

**GLOBAL SCHOOL-BASED STUDENT HEALTH SURVEY (GSHS)
in the Philippines
2003-2004**

A Component Project of
the World Health Organization and the U.S. Centers for Disease Control and Prevention's
Global School-based Health Surveillance System

Country Report

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Introduction

Many of today's and tomorrow's leading causes of death, disease and disability (cardiovascular disease, cancer, chronic lung diseases, depression, violence, substance abuse, injuries, nutritional deficiencies, HIV/AIDS/STI, etc.) can be significantly reduced by preventing six interrelated categories of behavior, that are initiated during youth and fostered by social and political policies and conditions such as tobacco use, behavior that results in injury and violence, alcohol and substance use, dietary and hygienic practices that cause diseases, sedentary lifestyle, HIV-related knowledge and behavior (WHO).

In the Philippines, four out of ten leading causes of deaths among youth and young adults aged 10-24 years are non-communicable in nature, and these are mostly attributable to risk behaviors. Accidents are leading cause of death, followed by diseases of the heart and vascular system, and cancer. Collectively, they account for 32% of total deaths in the country (PHS 2000). Substantial morbidity and social problems also result from the estimated cases of sexually transmitted (STDs) that occur each year among persons aged 10-19 years wherein, 2% of STD reported cases are in 13-17 years old age category, and also 2% of HIV/AIDS reported cases are in 10-19 age groups (Phil. AIDS Registry 2004).

In 2001, the World Health Organization, in collaboration with UNAIDS, UNESCO, and UNICEF, 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/ Department of Health and Education around the world have been using the GSHS to periodically monitor the prevalence of important health risk behaviors and protective factors among students. To date, 15 countries have completed a GSHS. This report describes results from the first GSHS conducted in Philippines by the Department of Health, Manila during September-December of 2003.

The purpose of the GSHS is to provide accurate data on health behaviors 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;
- Allow international agencies, countries, and others to make comparisons across countries and within countries regarding the prevalence of health behaviors; and protective factors
- Establish trends in the prevalence of health behaviors and protective factors by country for use in evaluation of school health and youth health promotion.

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

- Alcohol and other drug use
- Dietary behaviors
- Hygiene

- Mental health
- Physical activity
- Protective factors
- HIV-related knowledge and skills
- Tobacco use
- Violence and unintentional injury

Locally, the University of the Philippines' Population Institute had conducted a nationwide study on youth risk behavior in 1994 and 2002. The Young Adult Fertility and Sexuality Study (YAFS) took special interest in the risk or problem behaviors that young people engage in (Raymundo, C, et al, YAFS3).

Likewise, the Global Youth Tobacco Survey was conducted in the country in 2000 and in 2003, which investigated on tobacco use and its determinants (WHO-CDC).

A Baseline Behavioral Risk Factor Survey by the Department of Health and the University of the Philippines, Manila was initiated in 2000 to establish baseline data of risk behaviors for non-communicable diseases in the country. The survey covered Filipinos 15 years old and over, and investigated among others, tobacco and alcohol use, dietary behavior, physical activity, etc. (DOH-UP Manila 2001)

The Department of Education has a *Health and Nutrition Center* that provides programs on *Health and Nutrition Education*. Support instructional materials has been developed and are integrated in appropriate subject areas in the elementary and secondary level of education for the following programs and projects: *School-Based AIDS Education Project; School-Based Prevention and Control of Cardio-Vascular Diseases; Feminine Hygiene Educational Program; Oral Health Education (BSBF) Program; National Drug Education Program; Teacher-In-Child-Parent (TCP) Approach, and Preventive Nephrology Project* (Department of Education, Philippines). The *National Drug Education Program* aims to prevent substance abuse among students through the development of desirable values, attitudes and practices. The *Medical, Dental and Nursing health* services aim to promote, protect and maintain the health status of schoolchildren/personnel through the provision of various health services in the schools.

The Department of Health has an Adolescent and Youth Health and Development Program. The program focus on addressing the following health concerns: Growth and Development concerns, Nutrition, Physical, mental and emotional status; Reproductive Health, Sexuality, Reproductive Tract Infection (STD, HIV/AIDS), Responsible Parenthood, Maternal and Child Health, Communicable Diseases, Mental Health, Substance use and abuse, Intentional/ non-intentional injuries and Disability.

Moreover, the DOH has the National Center for Health Promotion under the Health Program Development Office which is responsible for recommending policies, among others, on advocacy and effective health promotion strategies and interventions that are intended towards reducing health –related illnesses and premature mortality due to risky behaviors among young people.

The 1st Global School-based Student Health Survey (GSHS) aims to establish baseline data of risk behaviors among students comparable with other parts of the region, across regions worldwide. More importantly, GSHS is intended to provide basis for assessment of existing youth programs, prioritize interventions for effective development of desirable youth in the country significant towards building of a strong republic.

This report presents findings from the 2003-2004 Philippines' Global-School Based Student Health Survey initiated by the WHO and US CDC in 2002.

Methods

Sampling.

The 2003 Philippines' GSHS employed a two-stage cluster sample design to produce a representative sample of students in 2nd-4th year levels of Secondary Education or High School. The first-stage sampling frame consisted of all schools containing any of 2nd-4th year levels. Schools were selected with probability proportional to school enrollment size. One hundred and fifty schools (150) were selected to participate in the Philippines' 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 weighting factor was applied to each student record to adjust for no response and for the varying probabilities of selection. 1.) Weights were scaled so that the weighted count of students was equal to the total sample size; and 2) the weighted proportions of students in each year matched national populations.

For the 2003 Philippines GSHS, 7, 338 questionnaires were completed in 148 schools. The school response rate was 99%, the student response rate was 85 %, and the overall response rate was 84%.

The data set was cleaned and edited for inconsistencies. Missing data were not statistically imputed. Epi- Info Complex-Sample analysis 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 2nd-4th year levels of High School in the Philippines.

Survey Administration.

Data Collection

Survey administration occurred from September to middle of December 2003. Survey procedures were designed to protect students' privacy by allowing for anonymous and voluntary participation. Students completed the self-administered questionnaire during one class period and recorded their responses directly on computer-scannable questionnaire answer sheet. The questionnaire contained 92 multiple-choice questions. Approximately, 30 Survey Administrators were specially trained to conduct the GSHS nationwide. The research assistants from the Clinical Epidemiology Unit and Institute of Clinical Epidemiology of the University of the Philippines-Manila had served as the data administrators. Before the survey was conducted, local school officials' permission procedures were followed.

GSHS Questionnaire.

The Philippines' questionnaire contained 92 questions addressing the following topics:

- Alcohol and other drug use
- Dietary behaviors
- Hygiene
- Mental health
- Physical activity
- Protective factors
- HIV-related knowledge
- Tobacco use
- Violence and unintentional injury

A GSHS Project Management Team of the Department of Health and the Institute of Clinical Epidemiology Unit, National Institutes of Health, University of the Philippines had developed the questionnaire. The questionnaire was with a corresponding translation in Filipino, a common language in the country.

Data Analysis

At risk for overweight and overweight were calculated from accrual height and weight and then applied to WHO reference data, to determine the percentage of students who were at risk for becoming overweight and who were overweight. At risk for becoming overweight was defined as BMI of $>85^{\text{th}}$ percentile and $<95^{\text{th}}$ percentile by age and sex. Overweight was defined as a BMI $\geq 95^{\text{th}}$ percentile by age and sex. A BMI $\geq 95^{\text{th}}$ percentile by age and sex among youth is approximately equivalent to BMI of >30 among adults. For an adult, a BMI of 30 is approximately 30 lbs overweight.

Results

Demographics

Nationwide, over half (56.8%) of respondents were females and 43.2% were males. Forty-four per cent were attending 2nd year, 32.0% were in 3rd year, and 27.0% were in 4th year High School and only about 0.8% were freshmen. The median age is 14 years old. The mean age is 15 years old with a range of 12-18 years.

Prevalence

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. Besides the direct effects of intoxication and addiction, alcohol use causes about 20% to 30% of esophageal cancer, liver disease, homicide and other intentional injuries, epilepsy, and motor vehicle accidents worldwide.¹ 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.²

While adverse health consequences from long-term chronic alcohol use may not cause death or disability until fairly late in life, acute consequences of alcohol use, including 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.³ Young people who drink are more likely to use tobacco and other drugs and engage in risky sexual behavior, than those who do not drink.⁴ Problems with alcohol can impair adolescents' psychological development and influence both the school environment and leisure time negatively.⁵

Table 1. Alcohol use among students, by gender, and year level, Philippines, 2003.

