

GLOBAL YOUTH TOBACCO SURVEY

TRINIDAD AND TOBAGO

MINISTRY OF HEALTH

DIRECTORATE OF HEALTH POLICY, RESEARCH AND EPIDEMIOLOGY

May – June 2000

Dr. Betty-Ann Carr – Director, Health Policy, Research and Epidemiology

Mr. Leo Alleyne – Research Officer II, Health Policy, Research and Epidemiology

Dr. Diane Renaud – Senior Research and Development Officer, Health Policy and Planning

ACKNOWLEDGEMENTS

The Global Youth Tobacco Survey was conducted among students ages 13-15 years from schools which were widely spread throughout Trinidad and Tobago. It was done within the two months, which preceded the schools' annual mid-year vacation and posed a challenge logistically for those involved in its administration.

Special recognition goes to the Ministry of Education, Principals and teachers for their cooperation in facilitating activities for the smooth conduct of the Survey.

Recognition is paid to the following Ministry of Health personnel who provided invaluable support and assistance:

Dr. Rosemarie Paul,
(Former Director of Health Policy, and Planning)

Ms. Caroline Alexis-Thomas
Policy Analyst

Ms. Edith Welch
Principal Statistical Officer

Mr. Kamesh Sharma
Epidemiologist

Mr. Peter Perry
Research Officer

Sincere thanks are extended to Dr. George Legall of the Caribbean Epidemiology Centre for the advice rendered.

The assistance received from the Centers of Disease Control (CDC) Atlanta, U.S.A. in collating and analysing the data is greatly appreciated.

ABSTRACT

Within recent years, tobacco use has become a priority problem affecting the health of individuals throughout the world and sadly, children are increasingly being encouraged in one way or another to adopt a lifestyle of tobacco use.

The Global Youth Tobacco Survey was conducted among 2661 students, of which 96% fell within the target age-group 13-15 years, in 61 schools across the country. Through a self-administered questionnaire, the study sought information on the knowledge, perceptions and attitudes of this cohort on cigarette smoking, social and media influences which support it and other variables such as access and anti smoking lessons being taught at schools.

The findings revealed that 40% of those surveyed smoked cigarettes once in their lives,

with males having a greater inclination for this. Fourteen percent were current smokers with twice as many males than females. One fifth of those surveyed first smoked before age ten, and twice as many boys felt it looked more 'cool' to smoke.

Many students reported that cigarettes were easily available, had parents and close friends who smoked, and most saw tobacco advertisements in the media. The majority of smokers expressed a desire to stop smoking.

The report concludes that cigarette smoking among the surveyed population is cause for great concern, and there should be enforced legislation, continuous anti-smoking campaigns and education at all age levels to stem this problem.

INTRODUCTION

Current Situation

The World Health Organisation (WHO) estimates that about four million deaths result each year from tobacco use. This figure is expected to reach 8.4 million by 2020¹. Non-communicable chronic diseases such as diseases of the heart and lung, stroke, diabetes and hypertension are accepted as being linked to tobacco use, which has the effect of ultimately resulting in premature death. Of concern to the WHO is that the smoking percentage rate among adolescents is rising while the age of initiation is falling as children begin to smoke at younger ages.

If smoking trends continue, it is estimated that 250 million children and adolescents alive today will die from tobacco-related causes, the most in developing countries².

General Response

In response to compelling evidence of the adverse health effects of tobacco, public health officials in many industrialized countries have called for tough legal restrictions on cigarette marketing and use, as well as for education campaigns that encourage smokers to quit and that persuade young people not to begin smoking.

Legislative action, which has been taken by these countries to curtail cigarette advertising, impose new taxes on cigarettes and prohibiting smoking in public places, has generally, resulted in decreased tobacco consumption. In response to declining sales, the tobacco transnational corporations have begun focussing their attention on Third World markets, where

tobacco consumption has increased dramatically in recent years.

Another response of the tobacco industry to legislation and to the subsequent drop in tobacco sales was its shift of focus to the young. Studies show that in the developed countries, most regular adult smokers begin smoking before age 18 years³. However, as adults successfully quit smoking to improve their health, the number of smokers begins to shrink.

As a result, promoting and marketing tobacco products to young people are essential to maintaining or expanding tobacco sales. Early exposure to tobacco use, therefore, increases the chances that the experimenting young person of today will become a regular smoker as an adult and will replace adult smokers who quit.

The Effects of Tobacco Control Interventions

The history of tobacco regulations in most countries was marked by two phases. In Phase I regulations primarily sought to enable citizens to make more informed choices. They required cigarette companies to print health warnings on cigarette packages, and in some cases, in magazine and billboard advertisements.

In many countries there were also bans on television and radio advertising of tobacco products. The result was that smoking rates fell gradually and by 1985, in the United States, most of Americans were aware of the health hazards of smoking.

Yet it is precisely at this point that the industry's clever marketing techniques to recruit and retain other segments of the market came into play. The youth, especially those from the lower classes, began to take up smoking in large numbers. Tobacco companies that had been banned from television, re-channelled millions of advertising dollars into magazines, billboards and sponsored sporting events. Study after study found highly significant links between high promotional expenditure on the part of tobacco companies and adolescent smoking.

In the second phase of controls therefore activists sought laws requiring larger, more stark and more specific warning labels on cigarette packages. They urged total bans on mass media advertising and on tobacco-company sponsorship of athletic events. They demanded much higher cigarette taxes, high enough to discourage use. A complementary movement sought to control the behaviour of smokers themselves (rather than that of tobacco companies) by lobbying for laws and regulations that would prohibit smoking in public places and offices. The objective was to brand smoking as socially unacceptable behaviour by making it inconvenient to smoke and by ostracizing smokers.

Evaluation studies of the effects of tobacco control interventions on consumption have not always provided clear results. However, the evidence with respect to the effect of bans on advertising clearly shows that partial bans have shown little or no effect. A recent study of 22 high-income countries based on data from 1970 to 1992 concluded that comprehensive bans on cigarette advertising and promotion can reduce smoking, but more limited partial bans have little or no effect.⁴ For example, a study in China⁵ found that partial

restrictions on cigarette advertising in China failed to prevent a large portion of the population from seeing and understanding the advertisements (in this case foreign brands such as Marlboro and Kent). It concluded that stricter restrictions were needed as previous ones had failed to achieve their intended effects.

The Trinidad and Tobago Situation

Although tobacco use is considered to be relatively high in Trinidad and Tobago, there are insufficient data being collected on a continuous basis to confirm the extent of such use or to adequately determine the effects which tobacco use is having on the health status of the nation. Indeed, only three studies, all of which have been conducted prior to 1996, can be identified as addressing this information gap.

The first was the St. James Cardiovascular Survey⁶; a 10-year community survey that sought to identify predictive risk factors for cardiovascular events. It questioned 1343 men and 1149 women between the ages of 35 and 64 about their smoking habits.

The results showed current smokers comprised of 39.4% men of African descent; 46.1% men of East Indian descent; 39.9% men of Mixed descent and 36.7% men of European descent. Heavy smoking (20 + a day) was present in 17.1% of men of African descent, 23.9% in men of East Indian descent, and 17.2% and 26.3% for the two other groups respectively. Current smokers among women comprised less than 10% and heavy smokers less than 2% except in European women.

The second study⁷ which was conducted in 1988, surveyed 1603 secondary school students aged 14-18 years assessing their drug, alcohol and tobacco use. 34.8%

admitted to having used tobacco at some time and 10.5% had used it in the last month preceding the survey. Most of the group had tried their first cigarette between 14 and 16 years of age.

The third study⁸ was in fact a component of a National Health Needs Assessment Survey conducted in 1995. Part of this Study examined tobacco use among persons 15 years and older. The results showed a smoking percentage figure of 29.8% among males and 5.1% among females nationally. The respective figures for past smokers (i.e., those who would have quit) were 11.5% and 3.5%.

