

I. Introduction:

The World Health Organization and the US Centers for Disease Control and Prevention developed the *Global Youth Tobacco Survey (GYTS)* Project to track tobacco use among youth in countries across the world, using a common methodology and core questionnaire. The GYTS is school based and employs a two-stage sample design to produce representative data on smoking among students approximately aged 13-15 years. The first stage consists of a probabilistic selection of schools, and the second consists of a random selection of classes from the participating schools. All students in the selected classes are eligible for the survey (1).

WHO Resolution

Between 1970 and 1995, WHO adopted 14 resolutions on the need for both national and international tobacco control policies. Four of the 14 resolutions are relevant to the UNF-project—Global Youth Tobacco (GYTS) Survey. Member states were encouraged to implement comprehensive tobacco control strategies that contain the following:

- 1.) Measures to ensure that non-smokers receive effective protection, to which they are entitled, from involuntary exposure to tobacco smoke.
- 2.) Measures to promote abstention from the use of tobacco so as to protect children and young people from becoming addicted.
- 3.) The establishment of programmes of education and public information on tobacco and health issues, including smoking cessation programmes, with active involvement of the health professions and the media.
- 4.) Monitoring trends in smoking and other forms of tobacco use, tobacco-related diseases, and effectiveness of national smoking control action.

Public Health Impact^a

Despite widespread knowledge of the harm caused by smoking, only modest success has been achieved in global tobacco control initiatives. WHO estimates that there are currently 3.5 million deaths a year from tobacco, a figure expected to rise to about 10 million by 2030(1). By that date, 70% of those deaths will occur in developing countries.

^aTobacco use by youth: a surveillance report from the Global Youth Tobacco Survey project, WHO Bulletin, 2000, 78

Tobacco use is considered to be one of the chief preventable causes of deaths in the world. Most people begin using tobacco before the age of 18(2,3). Recent trends indicate that the smoking prevalence rate among adolescents is rising; and age of initiation is becoming younger. If these patterns continue, tobacco use will result in the deaths of 250 million children and young people alive today, many of them in developing countries (4). Therefore, adolescents and school-aged children should be a primary focus for intervention strategies. Carefully designed surveys should provide a clear picture of the risk factor for behaviors of young and school-aged children, which then can be used to set up more effective and comprehensive tobacco, control policies.

Tobacco Use in the Philippines

The latest surveys (5) in the Philippines indicate that one of every three adult Filipinos currently smoke, 33% of country's adult population. Another 13% count themselves as ex-smokers. Of the 74 million Filipinos in 1999, therefore, as much as 34 million have been directly exposed to risks for cancer and other diseases related to tobacco-use. While little less than half of all Filipino adults actually use tobacco, however, their smoking directly affects at least 60% of all households in the Philippines. Only four out of ten Philippine households are smoke-free. With an average of 5.1 members per household, there would be approximately 35 million passive smokers in the country (6).

Tobacco use in Filipino youth is alarming. About 30% of adolescents in the urban areas smoke, and of these, more than 70% started smoking between the ages 13-15 (7). On a national level, the study says that, as much as 40% of boys and 19% of girls aged 10-14 are already daily smokers. The age 15-19, 38% of both male and female Filipinos are already considered regular smokers.

The WHO expects their numbers to continue to climb. Tobacco companies are aggressively marketing cigarettes to their children-to the extent of giving them sample packs for free- hoping to make them addicted to nicotine and thus ensure a continuing market for tobacco.

BACKGROUND OF THE GLOBAL YOUTH TOBACCO SURVEY

UNF Project

The Tobacco Free Initiative (TFI) /WHO was awarded by the United Nations Foundation for International Partnerships (UNFIP) as a tobacco prevention grant

^bWhite Paper on Tobacco, Senate Committee on Health & Demography, Philippines, 1999

to initiate a joint project with UNICEF titled “Building alliances and taking action create a generation of tobacco free children and youth”. The aim of the project is to pull together the evidence, technical support, and strategic alliances necessary to positively address the negative impact of tobacco and to encourage and support children and adolescents in leading healthy and active lives free of tobacco. The project was initially focused in a small group of developing countries, one per WHO Region, and drew upon the combined technical expertise and operational resources of a number of UN agencies—in particular, WHO, UNICEF, and the World Bank. The agencies will work together with the global scientific community, government and non-government agencies, institutions and systems within countries, the media, and with young people and to show that together they can make a difference in this important public health issue.

The project was conceived as a dynamic and interactive process, whereby the activities and products of each phase have been used to inform and guide subsequent activities. The project consists of three distinct, but overlapping phases. The *first phase* focused on harnessing the evidence for action: synthesizing the existing evidence from countries, some of which may participate in subsequent phases; undertaking new areas of research to support actions; and establishing the research-based evidence for developing future actions.

The *second phase* was the activating phase. *Country Activating Groups (CAGs)*, with broad membership, were formed in each of the participating countries as the coordinating and implementing mechanism at the country level to select and develop the components of a comprehensive country-based approach to addressing tobacco use among children and young people. Opportunities to promote the exchange of experiences and issues between countries and global activities have been developed and strengthened.

WHO and UNICEF technical staff from country offices, headquarters and regional offices, and other technical partners (e.g., the World Bank and the Center for Disease Control and Prevention, USA) have played a key role in supporting the country-level work, in particular: through assistance with the identification, development and dissemination of programme support tools and resources; with guidance of specific tobacco control strategies; and with suggestions and strategies for involving young people in the project activities. In addition, WHO and UNICEF will ensure that tobacco is included as a component of existing programmes they operate within the country and any plans for agreements they develop with relevant governments.

The third phase has involved taking the project to scale: producing and dissemination resources; strengthening regional capacity to sustain activities; integrating the products and results of the project into ongoing tobacco control work at the national, regional and global levels; transferring technology and

experience between countries and regions; and strengthening cooperation and collaboration at all levels.

The overall coordination of this project has been through TFI/WHO. WHO will coordinate the harnessing the evidence for action phase of the project, in collaboration with identified research experts from a range of developing countries. UNICEF Country offices, with technical support and assistance from WHO, will coordinate the activating phase.

Seven countries were selected to participate in the activating phase (Phase 2) of this project: China, Jordan, Sri Lanka, Fiji, Venezuela, Zimbabwe, and Ukraine. UNICEF and WHO will also be supporting a group of countries in the Caribbean and Pacific regions to participate in the technical elements of the project, using their existing resources. As a first step in this phase, WHO and CDC organized a small technical meeting in Geneva on 7-9 December, 1998 to plan for the development and implementation of an initial baseline assessment of youth tobacco use in each country using a school survey instrument—the Global Youth Tobacco Survey (GYTS). The purpose of the meeting was to work with a key tobacco control expert from each country to develop a suitable instrument used for the survey. The survey questionnaire was designed to have a “core” set of questions to be used by all countries; but also to be flexible to include specific issues and individual needs of each capacity of the participating countries (i.e., optional questions). The survey is intended to enhance the capacity of countries to design, implement, and evaluate the tobacco control and prevention programmes for young people, which will be initiated at the country level. The GYTS core includes questions on: *tobacco use, knowledge and attitudes, access to tobacco products, media and advertising exposure, school curriculum, cessation and ETS*. The Philippine GYTS Questionnaire is in Appendix D.

