

# GLOBAL SCHOOL HEALTH SURVEY

(GSHS ) 2007

## Trinidad Report



**Prepared by**  
**Mrs. Marilyn Procope - Beckles**  
**Project Manager, School Health Programme**  
**Ministry of Health**

**GSHS 2007 TRINIDAD REPORT.**

# Table of Contents

	Page
Table of Contents	2
Acknowledgements	3
Executive Summary	4-7
Introduction	8
Methods	9
Results	11-21
Demographics	
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	
Conclusions and Recommendations	22 -24
References	25- 26
Appendix	27

# Acknowledgments

Deep appreciation is expressed to all who contributed in any way to the planning and execution of this first survey and for the invaluable support provided by the International agencies, local ministries, and stakeholders.

*Special thanks are extended to the following:*

- Personnel from the WHO Regional Office, the WHO/PAHO country representative, and the Centre for Disease Control (CDC, Atlanta), in facilitating training in data analysis and report writing.
- The Ministry of Health and Ministry of Education Officials.
- The School Health Screening Assistants and all the other survey administrators.
- The principals, teachers, and students from the twenty-five (25) schools who participated in Trinidad first GSHS.

## EXECUTIVE SUMMARY

This report presents findings from the **first** Global School-based Student Health Survey (GSHS) conducted in Trinidad by the Ministry of Health and Ministry of Education from 19-30 April 2007. The Republic of Trinidad and Tobago is a twin island democratic Republic. Trinidad has a land area of *1,864 sq mi (4,828 sq km)*, is approximately 105 kilometers long and 77 kilometers wide. The population of Trinidad is 1,262,366 based on the 2000 census.

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 (Forms 1-4) have been done.

### Methodology

The 2007 Trinidad 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 systematically with probability proportional to school enrolment size. Twenty five schools were selected to participate in the Trinidad GSHS.

The second stage of sampling consisted of randomly selecting intact classrooms (using a random start) from each school to participate. All classes with the majority of students in Forms 1, 2, 3, and 4 were included in the sampling frame. All students in the sampled classrooms were eligible to participate in the GSHS.

For the 2007 Trinidad GSHS, 1,692 questionnaires were completed in 25 schools. The school response rate was 100%, the student response rate was 75%, and the overall response rate was 75%.

Survey administration occurred from Thursday 19<sup>th</sup> April to Monday 30<sup>th</sup> April 2007. Approximately, 34 Survey Administrators were specially trained to conduct the GSHS. Survey procedures were designed to protect student privacy by allowing for anonymous, confidential, and voluntary participation. Students completed the 66 item self-administered questionnaire during one classroom period and recorded their responses directly on a computer-scannable answer sheet. The core GSHS questionnaire consists of all core questionnaires addressing the following topics: 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. Computer packages like SUDAAN, SPSS, and EPI INFO were used to analyse the data.

## **Key Results**

The school response rate was 100% and the overall response rate was 75%. Twenty five ( 25) schools in Trinidad participated in the study and after data editing a total of 1,692 questionnaires were usable . 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.

The Survey revealed significant findings in the following six areas: alcohol and other drug use, mental health issues, physical activity, protective factors, sexual behaviours that contribute to HIV infection, other STI, and unintended pregnancy and violence and unintentional injury.

## **Demographic characteristics**

The sample was comprised of 49.9% males and 50.1% females. In the age group 13-15 years there was 69.1% of the sample, 19.3 % were 16 years and over and 11.6% were 12 years and younger. There were 24.8% from form 1, 24.% from form 2, 23.2% from form 3, and 27.3% from form 4.

## **Alcohol and other drug use**

The survey revealed that students, in particular males, have easy access to alcohol and used drugs during their lifetime. In Trinidad, male students (27.2%) are significantly more likely than female students (7.3%) to usually get the alcohol they drink by buying it from a store, shop, or from a street vendor. In the 13-15 age group 21.9% of males compared to 8.1% of females reported the same access to the alcohol they drank.

## ***Other drug use***

Male students are significantly more likely than female students to report lifetime drug use.

With regards to using drugs such as marijuana, hemp, or cocaine one or more times during their lifetime, 17.4% of males compared to 9.7% of females indicated they have engaged in such practices. While in the 13-15 age group, 15.1% of the male students and 10.2% of the females reported they have used drugs one or more time during their lifetime.

## **Mental health issues**

Some troubling findings in relation to female students which showed that, female students (15.1%) are significantly more likely than male students (8.0%) to feel lonely most of the time or always during the past 12 months. Female students (14.4%) are significantly more likely than male students (6.3%) to most of the time or always feel so worried about something they could not sleep at night. Female students (27.4%) are significantly more likely than male students (15.4%) to feel so sad or hopeless almost every day for two weeks or more in a row.

Female students (21.5%) are significantly more likely than male students (14.1%) to seriously consider attempting suicide. This is cause for great concern and as such, mental health matters, coping skills, and strategies must be taught to students in schools. In addition, there is a scarcity of data on mental health problems among students and as such research must be conducted in this area.