The lowest percentage was recorded in Tobago (18.9% male and 2.2% female for current smokers and 10.9% male and 1.5% female for past smokers). Highest percentage was found in the 35-44 age group (43.2%) and the lowest in the 15-24 age group (13.4%). Female smoking was consistent with this pattern. Overall, most current smokers were found in the 35-44 age group and most quitters were in the 65+ age group. Smoking increased with age and showed an inverse relation with education and income.

Among the leading causes of death and illness, for the past three decades, in Trinidad and Tobago have been cardiovascular disease, cerebrovascular disease, cancers and diabetes mellitus. A large proportion of those who suffer from diabetes mellitus also suffer from hypertension. Smoking is a known factor, which contributes to these diseases.

In spite of these statistics, sales of cigarettes have been on the increase although increases in taxes have been imposed intermittently. On average, cigarette production increased 22% per

annum between 1995 - 1999⁹. Manufacture and distribution of tobacco products are conducted mainly by one company, which occupies a monopoly position (98.5% in 1998)¹⁰ within the industry. This company has become an icon in terms of its support and sponsorship of local cultural and sporting activities and is a major contributor to the endowment fund of the University of the West Indies. Its logo has become an entrenched symbol at the community level. The company conducts a very extensive advertising campaign year round and this campaign has become known for its glamorisation of cigarette use especially among the youth population.

Current legislation related to smoking is minimal and not consistently enforced. None of this legislation controls advertising and promotions. Also there is no sustained public education or effective lobby to control tobacco use or advertising. In the context of such lax regulatory mechanisms the local tobacco manufacturing company has a free hand in advertising and promotion and has succeeded in building a very impressive corporate image as a company that supports athletic, cultural and educational activities in the country.

The Ministry of Health though, even in the absence of confirmed tobacco-related morbidity and mortality data, or data on consumption patterns, has gone ahead and publicly stated national support for a tobacco-free lifestyle. It has stated its intention also to institute measures to curb tobacco use.

The Global Youth Tobacco Survey (GYTS)

It is in this context that the baseline data provided by the Global Youth Tobacco Survey become extremely timely. This

project, sponsored by the WHO, UNICEF and the Centre for Disease Control (CDC), and initiated in 1998, has already been conducted in several countries. The GYTS is a school-based specific survey, which focuses on children age 13-15 years old.

Objectives of the GYTS

The objectives of the Study are:

- To document and monitor the percentage of tobacco use including: cigarette smoking, and current use of smokeless tobacco, cigars or pipes.
- To obtain an improved understanding of and to assess learner's attitudes, knowledge and behaviours related to tobacco use and its health impact, including: cessation, environmental tobacco smoke (ETS), media and advertising, young people's access, and school curriculum.
- To provide information to guide programming and advocacy work addressing youth tobacco use.

Coordination

Undertaking the GYTS was viewed as being quite opportune for Trinidad and Tobago since it would have provided data on youth smoking patterns that would support and augment measures, which the Ministry of Health had begun implementing to reduce the levels of tobacco use. The project was discussed with the Ministry of Education as it would have been of interest to both Ministries. Having given its approval, the Ministry of Education wrote to Principals informing them of the survey and enlisting their support for it.

Methodology

Sampling

The GYTS has a two-stage, randomised, stratified sample design. The first stage is at the level of the school and the second at the level of class. The probability of a school being selected is proportional to its enrolment size and this is based on country data on enrolment figures within age groups for all schools. The focus is on grades or forms in which most 13-15 year olds are to be found. The class or classes to be surveyed were selected based on a random selection table. Based on the total enrolment number of 13-15 years olds in Trinidad and Tobago, the sample size decided on (with a 0.05 confidence interval) was 1875. This allowed for 375 non-response due to absenteeism, reduced classes, etc. the minimum allowable sample size was 1500.

Questionnaire

The GYTS questionnaire contained 57 core questions - all of which were to be included. Countries had the option to add questions depending on their interest, up to a maximum of 99. The Trinidad and Tobago questionnaire contained 61 items. Modifications were made to 15 of the core items of the GYTS questionnaire to make them more culturally relevant to students. The questionnaire was pilot tested and further adjustments were made.

The questionnaire was self administered unless severe reading deficits were detected. Where this occurred, Survey Administrators read the questions aloud to

the class. Most of these Survey Administrators came from the Directorate of Health Policy and Planning at the Ministry of Health.

Questions had response categories which were to be shaded. Multiple responses to any question were not allowed. Participation by students was voluntary and anonymous.

Data Collection

Administering the questionnaires was done by Survey Administrators who were trained over a two-week period in preparation for undertaking the exercise. They were assigned to specific schools and were responsible for the delivery and collation of all survey documents. Students completed the questionnaires in their classrooms in the presence of the Survey Administrators.

Questionnaires were administered in a manner that minimised any disruption of the normal school schedule.

The completed questionnaires were

collected, parcelled together by class and by school and couriered to the Centres for Disease Control and Prevention, U.S.A. where the data were captured.

Analysis

Epi Info and SUDAAN, a software package for statistical analysis of correlated data, were used to compute percentage rates. The data were analysed by the Centers for Disease Control and Prevention, U.S.A.

Results

Fifty-seven (57) of the 60 schools selected in Trinidad participated in the survey. All four schools selected in Tobago participated. Overall 2363 students in Trinidad and 298 students in Tobago undertook the survey, bringing the total to 2661.

Of these 2282 in Trinidad and 280 in Tobago fell within the targeted age group (13-15 years). In Trinidad 50.9% were females and in Tobago it was 55.9%.

PERCENTAGE USE - (Table 1)

Ever Smokers

Students were asked whether they had ever smoked cigarettes even to the extent of having one or two puffs. Those who had done so [40.3%] were classified as ever smokers. Those who had never experimented with smoking cigarettes were classified as never smokers [59.7%]. Male students [46.4%] were more likely to have ever smoked cigarettes than female students [32.6%].

There were more ever smokers in Form 3 [44.3%] and Form 4 [53.1%] than Form 1 [26.1%].

The percentage of ever smokers in the age groups 15 years [48.4%] and 16 years and over [58.9%] was higher than it was in the age groups 12 years and under [26.3%] and 13 years [26.9%]. Moreover, the percentage of ever smokers was twice as great in the 16 years and over age group [58.9%] as it was in the 12 years and under age group [26.3%].

Table 1: Percentage of students who use tobacco

Category	Ever Smoked Cigarettes even one or two puffs	¹ Current Smokers			² Frequent Cigarette Smoking	First Smoked Cigarette Before Age 10	
		Cigarettes	Any Tobacco Product	Other Tobacco Products			
	%	%	%	%	%	%	
Total: Trinidad and Tobago	40.3	14.0	16.3	5.4	1.8	19.0	
Gender	Male	46.4	17.5	19.5	6.3	2.4	19.0
	Female	32.6	9.5	11.7	3.9	0.8	19.2
Class Levels	Post Primary	46.8	17.1	23.5	15.1	4.9	*
	Form 1	26.1	9.7	13.5	6.3	0.7	21.2
	Form 2	34.9	12.0	13.4	3.7	0.9	23.0
	Form 3	44.3	14.8	16.7	4.8	2.0	18.2
	Form 4	53.1	16.4	17.5	4.0	2.7	12.8
	Form 5	*	*	*	*	*	*
Age	≤12	26.3	13.5	17.4	8.3	3.4	32.2
	13	26.9	8.2	11.8	5.8	0.2	19.3
	14	39.8	12.7	13.8	3.2	1.1	23.2
	15	48.4	15.4	17.7	5.69	1.32	15.1
	16+	58.9	23.6	24.9	7.0	5.7	15.6
* n less than 35 cases in the denominator		1. Smoked cigarettes on ≥1 of the 30 days preceding the survey 2. Smoked cigarettes on ≥ 20 of the 30 days preceding the survey					

Current Smokers

Students who smoked cigarettes on one or more occasions within the thirty days that immediately preceded the survey were classified as current smokers. [14.0%] of students were considered to be current smokers. More male students [17.8%] than female students [9.5%] were

found to be current smokers. There was a progressive increase in the use of cigarettes by current smokers from Form 1 [9.7%] to Form 4 [16.4%]. Highest percentage of current cigarette use at the class level was among students in the post primary class [17.1%].