Age of initiation, place of drinking, lifetime and current drinking, accessibility	Total % (CI)*	Gender		Year		
		Male % (CI)	Female % (CI)	2nd % (CI)	3 rd % (CI)	4 th % (CI)
Were 13 years old or younger when they had their first drink of alcohol other than a few sips	18.9 (16.8-21.0)	24.8 (22.3-27.4)	14.3 (11.5-17.2)	20.2 (16.8-23.5)	19.8 (16.3-23.2)	15.9 (12.2-19.7)
Were 13 years old or younger the first time they drank so much alcohol that they were really drunk	5.9 (5.0-6.9)	8.7 (6.7-10.6)	3.9 (2.9-4.8)	7.7 (6.0-9.3)	5.2 (3.7-6.7)	4.3 (2.9-5.7)
Were at home or someone else's home the first time they had a drink of alcohol	30.0 (26.2-33.7)	34.5 (31.0-37.9)	26.6 (21.8-31.4)	22.4 (17.7-27.1)	32.4 (25.9-38.9)	38.4 (32.9-44.0)
Drank at least one drink containing alcohol on one or more of the past 30 days	23.6 (20.6-26.6)	31.6 (27.9-35.2)	17.9 (14.4-21.4)	18.9 (14.8-23.1)	22.2 (17.0-27.3)	32.1 (26.5-37.8)
Drank one or more drinks per day on the days they drank alcohol during the past 30 days	18.1 (15.4-20.9)	26.0 (22.5-29.5)	12.6 (9.6-15.5)	13.5 (10.1-16.8)	17.8 (13.4-22.3)	25.2 (19.8-30.7)
Usually got the alcohol they drank by buying it in a store, shop, or from a street vendor during the past 30 days.	7.3 (5.9-8.7)	12.3 (10.0-14.7)	3.7 (2.5-5.0)	5.5 (3.9-7.1)	6.9 (4.8-9.1)	10.4 (7.8-13.1)
Had someone refuse to sell them alcohol because of their age during the past 30 days	11.0 (9.6-12.3)	15.3 (13.4-17.3)	7.7 (6.2-9.2)	11.9 (9.7-14.1)	8.9 (6.2-11.5)	12.0 (9.8-14.3)
Drank so much alcohol they were really drunk one or more times during their life	24.3 (21.3-27.3)	32.5 (28.8-36.2)	18.0 (14.8-21.1)	18.3 (15.4-21.2)	24.1 (19.0-29.3)	33.5 (27.8-39.1)
Had a hang-over, felt sick, got into trouble, missed school, or got into fights one or more times as a result of drinking alcohol during their life	17.7 (15.7-19.7)	22.2 (19.9-24.6)	14.3 (11.9-16.7)	15.2 (13.4-17.0)	16.7 (13.5-19.8)	21.7 (16.7-26.6)

*95% confidence interval.

Nationwide, one in five (18.9%) students admitted they had their first drink of alcohol other than a few sips when they were 13 years old or younger (Table 1). The boys (24.8%) were significantly more likely than girls (14.3%) to have had their first drink of alcohol other than a few sips at this young age.

Overall, about 5.9% of the students were 13 years old or younger the first time they drank so much alcohol that they were really drunk. The boys (8.7%) were significantly more likely than the girls (3.9%), and the 2nd year students (7.7%) were more likely than the 4th year students (4.3%) to have drank so much alcohol that they were really drunk.

Overall, about one third (30.0%) of students admitted that they were at home or at someone else's home the first time they had a drink of alcohol. The 4th year students (38.4%) were significantly more likely than the 2nd year students (22.4%) to have admitted this.

The prevalence of current alcohol use among the age group (13-15) nationwide is 23.6%. The boys (31.6%) were significantly more likely than girls (17.9%) to report current alcohol use; and so with those in 4th year (32.1%) than those in 2nd year students (18.9%) to have reported current alcohol use.

About one in five (18.1%) students drank one or more drinks per day on the days they drank alcohol during the past 30 days preceding the survey. The boys (26.0%) were significantly more likely than girls (12.6%) to have done so. The 4th year students (25.2%) are significantly more likely than the 2nd year (13.5%) students to have one or more drinks per day on the days they drank.

About 7.3% 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 preceding the survey. The boys (12.3%) were significantly more likely than girls (3.7%) to have bought it in these places; and the 4th year students (10.4%) were more likely than the 2nd year students (5.5%) to have bought it in stores, shop, or from street vendor.

Only one in ten (11.0%) students had someone refuse to sell them alcohol because of their age during the past 30 days preceding the survey. The boys (15.3%) were significantly more likely than girls (7.7%) to have someone refuse to sell them alcohol because of their age.

Approximately, a quarter of students (24.3%) drank so much alcohol that they were really drunk one or more times during their life. The boys (32.5%) were significantly more likely than girls (18.0%) to have drank so much; and the 4th year students (33.5%) were more likely than the 2nd year students (18.3%) to have drank so much alcohol that they were really drunk one or more times during their life.

Almost one in five (17.7%) students had a hang over, felt sick, got into trouble with family or friends, missed school, or got into fights one or more times during their life as a result of drinking alcohol. The boys (22.2%) were significantly more likely than girls (14.3%); and the 4th year students (21.7%) were more likely than the 2nd year (15.2%) students to have had a hang over, got into trouble with family or friends, missed school, or got into fights one or more times during their life as a result of drinking alcohol.

Table 2. Alcohol use among students, by gender, and year level, Philippines, 2003.

Frequency, Type of alcohol, others.	Total % (CI)*	Gender		Year		
		Male % (CI)	Female % (CI)	2nd % (CI)	3 rd % (CI)	4 th % (CI)
Had three or more drinks as the most number of drinks they have had on one occasion	17.0 (13.9-20.0)	21.8 (18.0-25.7)	13.8 (10.7-16.9)	10.5 (6.7-14.3)	14.9 (10.2-19.6)	28.4 (22.7-34.2)
Drink beer as the usual type of alcohol	18.3 (16.3-20.2)	25.3 (22.0-28.5)	13.5 (11.4-15.6)	14.7 (11.4-17.9)	16.6 (12.9-20.2)	24.5 (20.7-28.2)
Who usually drink alone	1.1 (0.7-1.5)	1.8 (0.9-2.6)	0.6 (0.3-1.0)	0.7 (0.2-1.2)	1.6 (0.8-2.5)	1.1 (0.5-1.7)
Whose parents or guardians know that the student drinks alcohol	20.1 (17.4-22.7)	24.4 (21.2-27.6)	17.1 (14.2-20.1)	14.7 (11.9-17.4)	18.7 (15.0-22.4)	29.4 (25.1-33.7)
Allowed most of the time or always to drink alcohol at home	1.6 (1.2-2.0)	2.4 (1.5-3.3)	1.0 (0.5-1.6)	1.2 (0.6-1.9)	2.0 (1.0-2.9)	1.6 (1.0-2.3)
Whose father, mother, both parents or guardians drink alcohol	64.6 (62.7-66.5)	62.7 (59.6-65.7)	65.9 (64.0-67.8)	62.0 (58.5-65.4)	65.1 (63.1-67.2)	67.1 (63.7-70.5)

*95% confidence interval.

Overall, about one in five (17.0%) students had three or more drinks as the most number of drinks they have had on one occasion (Table 2). The boys (21.8%) were significantly more likely than girls (13.8%), and the 4th year students (28.4%) were more likely than the 2nd year students (10.5%), and 3rd year students (14.9%) to have had three drinks as the most number of drinks they have had on one occasion.

One in five (18.3%) students usually drinks beer. The boys (25.3%) were significantly more likely than girls (13.5%) to usually drink beer; and the 4th year students (24.5%) were more likely than the 2nd year (14.7%) and third year students (16.6%) to have beer as the usual type of alcohol they drink.

Only 1.1% of students usually drank alcohol alone. There were no significant differences by sex and by year in school.

One fifth (20.1%) of the students have parents or guardians who know that they drink alcohol. The boys (24.4%) were significantly more than girls (17.1%), and so with the 4th year students (29.4%) were more likely than the 2nd year (14.7%) and third year students (18.7%), to have parents or guardians who know that they drink alcohol.

Only 1.6% of students were allowed most of the time or always to drink alcohol at home. Over six in ten (64.6%) students have father or male guardian, mother or female guardian, or both parents who drink alcohol. There were no significant differences by sex and by year in school.

Table 3. Exposure to marketing and promotion of alcohol use among students, by gender, and by year levels, Philippines, 2003.