The meeting also spent time brainstorming other settings, key players, and methods of data collection, which could be used to gather information to supplement the school, survey, for advocacy and programming purposes in Phase 2.

A training meeting for the Research Coordinators was held 7-13 March 1999 to prepare these people to undertake the fieldwork and to plan for the training of country based Survey Administrators.

Research Coordinators were brought together for additional technical training in techniques for data analysis and report writing when the data from the fieldwork became available during 1999. This meeting was held in Singapore immediately prior to the International Consultation on Tobacco and Youth in September 1999. A second analysis workshop was held in San Francisco in December 2000, involving representatives from all countries that have completed the GYTS.

UNICEF and WHO hosted a phase 2 Planning Meeting to bring together UNICEF staff, along with key tobacco control experts from each of the participating countries, and key partners from 23-29 February, 1999. Unicef handled the logistical arrangements for the meeting, which was held in New York, and WHO (Child and Adolescent Health and TFI) developed the technical programme.

The Global Youth Tobacco Survey (GYTS)

The GYTS is a school –based tobacco specific survey which focuses on adolescents age 13-15. It assesses students' attitudes, knowledge and behaviors related to tobacco use and ETS exposure, as well as youth exposure to prevention curriculum in school, community programs, and media messages aimed at preventing and reducing youth tobacco use. The GYTS provides information on where tobacco products are obtained and used, and information related to the effectiveness of enforcement measures. School surveys are useful tools in gathering data as they are relatively inexpensive and easy to administer, tend to report reliable results, and refusals are significantly lower than in household surveys. The most common research approach for this specific population has been the self-administered questionnaire. Therefore, all the above, reasonably justifies why a school-based survey has proved to be most appropriate, hence selected for the UN Project on Youth and Tobacco.

Objectives of the GYTS

The GYTS is a school-based tobacco specific survey that focuses on students' age 13-15 years. The objective of this survey is two-fold:

- 1) To document and monitor prevalence of tobacco use including: cigarette smoking, and current use of smokeless tobacco, cigars or pipes.
- 2) To better understand and assess students' attitudes, knowledge and behaviors related to tobacco use and its health impact, including: cessation, environmental tobacco smoke (ETS), media and advertising, minors' access, and school curriculum.

The GYTS will attempt to address the following issues: determine the level of tobacco use, estimate age of initiation of cigarette use, estimate levels of susceptibility to become cigarette smokers, exposure to tobacco advertising, identify key intervening variables, such as attitudes and beliefs on behavioral norms with regard to tobacco use among young people which can be used in prevention programmes, assess the extent to which major prevention programmes are reaching school-based populations and establish the subjective opinions of those populations regarding such interventions.

METHODS

Sampling

The 2000 Philippine GYTS is a cross-sectional school-based survey, which employed a two-stage cluster sample design to produce a nationally representative sample of secondary level students in Years 2nd, 3rd and 4th. The first stage sampling frame consisted of all regular secondary schools containing any of Year 2nd, 3rd, and 4th secondary levels. Schools were selected with probability proportional to school enrollment size. One hundred fifty schools were selected.

The second sampling stage consisted of systematic equal probability sampling (with a random start) of classes/ sections from each school that participated in the survey. All classes / sections in the selected schools were included in the sampling frame. All students in the selected classes/ sections were eligible to participate in the survey.

A weighting factor was applied to each student record to adjust for non-response and for the varying probabilities of selection. For the 2000 Philippine GYTS, 11, 630 of the 13, 117 sampled students completed the usable questionnaires in 135 of the 150 sampled schools. The school response rate was 90%, and the student response rate was 88.66%. The overall response rate was 80%. SUDAAN and Epi Info 6 were used to compute the confidence intervals for the estimates.

The Questionnaire

A group of experts on tobacco addiction from the first group of countries selected to undertake GYTS, and staff members of WHO/TFI and UNICEF, wrote the 57 questions of the “core” part of the GYTS, which was adapted by the Philippine GYTS.

Data Collection

Survey procedures were designed to protect the students' privacy by allowing for anonymous and voluntary procedures. The self-administered questionnaire was administered in the classroom. Students recorded their responses directly on an answer sheet that could be scanned by a computer. The questionnaire contained 57 multiple-choice questions

To undertake the Philippine GYTS, the country was divided into three groups based on the Philippine geographic, and administrative regions. Group I consists of the following regions (northern): National Capital Region, Cordillera Autonomous Region, I, II, III, IV, and V.; Group II consists of the following regions

(central): VI, VII, and VIII; Group III consists of the following regions (southern): IX, X, XI, XII, CARAGA and the Autonomous Region for Muslim Mindanao or ARMM. Each region has one survey coordinator. The survey coordinators consisted of the 16 Regional Health Office's Smoking Control Program Coordinators. The survey administrators were technical staff (medical doctors, nurses and health educators) of the regional health offices and their counterparts from the local Department of Education, Culture and Sports. The training-workshops of survey coordinators and administrators were done in February 2000 where field researchers were instructed on the standard procedures to assure comparability on data collection. Actual data collection followed right after the respective trainings and concluded in mid-March, 2000.

Analysis

For the analysis, a weighting factor was applied to each student record to adjust for non-response and the varying probabilities of selection. The programs SUDAAN and Epi Info were used to compute rates and 95% Confidence Intervals for the estimates. A weight was 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 by:

$$W = W1 * W2 * f1 * f2 * f3$$

Where,

W1= the inverse of the probability of selecting the school

W2= the inverse of the probability of selecting the classroom/section within the school

F1= a school-level non-response adjustment factor calculated by school size category (small, medium, large)

F2= a class/ section adjustment factor calculated by school

F3= a student-level non-response adjustment factor calculated by class

F4= a post stratification adjustment factor calculated by gender and year

RESULTS

Table 1. Study sample size and response rates among schools and students- Philippines GYTS 2000

Regions	No. of schools sampled	No. of schools that Participated	Response rate by school (%)	No. of students sampled	No. of students that Participated	Response rate by students (%)	Overall response Rate (%)
*Zone 1	50	49	98.00	4,401	3,977	90.37	88.56
Zone 2	50	39	78.00	3,676	3,236	88.03	68.66
Zone 3	50	47	94.00	5,040	4,417	87.64	82.38
TOTAL	150	135	90.00	13,117	11,630	88.66	79.80

*Zone 1 (Luzon): National Capital Region (NCR), Cordillera Autonomous Region (CAR), Regions I, II, III, IV, V

Zone 2 (Visayas): Regions VI, VII, VIII

Zone 3 (Mindanao): Regions IX, X, XII, XII, Autonomous Region of Muslim Mindanao (ARMM), CARAGA

Table 1 presents that for the Global Youth Tobacco Survey in the Philippines, 11,630 out of 13,117 questionnaires were completed in 135 schools that participated from 150 schools sampled. The school's response rate was 90.0%, the student's response rate was 88.7%, and the overall response rate was 80.0%.