The percentage of current smokers in the age group 16 years and over [23.6%] was

higher than those in the 13-year age group [8.2%] and 14-year age group [12.7%]. Indeed, there were almost three times as many current smokers in the 16 years and over age group [23.6%] than in the 13-year age group [8.2%].

Other Tobacco Products

[5.4%] current smokers used tobacco products other than cigarettes. Post Primary current smokers [15.1%] were more inclined to have used other tobacco products than were current smokers in Form 1, [6.3%], Form 2 [3.7%] and Form 4 [4.0%]. Current smokers at the Post Primary level were also approximately three times more likely than those in Form 4 [4.0%] and four times more likely than those in Form 2 [3.7%] to have used tobacco products other than cigarettes.

Any Tobacco Product

The percentage of current smokers who used any Tobacco product (i.e. including cigarette) was [16.3%]. Male current smokers [19.5%] were greater users of any tobacco products than were female current smokers [11.7%]. Current smokers in the age groups 15 years [17.7%] and 16 years

and over [24.9%] were more likely to have used any tobacco product than those in the 13-year old group [11.8%].

Frequent Cigarette Smokers

Students who had smoked cigarettes on 20 or more of the 30 days immediately preceding the survey were classified as frequent smokers. Overall percentage was found to be [1.8%] for all of Trinidad and Tobago. At the class level, the highest percentage of frequent smokers was found in the Post Primary Class [4.9%]. The age group 16 years and over had the highest percentage of frequent smokers [5.7%]; an amount that was higher than that of frequent smokers in the 13-year [0.2%] and 14-year [1.1%] old age groups.

First Smoked Cigarettes before Age 10

[19.0%] of ever smokers would have taken their first puff or two before the age of ten years. The percentage between males [19.0%] and females [19.2%] was almost equal. The highest percentage of students who initiated smoking at or under age 10, was among students in Form 2 [23.0%].

KNOWLEDGE AND ATTITUDE - (Table 2)

In response to the question whether boys who smoke had more friends, [32.2%] of the students surveyed were of the view that boys who smoke had more friends. There was no major difference between current smokers

[37.7%] and never smokers [31.2%] on this. However, female current smokers [43.1%] were more inclined to this view than were male current smokers [34.3%].

Table 2: Knowledge and Attitude

Category	Think boys who smoke have more friends		Think girls who smoke have more friends		Think smoking makes boys look 'more cool'		Think smoking makes girls look 'more cool'	
	Never Smokers	¹ Current Smokers	Never Smokers	Current Smokers	Never Smokers	Current Smokers	Never Smokers	Current Smokers
	%	%	%	%	%	%	%	%
Total: Trinidad and Tobago	32.2		17.8		13.8		8.2	
	31.2	37.7	17.6	20.9	10.9	23.6	6.5	16.7
Gender:								
Male	28.5	34.3	16.1	19.8	12.1	26.3	7.3	16.4
Female	33.2	43.1	18.2	26.5	9.4	22.6	5.5	17.3
Class Levels Post Primary								
Form 1	26.1	35.6	16.6	22.1	11.4	21.0	8.4	17.6
Form 2	36.6	43.4	20.6	25.7	12.8	32.9	7.5	16.5
Form 3	29.7	36.7	13.0	21.0	10.4	20.0	4.6	16.6
Form 4	30.8	35.4	17.1	17.0	5.4	22.1	2.9	11.3
Form 5	*	*	*	*	*	*	*	*
Age:								
≤12	25.2	*	14.7	*	11.3	*	9.0	*
13	30.4	31.4	18.2	27.2	10.8	24.6	6.2	20.6
14	34.2	35.9	19.3	17.7	14.0	24.2	7.8	10.6
15	29.8	39.6	16.8	24.4	7.6	22.0	4.2	16.0
16+	33.3	37.5	14.1	17.7	6.9	23.4	3.5	22.0
* n less than 35 cases in the denominator			1. Smoked cigarettes on ≥ 1 of the 30 days preceding the survey					

With respect to whether girls who smoked had more friends, [17.8%] of the students affirmed that girls who smoke had more friends. Again, female current smokers [26.5%] were more of this view than male current smokers [19.8%].

Responding to the question as to whether smoking made boys or girls look 'more cool',

more students [13.8%] were of the view that boys who smoke look 'more cool' than girls who smoke [8.2%]. That boys look 'more cool' was the choice of over twice as many male current smokers [26.3%] and female current smokers [22.5%] as compared to male never smokers [12.1%] and female never smokers [9.4%].

Over three times as many female current smokers [17.3%] compared to female never smokers [5.4%] thought girls who smoke look 'more cool' than girls who did not smoke. At the class level, the percentage of current smokers [32.8%] in Form 2 who thought boys

look 'more cool' was higher than never smokers [12.8%]. The situation in Form 4 was almost similar with more current smokers [22.1%] than never smokers [5.4%] holding this view.

ACCESS AND AVAILABILITY- (Table 3)

[31.9%] of the students surveyed indicated that they bought their cigarettes at a shop or from a street vendor. More male students [34.9%] bought their cigarettes this way compared to female students [22.7%].

Approximately three-quarters of current smokers [72.9%] who bought cigarettes at a shop were not refused because of their age. More female current smokers [81.8%] than male current smokers [67.1%] have been sold cigarettes in spite of their age. Moreover, eight in ten 14-year old current smokers [80.0%], seven in ten 15-year old [74.0%] and 16-year and over [70.7%] current smokers have not been refused the purchase of cigarettes because of their age.

[6.4%] of current smokers obtained cigarettes from a friend. More male current smokers [8.3%] than female current smokers [4.2%] obtained cigarettes this way. Percentage of students who have been offered a free cigarette by a tobacco representative was [11.1%].

[33.6%] of current smokers usually smoke at home while [25.3%] of them smoke at school. More female current smokers [40.6%] compared to male current smokers [31.5%] smoke at home whereas more male current smokers [30.3%] compared to female current smokers [19.4%] smoke at school.

SOCIAL INFLUENCE - (Table 4)

It was found that [37.8%] of the parents of students in the survey smoke. More parents of current smokers [52.3%] were smokers than were parents of never smokers [34.2%]. The percentage of smoking was also higher among parents of female current smokers [55.5%]

than male current smokers [49.0%]. The percentage was also higher among parents of male current smokers [49.0%] and female current smokers [55.5%] than it was among parents of male never

Table 3: Access and Availability

Category	³ Students who bought cigarettes at Shop or from Street Vendor	¹ Current Smokers				Percentage of Students offered a free cigarette by a Tobacco Rep.	
		who bought cigarettes at Shop and were not refused because of age	who usually smoke at home	who smoke cigarettes at school	Got cigarettes from a Friend		
	%	%	%	%	%	%	
Total: Trinidad and Tobago	31.9	72.9	33.7	25.3	6.4	11.1	
Gender	Male	34.9	67.1	31.5	30.3	8.3	12.7
	Female	22.7	81.8	40.6	19.4	4.2	8.9
Class Levels	Post Primary	*	*	*	*	*	*
	Form 1	21.7	*	*	19.3	*	10.6
	Form 2	35.5	73.7	31.3	24.3	*	12.6
	Form 3	34.2	81.2	31.4	20.0	7.1	9.3
	Form 4	26.3	*	*	38.3	*	*
	Form 5	*	*	*	*	*	*
Age	≤12	*	*	*	*	*	*
	13	24.6	*	40.0		*	8.4
	14	33.1	80.0	32.2		5.9	10.4
	15	32.3	74.0	30.8		7.4	12.5
	16+	32.7	70.7	36.5		*	13.4
* n less than 35 cases in the denominator		1. Smoked cigarettes on ≥ 1 of the 30 days preceding the survey 3. Bought cigarette during the past 30 days					

smokers [30.4%] and female never smokers [36.8%]. In Forms 1-3, the percentage of smoking among parents of current smokers was greater than it was among parents of never smokers. Smoking among parents of

13-year old current smokers [55.6%] and 14 year old current smokers [55.0%] was higher than it was among parents of 13-year old never smokers [34.4%] and 14-year old never smokers [33.3%].