Marketing and promotion	Total % (CI)*	Gender		Year		
		Male % (CI)	Female % (CI)	2nd % (CI)	3 rd % (CI)	4 th % (CI)
Seen a lot of advertisements or promotions for alcohol in newspapers or magazines during the past 30 days	40.0 (37.5-42.4)	40.8 (37.6-44.0)	39.5 (36.7-42.4)	34.9 (32.8-36.9)	40.1 (35.3-45.0)	47.7 (43.5-51.9)
Seen a lot of advertisements or promotions for alcohol on billboards during the past 30 days	31.7 (29.4-34.0)	35.3 (32.1-38.6)	29.2 (26.8-31.7)	28.1 (25.0-31.2)	32.9 (28.3-37.6)	35.2 (32.2-38.3)
Saw alcohol brand names most of the time or always when they watched sports events on TV during the past 30 days	30.0 (27.6-32.4)	29.8 (27.0-32.6)	30.3 (27.5-33.2)	24.2 (21.6-26.8)	31.2 (26.7-35.8)	37.6 (33.4-41.8)
Saw actors drinking alcohol most of the time or always when they watch TV, videos, or movies	30.8 (28.4-33.1)	28.0 (25.4-30.6)	33.0 (30.3-35.7)	26.5 (23.3-29.6)	31.8 (27.7-35.9)	36.9 (33.1-40.6)
Saw advertisement for alcohol most of the time or always when they go to sports events, fairs, concerts, community events, or social gatherings	12.3 (11.0-13.6)	13.0 (10.9-15.1)	11.8 (10.6-13.0)	10.3 (8.4-12.2)	11.9 (9.7-14.1)	15.6 (13.2-18.0)
Been offered a free drink of alcohol by an alcohol company representative	9.9 (8.7-11.2)	14.3 (12.2-16.3)	6.8 (5.7-7.9)	8.1 (6.1-10.2)	10.6 (8.6-12.5)	11.1 (9.1-13.1)
Have something such as t-shirt, pen, backpack, or other item with an alcohol logo on it	16.1 (14.7-17.5)	20.8 (18.9-22.8)	12.7 (11.1-14.2)	15.3 (13.0-17.6)	16.7 (14.0-19.4)	16.1 (14.0-18.1)

*95% confidence interval.

Nationwide, two in five (40.0%) students have seen a lot of advertisements or promotions for alcohol in newspapers or magazines during the past 30 days preceding the survey (Table 3). There were no significant differences by sex. The 4th year students (47.7%) were significantly more likely than the 2nd year students (34.9%) to have been exposed to a lot of alcohol advertisements or promotions in newspapers or magazines.

Almost one-third (31.7%) of students have seen a lot of advertisements for alcohol on billboards during the past 30 days preceding the survey. The boys (35.3%) were significantly more likely than girls (29.2%), and the 4th year students (35.2%) were more likely than 2nd year students (28.1%), to have been exposed to a lot of advertisements for alcohol on billboards.

About one- third (30.0%) of students saw alcohol brand names most of the time or always when they watched sports events or other programs on television during the past 30 days preceding the survey. The 4th year students (37.6%) were significantly more likely than the 2nd year students (24.2%) to have seen alcohol brand names most of the time or always when they watched sports events or other programs on television.

About one-third (30.8%) of students saw actors drinking alcohol most of the time or always when they watch television, videos, or movies. The 4th year students (36.9%) were significantly more likely than the 2nd year students (26.5%) to have seen actors drinking alcohol most of the time or always when they watch television, videos, or movies.

Over one in ten (12.3%) saw advertisement for alcohol most of the time or always when they go to sports events, fairs, concerts, community events or social gatherings. The 4th year (15.6%) were significantly more likely than the 2nd year students (10.3%) to have seen advertisement for alcohol most of the time or always when they go to sports events, fairs, concerts, community events or social gatherings.

One in ten (9.9%) students had been offered a free drink of alcohol by an alcohol company representative. The boys (14.3%) were significantly more likely than the girls (6.8%) to have been offered a free sample of alcohol by an alcohol company representative.

Almost one in five (16.1%) students has something such as t-shirt, pen, backpack, or other item with an alcohol brand logo on it. The boys (20.8%) were significantly more likely than girls (12.7.0%), to have something such as t-shirt, pen, backpack, or other item with an alcohol brand logo on it.

Table 4. Lifetime drug use among students, by gender, and by year levels, Philippines, 2003.

Lifetime drug use	Total % (CI)*	Gender		Year		
		Male % (CI)	Female % (CI)	2nd % (CI)	3 rd % (CI)	4 th % (CI)
Used drugs, such as marijuana, shabu, ecstasy, or rugby one or more times during their life	6.7 (5.4-7.9)	11.5 (9.2-13.8)	3.0 (2.2-3.8)	4.8 (3.2-6.4)	6.6 (4.6-8.6)	9.1 (6.8-11.3)
Used marijuana one or more times during their life	6.3 (5.1-7.6)	11.6 (9.3-13.9)	2.4 (1.6-3.2)	4.3 (2.8-5.7)	5.6 (3.5-7.7)	9.4 (6.9-12.0)
Used methamphetamine one or more times during their life	3.7 (2.8-4.7)	6.9 (4.9-8.8)	1.3 (0.8-1.9)	3.0 (1.8-4.1)	3.3 (1.8-4.7)	4.1 (2.7-5.5)
Used ecstasy one or more times during their life	2.6 (1.9-3.4)	5.1 (3.6-6.5)	0.7 (0.4-0.9)	2.1 (1.2-3.0)	2.3 (1.1-3.6)	2.2 (1.3-3.1)
Used solvents or inhalants such as rugby one or more times during their life	4.0 (3.2-4.9)	7.0 (5.1-8.8)	1.8 (1.2-2.5)	4.0 (2.6-5.4)	4.5 (2.5-6.6)	3.4 (2.3-4.6)
Used tranquilizers or sedatives, such as Valium, without a doctor or nurse telling them to so, one or more times during their life	5.2 (4.3-6.0)	8.5 (6.8-10.2)	2.6 (2.0-3.3)	4.7 (3.4-6.1)	5.0 (3.3-6.8)	6.0 (4.4-7.6)
Used a needle to inject any drug into their body without a doctor or nurse telling them to do so, one or more times during their life	6.4 (5.5-7.3)	9.7 (8.2-11.3)	4.0 (3.1-4.8)	6.6 (4.8-8.4)	6.5 (4.4-8.6)	5.9 (4.2-7.6)
Have shared needles or syringes used to inject any drug into their body, one or more times during their life	4.0 (3.1-4.8)	7.4 (5.7-9.2)	1.3 (0.8-1.9)	2.7 (1.7-3.8)	4.2 (2.7-5.7)	5.3 (3.5-7.0)

*95% confidence interval.

Nationwide, the lifetime prevalence of drug use such as marijuana, shabu, ecstasy or rugby is 6.7% (Table 4). Overall, boys (11.5%) were significantly more likely than girls (3.0%) to be lifetime drug users. The 4th year students (9.1%) were more likely than the 2nd year students (4.8%) to have ever used drugs.

Lifetime Marijuana use

Overall, about 6.3% of students have used marijuana one or more times during their life. The boys (11.6%) were significantly more likely than girls (2.4%) to have used marijuana one or more times during their life; and the 4th year students (9.4%) were more likely than the 2nd year students (4.3%) to have ever used marijuana.

Lifetime Methamphetamine use

About 3.7% of students have used methamphetamines, commonly known as shabu, one or more times during their life. The boys (6.9%) were significantly more likely than girls (1.3%) to have used methamphetamines, commonly known as shabu, one or more times during their life.

Lifetime Ecstasy use

Overall, about 2.6% of students have used ecstasy one or more times during their life. The boys (5.1%) were significantly more likely than girls (0.7%) to have ever used ecstasy.

Lifetime Solvent/ inhalant use

Nationwide, 4.0% of students have ever used solvents or inhalants, commonly available as rubber cement, one or more times during their life. The boys (7.0%) were significantly more likely than girls (1.8%) to have ever used solvents or inhalants.

Lifetime Tranquilizer/ sedative use

Overall, 5.2% of students have ever used tranquilizers or sedatives such as Valium, without a doctor or nurse telling them to do so, one or more times during their life. The boys (8.5%) were significantly more likely than girls (2.6%) to have ever used tranquilizers or sedatives such as valium, without a doctor or nurse telling them to do so, one or more times during their life.

Lifetime Injectable drug use

Approximately, 6.4% of students have used a needle to inject any drug into their body without a doctor or nurse telling them to do so, one or more times during their life. The boys (9.7%) were significantly more likely than girls (4.0%) to have ever used a needle to inject any drug into their body without a doctor or nurse telling them to do so.

About 4.0% of students have ever shared needles or syringes used to inject any drug into their body, one or more times during their life. The boys (7.4%) were significantly more likely than girls (1.3%) to have ever shared needles or syringes used to inject any drug into their body, one or more times during their life.

Table 5. Current drug use among students, by gender, and by year levels, Philippines, 2003.