## **Physical activity**

The results showed that physical activity for a total of at least 60 minutes per day on all seven days during a usual week was significantly lower among female students than males. Male students (25.3%) are significantly more likely than female students (13.8%) to be physically active all 7 days during the past 7 days. On the other hand, female students (81.6%) are significantly more likely than

male students (66.5%) to participate in insufficient physical activity. Therefore, all schools should have supervised organised physical activities and all students must be encouraged to participate in same.

### **Protective factors**

The study found that male students (29.0%) are significantly more likely than female students (17.2%) to miss classes or school without permission. This is most worrying, as the chances of students becoming involved in deviant behaviours are increased when they are unsupervised.

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

The findings indicated that male students are significantly more sexually active than female students. In Trinidad, 26.0% of students had had sexual intercourse during their life. Male students (32.0%) are significantly more likely than female students (20.2%) to have had sexual intercourse. Male students (19.5%) are significantly more likely than female students (6.2%) to have initiated sexual intercourse before age 13 years. Male students (23.7%) are significantly more likely than female students (11.2%) to have had multiple partners. Male students (29.9%) are significantly more likely than female students (20.1%) to have had sexual intercourse during the past 12 months. These findings are cause for serious concern, since it means that students continue to engage in sexual activity, without regards for the abundance of literature and information which discourages such practices at an early age. In view of the above, it is extremely important that students be introduced to age appropriate health and family life education early in their school life, so as to enable them to make healthy choices.

### **Violence and unintentional injury**

This GSHS data showed that male students (49.4%) are significantly more likely than female students (29.9%) to have been physically attacked one or more times during the past 12 months. Male students (56.0%) are significantly more likely than female students (27.6%) to have been in a physical fight. Male students (53.8%) are significantly more likely than female students (42.2%) to have been seriously injured. Male students (26.7%) are significantly more likely than female students (7.0%) to be bullied most often by being hit, kicked, pushed, shoved around, or locked indoors. In fact, in the 13-15 age group, 49.2% of males and 32.0% of females were physically attacked one or more times during the past 12 months; 56.5% of males and 29.1% of females were in a physical fight; 53.6% of males and 39.3% of females were seriously injured one or more times during the past 12 months; 25.3% of the male students indicated they were bullied most often by being hit, kicked, pushed, shoved around or locked indoors and 21.2% of males compared to 12.2% of females reported they belonged to a violent group. Male students (22.4%) are significantly more likely than female students (11.1%) to belong to a violent group. These findings are troubling, as they say to us that these students need help in managing and channelling their anger. As such, counselling and guidance must be offered to the students, to help them to build their self esteem. In addition, students must be encouraged to verbalize their feelings, and become involved in conflict resolution and mediation sessions to learn how to manage anger and resolve issues in a non violent way.

It must be noted that findings from this study highlight the fact that male students are involved in more risk taking behaviours than the females.

## **Recommendations**

- The findings from this GSHS provide evidence that there is an urgent need to include in the school curriculum, Health Education and Health Promotion, with the aim of establishing health promoting schools.
- Implement a National School Health Policy and establish Adolescent Health Services.
- Enforce legislation/laws relating to the sale and use of alcohol and other illicit substances to students.
- Create an environment where students and parents can access counselling and appropriate referral services.
- Mental Health issues must be placed on the school curriculum and addressed.
- Instruct all schools to have supervised physical activities and the school policy where every child must actively participate in some type of physical activity.
- Teach students about the advantages of regular physical activity and healthy eating to their total well being and provide opportunities for students to select healthy foods in schools.
- Encourage parents by means of the Parent Teacher Association and other support groups to show more interest in their children's school work and other activities.
- Teach (age appropriate) Health and Family Life Education and reinforce abstinence messages early to students in their school life, so that their choices will not result in sexual behaviours that contribute to HIV infection, other STI, and unintended pregnancy.
- Actively involve students in conflict resolution and mediation sessions to learn how to manage anger and resolve issues in a non-violent way.
- A follow up GSHS is recommended to be conducted in three years (2010) to track changes and to obtain data on adolescent health behaviour, to determine trends and compare findings, to develop policies and programmes, and to evaluate school health promotion and adolescent health programmes.

# Introduction

In 2001, WHO, in collaboration with UNAIDS, UNESCO, and UNICEF, and with technical assistance from the US Center 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 Trinidad by the Ministry of Health and the Ministry of Education during 19 to 30 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 factor related to the leading causes of mortality and morbidity among youth and adults in Trinidad:

- 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

This GSHS is the first comprehensive survey conducted to gather data on the health behaviours and practices of students in the age group 13-15 (Forms 1- 4) in school in Trinidad. This data could be used to inform the National School Health Policy.



# Methods

## Sampling

The 2007 Trinidad 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 systematically with probability proportional to school enrolment size. Twenty-five schools were selected to participate in the Trinidad GSHS.