Table 2. Background Characteristics of Respondents

Characteristics	*Zone 1 (Luzon) n= 3,977		Zone 2 (Visayas) n= 3,236		Zone 3 (Mindanao) n= 4,417	
	Male n (%)	Female n (%)	Male n (%)	Female n (%)	Male n (%)	Female n (%)
Age (Years):						
≤12	160 (10.0%)	212 (9.7%)	88 (7.6%)	101 (5.2%)	104 (6.4%)	92 (3.5%)
13	52 (3.27%)	85 (3.9%)	37 (3.2%)	59 (3.0%)	47 (2.9%)	82 (3.0%)
14	334 (21.0%)	479 (23.0%)	177 (15.3%)	388 (20.0%)	261 (16.1%)	506 (19.0%)
15	455 (28.6%)	675 (31.%)	280 (24.2%)	487 (25.%)	411 (25.4%)	729 (27.5%)
16≥	587 (36.9%)	722 (33.0%)	577 (49.7%)	912 (46.8%)	798 (49.2%)	1245(46.9%)
Year Level:						
2 nd	584 (40.0%)	728 (37.8%)	408 (37.3%)	678(37.5%)	621 (38.4%)	952 (36.1%)
3 rd	545 (37.5%)	709 (36.8%)	370 (33.8%)	638 (35.3%)	432 (26.7%)	748 (28.4%)
4 th	321 (22.2%)	487 (25.3%)	314 (28.7%)	493 (27.3%)	562 (34.8%)	937 (35.5%)

* Zone 1 (Luzon): National Capital Region (NCR), Cordillera Autonomous Region (CAR), Regions I, II, III, IV, V

Zone 2 (Visayas): Regions VI, VII, VIII

Zone 3 (Mindanao): Regions IX, X, XII, XII, Autonomous Region of Muslim Mindanao (ARMM), CARAGA

Table 2 presents the basic demographic characteristics of the Filipino secondary school students who participated in the survey by gender, year level, and age by zonal regions of the country. There was a fair representation of male and female students, and by their year level in the three zonal regions. There were no significant differences in the age distributions among the regions their ages range

from 12-18 years, with a mean and median of 14 years. There were no significant differences in ages between males and females for the regions, (zone 1: $t=1.82$, $p=0.067$; zone 2: $t=0.50$, $p=0.61$; and zone 3: $t=0.37$, $p=0.70$). About 57% of the respondents were female, and 43% male. Thirty eight per cent were in sophomore level, 32% were juniors and 30% were in their senior levels.

PREVALENCE

Table 3. Prevalence of tobacco use among secondary school students, by gender, year level, age, and zonal regions- Philippines GYTS 2000

Category	Ever smoked cigarettes, even one or two puffs	Current Use ^a			Smoked cigarettes first before age 10 years ^b
		Cigarettes	Other tobacco products	Any form of tobacco products	
Overall	42.8 (\pm 3.2)	21.6 (\pm 2.5)	13.6 (\pm 1.2)	27.1 (\pm 2.3)	12.9 (\pm 2.5)
Gender:					
Male	57.0 (\pm 4.0)	32.6 (\pm 3.6)	18.3 (\pm 1.6)	37.3 (\pm 2.9)	11.0 (\pm 2.4)
Female	32.0 (\pm 2.9)	12.9 (\pm 1.7)	9.5 (\pm 1.4)	18.4 (\pm 2.1)	15.4 (\pm 3.1)
Year Level:					
2nd	40.7 (\pm 3.6)	20.7 (\pm 3.0)	13.8 (\pm 1.5)	26.6 (\pm 2.7)	15.3 (\pm 3.2)
3rd	41.3 (\pm 4.9)	21.7 (\pm 4.2)	14.0 (\pm 2.3)	27.5 (\pm 4.1)	14.1 (\pm 4.0)
4th	48.8 (\pm 5.4)	22.5 (\pm 3.8)	12.8 (\pm 1.9)	27.2 (\pm 3.3)	10.2 (\pm 3.1)
Age (Years):					
≤ 12	42.7 (\pm 8.1)	26.7 (\pm 5.4)	22.5 (\pm 4.9)	36.5 (\pm 6.2)	29.9 (\pm 11.9)
13	44.2 (\pm 6.0)	24.7 (\pm 7.6)	17.8 (\pm 5.6)	32.2 (\pm 8.1)	21.2 (\pm 9.4)
14	37.0 (\pm 4.7)	17.2 (\pm 2.8)	10.5 (\pm 1.9)	22.5 (\pm 2.5)	15.9 (\pm 3.6)
15	39.7 (\pm 3.2)	18.1 (\pm 2.9)	10.6 (\pm 1.6)	22.7 (\pm 2.8)	12.3 (\pm 3.2)
16\geq	47.5 (\pm 4.1)	24.4 (\pm 3.0)	14.3 (\pm 1.5)	29.1 (\pm 2.8)	11.1 (\pm 2.8)
Regions:					
Zone1	43.7 (\pm 4.9)	21.9 (\pm 3.8)	12.7 (\pm 1.7)	27.0 (\pm 3.5)	10.5 (\pm 3.4)
Zone2	36.7 (\pm 4.9)	19.7 (\pm 2.9)	14.2 (\pm 2.1)	26.0 (\pm 2.9)	13.0 (\pm 2.0)
Zone3	46.2 (\pm 3.1)	22.5 (\pm 3.0)	15.8 (\pm 2.0)	28.5 (\pm 3.2)	19.8 (\pm 5.5)

^a Smoked cigarettes or used other tobacco products on ≥ 1 of the 30 days preceding the survey

^b First whole cigarette among ever smokers

^c Figures in parentheses are 95% confidence interval

Table 3 presents the prevalence of tobacco use among Filipino secondary school students. When asked if they ever tried or experimented with cigarette smoking, even one or two puffs, an estimated 4 in 10 students (42.8%) answered yes to have ever smoked cigarettes. The male students are twice more likely than female students to have ever smoked cigarettes (57.0% vs. 32.0%, respectively). Prevalence of ever smoking increases with the students' year level and age. There are more ever smokers in the Mindanao regions (46.2%), followed by those in Luzon regions (43.7%) and the Visayas regions (36.7%).