Current drug use	Total % (CI)*	Gender		Year		
		Male % (CI)	Female % (CI)	2nd % (CI)	3 rd % (CI)	4 th % (CI)
Current marijuana users	2.1 (1.5-2.6)	3.6 (2.5-4.7)	0.9 (0.5-1.3)	2.0 (1.0-2.9)	1.9 (1.0-2.7)	2.4 (1.3-3.4)
Current methamphetamine, or shabu users	1.5 (1.1-1.9)	3.1 (2.3-3.9)	0.4 (0.1-0.6)	1.3 (0.6-2.0)	1.6 (0.7-2.5)	1.7 (0.8-2.5)
Current ecstasy user	2.9 (2.2-3.6)	5.0 (3.5-6.5)	1.3 (0.8-1.8)	2.9 (1.8-4.0)	3.5 (2.0-5.0)	2.0 (1.2-2.9)
Current solvents or inhalants, such as rugby	2.9 (2.2-3.5)	5.0 (3.9-6.2)	1.2 (0.7-1.6)	2.5 (1.5-3.6)	2.7 (1.6-3.9)	3.4 (2.3-4.5)
Used tranquilizers or sedatives, such as Valium, without a doctor or nurse telling them to so, one or more times during the past 30 days	3.5 (2.6-4.4)	5.5 (4.0-7.0)	2.0 (1.3-2.6)	3.7 (2.2-5.3)	3.4 (1.9-4.9)	3.2 (1.9-4.5)
Used a needle to inject any drug into their body without a doctor or nurse telling them to do so, one or more times during the past 30 days	5.8 (4.5-7.1)	10.8 (8.5-13.2)	2.1 (1.4-2.9)	3.9 (2.6-5.3)	5.1 (3.1-7.1)	9.3 (6.7-11.8)

*95% confidence interval.

Current Marijuana use

Overall, about 2.1% of students currently use marijuana one or more times during the past 30 days preceding the survey (Table 5). The boys (3.6%) were significantly more likely than girls (0.9%) to be current marijuana users.

Current Methamphetamine use

About 1.5% of students currently use methamphetamine, also called shabu, one or more times during the past 30 days preceding the survey. The boys (3.1%) were significantly more likely than girls (0.4%) to be current shabu users.

Current ecstasy use

Overall, 2.9% of students currently use ecstasy one or more times during the past 30 days preceding the survey. The boys (5.0%) were significantly more likely than girls (1.3%) to be current users of ecstasy.

Current Solvent/ inhalant use

Nationwide, 2.9% of students currently use solvents or inhalants such as rugby one or more times during the past 30 days preceding the survey. The boys (5.0%) were significantly more likely than girls (1.2%) to be current users of solvents or inhalants.

Approximately, 3.5% of students currently use tranquilizers or sedatives such as valium, without a doctor or nurse telling them to do so, one or more times during the past 30 days. The boys (5.5%) were significantly more likely than girls (2.0%) to be current users of tranquilizers without a doctor or nurse telling them to do so.

Current injectable drug use

Overall, about 5.8% of students currently use a needle to inject any drug into their body without a doctor or nurse telling them to do so. The boys (10.8%) were significantly more likely than girls (2.1%), and so with the 4th year students (9.3%) were more likely than the 2nd year students (3.9%) to have currently used a needle to inject any drug into their body without a doctor or nurse telling them to do so.

Table 6. Initiation of drug use among students, by gender, and by year levels, Philippines, 2003.

Age of initiation of drug use	Total % (CI)*	Gender		Year		
		Male % (CI)	Female % (CI)	2nd % (CI)	3 rd % (CI)	4 th % (CI)
Were 13 years old or younger when they first tried marijuana	2.4 (1.8- 3.1)	4.6 (3.2- 6.0)	0.9 (0.5- 1.3)	2.4 (1.4- 3.4)	2.3 (1.2- 3.4)	2.5 (1.5- 3.5)
Were 13 years old or younger when they first tried Methamphetamines or shabu	1.8 (1.4-2.3)	3.5 (2.8- 4.3)	0.5 (0.3- 0.8)	1.8 (1.0- 2.5)	1.9 (0.9- 2.9)	1.7 (0.9- 2.5)
Were 13 years old or younger when they first tried ecstasy	3.1 (2.4-3.8)	5.5 (4.0- 7.0)	1.4 (0.8- 1.9)	3.4 (2.1- 4.8)	3.3 (1.9- 4.7)	2.3 (1.5- 3.1)
Were 13 years old or younger when they first tried solvents or inhalants, such as rugby	4.4 (3.5-5.3)	7.3 (5.9- 8.7)	2.2 (1.5- 3.0)	4.7 (3.0- 6.4)	4.1 (2.1- 6.1)	4.5 (3.1- 5.8)

*95% confidence interval.

Age of initiation of drug use

Nationwide, 2.4% of students were 13 years old or younger when they first tried marijuana (Table 6). The boys (4.6%) were significantly more likely than girls (0.9%) to have first tried marijuana at 13 years old or younger.

Approximately 1.8% of students were 13 years old or younger when they first tried methamphetamines or shabu. The boys (3.5%) were significantly more likely than girls (0.5%) to have first tried marijuana at 13 years old or younger.

Overall, 3.1% of students were 13 years old or younger when they first tried ecstasy. The boys (5.5%) were significantly more likely than girls (1.4%) to have first tried ecstasy at 13 years old or younger.

Nationwide, 4.4% of students were 13 years old or younger when they first tried solvents or inhalants such as rugby. The boys (7.3%) were significantly more likely than girls (2.2%) to have first tried solvents or inhalants such as rugby at 13 years old or younger.

Table 7. Marketing and school lessons on drug use among students, by gender, and by year levels, Philippines, 2003.

	Total % (CI)*	Gender		Year		
		Male % (CI)	Female % (CI)	2nd % (CI)	3 rd % (CI)	4 th % (CI)
Were offered, sold, or given a drug such as marijuana, shabu, ecstasy, or rugby during the past 30 days	22.9 (21.3- 24.5)	27.5 (24.9- 30.2)	19.4 (17.9- 20.8)	23.3 (20.3- 26.2)	21.2 (18.6- 23.7)	23.7 (21.5- 26.0)
Were taught in any of their classes during the school year the dangers of using drugs such as marijuana, shabu, ecstasy, or rugby.	43.9 (40.1- 47.7)	44.2 (40.0- 48.3)	43.7 (39.0- 48.4)	35.1 (30.3- 39.9)	45.7 (41.3- 50.1)	55.3 (48.3- 62.2)

*95% confidence interval.

Marketing of illicit substances

Overall, almost a quarter (22.9%) of students were offered, sold, or given a drug such as marijuana, shabu, ecstasy, or rugby during the past 30 days preceding the survey (Table 7). The boys (27.5%) were significantly more likely than girls (19.4%) to have been offered, sold, or given drugs.

School lessons on substance abuse

Nationwide, less than half (43.9%) of students were taught in any of their classes during the school year the dangers of using drugs such as marijuana, shabu, ecstasy or rugby (Table). The 4th year students (55.3%) were significantly more likely than the 2nd year students (35.1%) to have been taught in any of their classes during the school year the dangers of using drugs such as marijuana, shabu, ecstasy or rugby.

Dietary Behaviors

During adolescence, overweight is associated with hyperlipidemia, hypertension, abnormal glucose tolerance, and adverse psychological and social consequences. 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.⁶

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.⁷

Table 8. BMI and dietary behaviors, by gender, and by year levels, Philippines, 2003.

	<i>Total % (CI)*</i>	<i>Gender</i>		<i>Year</i>		
		<i>Male % (CI)</i>	<i>Female % (CI)</i>	<i>2nd % (CI)</i>	<i>3rd % (CI)</i>	<i>4th % (CI)</i>
At risk for becoming overweight ¹	5.5 (4.4-6.6)	6.4 (4.3-8.6)	4.7 (3.4-6.0)	5.7 (3.9-7.5)	5.7 (3.7-7.8)	5.0 (3.3-6.7)
Overweight ²	8.2 (5.1-11.2)	10.1 (6.5-13.7)	6.6 (3.7-9.5)	7.6 (2.6-12.5)	7.7 (2.0-13.4)	9.5 (4.8-14.1)
Went hungry most of the time or always because there was not enough food in their home during the past 30 days	7.8 (6.6-8.9)	9.6 (7.9-11.4)	6.4 (4.9-7.8)	8.9 (6.7-11.2)	7.4 (5.1-9.6)	6.5 (4.7-8.3)
Usually ate fruit, such as bananas, mangoes, papayas, one or more times per day during the past 30 days	66.5 (64.0-69.1)	62.9 (59.7-66.1)	69.4 (66.3-72.4)	71.7 (68.0-75.5)	64.5 (60.9-68.1)	62.2 (58.8-65.5)
Usually ate vegetables, such as kangkong, cabbage, string beans, or tomatoes, one or more times per day during the past 30 days	80.1 (78.0-82.1)	79.4 (76.5-82.3)	80.5 (78.3-82.6)	82.1 (78.9-85.2)	81.0 (77.8-84.1)	76.7 (73.6-79.7)
Ate fruits and vegetables five or more times per day during the past 30 days	24.0 (21.8-26.2)	25.5 (23.1-27.9)	22.9 (20.2-25.6)	27.3 (24.1-30.4)	23.7 (20.1-27.2)	19.7 (17.7-21.8)

*95% confidence interval.