The second stage of sampling consisted of randomly selecting intact classrooms (using a random start) from each school to participate. All class with the majority of students in Forms 1, 2, 3, and 4 were included in the sampling frame. All students in the sampled classrooms were eligible to participate in the GSHS.

## 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 weight used for estimation is given as follows:

W 1= the inverse of the probability of selecting the school

W 2 = the inverse of the probability of selecting the classroom within the school

f 1 = a school level response adjustment factor calculated by the school size category (small, medium, large). The factor was calculated in terms of school enrolment instead of number of school.

f 2 = a student-level non response adjustment factor calculated by class.

f 3 = a post stratification adjustment factor calculated by Form

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.

## Response Rates

For the 2007 Trinidad GSHS, 1,692 questionnaires were completed in 25 schools. The school response rate was 100%, the student response rate was 75%, and the overall response rate was 75% (1,699 of the 2,256 sampled students completed questionnaires). The data set was cleaned and edited for inconsistencies (1,692 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 attending Forms 1, 2, 3, and 4 in schools in Trinidad.

Survey administration occurred from Thursday 19<sup>th</sup> April to Monday 30<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 questionnaire during one classroom period and recorded their responses directly on a computer-scannable answer sheet. Approximately, 34 Survey Administrators were specially trained to conduct the GSHS.

The Trinidad GSHS questionnaire contained 66 questions, 54 questions (1-54) were from the core questionnaire modules and twelve (12) questions (55-66) were 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 demographic characteristics of the sample are described in the following table.

*Table 1: Demographic characteristics of the sample, Trinidad, 2007.*

	Sex		Age			Forms			
	Males	Females	12 or younger	13-15	16 or older	1	2	3	4
<b>Trinidad</b>	49.9%	50.1%	11.6%	69.1%	19.3%	24.8%	24.1%	23.2%	27.3%

## 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, Trinidad, 2007.*

Questions	Total % (CI)*	Sex	
		Male % (CI)	Female % (CI)
Drank at least one drink containing alcohol on one or more days during the past 30 days (i.e., current alcohol use)	40.5 ( 38.4 – 42.5)	42.3 (38.0 – 46.7)	38.8 ( 36.2 - 41.5)
Among students who reported current alcohol use, those who usually drank two or more drinks per day on days they drank alcohol during the past 30 days	42.6 (38.6 - 46.6)	48.1 ( 41.9 - 54.3)	36.4 ( 31.0 – 41.9)
Among students who reported current alcohol use, those who usually got the alcohol they drank during the past 30 days by buying it in a	<b>17.3</b> <b>(13.5 - 21.2)</b>	<b>27.2</b> <b>(21.3 – 33.2)</b>	<b>7.3</b> <b>(2.9 – 11.7)</b>

store, shop, or from a street vendor			
Drank so much alcohol they were really drunk one or more times during their life	28.1 (25.5 – 30.6)	30.8 ( 26.5 – 35.2 )	25.4 (22.5 -28.3)
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	16.8 (14.7 – 18.9)	18.6 (15.3 – 22.0)	14.8 (11.9 – 17.6)
Used drugs such as marijuana, hemp, or cocaine one or more times during their life	<b>13.5</b> <b>(11.0 – 16.0 )</b>	<b>17.4</b> <b>(13.5 – 21.2)</b>	<b>9.7</b> <b>(7.3 – 12.0 )</b>
Among students who reported current alcohol use, the percentage who had their first drink of alcohol before the age of 14 years	77.9 (74.5 – 81.4)	79.7 (75.5 -83.9)	76.2 (72.1 – 80.3)
Saw during the past 30 days almost daily or daily any alcohol advertisements	38.2 (34.8 -41.7)	40.1 ( 35.0 – 45.2)	36.6 (32.9 – 40.3)

\*95% confidence interval.

In Trinidad, the prevalence of current alcohol use among students (i.e., drinking at least one drink containing alcohol on one or more of the past 30 days) is 40.5%. Among students who reported current alcohol use, 42.6% drank two or more drinks per day on the days they drank alcohol during the past 30 days and 17.3% of students usually got the alcohol they drank during the past 30 days by buying it in a store, shop, or from a street vendor. Male students (27.2%) are significantly more likely than female students (7.3%) to usually get the alcohol they drink by buying it from a store, shop, or from a street vendor.

During their life, 28.1% of students drank so much alcohol they were really drunk one or more times. Overall, 16.8% of students ever had a hang-over, felt sick, got into trouble with their family or friends, missed school, or got into fights one or more times as a result of drinking alcohol during their life. Among students who reported current alcohol use, 77.9% had their first drink of alcohol before the age 14 years. Overall, 38.2% of students during the past 30 days almost daily or daily saw any alcohol advertisements.