When asked on how many days did one smoke during the past 30 days (current smoking), 1 in 5 students smoked cigarettes during the past 30 days. The male students are twice more likely than female students to be current smokers (33% vs. 13%, respectively); also, prevalence of current smoking increases with the

students' year level. There are no significant differences in prevalence of current cigarette smoking across the regions of the country.

Fourteen per cent (14%) of those who currently smoke have said they have ever used any form of tobacco products other than cigarettes (i.e., chewing tobacco, snuff, dip, cigars, cigarillos, little cigars, pipe) in the past 30 days. And about 27% of those who currently smoke have used any form of tobacco products (smoked cigarettes or used other tobacco products on 1 or more days in the past 30 days). The male current smokers are twice more likely than female current smokers to have used some form of tobacco product other than cigarette and or any form of tobacco product.

Among those who have ever smoked, 13% reported to have first tried cigarette smoking before age 10 years, with female students more likely to have first tried than male students (15.4% vs. 11.0%, respectively). A greater proportion of younger students, age less than 12 years (30%) and those in lowest year level (15.3%), have reported to have first tried smoking before age 10 years; 1 in 5 ever smokers from the Mindanao regions have reported to have first tried smoking before age 10 years while it is 1 in 10 ever smokers from the Visayas and Luzon regions.

ACCESS

Table 4. Percentage of secondary school students who currently smoke cigarettes by where they usually smoke, and how they obtain their cigarettes, by gender, year level, age, and regions- Philippines GYTS 2000

Category	Usually Smokes at home	Usually smokes in school	Usually smokes at a friend's place	Bought cigarettes in a store	Bought cigarettes & were not refused because of age
Overall	18.5 (± 2.1) ^a	9.4 (± 2.1)	27.3 (± 2.7)	45.0 (± 1.4)	45.4 (± 3.8)
Gender:					
Male	14.0 (± 2.1)	10.4 (± 2.9)	26.6 (± 3.8)	16.8 (± 2.2)	45.6 (± 4.4)
Female	26.9 (± 4.6)	6.7 (± 2.7)	30.4 (± 4.3)	5.4 (± 1.0)	45.8 (± 6.2)
Year Level:					
2nd	20.7 (± 3.3)	7.7 (± 2.3)	29.1 (± 4.3)	8.9 (± 1.7)	45.5 (± 7.2)
3rd	17.6 (± 4.0)	10.9 (± 4.3)	31.1 (± 5.0)	10.8 (± 2.5)	45.8 (± 6.1)
4th	17.8 (± 3.9)	8.5 (± 3.4)	22.4 (± 4.6)	11.6 (± 2.7)	45.2 (± 8.3)
Age (Years):					
≤12	22.5 (± 7.8)	14.1 (± 5.8)	21.5 (± 7.9)	13.2 (± 2.6)	41.4 (± 8.5)
13	29.5 (± 11.0)	11.2 (± 7.0)	24.3 (± 8.1)	9.2 (± 3.1)	37.4 (± 14.2)
14	26.0 (± 5.7)	6.7 (± 3.9)	27.3 (± 6.4)	6.7 (± 1.6)	50.3 (± 5.6)
15	15.5 (± 3.6)	8.5 (± 3.2)	36.3 (± 5.5)	8.5 (± 1.6)	47.8 (± 7.5)
16≥	16.4 (± 2.8)	9.7 (± 2.8)	24.6 (± 3.7)	12.8 (± 2.1)	45.4 (± 5.2)
Regions					
Zone 1	15.4 (± 2.7)	6.6 (± 3.2)	27.0 (± 4.0)	10.9 (± 2.1)	50.4 (± 4.1)
Zone 2	21.3 (± 4.6)	11.3 (± 3.7)	26.6 (± 4.1)	9.8 (± 2.1)	37.1 (± 4.3)
Zone 3	25.8 (± 18.9)	10.2 (± 2.6)	28.5 (± 3.0)	9.3 (± 1.5)	37.0 (± 4.1)

Table 4 presents the percentage of students who currently smoke by their place of preference to smoke and where they avail of cigarettes. Students who currently smoke were asked where they usually smoked, and an estimated of 1 in 5 (18.5%) current smokers usually smoke at home, with female current smokers are twice more likely than male current smokers to be smoking at home. One in 10 (10%) of these current smokers usually smoke in school, with more male current smokers (10.4%) than female current smokers (6.7%) doing such. Three of 10 (27.3%) current smokers usually smoke at a friends' home. Friends' home are the most common place to smoke, for both sexes, year and age levels, and in all regions of the country.

When asked of how did they usually get their own cigarettes during the past 30 days, almost half of those (10.4%) who currently smoke purchase their cigarette from stores, shops or from street vendors, with male current smokers (16.8%) being three times more likely than female current smokers (5.4%) to have bought their cigarettes from a store. Almost one half (45.4%) of the current smokers were not refused the sale of cigarettes because of their age, and this is similarly presented by both gender, year and age levels, and across regions.

KNOWLEDGE AND ATTITUDES

Table 5. Percentage of secondary school students who know the dangers of tobacco, and their attitudes towards smoking, by gender, year level, age, and regions- PH-GYTS 2000