¹Students who were at or above the 85th percentile, but below the 95th percentile for body mass index by age and sex based on reference data from Cole, Bellizzi, Flegal, and Dietz, *BMJ*, May 2000.

²Students who were at or above the 95th percentile for body mass index by age and sex based on reference data from Cole, Bellizzi, Flegal, and Dietz, *BMJ*, May 2000.

Nationwide, 5.5% of students were at risk for becoming overweight (Table 8). The prevalence of at risk for becoming overweight did not significantly differ by sex and by year in school

Overall, 8.2% of students were overweight. The prevalence of overweight did not differ significantly by sex and by year in school.

Overall, only 7.8% of students went hungry most of the time or always because there was not enough food in their home during the past 30 days. The boys (9.6%) were significantly more likely than girls (6.4%) to have experienced such.

Nationwide, almost seven out of ten students usually ate fruit (67%), such as banana, mango, or papaya, one or more times per day during the past 30 days preceding the survey. The girls (69.4%) were significantly more likely than boys (62.9%) to have eaten such. The 2nd year students (71.7%) were more likely than the 4th year students (62.2%) to eat fruit one or more times per day.

Overall, eight of ten students (80%) usually ate vegetables such as kangkong, cabbage, string beans, or tomatoes one or more times per day during the past 30 days preceding the survey.

Almost a quarter (24%) of students ate five or more servings of fruits and vegetables per day during the past 30 days preceding the survey. The 2nd year students (27.3%) were significantly more likely than the 4th year students (19.7%) to have eaten 5 or more servings of fruits and vegetables per day.

Hygiene

Dental caries are one of the most common chronic childhood diseases.⁸ Dental caries and other oral disease can affect the ability to eat, appearance, communication, overall health status, and the ability to learn. 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.

Diarrhoeal diseases kill 2 to 3 million children in developing countries every year. Hand washing with soap alone could cut deaths in half. Removing excreta and cleaning hands with soap after contact with faecal material prevents transmission of the bacteria, viruses, and protozoa that cause diarrhoeal diseases.

Table 9. Hygiene-related behaviors, by gender, and year levels, Philippines, 2003.

	Total % (CI)*	Gender		Year		
		Male % (CI)	Female % (CI)	2 nd % (CI)	3 rd % (CI)	4 th % (CI)
Did not clean or brush their teeth during the past 30 days	1.2 (0.4-1.9)	2.0 (0.4-3.5)	0.5 (0.2-0.8)	0.6 (0.2-1.0)	1.1 (0.4-1.9)	0.7 (0.4-1.0)
Never or rarely washed their hands before eating during the past 30 days	4.3 (3.2-5.4)	4.9 (3.3-6.5)	3.8 (2.6-5.0)	4.2 (2.6-5.8)	4.4 (2.3-6.5)	3.1 (2.2-4.0)
Never or rarely washed their hands after using the toilet or latrine during the past 30 days	4.0 (3.1-4.8)	4.7 (3.1-6.2)	3.3 (2.5-4.1)	4.1 (3.0-5.2)	3.1 (2.0-4.2)	3.1 (2.3-3.9)
Never or rarely used soap when washing their hands during the past 30 days	4.7 (3.6-5.8)	6.1 (4.4-7.8)	3.6 (2.7-4.5)	4.2 (2.9-5.5)	4.6 (2.8-6.5)	4.4 (3.5-5.3)

*95% confidence interval.

Overall, only 1.2% of students did not clean or brush their teeth during the past 30 days preceding the survey (Table 9).

Only 4.3% of students have never or rarely washed their hands before eating during the past 30 days preceding the survey.

Only 4.0% of students have never or rarely washed their hands after using the toilet or latrine during the past 30 days preceding the survey.

Only 4.7% of students have never or rarely used soap when washing their hands during the past 30 days preceding the survey.

Mental Health

Anxiety disorders, depression and other mood disorders, and behavioral and cognitive disorders are among the most common mental health problems among adolescents. 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 behaviors. Depression during adolescence and young adulthood is recognized increasingly as an important public health and social problem. Worldwide, about 4 million adolescents attempt suicide annually, resulting in at least 100,000 deaths.^{9,10,11}

Table 10. Mental health issues among students, by gender, and year levels, Philippines, 2003.

	Total % (CI)*	Gender		Year		
		Male % (CI)	Female % (CI)	2 nd % (CI)	3 rd % (CI)	4 th % (CI)
<i>Most of the time or always felt lonely during the past 12 months</i>	10.5 (9.2-11.7)	9.5 (8.1-10.9)	11.2 (9.5-12.9)	9.6 (8.2-11.0)	10.4 (7.7-13.2)	12.2 (9.8-14.6)
<i>Most of the time or always felt so worried about something that they could not sleep at night during the past 12 months</i>	14.6 (13.1-16.1)	12.8 (10.8-14.8)	16.1 (14.5-17.7)	14.2 (12.0-16.5)	13.4 (10.4-16.4)	16.7 (14.7-18.7)
<i>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</i>	42.0 (39.6-44.3)	39.0 (36.7-41.3)	44.3 (41.0-47.5)	41.8 (38.0-45.6)	41.2 (37.0-45.3)	43.3 (40.3-46.2)
<i>Seriously considered attempting suicide during the past 12 months</i>	17.1 (14.6-19.6)	18.4 (15.3-21.6)	16.2 (13.7-18.7)	18.7 (13.3-24.2)	16.5 (13.9-19.1)	15.6 (12.9-18.3)
<i>Made a plan about how they would attempt suicide during the past 12 months</i>	16.7 (14.2-19.3)	16.6 (13.9-19.4)	16.8 (13.9-19.8)	19.1 (13.8-24.4)	14.7 (12.1-17.3)	15.4 (13.2-17.5)
<i>Have no close friends</i>	3.3 (2.5-4.0)	4.0 (2.6-5.5)	2.5 (1.9-3.2)	3.3 (2.2-4.4)	2.9 (1.9-3.8)	2.4 (1.6-3.1)

**95% confidence interval.*

Nationwide, only one out of ten (10.5%) students felt lonely most of the time or always during the past 12 months preceding the survey (Table 10). There were no significant differences in this kind of feelings by sex, and by year in school.

Over one in ten (14.6%) students, most of the time or always, felt so worried about something that they could not sleep at night during the past 12 months.

Over two in five (42.0%) students felt so sad or hopeless almost every day for two weeks or more in a row that they stopped their usual activities during the past 12 months preceding the survey.

About one in five (17.1%) students seriously considered attempting suicide during the past 12 months preceding the survey. There were no significant differences by sex and by year in school.

About one in five (16.7%) students made a plan about how they would attempt suicide during the past 12 months preceding the survey. There were no significant differences by sex and by year in school.

Only 3.3% of the students have no close friends. There were no significant differences by sex and by year in school.

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.¹² The prevalence of type 2 diabetes is increasing globally and now is occurring during adolescence and childhood.¹³ Participating in adequate physical activity also helps build and maintain healthy bones and muscles, control weight, build lean muscle, reduce fat, reduce feelings of depression and anxiety, and promote psychological well being.¹⁴

Table 11. Physical activity among students, by gender, and by year levels, Philippines GSHS 2003.

	Total % (CI)*	Gender		Year		
		Male % (CI)	Female % (CI)	2 nd % (CI)	3 rd % (CI)	4 th % (CI)
Physically active all seven days for a total of at least 60 minutes per day during the past seven days	7.6 (6.3- 9.0)	8.6 (6.6- 10.7)	6.9 (5.6- 8.3)	6.1 (4.8- 7.5)	7.4 (4.2- 10.5)	10.4 (7.6- 13.2)
Physically active seven days for a total of at least 60 minutes per day during a typical or usual week	9.0 (7.3- 10.7)	10.0 (8.0- 12.0)	8.4 (6.5- 10.2)	7.3 (5.2- 9.3)	8.8 (5.2- 12.5)	12.1 (9.4- 14.7)
Participated in an insufficient amount of physical activity	90.4 (88.5- 92.3)	89.3 (86.8- 91.8)	91.1 (89.2- 93.0)	93.0 (90.9- 95.2)	91.0 (87.4- 94.5)	85.6 (81.9- 89.4)
Spent three or more hours per day doing sitting activities during a typical or usual day	29.3 (25.5- 33.2)	26.5 (22.1- 30.9)	31.6 (27.5- 35.7)	22.5 (17.8- 27.1)	30.5 (24.6- 36.5)	38.2 (31.4- 45.0)
Did not walk or bicycle to and from school during the past seven days	55.8 (52.4- 59.1)	55.2 (51.4- 59.1)	56.0 (52.0- 60.1)	55.8 (51.1- 60.5)	54.5 (47.7- 61.4)	57.6 (53.7- 61.6)
Usually took less than 30 minutes to get to and from school each day during the past seven days	82.6 (79.9- 85.3)	83.6 (80.9- 86.3)	81.7 (78.3- 85.1)	87.8 (85.7- 89.8)	81.4 (77.0- 85.8)	76.0 (71.5- 80.5)
Walked or bicycled to and from school for a total of 150 minutes or more during the past seven days	92.9 (91.2- 94.6)	93.7 (92.1- 95.2)	92.3 (90.0- 94.5)	93.9 (92.1- 95.8)	91.8 (87.1- 96.4)	92.6 (90.9- 94.4)

*95% confidence interval.