Table 4: Social Influence

Category	Parents Smoke		Other Adults in Household Smoke		Close Friends Smoke		Percentage of students who have seen Actors smoking in movies and on TV and Videos	
	Never Smokers	¹ Current Smokers	Never Smokers	Current Smokers	Never Smokers	Current Smokers	A Lot	Sometimes
	%	%	%	%	%	%	%	%
Total: Trinidad and Tobago	37.8		25.5		43.2		95.9	
	34.2	52.3	18.9	40.7	35.5	87.9	56.6	39.3
Gender:								
Male	30.4	49.0	18.0	39.1	42.9	92.0	56.7	37.8
Female	36.8	55.5	19.8	45.1	29.3	78.8	56.8	40.6
Class Levels Post Primary								
Form 1	26.2	*	22.1	*	46.2	*	36.6	55.4
Form 2	32.4	52.8	19.5	50.0	22.8	76.8	50.9	44.2
Form 3	34.0	51.9	19.6	45.2	36.7	90.5	58.4	38.4
Form 4	31.8	52.6	16.5	37.3	43.3	88.0	58.8	38.4
Form 5	41.8	43.3	18.7	33.4	43.5	92.9	62.0	33.8
Form 5	*	*	*	*	*	*	*	*
Age								
≤12	24.4	*	16.3	*	21.1	*	48.6	44.8
13	34.4	55.6	17.9	48.5	26.3	77.1	54.5	41.1
14	33.3	55.0	19.0	40.6	38.2	88.9	55.2	41.3
15	40.9	47.6	21.6	40.0	44.4	89.8	64.5	32.9
16+	32.8	54.5	19.0	30.5	52.8	93.2	56.2	38.6
* . n < 35 cases in the denominator † . 95% Confidence Interval			1. Smoked cigarettes on ≥ 1 of the 30 days preceding the survey					

[25.5%] of students surveyed live in households where adults other than parents smoke. There was a higher percentage of smoking in households to which current smokers belonged [40.7%] than those to which never smokers belonged [18.9%]. Adult smoking in households was greater in households to which female current smokers

belonged than it was in households to which female never smokers belonged.

[43.2%] of students had close friends who smoke. More current smokers [87.9%] than never smokers [35.5%] had close friends who smoke. Approximately 9 in 10 male and 8 in 10 female current smokers had

close friends who smoke. In each of the other categories surveyed (class and age group), more current smokers compared to never smokers had close friends who smoke.

[95.9%] of students had seen images of

actors smoking in movies, on television and in Videos. More students [56.6%] had seen actors smoking on these media a lot as compared to those who had seen them smoking occasionally [39.3%].

MEDIA AND ADVERTISING - (Table 5)

With regard to media messages and advertising, [80.3%] of the students surveyed said that they had seen pro-tobacco messages in newspapers and magazines within the 30 days immediately preceding the survey. An almost equal percentage of current smokers [84.7%] and never smokers [80.6%] had seen these messages. Similarly, in each of the categories surveyed, (gender, class level and age group), never smokers and current smokers had been exposed almost equally to these messages.

In terms of the advertisement of cigarette brand names, [89.0%] of students said that they had seen cigarette brand names on TV, within the past 30 days, while watching sports and other programs. The percentage of never smokers and current smokers showed

no major difference in each of the categories surveyed.

Regarding ownership of objects with a cigarette brand logo on them [19.4%] of the students said they owned such an object. Current smokers [30.9%] were more inclined to have owned an object with a brand logo on it than never smokers [15.3%]. Indeed, female current smokers [40%] were more likely to own such an object than male current smokers [23.4%].

More than three-quarters [76.9%] of the students surveyed had seen anti-smoking media messages. More Form 1 students [83.7%] had seen anti-smoking messages than students in the Post Primary class [66.8%].

ENVIRONMENTAL TOBACCO SMOKE - (Table 6)

[38.0%] of students were exposed to smoke from others in their homes while [67.6%] were exposed to smoke from others in public places. Current smokers were more exposed

to smoke from others in their homes [57.8%] and at public places [84.0%] than were never smokers [29.8%] at home and [61.5%] in public places.

Table 5: Media and Advertising

Category		⁴ Saw anti-smoking media messages	⁵ Saw pro-tobacco messages in Newspapers and Magazines		⁶ Saw cigarette brand names on TV while watching sports and other programs		Had object with cigarette brand logo on it	
			Never Smokers	¹ Current Smokers	Never Smokers	Current Smokers	Never Smokers	Current Smokers
		%	%	%	%	%	%	%
Total: Trinidad and Tobago		76.9	80.3		89.0		19.4	
			80.6	84.7	92.6	89.9	15.3	30.9
Gender	Male	77.3	78.9	81.1	91.6	88.6	18.0	23.4
	Female	76.9	82.1	89.5	93.2	93.2	13.1	40.0
Class Levels	Post Primary	66.8	66.8	*	89.0	*	23.4	*
	Form 1	83.7	81.1	83.5	93.4	88.3	13.5	29.5
	Form 2	77.3	81.7	79.2	93.5	92.4	17.4	28.4
	Form 3	74.8	78.9	82.3	89.9	90.8	17.8	24.9
	Form 4	72.7	82.6	92.9	93.8	87.4	11.0	33.9
	Form 5	*	*	*	*	*	*	*
Age	≤12	81.0	80.1	*	95.8	*	17.1	*
	13	80.4	82.7	78.3	92.9	95.0	15.3	31.8
	14	77.3	78.5	80.8	90.8	90.6	15.2	24.3
	15	75.9	80.0	83.9	92.9	90.9	17.6	29.5
	16+	70.2	80.9	89.3	94.1	85.9	10.0	33.8
* n less than 35 cases in the denominator			<ol style="list-style-type: none"> 1. Smoked cigarettes on ≥ 1 of the 30 days preceding the survey 4. Saw anti smoking media messages during the 30 days which preceded the survey 5. Saw pro-tobacco messages during the 30 days which preceded the survey 6. Saw cigarette brand names during the 30 days which preceded the survey 					

Exposure to smoke from others was greater among current smokers than never smokers in all the other categories surveyed. With regard to their health [68.7%] of students thought that

smoke from others was definitely harmful to them. Never Smokers [92.9%] were more assured about this than were current

Table 6: Environmental Tobacco Smoke

Category	'Exposed to smoke from others in their home		'Exposed to smoke from others in public places		Definitely think smoke from others is harmful to them		Percentage who think smoking should be banned in public places	
	Never Smokers	¹ Current Smokers	Never Smokers	Current Smokers	Never Smokers	Current Smokers	Never Smokers	Current Smokers
	%	%	%	%	%	%	%	%
Total: Trinidad and Tobago	38.0		67.6		68.7		83.9	
	29.8	57.8	61.5	84.0	92.9	78.5	90.1	64.3
Gender:								
Male	28.7	59.4	61.5	86.3	92.6	78.1	88.1	61.3
Female	30.6	55.5	62.2	78.9	93.4	81.7	92.0	71.1
Class Levels Post Primary								
Form 1	26.5	64.4	57.2	87.0	91.2	71.4	89.1	66.9
Form 2	30.9	60.4	63.4	84.4	92.8	78.8	91.2	66.5
Form 3	27.7	54.6	62.8	83.3	93.6	79.4	90.8	61.0
Form 4	36.2	52.9	65.1	86.3	95.5	91.0	92.5	69.9
Form 5	*	*	*	*	*	*	*	*
Age								
≤12	26.1	*	50.1	*	90.2	*	87.6	*
13	27.2	65.8	62.6	90.2	94.0	75.9	92.4	68.9
14	30.8	51.1	59.8	79.7	92.9	82.6	88.3	63.3
15	33.3	55.4	68.1	90.3	92.0	77.5	91.4	59.5
16+	32.0	62.2	64.8	81.7	93.6	79.2	89.2	70.3
* . n less than 35 cases in the denominator			1. Smoked cigarettes on ≥ 1 of the 30 days preceding the survey 7. Exposed to cigarette smoke within 7 days of the survey					

smokers [78.5%]. In terms of gender, there were more male never smokers [92.6%] than male current smokers [78.1%] of this view. The percentage of students who thought that

smoking should be banned in public places was [83.9%]. In all the categories surveyed, never smokers were more inclined to be of this view than were current smokers.