	Tobacco is harmful		Once someone starts smoking, it is difficult to quit		Safe to smoke for ½ year	
	Current smoker	Never smoker	Current smoker	Never smoker	Current smoker	Never smoker
Overall	37.6 (± 4.6) ^a	49.8 (± 4.4)	18.3 (± 2.2)	14.9 (± 1.7)	12.6 (± 2.3)	5.3 (± 0.7)
Gender:						
Male	36.5 (± 5.6)	49.4 (± 5.5)	16.9 (± 2.9)	13.4 (± 1.9)	11.9 (± 2.3)	5.6 (± 1.6)
Female	39.8 (± 4.8)	51.0 (± 4.6)	20.0 (± 3.9)	16.0 (± 2.2)	13.8 (± 4.1)	5.1 (± 1.0)
Year Level:						
2nd	37.9 (± 5.1)	46.9 (± 4.7)	15.3 (± 2.4)	14.6 (± 1.9)	13.2 (± 4.2)	5.6 (± 0.9)
3rd	36.7 (± 6.7)	54.2 (± 6.3)	20.0 (± 3.7)	15.6 (± 2.4)	14.0 (± 3.6)	5.4 (± 1.4)
4th	40.9 (± 8.6)	54.4 (± 7.6)	20.2 (± 5.4)	16.9 (± 3.8)	10.7 (± 3.5)	4.5 (± 1.4)
Age (Years):						
≤12	26.4 (± 7.3)	32.6 (± 8.1)	23.2 (± 8.4)	9.8 (± 2.3)	15.3 (± 5.4)	6.1 (± 2.1)
13	35.1 (± 9.2)	44.5 (± 8.7)	22.7 (± 10.3)	10.2 (± 4.7)	20.2 (± 8.5)	5.2 (± 3.5)
14	41.4 (± 6.3)	53.3 (± 5.4)	14.0 (± 4.6)	15.4 (± 2.2)	10.9 (± 4.9)	4.7 (± 1.7)
15	40.4 (± 6.1)	57.0 (± 5.4)	17.0 (± 4.0)	16.4 (± 2.1)	14.8 (± 5.1)	5.3 (± 1.3)
16≥	37.9 (± 6.4)	47.6 (± 5.7)	19.2 (± 4.2)	15.5 (± 3.9)	11.0 (± 2.7)	5.5 (± 1.0)
Regions:						
Zone 1	40.4 (± 6.8)	52.1 (± 6.6)	19.6 (± 3.4)	15.0 (± 2.2)	12.6 (± 3.5)	5.4 (± 1.1)
Zone 2	32.5 (± 6.8)	47.7 (± 7.2)	18.8 (± 2.9)	15.6 (± 4.9)	11.2 (± 6.9)	4.0 (± 1.2)
Zone 3	33.5 (± 4.6)	44.9 (± 6.1)	16.4 (± 2.4)	13.9 (± 1.7)	14.1 (± 1.5)	6.0 (± 1.1)

^a Figures in parentheses are 95% confidence interval

Table 5 presents the percentage of secondary school students who know the dangers of smoking and their attitudes towards the health effects of tobacco. When asked of whether they have tried or experimented with cigarette smoking and definitely think smoking cigarettes is harmful to your health, there are more never smokers (50%) who think that tobacco is harmful to one's health, than current smokers (38%) having thought so. This attitude is affirmed similarly by both sexes, in all year levels, and in all regions. Further, table 5 presents prevalence of attitudes concerning tobacco addiction and smoking cessation among secondary school students. More current smokers (18.3%) than never smokers (15%) stated that quitting smoking is difficult once someone starts smoking. Current smokers believed twice more than never smokers that it is safe to smoke for a year or two as long as one quits after that. There were no significant differences in attitudes of students towards dangers of tobacco and smoking across the regions.

ENVIRONMENTAL TOBACCO SMOKE (ETS)

Table 6. Percentage of secondary school students who are exposed to environmental Tobacco Smoke (ETS), and their attitudes towards ETS, by gender, year level, age, and regions-Phil. GYTS 2000

Category	Others smoke in their homes		Around others who smoke in other places		Definitely think smoke from others is harmful to them		Think smoking should be banned from public places	
	Current Smoker	Never Smoker	Current Smoker	Never Smoker	Current Smoker	Never Smoker	Current Smoker	Never Smoker
Overall	78.7 (± 2.5) ^a	52.4 (± 2.1)	87.2 (± 1.9)	69.0 (± 2.2)	33.2 (± 4.2)	43.5 (± 4.5)	41.6 (± 3.3)	35.6 (± 4.8)
Gender: Male	77.3 (± 3.0)	49.3 (± 2.4)	87.7 (± 2.7)	65.0 (± 3.2)	32.6 (± 5.2)	41.6 (± 5.2)	43.6 (± 4.6)	42.0 (± 6.0)
Female	81.9 (± 3.2)	54.4 (± 2.9)	86.9 (± 2.0)	71.2 (± 2.9)	34.3 (± 5.4)	45.3 (± 4.8)	38.4 (± 4.5)	33.5 (± 4.8)
Year: 2nd	77.6 (± 3.7)	49.0 (± 3.2)	86.4 (± 3.6)	65.4 (± 3.3)	33.1 (± 5.0)	39.3 (± 4.7)	36.9 (± 5.0)	32.4 (± 5.2)
3rd	80.4 (± 4.1)	54.6 (± 3.6)	86.8 (± 3.3)	70.9 (± 4.2)	29.5 (± 6.2)	47.8 (± 6.7)	41.5 (± 5.1)	39.6 (± 7.0)
4th	78.2 (± 3.8)	54.2 (± 4.1)	88.5 (± 3.2)	72.9 (± 3.9)	39.1 (± 8.3)	49.4 (± 7.2)	47.3 (± 6.4)	41.7 (± 7.1)
Age: ≤12	77.6 (± 7.1)	48.8 (± 4.5)	82.1 (± 6.9)	58.9 (± 5.5)	26.2 (± 5.7)	21.9 (± 6.6)	40.6 (± 7.2)	18.4 (± 7.4)
13	76.8 (± 9.1)	43.8 (± 8.7)	80.0 (± 10.9)	70.3 (± 9.2)	26.3 (± 8.1)	38.5 (± 8.5)	45.0 (± 10.7)	37.8 (± 9.3)
14	78.6 (± 5.6)	48.9 (± 3.2)	90.2 (± 3.9)	67.0 (± 3.4)	35.6 (± 5.9)	45.4 (± 4.7)	39.9 (± 7.2)	34.0 (± 5.9)
15	79.8 (± 3.6)	52.8 (± 3.7)	86.8 (± 3.3)	71.7 (± 3.8)	33.3 (± 6.9)	51.1 (± 6.2)	35.8 (± 5.0)	42.7 (± 6.9)
16≥	79.2 (± 3.8)	56.0 (± 3.0)	88.0 (± 2.5)	70.5 (± 3.6)	34.8 (± 6.0)	42.7 (± 5.9)	44.6 (± 4.2)	35.1 (± 5.2)
Zone 1	77.9 (± 3.7)	52.4 (± 3.0)	88.5 (± 2.7)	68.5 (± 2.8)	36.0 (± 6.5)	45.5 (± 7.0)	41.4 (± 4.9)	36.4 (± 7.5)
Zone 2	76.4 (± 4.4)	51.5 (± 4.6)	84.0 (± 4.2)	68.2 (± 6.1)	41.0 (± 6.8)	27.1 (± 6.1)	38.7 (± 5.3)	34.7 (± 6.0)
Zone 3	83.4 (± 3.7)	53.7 (± 2.5)	85.9 (± 2.4)	71.4 (± 3.1)	30.0 (± 4.5)	39.9 (± 5.7)	44.6 (± 4.1)	34.1 (± 6.8)

^a Figures in parentheses are 95% confidence interval

Table 6 presents percentage of secondary school students who are exposed to Environmental Tobacco Smoke (ETS) and their attitudes towards ETS. A number of questions were asked on students' exposure and their attitudes towards ETS. When asked whether someone had smoked in their presence in their homes in the past 7 days, there are more current smokers (80%) than never smokers (52%) who reported that they have had someone in their homes who smoke in their presence. In addition, a majority of students had been exposed to tobacco smoke in other places other than in their homes. There are more current smokers (87.2%) than never smokers (69%) who have stated that they have had someone who smoke in their presence other than in their homes in the past seven days. Significantly, over 50% of students from all regions of the country had been exposed to ETS on a daily basis. Although differences in exposure to ETS between gender, among year and age levels were marginal, however, they were significant between current smokers and never smokers. The current smokers could have been exposed to their own smoke or they associated or frequented places where they could also smoke.

