2004. Available on-line at: [http://www.who.int/child-adolescent-health/New\\_Publications/ADH/ISBN\\_92\\_4\\_156288\\_9.pdf](http://www.who.int/child-adolescent-health/New_Publications/ADH/ISBN_92_4_156288_9.pdf)
31. WHO. World No Tobacco Day, 2006 Brochure: Tobacco: deadly in any form or disguise. Geneva, Switzerland, 2006. Available on-line at: [http://www.who.int/tobacco/communications/events/wntd/2006/Report\\_v8\\_4May06.pdf](http://www.who.int/tobacco/communications/events/wntd/2006/Report_v8_4May06.pdf)
32. WHO. The Tobacco Atlas. Geneva, Switzerland, 2002. Available on-line at: [http://www.who.int/tobacco/resources/publications/tobacco\\_atlas/en/index.html](http://www.who.int/tobacco/resources/publications/tobacco_atlas/en/index.html)
33. WHO and UNICEF. Child and adolescent injury prevention: a global call to action. Geneva: WHO, 2005.
34. WHO. Global Estimates of Health Consequences due to Violence against Children. 2005. Background paper to the UN Secretary-General's Study on Violence against Children. (unpublished)
35. WHO. World Report on Violence and Health. 2002. chapter on youth violence.
36. Anti-Bullying Centre. School Bullying: Key Facts. Trinity College, Dublin: Anti-Bullying Centre, 2002. Availabe on-line at [www.abc.tcd.ie/school.htm](http://www.abc.tcd.ie/school.htm).

## **APPENDIX**

### **2007 Tobago GSHS Questionnaire**