Table 7: Intention to smoke/Desire to stop

Category	Never Smokers				Current Smokers ¹			Students who stopped smoking to improve health
	Susceptible to Initiating Smoking	Will probably smoke if offered a cigarette by a friend	Will definitely smoke cigarettes 5 years from now	Think smoking difficult to stop once started	Desire to stop smoking	Tried to stop smoking in the past year	Have not received help/advice to stop smoking	
	%	%	%	%	%	%	%	%
Total: Trinidad and Tobago	12.4	3.0	0.1	35.3	69.5	76.6	38.2	59.9
Gender:								
Male	13.5	2.8	0.3	34.4	74.2	81.3	31.0	63.7
Female	11.8	3.3	0.0	36.4	66.6	69.7	52.4	53.6
Class Levels								
Post Primary	20.5	1.1	0.0	36.5	*	*	*	*
Form 1	6.9	2.1	0.0	36.0	62.9	*	30.7	68.3
Form 2	13.7	4.1	0.5	35.7	79.3	73.4	38.3	67.1
Form 3	17.2	3.8	0.0	31.9	70.9	72.7	41.6	54.9
Form 4	12.2	1.8	0.0	37.0	*	*	40.9	51.6
Form 5	*	*	*	*	*	*	*	*
Age:								
≤12	5.5	1.8	0.0	35.8	*	*	*	63.8
13	10.1	3.5	0.2	37.9	*	*	32.7	62.6
14	15.9	3.9	0.2	34.3	73.7	64.5	40.0	61.5
15	15.0	2.4	0.0	35.0	65.7	86.8	36.6	58.4
16+	12.1	1.3	0.0	30.4	*	84.5	41.6	57.4
*. n less than 35 cases in the denominator				1. Smoked cigarettes on ≥ 1 of the 30 days preceding the survey				

INTENTION TO SMOKE/DESIRE TO STOP - (Table 7)

[12.4%] of students who never had even one puff of cigarettes were found to be susceptible to initiating smoking. There was no major difference between male never smokers [13.5%] and female never smokers [11.8%].

The highest percentage of never smokers susceptible to smoking was among the Post Primary Class [20.5%]. Never smokers in the 14-year old [15.9%] and 15-year old [15%] age groups were more

susceptible to initiating smoking than those in the 12-year and under age group [5.5%].

Never smokers showed low desire to want to initiate smoking if offered a cigarette by a friend [3.0%]. They expressed an even lower desire [0.1%] when asked whether they will definitely initiate smoking within five years. Indeed, [35.3%] of never smokers thought that smoking was difficult to stop once started.

Over two-thirds of current smokers [69.5%] expressed a desire to stop smoking whereas more than three-quarters [76.6%] had tried to stop smoking in the past year. [38.2%] of current smokers have received help or advice to stop smoking. More female current smokers [52.4%] than male current smokers [31.0%] have received such help or advice. Of the students who stopped smoking, [59.9%] did this to improve their health.

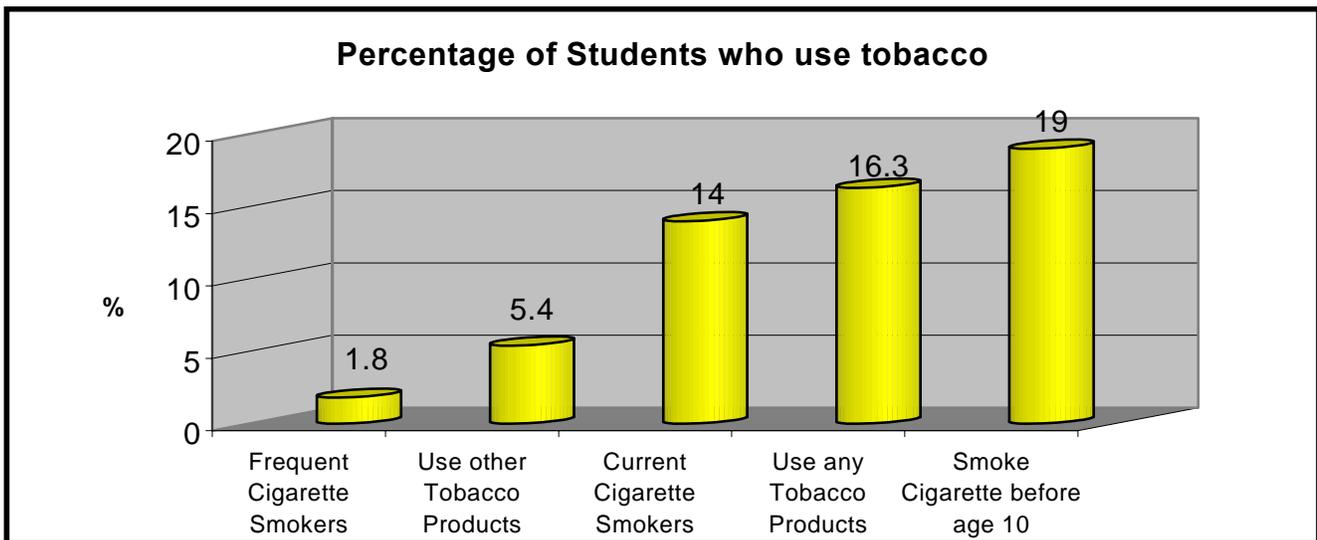
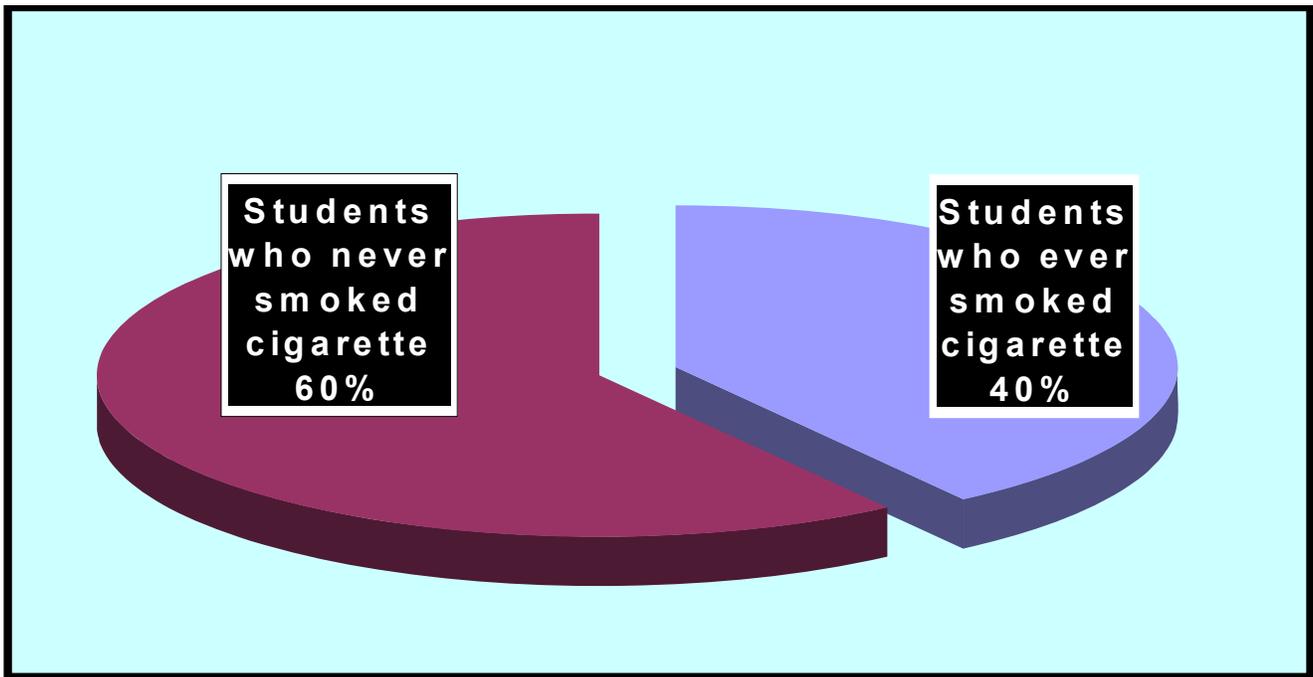
SCHOOL CURRICULUM **(Table 8)**

