

INTRODUCTION

Even though tobacco use is considered to be one of the chief preventable causes of death in the world, WHO estimates that there are currently 3.5 million deaths each year from tobacco. This figure is expected to rise to about 10 million by 2030. By that date 70 % of those deaths will occur in developing countries. The World Health Report 1998 (1) stated that " the majority of smokers began smoking by the age of 19; in some cases the majority of smokers had adopted the habit by 12 years of age. More boys tend to smoke than girls." Recent trends indicate that the smoking prevalence rate among adolescents is rising and the age of initiation is becoming younger. If these patterns continue, tobacco use will result in the deaths of 250 million children and young people living today, many of them in developing countries.

Despite widespread knowledge of the harm caused by smoking, only modest success has been achieved in global tobacco control initiatives. Since it is clear that children and young people are now more at risk than ever before, it therefore becomes imperative that they should be a primary focus for intervention strategies. It has been observed that the Caribbean currently lacks a mechanism for monitoring and tracking potential increases in tobacco use among our youths. The Global Youth Tobacco Survey (GYTS) has been recommended as one such mechanism.

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 United Nations Foundation project- Global Youth Tobacco Survey (GYTS). The aim of the project is "to bring 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, active, tobacco-free lives."

The target population of GYTS is youth between the ages of 13 – 15 years. The main objectives of this survey in Guyana are: to determine the level of tobacco use, to estimate age of initiation of cigarette use, to estimate levels of susceptibility to become cigarette smokers, to identify key intervening variables, such as, attitudes and beliefs on behavioural norms, with regard to tobacco use among young people and its health impact, including cessation, environmental tobacco smoke (ETS), media and advertising, minors' access, and school curriculum, and to assess the extent to which major prevention programmes are reaching school-based populations and establish the subjective opinions of those populations regarding such interventions.

STUDY DESIGN AND METHODS

One of the prerequisites for the implementation of the GYTS in Guyana was the acquisition of current (1999-2000) school enrolment data. Complete data for this academic year was not available, and the previous academic year (1998-1999) could only have been extracted from the available (raw data) questionnaires at the Statistical Section of the Ministry of Education.

The data extracted from the Ministry of Education statistical questionnaires was forwarded through PAHO/WHO (Guyana Office) to CDC Office on Smoking and Health, where the preliminary sample was drawn.

A training workshop for Research Coordinators in the Caribbean was held at the PAHO/WHO Office of Caribbean Program Coordination, Barbados, from April 10 – 12, 2000. The basic aim of the training workshop was the standardization of the research methodology. At the training workshop, with the use of the GYTS 2000 Handbook, the core questions and optional questions to be included in the final questionnaire were reviewed, item-by-item. Tasks of the Research Coordinator were identified and discussed, namely, GYTS Survey Design and Procedures, as well as the List of Sample Selection and the final sample size.

The GYTS was designed to be school-based and to focus on students aged 13-15 years. The questionnaire consisted of a 'core' component and an 'optional' component. The core questions allow for comparison between countries and regions, and the optional questions allow for specific issues pertaining to individual countries.

All the questions were multiple-choice and apart from 3 questions that asked for background information such as age, gender and class-level, the other 70 questions solicited information on the use of tobacco (prevalence, access, brand of cigarette and about other tobacco products), knowledge and attitude towards smoking, environmental tobacco smoke, cessation, media and advertising, school curriculum and community response to smoking.

During the third semester, in July 2000 to be specific, the survey was conducted.

Sampling methods

A two-stage sample design was used for the GYTS:

Stage 1: Selection of Schools

Since the target population for the GYTS is youth aged 13 – 15 years, a list of schools eligible to participate in the survey was sent to the Office for Smoking and Health/CDC where the sample selection was done. This list included students from the Secondary Department of Primary Schools, Community High Schools and Secondary School in regions 2,3,4,5,6,7 and 10. The schools were selected with a probability proportional to enrolment size. This meant that large schools were more likely to be selected than small schools. The outcome of this selection process gave Guyana 50 schools with an expected survey population of 1500, with no replacement or substitution allowed for schools that did not agree to participate.