When asked if smoke from other people was harmful to them, more never smokers thought so (43.5%) as compared to current smokers (33.2%). These characteristics are significantly different for never smokers among the regions, with more never smokers from Luzon regions saying that smoke from other people is harmful to others as compared to the response of never smokers from the Mindanao and Visayas regions.

Surprisingly though, not many students were in favor of banning smoking in public places, with less than half saying they were in favor; however, more current smokers were in favor of doing so (42%) than those who never smoke (35.6%), and with more male being in favor of than female smokers. There were no significant differences in this attitude across year and age levels, and regions of the country.

CESSATION

Table 7 presents percentage of students who currently smoke cigarettes but desire to stop and had attempted to stop smoking. According to studies, once a person starts smoking, it becomes difficult for one to stop. This survey therefore tried to examine among students who smoked: how many had the desire to stop smoking, how many had even tried to stop smoking and how many think they can stop if they wish to? When asked if they ever had tried to stop smoking cigarettes in the past year, about 8 of 10 of the current smokers wanted to stop; likewise, 8 of 10 think that they can stop smoking if they wish to. However, 8 of 10 current smokers also had tried to stop but had not succeeded. There were no significant differences in the characteristics across gender, year and age levels, and regions of the country.

Table 7. Percentage of secondary school students who currently smoke cigarettes and who wanted to stop and unsuccessfully tried to stop smoking, by gender, year level, age, and regions- Philippines GYTS 2000

Category	Desire to stop	Tried to stop	Able to stop smoking if they wish to
Overall	84.1 (\pm 3.0) ^a	84.0 (\pm 3.1)	85.3 (\pm 3.0)
Gender:			
Male	85.1 (\pm 3.10)	84.0 (\pm 3.6)	86.1 (\pm 3.2)
Female	83.7 (\pm 4.7)	83.1 (\pm 4.5)	84.4 (\pm 5.9)
Year Level:			
2 nd	85.5 (\pm 4.3)	85.5 (\pm 4.5)	82.4 (\pm 4.3)
3 rd	84.5 (\pm 4.8)	82.0 (\pm 4.2)	85.5 (\pm 4.7)
4 th	84.1 (\pm 5.1)	83.0 (\pm 6.2)	89.5 (\pm 3.7)
Age (Years):			
≤ 12	81.2 (\pm 8.1)	80.8 (\pm 7.2)	75.9 (\pm 10.3)
13	85.0 (\pm 14.3)	90.3 (\pm 8.9)	83.7 (\pm 12.9)
14	84.1 (\pm 5.0)	85.4 (\pm 5.3)	85.1 (\pm 7.1)
15	85.9 (\pm 4.4)	80.5 (\pm 6.2)	87.7 (\pm 4.7)
16 \geq	85.0 (\pm 4.4)	85.5 (\pm 3.8)	86.6 (\pm 4.1)
Regions:			
Zone 1	84.0 (\pm 4.3)	85.2 (\pm 4.4)	85.5 (\pm 4.3)
Zone 2	87.2 (\pm 5.3)	82.9 (\pm 5.4)	85.1 (\pm 4.5)
Zone 3	88.5 (\pm 3.4)	80.8 (\pm 4.0)	84.3 (\pm 4.7)

MEDIA AND ADVERTISING

Table 8 (p.16) presents percentage of secondary school students who were exposed to both positive and negative information on tobacco from different mediums. The role of the media in influencing behavior is well known, and this is a starting point for most programs that try to advocate for anti-smoking. Students were asked about their exposure to anti-smoking messages as well as cigarettes advertisements.

Overall, over a half (52%) of the Filipino secondary school students saw anti-smoking media messages, but also over half of the students (54%) saw brand names when watching sports events or other programs. About one third of them (29.4%) saw anti-smoking messages at sporting and other events; however, also almost one third (28%) saw ads for cigarettes at sporting events.

For those who were exposed to pro-smoking advertisement, 2 in 5 saw advertisements for cigarettes on billboards, with more never smokers (46%) than current smokers (42%) having been exposed to. An estimated 1 in 5 students, saw ads for cigarettes in newspapers and magazines, with more female never smokers (20%) than female current smokers (15%) having been exposed to these ads.

There are more current smokers (3 of 10) than never smokers (1 of 10) who have reported to have something or have an object with a cigarette brand logo on it; and among the never smokers, there are more male than female who said they have something with a cigarette logo on it.

The current smokers were three times more likely than the never smokers (30%: 12%) to have been offered “free” cigarettes by a representative of a tobacco company, and with more male than female students having been offered such. More significantly and more alarming, more students with age less than 12 years have reported to have been offered “free” cigarettes. There were no significant differences in exposure to anti and pro-smoking advertisements among the students across the regions of the country.

SCHOOL

Table 9. Percentage of secondary school students who were taught about tobacco in class during the past school year, by gender, year level, age, and regions-Philippines GYTS 2000

Category	Taught dangers of smoking in class	Discussed reasons for smoking in class	Target effects of tobacco use in class
Overall	58.6 (± 2.7) ^a	57.7 (+ 2.4)	64.1 (+ 2.5)
Gender:			
Male	56.9 (± 3.2)	54.6 (± 3.0)	61.2 (± 2.7)
Female	61.2 (± 3.2)	61.4 (± 2.6)	67.0 (± 3.0)
Year Level:			
2 nd	56.0 (± 3.6)	55.3 (± 3.2)	62.1 (± 3.1)
3 rd	58.9 (± 4.6)	58.7 (± 3.6)	65.0 (± 4.2)
4 th	62.8 (± 3.8)	61.0 (± 3.7)	67.2 (± 3.9)
Age (Years):			
≤12	49.6 (± 6.5)	46.9 (± 5.5)	50.3 (± 4.1)
13	47.1 (± 8.5)	51.0 (± 5.8)	53.4 (± 7.1)
14	58.5 (± 3.7)	57.3 (± 3.3)	64.2 (± 3.4)
15	62.0 (± 4.4)	61.0 (± 3.5)	67.2 (± 3.4)
16≥	60.0 (± 3.4)	58.9 (± 3.0)	68.1 (± 3.5)
Regions:			
Zone 1	58.5 (± 4.0)	57.6 (± 3.6)	63.4 (± 3.9)
Zone 2	58.5 (± 5.2)	57.9 (± 3.9)	66.5 (± 3.9)
Zone 3	58.9 (± 3.0)	58.1 (± 2.8)	63.9 (± 3.1)

^a Figures in parentheses are 95% confidence interval

Table 9 presents percentage of Filipino secondary school students who have reported to have been taught or have discussed dangers of tobacco, reasons why young people smoke and targeted lessons on effects of tobacco in class during the past school year. When asked whether they were taught about dangers of tobacco in class, 6 out of 10 students have reported having been taught in class about the dangers of tobacco use; likewise, 6 out of ten students also stated that they have discussed reasons for not smoking and have targeted lessons on effects of tobacco use in class in the past year.