In Trinidad, the prevalence of lifetime drug use (such as marijuana hemp or cocaine) is 13.5%. Male students (17.4%) are significantly more likely than female students (9.7%) 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, Trinidad, 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.	5.9 ( 4.5 – 7.4 )	6.0 ( 3.9 – 8.1)	5.8 ( 4.4 – 7.2)
Usually ate fruit, such as orange, grapefruit, banana, apple, grape, melon, or pineapple, one or more times per day during the past 30 days	64.9 (61 .9 – 67.8)	68.3 ( 62.9 – 73.6)	61.5 ( 58.1 – 65.0)
Usually ate vegetables, such as carrots, pumpkin, cabbage, lettuce, cucumber, or tomatoes one or more times per day during the past 30 days	68.8 (65.0 – 72.7)	67.8 (61.9 - 73.6)	70.2 ( 65.0 – 75.4)
Ate fruits and vegetables five or more times per day during the past 30 days	24.7 (22.2 -27.2)	25.1 ( 20.6 – 29.6)	24.2 (21.3 – 27.0)
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	52.2 (46.7 -57.7)	52.7 (47.1- 58.3)	52.0 (44.7 -59.3)
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.	20.3 (17.5 – 23.1)	20.5 (16.6 – 24.5)	20.1 (16.9 -23.3)

\*95% confidence interval.

In Trinidad, 5.9% 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, 64.9% of students usually ate fruit, such as orange, grapefruit, banana, apple, grape, melon, or pineapple one or more times per day during the past 30 days. Overall, 68.8 % of students usually ate vegetables, such as carrots, pumpkin, cabbage, lettuce, cucumber, or tomatoes, one or more times per day during the past 30 days. Overall, 24.7% of students usually ate fruits and vegetables five or more times per day during the past 30 days.

Overall, 52.2% of students 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.

Overall, 20.3% of students ate at a 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.

## 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, Trinidad, 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	4.5 (3.1 – 5.9)	5.8 (4.1 – 7.4)	2.9 (1.2 – 4.5)
Never or rarely washed their hands before eating during the past 30 days	10.4 (8.2 – 12.6)	10.5 (8.0 – 13.0)	10.1 (7.3 – 12.8)
Never or rarely washed their hands after using the toilet or latrine during the past 30 days	4.1 (3.1 – 5.2)	4.9 (3.0 – 6.8)	3.2 (1.9 – 4.4)
Never or rarely used soap when washing their hands	8.8 (7.0 – 10.5)	9.0 (7.0 – 11.0)	8.4 (6.2 – 10.6)

\*95% confidence interval.

In Trinidad, the percentage of students who cleaned or brushed their teeth less than 1 time during the past 30 days was 4.5%. Overall, 10.4% of students never or rarely washed their hands before eating during the past 30 days. Overall, 4.1% of students never or rarely washed their hands after using the toilet or latrine during the past 30 days. Overall, 8.8% 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, Trinidad, 2007.*

Question	Total % (CI)*	Sex	
		Male % (CI)	Female % (CI)
Most of time or always felt lonely during the past 12 months	11.5 (9.1 – 14.0)	8.0 (5.5 – 10.5)	15.1 (12.0 – 18.2)
Most of the time or always felt so worried about something that they could not sleep at night during the past 12 months	10.4 (8.4 – 12.4)	6.3 (4.6 – 8.0)	14.4 (11.2 – 17.5)
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	21.5 (18.8 – 24.3)	15.4 (12.6 – 18.1)	27.4 (23.5 – 31.4)

months			
Seriously considered attempting suicide during the past 12 months	<b>17.9</b> (16.2 – 19.6)	<b>14.1</b> (11.4 – 16.8)	<b>21.5</b> (18.6 – 24.3)
Made a plan about how they would attempt suicide during the past 12 months	17.4 (15.3 – 19.5)	15.1 (12.6 – 17.6)	19.7 (16.8 – 22.5)
Have no close friends	9.0 (7.5 – 10.4)	8.7 (6.5 – 10.9)	9.1 (7.0 – 11.3)
Think of themselves as a religious or spiritual person	68.3 (64.5 – 72.0)	67.5 (64.0 – 71.0)	69.0 (63.4 – 74.7)

\*95% confidence interval.

In Trinidad, 11.5% of students most of the time or always felt lonely during the past 12 months. Female students (15.1%) are significantly more likely than male students (8.0%) to feel lonely most of the time or always during the past 12 months. Overall, 10.4% 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 (14.4%) are significantly more likely than male students (6.3%) to most of the time or always feel so worried about something they could not sleep at night.

Overall, 21.5% 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. Female students (27.4%) are significantly more likely than male students (15.4%) to feel so sad or hopeless almost every day for two weeks or more in a row.