Nationwide, only 7.6% of students were physically active all seven days during the past 7 days for a total of at least 60 minutes per day (Table 11). The 4th year students (10.4%) were significantly more likely than the second year students to be physically active all seven days for at least 60 minutes.

Only 9.0% of students were physically active seven days during a typical or usual week for at least a total of 60 minutes per day. The 4th year students were significantly more likely than the second year students (7.3%) to be physically active all seven days during a typical or usual week for 60 minutes per day.

Overall, nine out of ten students participated in an insufficient amount of physical activity (Table 11). The 2nd year students (93.0%) were significantly more likely than the 4th year students (85.6%) to participate in an insufficient amount of physical activity.

Almost one-third (29.3%) of students spent three or more hours per day sitting and watching television, playing computer games, talking with friends, or doing sitting activities, such as playing card during a typical or usual day. The 4th year students (38.2%) were significantly more likely than 2nd year students (22.5%) to spend three or more hours per day doing sitting activities.

Over half of students (55.8%) did not walk or ride a bicycle to and from school during the past seven days preceding the survey.

Eight in ten (82.6%) students usually took 30 minutes or less to get to and from school each day during the past seven days preceding the survey. The 2nd year students (87.8%) were significantly more likely than the 4th year students get to and from school in 30 minutes or less each day during the past seven days.

Overall, nine of ten (92.9%) students walked or bicycled to and from school for a total of 150 minutes or more during the past seven days.

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 behaviors including violence and sexual risk behaviors.^{15,16,17} Students' perceptions of the school environment are associated significantly to their health and well-being.^{18,19} Perceived high-level support from fellow students is related to subjective health complaints, satisfaction with school, and increased physical activity.^{20,21}

One of the most reliable and powerful findings in research on adolescence and their families is the importance of adequate regulation of adolescents, measured in terms of supervision, monitoring, rule-setting, and other forms of behavioral control.^{22,23,24} Without adequate regulation and monitoring, children do not learn to self-regulate, tend to be impulsive, prone to risk taking, more susceptible to peer influences, and more likely to engage in various health risk behaviors including alcohol use and sexual risk behaviors.²⁵ Parental bonding and connection is associated with lower levels of depression and suicidal ideation, alcohol use, sexual risk behaviors, and violence.²⁶

Table 12. Protective factors among students, by gender, and by year levels, Philippines, 2003.

	Total % (CI)*	Gender		Year		
		Male % (CI)	Female % (CI)	2nd % (CI)	3 rd % (CI)	4th % (CI)
Missed classes or school without permission on one or more of the past 30 days	31.2 (27.6-34.8)	35.6 (31.9-39.3)	28.0 (23.7-32.2)	29.9 (25.0-34.8)	29.1 (22.5-35.7)	35.5 (28.6-42.4)
Most of the students in their school were kind and helpful most of the time or always during the past 30 days	30.2 (27.6-32.8)	28.8 (25.8-31.7)	31.3 (28.5-34.1)	27.3 (23.8-30.8)	30.4 (27.0-33.8)	34.4 (29.7-39.2)
Parents or guardians checked to see if their homework was done most of the time or always during the past 30 days	23.0 (21.1-24.9)	21.7 (19.3-24.2)	24.0 (22.1-26.0)	25.2 (22.5-28.0)	21.9 (18.9-24.9)	21.0 (18.2-23.8)
Parents or guardians understood their problems and worries most of the time or always during the past 30 days	27.8 (25.7-29.9)	25.4 (23.2-27.6)	29.7 (27.1-32.4)	25.5 (22.6-28.4)	26.7 (24.2-29.3)	32.8 (28.3-37.3)
Parents or guardians really knew what they were doing with their free time most of the time or always during the past 30 days	34.0 (31.0-36.9)	28.7 (25.8-31.6)	37.8 (34.0-41.5)	31.7 (27.3-36.1)	33.8 (29.6-38.1)	38.0 (33.3-42.7)

*95% confidence interval.

Almost one-third of students (31.2%) missed classes or school without permission on one or more of the past 30 days preceding the survey (Table 12).

About one-third of students (30.2%) have reported that most of the students in their school were kind and helpful most of the time or always during the past 30 days preceding the survey.

Only one in five students (23.0%) have parents who checked to see if their homework was done most of the time or always during the past 30 days preceding the survey.

About three in ten students (27.8%) have parents or guardians who understood their problems and worries most of the time or always during the past 30 days preceding the survey.

Over one-third of students (34.0%) have parents or guardians who knew what they were doing with their free time most of the time or always during the past 30 days preceding the survey. The girls (37.8%) were more likely than boys (28.7%) to have parents or guardians who really knew what they were doing with their free time most of the time or always during the past 30 days.

HIV-Related Knowledge

Since the epidemic began, more than 60 million people have been infected with HIV. More than half of those newly infected with HIV today are between 15 and 24 years old. Each day, nearly 6,000 becomes infected. An estimated 11.8 million young people aged 15 to 24 are living with HIV and AIDS.²⁷ HIV infection and AIDS is by far the leading cause of death in sub-Saharan Africa and the 4th leading cause of death worldwide. 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 enrollment and the availability of teachers.²⁸

Table 13. HIV-Related Knowledge, by sex, and by year levels, Philippines, 2003.

	Total % (CI)*	Gender		Year		
		Male % (CI)	Female % (CI)	2 nd % (CI)	3 rd % (CI)	4 th % (CI)
Ever heard of HIV or the disease called AIDS	95.3 (94.3- 96.4)	94.8 (93.2- 96.3)	95.7 (94.7- 96.8)	93.9 (91.9- 95.9)	95.3 (93.2- 97.5)	97.2 (96.1- 98.2)
Taught in any of their classes about HIV or AIDS during this school year	50.9 (47.1- 54.7)	50.9 (46.6- 55.2)	50.9 (46.2- 55.7)	42.9 (36.5- 49.3)	52.0 (46.4- 57.5)	61.9 (55.3- 68.5)
Taught in any of their classes how to avoid HIV or AIDS during this school year	44.5 (40.7- 48.3)	44.1 (40.5- 47.7)	44.9 (40.0- 49.9)	35.8 (29.5- 42.1)	46.4 (40.4- 52.5)	55.5 (49.5- 61.6)
Know that people can protect themselves from HIV by not having sexual intercourse	54.2 (51.5- 56.9)	55.7 (52.9- 58.4)	53.3 (49.9- 56.7)	48.5 (43.2- 53.8)	54.4 (50.9- 58.0)	61.9 (57.0- 66.8)
Know how to tell someone they do not want to have sexual intercourse with them	45.3 (42.5- 48.1)	47.0 (44.0- 50.0)	44.1 (40.3- 47.9)	41.3 (37.8- 44.7)	43.8 (39.3- 48.3)	52.7 (47.8- 57.6)
Ever talked about HIV or AIDS with their parents or guardians	33.6 (31.6- 35.5)	31.4 (29.0- 33.8)	35.2 (32.7- 37.8)	28.0 (24.9- 31.2)	35.5 (32.0- 39.0)	39.6 (36.6- 42.5)

*95% confidence interval

Overall, 95.3% of students had ever heard of HIV or disease called AIDS (Table). The 4th year students (97.2%) were more likely that the 2nd year students (93.9%) to have ever heard of HIV or a disease called AIDS.

Nationwide, only half of the students (50.9%) had been taught in any of their classes about HIV and AIDS during this school year. The 4th year students (61.9%) were significantly more likely than the 2nd year students (42.9%) to have been taught in any of their classes about HIV and AIDS.

Less than half (44.5%) of students were taught how to avoid HIV or AIDS in any of their classes during the school year. The 4th year students (55.5%) were significantly more likely than the 2nd year students (35.8%) to have been taught how to avoid HIV or AIDS.

Over half of the students (54.2%) believe people can protect themselves from HIV by not having sexual intercourse. The 4th year students (61.9%) were significantly more likely than the 2nd year students (48.5%) to believe that people can protect themselves from HIV by not having sexual intercourse.

Almost half of students (45.3%) know how to tell someone they do not want to have sexual intercourse with them. The 4th year students (52.7%) were more likely than the 2nd (43.8%) and 3rd year (41.8%) students to know how to tell someone they do not want to have sexual intercourse with them.

Only one-third of students (33.6%) have ever talked about HIV or AIDS with their parents or guardians. The 4th year students (39.6%) were more likely than the second year students (28.0%) to have ever talked about HIV or AID with their parents or guardians.