More female (62%) than male students (57%) have reported to discuss dangers of tobacco use in class. Also, more students from higher year and age levels reported from that they have discussed dangers of tobacco use in class in the past school year. no significant differences in proportion of students from the different regions

Table 8. Percentage of secondary school students who were exposed to anti- and pro-smoking advertising, by gender, year level, age, and regions- Philippines GYTS 2000

Category	Saw Anti-Smoking Media Messages	Saw Anti-Smoking Message at Sporting and Other Events	Saw Ads For Cigarettes on Billboards		Saw Advertisements For Cigarettes in Newspaper and Magazines		Saw Brand Names When Watching Sports Events or Other Programs	Saw Ads For Cigarettes At Sporting Events	Who have Something With a Cigarettes Brand Logo On It		Offered “Free” Cigarettes by Representative of a Tobacco Company	
			Current Smoker	Never Smoker	Current Smoker	Never Smoker			Current Smoker	Never Smoker	Current Smoker	Never Smoker
Overall	52.0 (± 1.9)	29.4 (± 1.8)	41.6 (± 3.0)	46.0 (± 1.9)	19.1 (± 2.8)	20.2 (± 2.3)	51.6 (± 2.2)	27.8 (± 1.4)	25.5 (± 2.8)	13.6 (± 1.3)	29.4 (± 2.8)	11.8 (± 1.3)
Gender:												
Male	48.7 (± 2.4)	30.4 (± 2.3)	41.5 (± 4.0)	47.3 (± 2.5)	20.8 (± 3.9)	20.5 (± 2.7)	49.8 (± 2.4)	29.3 (± 2.0)	27.4 (± 3.4)	17.1 (± 2.1)	32.0 (± 3.6)	15.1 (± 2.3)
Female	55.5 (± 2.3)	28.7 (± 2.2)	43.2 (± 4.9)	45.8 (± 2.5)	14.5 (± 3.4)	19.6 (± 2.7)	53.5 (± 2.8)	26.4 (± 1.8)	21.5 (± 4.2)	11.7 (± 1.8)	23.0 (± 3.5)	10.1 (± 1.4)
Year:												
2nd	49.5 (± 3.3)	28.7 (± 3.1)	36.3 (± 5.0)	44.8 (± 3.5)	19.3 (± 3.7)	24.0 (± 3.8)	49.1 (± 3.4)	27.0 (± 2.3)	25.5 (± 3.9)	14.9 (± 1.8)	29.2 (± 4.2)	10.3 (± 1.9)
3rd	52.5 (± 3.5)	28.2 (± 1.9)	42.7 (± 7.1)	47.2 (± 3.1)	20.4 (± 5.3)	19.0 (± 3.2)	53.7 (± 3.8)	27.5 (± 2.1)	27.2 (± 4.9)	12.8 (± 2.1)	30.3 (± 5.4)	11.8 (± 2.0)
4th	55.9 (± 3.3)	31.5 (± 2.3)	47.2 (± 5.7)	48.6 (± 4.1)	17.6 (± 4.8)	15.0 (± 3.4)	54.5 (± 3.3)	29.2 (± 2.3)	24.5 (± 5.8)	11.6 (± 2.3)	27.6 (± 4.6)	12.5 (± 1.9)
Age :												
≤12	41.9 (± 4.6)	29.6 (± 5.0)	35.6 (± 8.0)	41.8 (± 5.3)	25.5 (± 5.9)	27.7 (± 7.4)	44.4 (± 5.9)	35.4 (± 6.1)	32.6 (± 7.1)	23.9 (± 6.3)	42.9 (± 8.1)	22.5 (± 5.4)
13	45.7 (± 6.7)	33.3 (± 6.4)	18.7 (± 10.4)	44.7 (± 6.8)	31.8 (± 10.6)	18.6 (± 5.4)	52.8 (± 5.2)	31.8 (± 4.9)	40.1 (± 13.1)	14.2 (± 5.4)	29.2 (± 13.5)	7.9 (± 3.5)
14	52.7 (± 3.6)	28.9 (± 3.2)	41.7 (± 8.4)	47.3 (± 4.1)	17.6 (± 5.0)	20.0 (± 3.2)	53.0 (± 3.4)	26.0 (± 2.6)	22.5 (± 5.5)	12.4 (± 2.2)	23.0 (± 5.1)	8.2 (± 1.6)
15	54.8 (± 3.0)	30.5 (± 2.5)	42.7 (± 6.6)	46.6 (± 3.1)	19.0 (± 5.1)	17.9 (± 3.2)	54.8 (± 3.5)	26.9 (± 2.1)	22.0 (± 4.5)	12.9 (± 2.3)	22.7 (± 5.3)	10.9 (± 2.2)
16≥	52.9 (± 2.6)	28.7 (± 2.3)	44.0 (± 4.4)	46.0 (± 3.2)	17.4 (± 3.0)	20.6 (± 3.6)	50.4 (± 3.0)	27.3 (± 2.1)	25.8 (± 4.2)	12.0 (± 1.6)	31.5 (± 3.8)	11.8 (± 1.4)
Regions:												
Zone 1	50.3 (± 2.7)	28.8 (± 2.7)	42.0 (± 4.3)	43.6 (± 2.3)	18.6 (± 4.2)	20.4 (± 2.9)	51.5 (± 3.3)	28.0 (± 2.0)	25.9 (± 4.1)	13.9 (± 2.0)	27.5 (± 3.9)	11.0 (± 2.1)
Zone 2	54.3 (± 4.3)	31.0 (± 3.4)	38.4 (± 5.1)	48.9 (± 5.1)	20.9 (± 4.9)	20.7 (± 6.0)	51.7 (± 4.6)	27.7 (± 2.4)	20.0 (± 4.7)	12.9 (± 1.8)	29.7 (± 4.1)	13.3 (± 1.8)
Zone 3	54.8 (± 2.8)	29.8 (± 2.1)	43.3 (± 4.6)	50.3 (± 2.3)	19.1 (± 3.1)	19.1 (± 2.7)	51.5 (± 2.3)	27.3 (± 1.9)	28.7 (± 4.8)	13.4 (± 1.9)	34.9 (± 5.5)	12.4 (± 1.7)

ISSUES:

There are positive indicators for our anti-smoking campaign in the Philippines: -

- 72% thinks cigarette smoking is harmful,
- 72% thinks cigarette smoking makes one less attractive and 85% of current smokers want to stop smoking.