Overall, 17.9% of students seriously considered attempting suicide during the past 12 months. Female students (21.5%) are significantly more likely than male students (14.1%) to seriously consider attempting suicide. Overall, 17.4% of students made a plan about how they would attempt suicide during the past 12 months. Overall, 9.0% of students have no close friends. Overall, 68.3% of students think 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, Trinidad, 2007.*

Question	Total % (CI)*	Sex	
		Male % (CI)	Female % (CI)
Physically active for a total of at least 60 minutes per day on all seven days during the past seven days	<b>19.5</b> (15.5 – 23.5)	<b>25.3</b> (20.2 – 30.3)	<b>13.8</b> (10.9 – 16.7)
Physically active for a total of at least 60	<b>17.4</b>	<b>21.6</b>	<b>13.3</b>

minutes per days all 7days during a typical or usual week	<b>(13.9 – 20.9)</b>	<b>(17.1 – 26.0)</b>	<b>(10.2 – 16.4)</b>
Participated in physical activity for at least 60 minutes per day on less than five or fewer days per week on average	<b>74.2</b> <b>(69.7 – 78.7)</b>	<b>66.5</b> <b>(59.8 – 73.2)</b>	<b>81.6</b> <b>(78.7 – 84.5)</b>
Spent three or more hours per day during a typical or usual day sitting and watching TV or doing sitting activities such as reading a novel	48.8 (46.1- 51.6)	44.6 (41.2 – 48.0)	53.0 (47.7 – 58.3)
Did not walk or bicycle to and from school during the past seven days	75.0 (71.0- 79.0)	73.6 (68.2 – 78.9)	76.7 (71.6 – 81.8)
Usually took 29 minutes or less to get to and from school each day during the past seven days	50.3 (45.8 – 54.8)	53.1 ( 45.3 -60.9)	47.6 (42.5 – 52.8)
Spent less than 2.5 hours walking or bicycling to and from school during the past seven days	92.6 (91.2 – 93.9)	92.6 (90.8 – 94.5)	92.8 (90.4 – 95.3)
Went to physical education class 4 or more days each week during the school year	19.5 (16.9 -22.0)	21.1 (18.2 -23.9)	18.0 (14.1- 21.9)

\*95% confidence interval.

In Trinidad, 19.5% of students were physically active all 7 days during the past 7 days for a total of at least 60 minutes per day. Male students (25.3%) are significantly more likely than female students (13.8%) to be physically active all 7 days during the past 7 days. Overall, 17.4% of students were physically active 7 days during a typical or usual week for a total of at least 60 minutes per day. Male students (21.6%) are significantly more likely than female students (13.3%) to be physically active 7 days during a typical or usual week.

Overall, 74.2% 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 (81.6%) are significantly more likely than male students (66.5%) to participate in insufficient physical activity.

Overall, 48.8% of students spent three or more hours per day doing sitting activities during a typical or usual day. Overall, 75.0% of students did not walk or bicycle to and from school during the past 7 days. Overall, 50.3% of students usually took less than 30 minutes to get to and from school each day during the past 7 days. Overall, 92.6% of students spent less than 150 minutes walking or bicycling to and from school during the past seven days. Overall, 19.5% of students went to physical education class 4 or more days each week during the 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, Trinidad, 2007.*

Question	Total % (CI)*	Sex	
		Male % (CI)	Female % (CI)
Missed classes or school without permission on one or more of the past 30 days	23.2 (19.4 – 27.0)	29.0 (23.1 -35.0)	17.2 (12.9 -21.4)
Most of the students in their school were kind and helpful never or rarely during the past 30 days	41.8 (38.1 - 45.5)	42.6 (38.1 - 47.2)	40.8 ( 34.3 - 47.4)
Students whose parents or guardians never or rarely checked to see if their homework was done during the past 30 days	42.7 (39.2 - 46.3)	40.1 (33.9 – 46.3)	45.5 ( 42.1 - 48.9)
Students whose parents or guardians never or rarely understood their problems and worries during the past 30 days	46.8 (44.2 – 49.4)	43.8 (39.5 -48.1)	49.6 (46.0 -53.2)
Student whose parents or guardians never or really knew what they were doing with their free time during the past 30 days	33.7 (30.4 -36.9)	35.1 (30.9 – 39.3)	32.1 (28.7 – 35.5)

\*95% confidence interval.

In Trinidad, 23.2% of students missed classes or school without permission on one or more of the past 30 days. Male students (29.0%) are significantly more likely than female students (17.2%) to miss classes or school without permission.

Overall, 41.8% of students reported that most of the students in their school were kind and helpful never or rarely during the past 30 days.