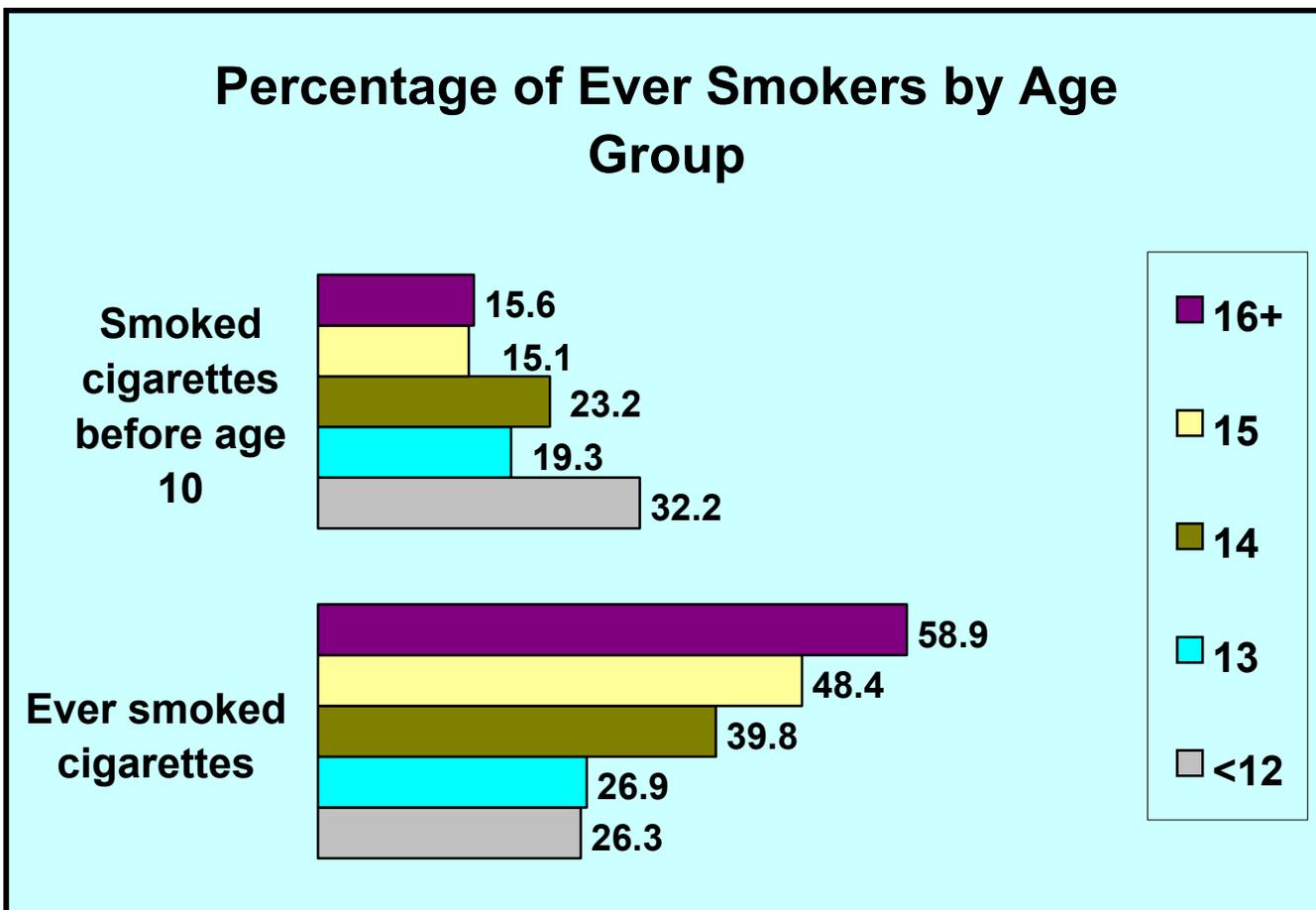
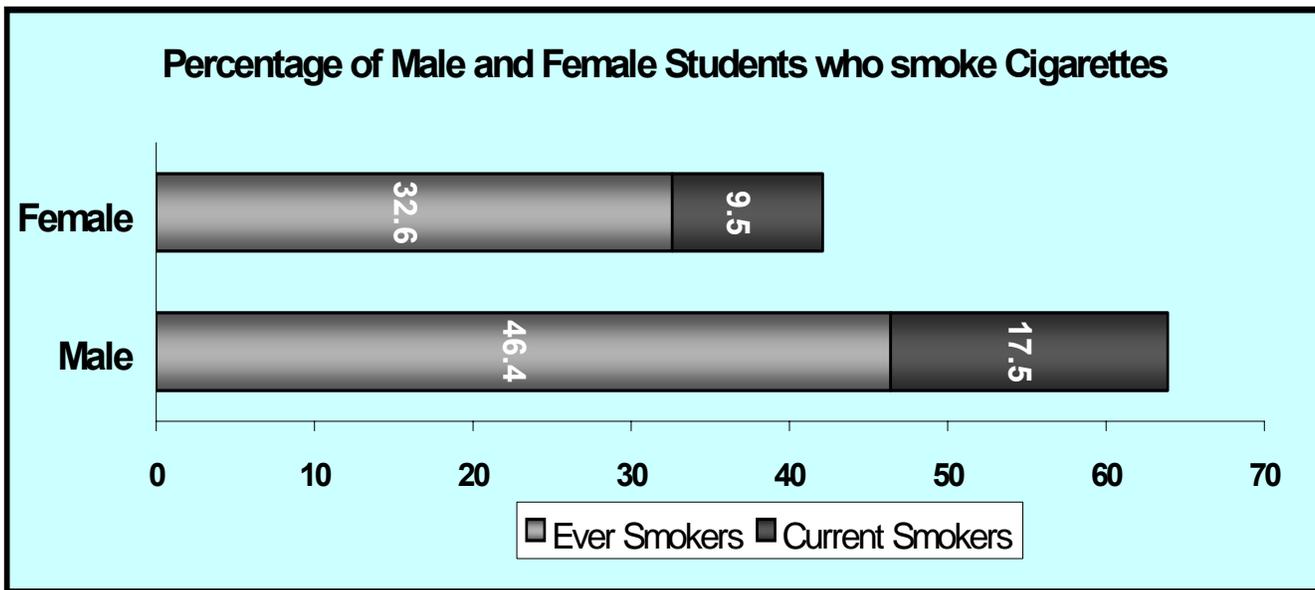
With respect to the school curriculum for the year, [43.9%] of the students indicated that they were taught the dangers of smoking in class, [40.2%] were taught about the effects of smoking while fewer students [31.1%] discussed the reasons why people their age smoke. With respect to the existing school