However, we face greater challenges as

- only 27% of never smokers are likely to initiate smoking in the next year, -
- only 39% agree that smoking should be banned from public places and
- only 6% of those who wish to quit smoking had access to professional help.

CONCLUSIONS^d

Current cigarette smoking among young people in the Philippines is high, and use of other tobacco products is moderately high. Comparing these with the reported data in 1995, there is a 33% increase of prevalence of ever smoking in Filipino youth and a 12% increase in current smoking prevalence.

Like in most countries, Filipino boys are more likely than girls to use tobacco. Almost one-fifth of young people begin smoking before the age of 10 years. Over ¼ of never smokers are likely to start smoking this year. This is of concern, since the younger they start to smoke, the more likely they are to become addicted, or become heavy smokers, or die from tobacco-related illnesses.

Environmental Tobacco Smoke exposure is very high, over half of parents smoke. About 3 in 4 are around others who smoke in places outside their homes. Filipino youth smokers usually smoke at home but majority of them prefer to smoke in a friend's home. Only 4 in 10 think smoking is harmful to their health.

Cigarettes in the Philippines are widely available and accessible. Almost half of the Filipino youth smokers can buy their cigarettes in the stores and half of them bought their cigarettes without any prohibition of sale. There are no laws and ordinances that prohibit sale of cigarettes to minors in the country.

The majority of young people currently smoking want to stop smoking and over two-thirds or 8 in 10 smokers want to stop. There is lack of access to smoking cessation programmes among those who are already smoking.

Half of the students saw anti-smoking media message and also, over half of them saw pro-smoking media messages. The influence of advertising by the tobacco industry is pronounced and until legislation provides support for total ban

on advertisement, children and adolescents will continue to be influenced by these pro-smoking messages in the media.

A majority of young people has been taught in schools about the dangers of smoking. The present survey does not include details about the content or quality of the curriculum, the preparation of the teachers on this topic, or the number or duration of the lessons taught.

RECOMMENDATIONS^c

The passage of the Comprehensive Anti-Smoking Bill or a Law for effective tobacco control at the national policy level is neutralized by the economic use of tobacco. Tobacco is one of the main foreign currency earners in the Philippines. As in any other country, one major problem that cannot be ignored is its increased use by young people and the long-term effects to their health.

From this survey, the increased use of cigarettes and other tobacco products by young people has been shown and many recommendations especially specific intervention programs can be drawn.

1. The Philippines needs a stronger anti-smoking legislation, re-echoing the World Bank Report recommendations, there is an urgent need to increase tobacco taxes, to ban sale of tobacco products to and by minors. These are proven effective strategies in other countries.
2. The “Clean Air Act” should be enforced, and strictly prohibit smoking in public places.
3. Strengthen Information, Education and Communication campaigns on health effects of tobacco in all settings, schools, community, and workplaces. The Non-government organizations, professional and allied health organizations could contribute their share in this crusade.
4. Initiate smoking cessation program in schools and make this more accessible for everyone who wish to quit.
5. To continue monitoring tobacco use and other risk behaviors in youth and among the population.

APPENDIX A: WEIGHTING, VARIANCE ESTIMATION, & STATISTICAL TESTING

Weighting & Variance Estimation

School, classroom and students data were weighted to produce total population estimated. The weighting factor reflects the probability of selection, non-response, and post-stratification (gender and year level). Variances were estimated using the general linear variance estimators. This method of computing variances takes into account the complex nature of the design and the classroom effect. It also accounts for sampling with the probability proportional to measure size. SUDAAN was used to compute standard errors for the estimates.

Statistical Testing for Differences

Confidence Interval

A percent and its estimated standard error may be used to construct confidence intervals (C.I.) about the percent. The C.I. is expressed as a range (upper and lower) around the percent. The C.I. range contains the average value of the percent, which would result if all possible samples were produced. The 95% C.I. suggests that if 100 samples were drawn and C.I.s were calculated for each, then the average value of the percent would be contained in 95 of the 100 C.I.s.

The test of statistical significance is done by comparing the 95% C.I. for two percentages. If the C.I.s do not overlap, then the percentages are significantly different.

E.g., in the table on prevalence, 57 % males and 32 % females had ever tried smoking.

* The 95% C.I. for each percent is calculated by multiplying the standard error (SE) by 1.96, giving 4.0 and 2.9 for males and females respectively.

- Therefore the lower and upper bounds for the two percentages are
- Males 57.0% (53.0, 61.0)
- Females 32.0% (29.1, 34.9)

*Statistical difference is determined by comparing the upper bound, for the smaller % and lower bound, for the larger %.

- If the two ranges do not overlap, then the two %s are statistically (significantly) different at 95% C.I.
- If the two ranges overlap, then there is no statistical (significant) difference between the two %s, at the 95% C.I.
- In this example, the percentages 57.0% (53.0, 61.0) and 32.0% (29.1, 34.9) do not overlap. Males are significantly twice more likely than females to have ever smoked cigarettes.

APPENDIX B: DEFINITIONS and ACRONYMS

Definitions

Current smoker	Those who smoked cigarettes on 1 or more days in the past 30 days
Never smoker	A person who had never tried or experimented with cigarette smoking, even one or two puffs.
Passive smoking	The inhalation of environmental tobacco smoke
Population	A set of people or entities to which findings is to be generalized
Region	There are 16 main administrative regions in the Philippines, where one region is comprised of an average of 5 provinces
Sample	A collection of units, selected to draw conclusions about a population
Significance	The percent chance that a relationship found in the data is just due to an unlucky sample. And if we took another sample we might find nothing.
Youth	Aged between 10-24

Acronyms

Ads	Advertisement
CAG's	Country Activating Groups
C.I.	Confidence Interval
CDC	U.S. Centers for Disease Control and Prevention
ETS	Environmental Tobacco Smoke
GYTS	Global Youth Tobacco Survey
NGO	Non-Governmental Organization
TFI	Tobacco Free Initiative
UN	United Nations
UNF	United Nations Foundation
UNFIP	United Nations Foundations for International Partnerships
UNICEF	United Nations children's Fund
WHO	World Health Organization