Stage 2: Selection of Classes and Students

In each selected school, the number of classes in Forms 2,3 and 4 and their respective enrolment were listed, and from this list, classes were randomly selected (based on the random start provided by OSH/CDC on the School-Level Form). It meant, then, that in each school, depending on the number of classes listed, one or two or three of those classes were selected, and in each class selected, every student present was interviewed.

The US Office on Smoking and Health/Centre for Disease Control and Prevention did the analysis of the raw data. A weighting factor was applied to reflect the likelihood of sampling each student and to reduce bias by compensating for differing pattern of non-response. Also, a statistical analysis of correlated data was used to compute 95% confidence intervals.

Data Collection

Because GYTS is a school-based survey, cooperation of the Ministry of Health and the Ministry of Education was necessary, especially the latter since government schools were under its immediate control. And even though all the selected schools were under the Ministry of Education and permission was granted by the Head Office to execute the survey, permission and cooperation had to be obtained from the Regional Education Officers and School Heads in the various regions of the country.

The Research Coordinator was responsible for the overall management of the project, for the development of the final questionnaire, for making the initial contact with and securing participation of the schools selected, for identifying Survey Administrators and to train and assign them to schools selected. The purpose of the training was to ensure that all the Survey Administrators had the same information about GYTS and follow the same survey administration procedures. The training dealt with the purpose of GYTS, confidentiality, scheduling survey administration,

documenting school and class participation, presenting and administering the GYTS to the students, and materials needed for survey administration.

The survey procedure employed allowed for students' voluntary participation, anonymity, and privacy.

The Survey Administrators were selected mainly from the staff of the Division of Health Sciences Education. They were assigned to specific schools and were responsible for the delivery and collection of all survey documentation forms, Answer Sheets, Header Sheets, and Questionnaires.

Two forms were provided for each selected school – the School-Level Form and the Classroom Level Form. These two forms provided the necessary identification information and were the primary data management forms.

The School-Level Form contained the Coordinating Agency, the School name, the sample size, and the School ID (this was supplied by the OSH/CDC). The grades taught and the grades surveyed in the school, as well as the total number of eligible classes, were filled in by the Survey Administrator. A list of random numbers was supplied by OSH/CDC and appeared just above the Class Tracking information. The Survey Administrator was expected to fill in the Class Tracking information. This contained a grid that was used to catalogue the completion status of each selected class.

The Classroom Level Form also showed the Coordination Agency (Guyana), the School name, the sample, the School ID and the Class ID. This information was previously entered by the OSH/CDC. Only one copy of the Classroom Level Form was provided by OSH/CDC. Additional copies were provided by the Coordinating Agency and each class participating in the selected school was given one. The Survey Administrator entered the number of students who were enrolled in the classes and the number of students who actually participated in the survey. All students in the selected classes were eligible for participation.

The Answer Sheet and the Header Sheet were also provided by OSH/CDC. One Answer Sheet was given to each student. Students were not required to write their names on the Answer Sheet, or provide any other kind of identifying information. This answer sheet on which students were asked to record their responses was machine-readable. A Header Sheet was completed for each participating class in each school and showed the School ID (from the School Level Form) and the Class ID (from the Classroom Level Form).

Instructions were provided to the Survey Administrator for procedures to be followed prior to, during and after the survey in the classroom. Before the start of the survey a script of instructions for students was read.

Each of the ten Survey Administrators was assigned to five schools and each had the responsibility to collect the enrolment data of all the classes in Forms II, III, and IV in each school and transmit such information to the Research Coordinator by hand or by phone so as to confirm the selection of the correct class or classes to be interviewed. The administration of the questionnaire, documentation of the class and school participation, and the security of the Answer Sheets were the assigned responsibility of the Survey Administrators. The Research Coordinator undertook the responsibility of the final editing and package of the Answer Sheets, the Header Sheets, the Classroom-Level Forms, and the School-Level Forms. This was done simply to establish quality data management throughout the data gathering process.

RESULTS

Forty-three (43) of the 50 sampled schools participated in this survey. Out of the 1256 sampled students, 906 responded to the questionnaires. This gave an overall response rate of 62.04%. There were 334 (40.2%) male students and 484 (59.8%) female students, with 205(23.3%) in Form II, 271(36.4%) in Form III, and 363 (40.3%) in Form IV.