Tobacco Use

About one in three or 1.1 billion people worldwide smoke. Among these, about 80% live in low- and middle-income communities.²⁹ By 2020, the tobacco epidemic is expected to kill more people than any single disease. By 2020, tobacco use will cause about 18 percent of all deaths in developed countries and about eleven percent of all deaths in developing countries. Tobacco use is a known or probable cause of about 25 diseases including heart disease; cancer, stroke, and chronic obstructive pulmonary disease. Smokeless tobacco use causes oral cancer in the lip, tongue, mouth, and throat areas and digestive system cancers. Most people who use tobacco initiate use prior to age 18. Exposure to tobacco smoke in the environment can aggravate allergies and increase the severity of symptoms in children and adolescents with asthma and heart disease; it is also associated with lung cancer.³⁰ Family members, film stars, and sports heroes who use tobacco influence whether children and adolescents choose to use tobacco.³¹

Table 14. Tobacco use among students, by gender, and by year level, Philippines, 2003.

	Total % (CI)*	Gender		Year		
		Male % (CI)	Female % (CI)	2 nd % (CI)	3 rd % (CI)	4 th % (CI)
Smoked cigarettes on one or more days during the past 30 days	14.6 (12.2-17.0)	23.5 (20.0-26.9)	8.2 (5.8-10.5)	14.2 (10.4-18.1)	13.0 (8.6-17.4)	17.1 (12.7-21.4)
Among students who smoked cigarettes during the past 30 days, those who tried their first cigarette at age 9 or younger	10.8 (7.5-14.0)	12.6 (8.2-17.1)	6.9 (3.1-10.8)	16.2 (9.0-23.3)	8.5 (4.8-12.2)	5.9 (3.6-8.3)
Used any other form of tobacco on one or more days during the past 30 days	6.2 (5.0-7.4)	10.7 (8.6-12.8)	2.5 (1.7-3.2)	6.0 (3.9-8.1)	5.8 (3.8-7.8)	5.8 (4.2-7.4)
Used any tobacco on one or more days during the past 30 days	16.0 (13.5-18.6)	25.6 (21.9-29.3)	8.9 (6.6-11.3)	15.7 (11.7-19.6)	14.5 (9.8-19.1)	17.9 (13.5-22.3)
Among students who smoked cigarettes during the past 12 months, those who tried to stop smoking cigarettes	80.1 (76.3-83.8)	82.0 (77.7-86.4)	76.9 (71.3-82.6)	81.2 (75.7-86.8)	79.6 (72.7-86.4)	81.7 (76.0-87.4)
People smoked in their presence on one or more days during the past seven days	54.2 (51.8-56.6)	60.2 (57.4-63.0)	49.5 (46.3-52.8)	50.9 (46.4-55.4)	53.4 (49.2-57.6)	59.7 (56.6-62.8)
Have a parent or guardian who uses any form of tobacco	42.1 (40.0-44.1)	41.3 (38.4-44.1)	42.5 (40.2-44.9)	41.5 (37.8-45.2)	40.9 (37.2-44.6)	43.7 (40.0-47.4)

*95% confidence interval.

Overall, 14.6% of high school students currently smoke cigarettes (Table 14). The boys (23.5%) were significantly more likely than girls (8.2%) to be current smokers.

Nationwide, one in ten (10.8%) students who currently smoke cigarettes admitted to have tried their first cigarette at age 9 or younger. The 2nd year students who currently smoke (16.2%) were significantly more likely than the 4th year students (5.9%) to have tried their first cigarette at age 9 or younger.

Approximately, 6.2% of students had used any other form of tobacco on one or more of the past 30 days preceding the survey. The boys (10.7%) were significantly more likely than girls (2.5%), to have currently used any other form of tobacco.

About one in five students (16.0%) currently use any tobacco product. The boys (25.6%) were significantly more likely than girls (8.9%) to have currently used any tobacco.

About eight in ten (80.1%) students who smoked during the past 12 months have tried to stop smoking during the past year. There were no significant differences by sex and by year in school.

Over half (54.2%) of the students reported that people have smoked in their presence on one or more of the past 7 days. The boys (60.2%) were significantly more likely than girls (49.5%) to have people smoke in their presence. The 4th year students (59.7%) were significantly more likely than the 2nd year students (50.9%) to have reported that people have smoked in their presence on one or more of the past 7 days.

Overall, over two in five students (42.1%) have a parent or guardian who uses any form of tobacco. There were no significant differences by sex and by year in school.

Violence and Unintentional Injury

Injuries are a major cause of death and disability among young children.^{32,33} Each year, 750,000 children die from injuries. Another 400 million children are hurt seriously. In 2000, an estimated 190,000 youth homicide (9.2 per 100,000 populations) occurred globally. For every youth homicide, approximately 20 to 40 victims of non-fatal youth violence receive hospital treatment. Many injuries lead to permanent disability and brain damage. Victims of bullying have increased stress and a reduced ability to concentrate and are at increased risk for substance abuse, aggressive behavior, and suicide attempts.³⁴

Table 15. Violence and unintentional injury among students, by gender, and by year levels, Philippines 2003.

	Total % (CI)*	Gender		Year		
		Male % (CI)	Female % (CI)	2 nd % (CI)	3 rd % (CI)	4 th % (CI)
Were in a physical fight one or more times during the past 12 months	50.1 (47.2-52.9)	51.6 (48.5-54.8)	48.8 (44.9-52.7)	56.0 (51.5-60.4)	47.5 (43.9-51.0)	43.5 (38.2-48.7)
Were seriously injured one or more times during the past 12 months	31.1 (28.3-33.9)	39.1 (35.9-42.3)	25.9 (22.7-29.1)	36.4 (32.3-40.6)	27.2 (23.5-30.9)	27.9 (23.5-32.3)

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	10.8 (8.0-13.7)	14.8 (10.0-19.5)	6.9 (4.0-9.9)	9.0 (4.8-13.1)	13.2 (7.7-18.7)	12.0 (8.0-15.9)
Among students who were seriously injured during the past 12 months, those whose most serious injury was the result of a fall	11.1 (8.7-13.4)	14.1 (10.0-18.1)	8.0 (5.5-10.6)	10.8 (7.1-14.4)	9.2 (6.0-12.4)	13.5 (8.4-18.7)
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	56.1 (52.1-60.1)	53.7 (48.3-59.0)	58.7 (53.5-63.8)	53.8 (48.6-59.1)	58.9 (51.6-66.2)	55.6 (51.1-60.2)
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	19.8 (16.6-23.0)	28.0 (23.3-32.6)	11.7 (8.4-15.1)	17.3 (13.4-21.3)	22.8 (16.3-29.4)	21.1 (13.9-28.3)
Were bullied on one or more days during the past 30 days	35.7 (33.3-38.0)	34.7 (31.7-37.8)	36.1 (32.9-39.3)	38.0 (33.5-42.5)	34.9 (31.3-38.5)	31.6 (28.6-34.6)
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	28.0 (24.3-31.8)	35.8 (30.2-41.3)	22.2 (18.3-26.1)	33.2 (27.1-39.4)	23.7 (17.6-29.9)	20.1 (16.9-23.2)

*95% confidence interval.

Nationwide, half (50.1%) of students were involved in a physical fight one or more times during the past 12 months preceding the survey (Table 15). The 2nd year students (56.0%) were significantly more likely than the 3rd year (47.5%) and the 4th year students (43.5%) to have been involved in a physical fight one or more times during the past 12 months preceding the survey.

Overall, three in ten students (31.1%) were seriously injured one or more times during the past 12 months preceding the survey. The boys (39.1%) were significantly more likely than girls (25.9%) to have been seriously injured during the past 12 months preceding the survey. The 2nd year students (36.4%) were more likely than the 3rd year students (27.2%) to have been seriously injured during the past 12 months preceding the survey.

One in ten students (10.8%) who were seriously injured during the past 12 months had reported that most serious injury happened to them while they were playing or training for a sport. The males (14.8%) were significantly more likely than females (6.9%) to have been injured while playing or training for sports. The 4th year students (12.0%) were significantly more likely than 2nd year students (9.0%) to have had their most serious injury occur this way.

Over one in ten (11.1%) students who were seriously injured during the past 12 months had stated that their most serious injury was the result of a fall.

Over half (56.1%) of the students who were seriously injured during the past 12 months had reported that their most serious injury was due to hurting themselves by accident.

About one-fifth (19.8%) of the students who were seriously injured during the past 12 months had broken bone or dislocated joint as their most serious injury. Overall, the boys (28.0%) were significantly more likely than girls (11.7%) to have had a broken bone or dislocated joint as their most serious injury.

Nationwide, over one-third (35.7%) of students were bullied on one or more days during the past 30 days preceding the survey.