Overall, 42.7% of students reported their parents or guardians never or rarely checked to see if their homework was done during the past 30 days. Overall, 46.8% of students reported their parents or guardians understood their problems and worries never or rarely during the past 30 days. Overall, 33.7% of students reported their parents or guardians really know what they were doing with their free time never or rarely 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, Trinidad , 2007.*

Question	Total % (CI)*	Sex	
		Male % (CI)	Female % (CI)
Ever had sexual intercourse	26.0 (22.2 – 29.7)	32.0 (25.3 – 38.7)	20.2 (16.3 – 24.1)
Initiated sexual intercourse before age 13 years	13.0 (10.5 – 15.5)	19.5 (14.4 – 24.7)	6.2 (4.2 – 8.2)
Had sexual intercourse with two or more people during their life	17.4 (14.6 – 20.3)	23.7 (18.4 – 29.0)	11.2 (8.7 – 13.7)
Had sexual intercourse during the past 12 months	24.9 (21.5 – 28.3)	29.9 (25.0 – 34.8)	20.1 (16.2 – 24.0)
Among students who had sexual intercourse during the past 12 months, those who used a condom at last sexual intercourse	59.1 (53.3 – 64.8)	63.4 (55.9 – 70.9)	53.0 (44.3 – 61.7)
Students who would most likely get a condom or rubbers if they wanted one from a pharmacy or hospital	37.8 (35.4 – 40.3)	36.6 (32.4 – 40.9)	39.2 (36.7 – 41.7)
Among students who had sexual intercourse during the past 12 months, those who most of the time or always used a method of birth control with their partner	22.3 (15.4 – 29.2)	23.0 (14.0 – 31.9)	20.5 (10.5 – 30.5)

\*95% confidence interval.

In Trinidad, 26.0% of students had had sexual intercourse during their life. Male students (32.0%) are significantly more likely than female students (20.2%) to have had sexual intercourse. Overall, 13.0% of students initiated sexual intercourse before age 13 years. Male students (19.5%) are significantly more likely than female students (6.2%) to have initiated sexual intercourse before age 13 years. Overall, 17.4% of students had sexual intercourse with multiple partners (i.e., two or more) during their life. Male students (23.7%) are significantly more likely than female students (11.2 %) to have had multiple partners. Overall, 24.9% of students had sexual intercourse during the past 12 months. Male students (29.9%) are significantly more likely than female students (20.1%) to have had sexual intercourse during the past 12 months. Among students who had sexual intercourse during the past 12 months, 59.1% used a condom at last sexual intercourse. Overall, 37.8% of students would most likely get a condom or rubbers if they wanted one from a pharmacy or hospital. Overall, 22.3% 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, Trinidad, 2007.*

Question	Total % (CI)*	Sex	
		Male % (CI)	Female % (CI)
Among students who smoked cigarettes on one or more of the past 30 days, those who tried their first cigarette at the age 13 or younger	80.7 (72.0-89.4)	**NA	**NA
Smoked cigarettes on one or more days during the past 30 days	10.0 (7.7 – 12.3)	11.2 (8.4 14.1)	8.6 (6.2 – 11.0)
Used any other form of tobacco, such as hemp, on one or more days during the past 30 days	7.2 (5.2 -9.2)	8.0 (5.7 -10.3)	6.2 (3.1 - 9.3)
Used any tobacco on one or more of the past 30 days	12.2 (9.3 – 15.1)	14.0 (10.3 – 17.7)	10.3 (7.4 – 13.3)
Among students who smoked cigarettes during the past 12 months, those who tried to stop smoking cigarettes	58.1 (52.7 -63.5)	55.8 (47.6 – 64.0)	** NA
Reported people smoked in their presence on one or more days during the past seven days	66.3 (62.7 -69.9)	68.2 (63.8 – 72.6)	64.3 (59.1 -69.5)
Had a parent or guardian who uses any form of tobacco	30.0 (27.4 -32.5)	28.7 (24.4 – 32.9)	31.5 (28.6 -34.3)
Probably or definitely think they will smoke a cigarette during the next 12 months	11.8 (10.1 -13.5)	11.8 (9.7 – 14.0)	11.8 (9.8 – 13.8 )
Probably or definitely would smoke if one of their best friends offered them a cigarette	9.7 (8.0 -11.3)	11.1 (8.8 -13.4)	8.1 (6.3 – 10.0)

\*95% confidence interval.

In Trinidad, 10.0% of students smoked cigarettes on one or more days during the past 30 days. Among students who smoked cigarettes during the past 30 days, 80.7% tried their first cigarette at age 13 or younger. Overall, 7.2% of students used any other form of tobacco, such as hemp, on one or more days during the past 30 days. Overall, 12.2% of students used any tobacco on one or more of the past 30 days. Among students who smoked cigarettes during the past 12 months, 58.1% tried to stop smoking cigarettes.

Overall, 66.3% of students reported that people smoked in their presence on one or more days during the past seven days. Overall, 30.0% of students had a parent or guardian who uses any form of tobacco.