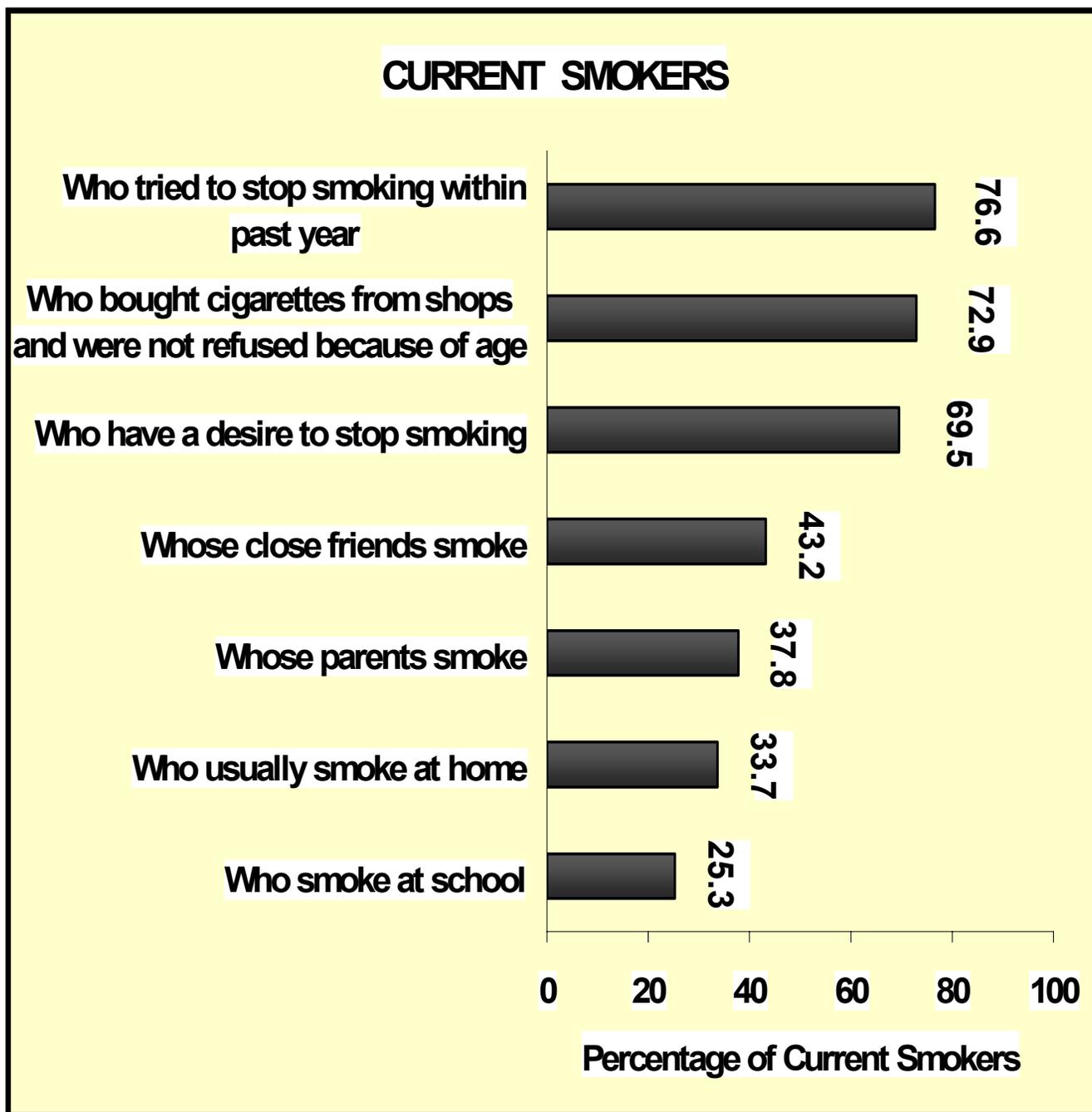
term only [15.7%] of the students discussed smoking and health as part of a lesson.

Category	During this School Year			Discussed smoking and health as part of a lesson this term	
	Taught dangers of smoking in class	Discussed reasons why people their age smoke	Taught about the effects of smoking		
	%	%	%	%	
Total: Trinidad and Tobago	43.9	31.1	40.2	15.7	
Gender	Male	42.6	29.3	39.5	17.7
	Female	44.8	32.7	41.1	13.2
Class Levels	Post Primary	37.6	29.1	40.6	*
	Form 1	39.8	25.2	34.0	13.5
	Form 2	50.7	29.9	47.4	21.3
	Form 3	42.9	35.1	41.4	13.9
	Form 4	41.0	34.0	36.5	*
	Form 5	*	*	*	*
Age	≤12	44.8	28.3	33.0	*
	13	43.8	28.6	40.8	17.3
	14	43.9	30.0	41.8	16.5
	15	45.2	34.3	42.3	15.2
	16+	42.7	35.1	38.0	14.5
* . n less than 35 cases in the denominator					

TRINIDAD AND TOBAGO - MAIN HIGHLIGHTS







DISCUSSION

The survey solicited the views of 2661 students 96% of whom fell between the ages 13-15 years old throughout Trinidad and Tobago concerning their perceptions on and use of tobacco products. The questionnaire included a question on alcohol use but the responses to this were not included in the analysis, which sought to concentrate primarily on responses directly related to tobacco use. Responses from students in Form V were ignored because they were fewer than 35 in each instance and were considered to be too few to be meaningful to the Study.

Ever smokers (students who would have smoked cigarettes at least once in their lives) constituted 40% of the sample. This is 5.2% higher than the level of usage that was found in the 1988 school-based study for students 14-18 years of age conducted by Singh H., Maharaj HD, and Shipp M.⁷

Male students were more inclined to have ever smoked cigarettes than were female students. This reflects a pattern of smoking consistent with previous studies on smoking undertaken locally^{6, 7, 8}. The urge to experiment increased progressively as students moved from Form I through to Form IV and as they advanced in age. Indeed, the percentage of smoking among students 16 years and older was found to be higher than it was among students in the categories 14 years and younger.

This progressive pattern in the use of cigarettes by ever smokers was also similar among current smokers (i.e. students who would have smoked cigarettes on one or more occasions within the 30 days preceding the survey). The usage level of cigarette smoking among current smokers was 14%, which was higher than the 10.5% found among older students 14-18 years who were classified as current smokers in the 1988 Study⁷. It was also

marginally higher than the 13.4% found among the age group 15-24 years in the Health Needs Assessment Study⁸ conducted in 1995. Percentage of female current smokers (9.5%) was higher than the national percentage of 5.1%, which was found in the health Needs Assessment Survey and it reflects the international trend of increased female smoking especially among young women¹¹.

The progressive pattern of cigarette usage was also evident among frequent smokers (students who smoked 20 or more cigarettes within the 30 days preceding the survey). This pattern was also almost similar among current smokers who use tobacco products other than cigarettes, as well as, those who use any tobacco products including cigarettes.

Of concern is that the percentage in use among current smokers of any tobacco product is greater than those who smoke cigarettes only. This may be an indication that students may be willing to use alternative tobacco products on occasions they are unable to access cigarettes. Male current smokers are more likely to smoke and to use any tobacco product than female current smokers. The percentage of smoking among frequent cigarette smokers is quite low when compared to current smokers and ever smokers.

It was found that the usage of tobacco by students at the Post Primary level was unusually high. Post primary students represent that segment of students who would not have passed the qualifying examination for automatic promotion from primary school to secondary school. Approximately 73% of this segment fell within the age group 12 – 14 years. Yet, the percentage of post primary current

smokers was greater than that of students in the 15-year old age group. It was greater than it was among students in Forms 1 to 4 also. The percentage of frequent smokers as well as current smokers of cigarettes and users of any and other tobacco products in the Post Primary classes was greater than it was among students in Forms 1 – 4. Moreover, it was found that students in the Post Primary classes were more susceptible to initiating smoking than students in all the other classes.

The percentage of frequent smokers and users of tobacco products other than cigarettes in the age group twelve years and younger, was greater than it was in the age group 13 – 15 years. This suggests a pattern of more chronic smoking and tobacco use among younger, mostly male, students.