About three in ten (28.0%) of those who were bullied during the past 30 days preceding the survey have reported that they were most often hit, kicked, pushed, shove around, or locked indoors. The boys (35.8%) were significantly more likely than the girls (22.2%) to have reported such. The 2nd year students (33.2%) were more than the 4th year students (20.1%) to have been bullied and reported that they were most often hit, kicked, pushed, shove around, or locked indoors.

Discussion

Substance Use

In public health context, substance abuse prevention should focus on all psychoactive substances (illicit drugs, alcohol, tobacco, pharmaceutical drugs and inhalants) regardless of their legal status (NOH, 2000). The National Objectives for Health 2000-2004 had set targets for risk reduction among these risky behaviors:

a.) Tobacco Use

The NOH target is to reduce the prevalence of tobacco use among youth, 12-19 years old to 20%. From this GSHS study, current cigarette use among students of this age group is 15%. Comparatively, from the school-based GYTS 2003 survey, current cigarette use is also at 15%. Considering use of any tobacco product, the prevalence is at 16% in GSHS and 19.0% in GYTS 2003. Citing the Young Adult Fertility and Sexuality Study 3 (YAFS3, UPPI) in 2002, the prevalence of current cigarette smoking among Filipino youth (15-19 years old) is at 17.1%. From the three studies, the boys were significantly more likely than girls to be currently using tobacco products. Practically, it can be said that we have reached the NOH target as compared to the 28% prevalence (14-17 years) in 1991 (Ayson et al). However, this should be reduced further more to a very minimum level in the next three years or so.

One in ten students admitted to have tried and or smoked tobacco before 9 years old (GSHS). In the GYTS2003, 5% of students admitted to have first tried smoking before 9 years old. *Decrease Tobacco Use Initiation* means postponing or preventing tobacco use in children and adolescents which will eventually decrease the number of adult tobacco users.

Eight in ten students who are current smokers have tried to stop smoking within the past year. It is also reflected in the GYTS2003 study. *Increase Tobacco Use Cessation* is imperative as tobacco use cessation reduces tobacco-related illnesses and deaths.

Over half of the students have been exposed to Environmental Tobacco Smoke (ETS). Likewise, it is also true in the GYTS2003 and Field Survey of Metro Manila Air Quality Monitoring 2003 where over half have parents smoke in their presence at home. Similarly, more than half of the students were exposed to

ETS in public places. However, this account for 21% reduction from the baseline where there were almost three fourths of students who were exposed to ETS in 2000. Reduce Exposure to Environmental Tobacco Smoke. Reducing ETS exposure will reduce secondhand smoke-related illnesses and deaths among nonsmokers.

b.) Alcohol Use

The NOH target by 2004 is to reduce the percentage of population that has ever experienced using alcohol. From the YAFS2 1994 study, the percentage of youth aged 15-19 years who ever drank alcohol was 44.8%, but in the YAFS3 2002 study, it was 52.4%. In the Behavioral Risk Factor Survey of 2001 (DOH-UPM), the prevalence of those who ever drank alcohol among youth 15-19 is 39.0%. From the GSHS 2003, the percentage of students who were really drunk one or more times during their life is about 25%.

From the YAFS2 study in 1994, the prevalence of current alcohol drinking among 15-19 years was 29%, while in the YAFS3 2002 study, the prevalence of current alcohol drinking (15-17 years) is estimated at 31%. In the GSHS study of 2003, the prevalence of current alcohol drinkers among 13-15 years students is 24%. In both studies, boys were significantly more likely than girls to be currently drinking alcohol.

Reduce access and availability of alcohol to youth is another target. In this GSHS study, only one in ten students had been refused sell of alcohol even if they are minors.

c.) Drug /Substance Use

The NOH target is to reduce the percentage of population who has ever experienced use of illicit drugs. In the YAFS2 1994 study, the percentage of youth who have ever tried drugs was 3.2% and in YAFS3 2002, it was 6.2%. From the GSHS 2003, the percentage of students who have ever used drugs is 6.7%.

Marijuana is the most common type of illicit substance ever used (6.3%), next are sedatives or tranquilizers such as valium (5.2%), inhalants or solvents such as rugby (4.0%), methamphetamine or shabu use (3.7%), and least used is ecstasy (2.6%). In all of these, the boys are significantly more than girls to have ever used illicit substances.

The prevalence of current illicit substance use among 12-17 years old range from 1.5% to 3.5%. This is comparable to the YAFS3 2002 study (15-19 years) which showed that prevalence of current illicit substance use is 2.0%. In YAFS2 1994 study, it was only 1.0%. The most common type of illicit substance currently used by the students are sedatives or tranquilizers such as valium without prescription (3.5%), next are inhalants or solvents such as rugby (2.9%) and ecstasy (2.9%), marijuana (2.1%) and methamphetamine or shabu (1.5%). Likewise, the boys are significantly more likely than girls to be current users of illicit drugs.

More students (4.4%) had initiated use of solvents or inhalants such as shabu when they were 13 years old or younger, than any other illicit substances. In 1997 National Youth Commissioned Social Weather Station Survey had reported an average of 17.3 years when first tried use of this illicit substances. Almost a quarter of students were offered, sold or given a free sample of the substance. Reduce access and availability of illicit substances to minors is one major target of NOH.

Dietary Behaviors

From the NOH targets for 2004, one of the health status objectives is to reduce prevalence of overweight and obesity among the population. And one of the risk reduction objectives to support this among others is to increase the percentage of individuals consuming green leafy and yellow vegetables to 100%.

The prevalence of overweight is 8.2%, with males more likely than females to be overweight. The prevalence of at risk for becoming overweight is 5.5%. There are about 1.5million Filipino youth ages 10-19 years old who are overweight and about a million are at risk of becoming overweight. There is an increasing trend of prevalence of overweight among 11-19 years as shown in the Food and Nutrition Research Institute survey (1998-2003). Overall, they have reported a prevalence of 3.5% in 2003.

Food availability is not scarce as only 7.8% went hungry most of the time or always because there was not enough food in their homes. Almost three-fourths of youth eat fruits one or more times during the day such as bananas, mangoes, papayas, etc. Eight in ten students eat vegetables one or more times per day. Only a quarter of students eat fruits and vegetables 5 times a day, the desirable frequency. Generally, there has been improvement in the nutritional status as shown in the FNRI survey (1998-2003).

Physical Activity

Physical inactivity among high school students is high as only 8% of students were physically active at least an hour for all of 7 days in a week. Nine out of ten students participated in an insufficient physical activity. Three out of ten students spent three or more hours per day sitting and watching television, playing computer games, talking with friends, or doing sitting activities during a typical day. Over half did not walk or ride a bicycle to and from the school.

Protective Factors

Only two in ten students have parents who checked to see if their homework was done most of the time or always, only three in ten students have parents or guardians who understood their problems and worries most of the time. Only three in ten students have parents or guardians who knew that they were doing with their free time most of the time or always.

HIV/ AIDS

There is high awareness on HIV or AIDS. Half of the students had been taught in any of their classes about HIV or AIDS, but it's the senior students who were more likely to have been taught in class. Less than half of the students were taught how to avoid HIV or AIDS in any of their classes during the school year, however, over half of the students believe people can protect themselves from HIV by not having sexual intercourse. Only three in ten students have ever talked about HIV or AIDS with their parents or guardians.

Violence and Unintentional Injury

Half of the students were involved in a physical fight, and younger students are more likely to have done so. One in ten was seriously injured about one or more times in the past year. The most serious injuries were due to training or playing sports or due to a fall; most significantly, over half who were seriously injured hurt themselves by accident. (In the NOH Baseline Survey in 2000, about a half don't cross roads at proper corners, less than one fifth ride vehicles properly, less than 10% use helmets for motorcyclists, about 80% play with knives, matches, climb high steep places, don't keep medicine in safe place. About one third only were careful when handling hot objects); One third were bullied on one or more occasion in the past month, with the younger students being predominantly the victim.

Hygiene

Hygienic-related behaviors of the students were rather commendable, as almost all of them practice healthy hygienic behaviors. In the NOH Baseline Survey, there are a majority of schools providing hand washing facilities, safe water supply and sanitary toilet facilities, so the support system is very remarkable.

Conclusion and Recommendations

The Global School-based Student Health Survey in the Philippines, a component of the Global School-based Student Health Surveillance System, is the first survey conducted among youth in schools nationwide and was intended to provide baseline data on levels of risky behaviors and eventually to assess trends in the coming years. The results should be adopted to set health education and health promotion goals, support curricula or program modifications, support legislation that promotes health. The Adolescent and Youth Health Program of the Department of Health and the School-Health Program of the Department of Education should consider significant results, hence, be guided in modifying strategies towards effective program interventions, reducing morbidity, mortality from chronic diseases even among youth and when they become adults sooner or later.

This GSHS Surveillance System should be maintained and be sustained to help monitor and ensure the effectiveness of those and other public health and school health programs for youth.

Appendix

PHL GSHS Questionnaire

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