Overall, 11.8% of students probably or definitely think they will smoke a cigarette during the next 12 months. Overall, 9.7% 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, Trinidad, 2007.*

Question	Total % (CI)*	Sex	
		Male % (CI)	Female % (CI)
Were physically attacked one or more times during the past 12 months	<b>39.9</b> (35.1 – 44.7)	<b>49.4</b> (44.6 -54.3)	<b>29.9</b> (25.2 – 34.7)
Were in a physical fight one or more times during the past 12 months	<b>42.0</b> (38.0 -45.9)	<b>56.0</b> (52.6 - 59.3)	<b>27.6</b> (23.5 - 31.7)
	<b>48.1</b> (45.3 – 50.9)	<b>53.8</b> (49.8 – 57.9)	<b>42.2</b> (38.4 – 46.0)
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	28.9 (22.7 - 35.0)	35.7 (26.9 - 44.5)	20.5 (13.1 - 27.8)
Among students who were seriously injured during the past 12 months, those whose most serious injury was the result of a fall	25.5 (22.1 – 29.0)	23.3 (18.1 – 28.5)	28.5 (24.7 – 32.2)
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	43.6 (38.2 – 49.0)	41.1 (32.2 - 49.1)	47.3 (41.7 – 52.9)
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	16.9 (13.1 -20.8)	19.6 ( 15.2 -24.0)	13.9 ( 9.1 -18.8)
Were bullied on one or more days during the past 30 days	20.7 (17.5 – 23.9)	22.6 ( 19.0 – 26.2)	18.8 (14.9 -22.6)
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	<b>17.4</b> (12.8 - 21.9)	<b>26.7</b> (19.3 – 34.1)	<b>7.0</b> ( 3.4 – 10.6)
Belonged to a violent group	<b>16.7</b> (13.2 -20.2)	<b>22.4</b> (17.7 -27.2)	<b>11.1</b> (7.8 -14.3)
Never or rarely used a belt when riding in a motor vehicle driven by some one else during the past 30 days	48.0 (43.0 -53.1)	49.2 (41.8 -56.5)	46.9 (42.0 -51.7)

\*95% confidence interval.

In Trinidad, 39.9% of students were in a physical attacked one or more times during the past 12 months. Male students (49.4%) are significantly more likely than female students (29.9%) to have been in a physically attacked one or more times during the past 12 months. Overall, 42.0% of students were in a physical fight one or more times during the past 12 months. Male students (56.0%) are significantly more likely than female students (27.6%) to have been in a physical fight.

Overall, 48.1% of students were seriously injured one or more times during the past 12 months. Male students (53.8%) are significantly more likely than female students (42.2%) to have been seriously injured. Among students who were seriously injured during the past 12 months, 28.9% were playing or training for a sport when their most serious injury happened to them, 25.5% had their most serious injury caused by a fall, 43.6% had their most serious injury occur as a result of hurting themselves by accident, and 16.9% experienced a broken bone or dislocated joint as their most serious injury.

Overall, 20.7% of students were bullied on one or more days during the past 30 days. Among students who were bullied during the past 30 days, 17.4% were bullied most often by being hit, kicked, pushed, shoved around, or locked indoors. Male students (26.7%) are significantly more likely than female students (7.0%) to be bullied most often by being hit, kicked, pushed, shoved around, or locked indoors.

Overall, 16.7% of students belonged to a violent group. Male students (22.4%) are significantly more likely than female students (11.1%) to belong to a violent group.

Overall, 48.0% of students never or rarely used a belt when riding in a motor vehicle driven by someone else during the past 30 days.

## Conclusions

In Trinidad, like Tobago, this first GSHS revealed that students are engaging in unhealthy behaviours and dangerous lifestyle practices. As such, interventions, policies, and programmes must be implemented to enable students to adapt and make healthy lifestyle choices at this stage of their lifecycle which will pave the way for continuity into adult hood.

Significant findings were identified in the following six areas: alcohol and other drug use, mental health issues, physical activity, protective factors, sexual behaviours that contribute to HIV infection, other STI, and unintended pregnancy, and violence and unintentional injury.

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

The survey revealed that students, in particular males, have easy access to alcohol and used drugs during their lifetime. Overall, 27.2% got the alcohol they drank by buying it in a store or shop or from a street vendor. In the 13 -15 age group, 21.9% of males compared to 8.1% of females reported the same access to the alcohol they drank.

The 2007 Tobago GSHS revealed that in the 13 -15 age group 32.3% of males and 22.1% of females reported they drank so much alcohol that they were really drunk one or more times during their life. In addition 20.7% of males and 10.8% of females stated they got in trouble with family or friends, missed school, or got into fights as a result of drinking alcohol during their lifetime.

With regards to using drugs such as marijuana, hemp, or cocaine one or more times during their lifetime, 17.4% of males compared to 9.7% of females indicated they have engaged in such a practice. Meanwhile in the 13 -15 age group 15.1% of the male students and 10.2% of the females reported they have used drugs one or more time during their lifetime. The 2007 Tobago GSHS findings from the same age group, showed 20.2% of males and 9.0% of females reported drug use during their lifetime.

Serious effort must be made to discourage students from having easy access to and consumption of alcohol and other illegal substances. Therefore, there must be stricter enforcement of the laws/legislation which deals with the sale of alcohol and other illegal substances to adolescents.

### **Mental health issues**

This study found that significantly more female students than males reported always feeling lonely; always feeling worried about something, felt sad or hopeless, and seriously considered attempting suicide during the past 12 months. In the 13 -15 age group, the pattern continued with 21.7% of females compared to 14.2% of males stating they seriously considered attempting suicide, with feelings of loneliness, worried, and hopelessness significantly higher among the female students. Similarly, findings from the 2007 Tobago GSHS found that female students are significantly more likely than male students to most of the time or always feel so worried about something that they cannot sleep at night. This is cause for great concern and as such, mental health matters, coping skills, and strategies must be taught to students in schools. Students must be encouraged to have hobbies and become involved in extra curricular activities. In addition, parents and teachers must be taught to recognize mood and behavioural changes in students and the appropriate intervention made in a timely manner, so as to prevent further harm.

### **Physical activity**

It showed that physical activity was significantly lower among female students than males for a total of at least 60 minutes per day on all seven days during a usual week. However, more females

reported they participated in physical activity for at least 60 minutes per day on less than five or fewer days per week on average. Students must be taught about the benefits of physical exercise in relation to the prevention of chronic non-communicable diseases. In addition, all schools must have supervised organised physical activities and all students must be encouraged to participate in the same.

### **Protective factors**

The survey pointed out that significantly more male students than females missed classes or school without permission on one or more of the past 30 days. In the 13 -15 age group the pattern was the same with 26.5% of males compared to 15.6% of females missing school without permission. This is most worrying, as the chances of students becoming involved in deviant behaviours are increased when they are unsupervised.

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

The findings indicated that male students are significantly more sexually active than female students. In the 13-15 age group 30.7% of the males reportedly had sexual intercourse, 21.5% initiated sexual intercourse before age 13, and 23.7% had multiple partners, compared to the female students with 18.0%, 5.6%, and 9.9% respectively. Interestingly, in the same age group, 37.1% of females (1% more than males) reported they would most likely get a condom or rubbers from a pharmacy or hospital if they wanted one. Similar findings were also seen in the 2007 Tobago GSHS. These findings are cause for serious concern, since it means that students continue to engage in sexual activity, in spite of the abundance of literature and information which discourages such practices at an early age. Therefore, it is extremely important that students be introduced to age appropriate health and family life education early in their school life, so as to enable them to make healthy choices.

### **Violence and unintentional injury**

This GSHS data showed that male students are significantly more likely than female students to have been physical attacked, been involved in a physical fight, been seriously injured, been bullied, and belonged to a violent group. In fact, in the 13-15 age group, 49.2% of males and 32.0% of females were physically attacked one or more times during the past 12 months; 56.5% of males and 29.1% of females were in a physical fight; 53.6% of males and 39.3% of females were seriously injured one or more times during the past 12 months; 25.3% of the male students indicated they were bullied most often by being hit, kicked, pushed, shoved around or locked indoors; and 21.2% of males compared to 12.2% of females reported they belonged to a violent group. Similar results were noted in the 13-15 age group from the Tobago GSHS. These findings are troubling, as they saying to us that these students need help in managing and channelling their anger. Counselling and guidance must be offered to the students, to help them to build their self esteem. As such, students must be encouraged to verbalize their feelings, in addition to an active involvement in conflict resolution and mediation sessions to learn how to manage anger and resolve issues in a non violent way.

It must be noted that findings from this study highlight the fact that male students are involved in more risk taking behaviours than the females.

Although in this study no significant differences between male and female students were identified in the dietary behaviour, hygiene, and tobacco use areas, policies and programmes must be established to address these areas also.

## RECOMMENDATIONS

- The findings from this Global School based Health Survey (GSHS) provide evidence that there is an urgent need to include in the school curriculum, Health Education and Health Promotion and eventually establish health promoting schools.
- Implement a National School Health Policy and establish Adolescent Health Services.
- Enforce legislation/laws relating to the sale and use of alcohol and other illicit substances to students.
- Create an environment where students and parents can access counselling and appropriate referral services.
- Mental Health issues must be placed on the school curriculum and addressed.
- Instruct all schools to have supervised physical activities and a school policy where every child must actively participate in some type of physical activity.
- Teach students about the advantages of regular physical activity and healthy eating to their total well being and provide opportunities for students to select healthy foods.
- Encourage parents by means of the Parent Teacher Association and other support groups to show more interest in their children's school work and other activities.
- Teach (age appropriate) Health and Family Life Education and reinforce abstinence messages early to students in their school life, so that their choices will not result in sexual behaviours that contribute to HIV infection, other STI, and unintended pregnancy.
- Actively involve students in conflict resolution and mediation sessions to learn how to manage anger and resolve issues in a non violent way.
- A follow up GSHS is recommended to be conducted in three years (2010) to track changes and to obtain data on adolescent health behaviour, to determine trends, to compare findings, to develop policies and programmes, and to evaluate school health promotion 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 Trinidad GSHS Questionnaire**