With respect to the age of initiation, almost one-fifth of the students smoked cigarette before the age of 10 years with males and females having done so in equal proportions. This is of concern as it points to the potential for a major increase in smoking among females. The concern assumes greater importance when it is considered that more pro-tobacco messages are seen by female students than male students and that more female students (40%) owned objects with cigarette brand logos on them than male students (23.4%).

Of greater concern is that the percentage among students who first smoked cigarettes before age 10 has doubled in approximately 4 years from 15.6% among students 16 years and older to 32.2% among those 12 years and younger. Indeed, unlike the progressive trend that has been observed wherein smoking among students increased with age and class promotion, the reverse was seen wherein the percentage among students who initiate smoking before age 10 generally tended to

increase at the lower class levels and the lower age groups.

The data suggest that the age of initiation for smoking has decreased since the 1988 survey⁷, which showed that most of the students surveyed had their first puff of cigarettes between the ages 14 and 16 years of age. In the GYTS, it was found that most students first used cigarettes between the ages 12-13 years.

Encouragingly, the good news is that the perception held by students of their peers who smoke is not very favourable. 91.8% of students thought girls who smoke did not 'cut it' as being cool while 82.2% thought the same of boys. Boys who smoke, however, do seem to have some appeal since at least 1 in every 3 students felt such boys have more friends. Current smokers were more of this view than never smokers. Of concern, however, is that a greater percentage of female current smokers than male current smokers think boys as well as girls who smoke have more friends.

The results also validated the findings of Biglan A, Duncan TE, Ary DV, et al in their survey¹² which found that students with parents and significant others who smoke are more likely to become smokers themselves. In this regard, it was found that compared to never smokers a greater percentage of current smokers had parents who smoke. In addition, it was seen that a higher percentage of female current smokers compared to male current smokers live in households where parents and other adults smoke. It is, therefore, not surprising to have found that twice as many female current smokers are able to smoke at home as compared to smoking at school where male smoking is more prevalent. In terms of both genders, it was

found that more smoking is done at home than at school.

Other influences such as peer group appeal appear to play an important part in promoting and/or reinforcing the habit of cigarette smoking¹². Among current smokers almost all (both male and female), had high percentages of close friends who smoke and this may be playing an important part in their continuing to smoke. On the other hand, never smokers had fewer close friends who smoke. Responding to the question whether they would probably smoke if offered a cigarette by a friend, 97% of never smokers said that they would not.

Smoking by actors in movies, on TV and on videos is pervasive and perhaps presents a major influence in propagating the habit of smoking among students¹³. Overall, approximately 96% of them had seen actors smoking within 30 days of the survey with almost two-thirds of them having seen a lot of images of actors smoking during the same period. Jennifer J. Tickle in her study *Favourite movie stars, their tobacco use in Contemporary movies, and its association with adolescent smoking* concluded that adolescents who choose movie stars who use tobacco onscreen are significantly more likely to have advanced smoking states and more favourable attitude towards smoking than adolescents who choose non-smoking stars¹³.

Advertising is also very pervasive. Eight in every ten students surveyed had seen pro-tobacco messages in newspapers and magazines while nine in every ten had seen cigarette brand names on TV while watching sports and other programmes within 30 days of the survey. This indicates that both the print and electronic media are having equal impact on spreading the message of smoking to children. Compared to advertising, direct promotions appear to be having less impact or may be a lesser-used strategy to sell cigarettes

since only one in every five students had an object with a cigarette logo on it and one in every ten current smoker was offered a free cigarette by a tobacco representative.

The main avenue through which current smokers obtain cigarettes is by purchasing them at shops or from street vendors. Although legislation exists prohibiting sales of cigarettes to minors, almost three-quarter of current smokers were able to buy cigarettes and were not refused because of their age. This occurred more among female current smokers than male current smokers. The actions of vendors indicate that they may not be aware of the law or, if they are, they flout the law because they know that it is not being monitored for compliance.

With respect to environmental tobacco smoke, students appear to have a relatively high level of awareness regarding the connection between smoking and ill health. Seven in every ten were of the view that smoke from others is definitely harmful to their health. Never smokers seem more aware of this than current smokers although the latter was more highly exposed than the former to smoke from others in their homes and public places.

Eight in every ten current smoker had been exposed to smoke from others in public places within seven days of the survey. Generally, it was seen that students were more exposed to environmental tobacco smoke in public places than in their homes.

This points to a very loose and unrestricted use of tobacco in public places and an apparent lack of appreciation or knowledge among smokers of the health risks of environmental tobacco smoke to others.

Accordingly, eight in every 10 student indicated that smoking in public places should be banned.

The percentage of students surveyed who are susceptible to smoking (12%) is almost as high as those who currently smoke. Although this appears to be an ominous sign it is countered by the views of 97% of never smokers who say that they will probably not smoke if offered a cigarette by a friend and by the views of 98.9% who do not see themselves smoking in the next five years. This intention appears to be reinforced by the fact that one-third of never smokers think that it is difficult to stop smoking once it is started; indicating their belief that cigarette smoking is addictive.

With regard to cessation, most current smokers appear to want to quit smoking. Approximately seven in every ten expressed a desire to stop while over three-quarter tried to stop smoking in the year preceding the survey.

Of those students who have quit smoking in the past, approximately six in every ten did so to improve their health. It is somewhat contradictory that this is happening although lessons on the dangers of cigarette smoking do not appear to be frequently taught in schools. Indeed, fewer than 50% of students recalled having been taught the dangers of smoking during the particular school year while only 15.7% recalled having discussed smoking and health as part of a lesson during that term.

Given this dearth in information at the school level and the fact that more than 60% of current smokers said that they had not received help or advice to stop smoking, it could be said that teenage smokers between the age group 13 – 15 years are not receiving sufficient assistance to help them fulfil their desire to stop smoking in their early years.

Conclusion and Recommendations

Problems related to smoking among school-based children between the ages 13-15 appear to be generally worst in Trinidad and Tobago than they are in the other Caribbean countries surveyed. The fact that in Trinidad and Tobago close to half (40%) of all students within this age group have experimented with cigarette smoking at one time or the other is sufficient to send wake up signals that this is a situation which warrants attention. Of greater concern should be the fact that children within this age group are smoking more than their elders 14-18 years did in 1988⁷ and that an almost equal percentage of male and females are experimenting with smoking before the age of 10 years.

It is apparent that extensive mass media advertising of cigarettes as well as easy and seemingly non-existent barriers to cigarette access by teenagers are directly fuelling the habit among this age group in spite of the fact that there are laws prohibiting the sale of cigarettes to minors.

Another major factor influencing the increase in smoking among teenagers 13-15 years is that many of them, especially current smokers, live in households where parents and other adults smoke. This appears to be a ready way for replicating the legacy of smoking. It is not surprising to have found that students do more smoking at home than at school.

Exposure to environmental tobacco smoke appears to be a sour point with students since almost all the respondents felt that smoking should be banned in public places.

Any attempts, therefore, to curb the increasing use of tobacco, especially

cigarette smoking among teenagers must include the following:

1. Effective enforcement of the existing laws prohibiting sale of cigarettes to minors;
2. Enactment of legislation to make it an offence for adults to use minors to purchase cigarettes and other tobacco products;
3. Continuous information campaigns at the community level to make traders, parents and other adults aware of the laws prohibiting sale of cigarette to minors;
4. Continuous information campaigns aimed at households to alert and/or reinforce the message that environmental tobacco smoke is dangerous to health;
5. Greater use of anti-tobacco advertising which places special emphasis on stemming the increase in female smoking as well as dissuading children 18 years and under from ever wanting to experiment with tobacco use;
6. Compulsory inclusion of age-appropriate information about tobacco addiction and its effects on health as part of the curricula in primary and secondary schools;
7. A total ban on cigarettes advertising since it has been found in other parts of the world that partial bans are not usually successful because advertisers use other devious measures to circumvent the law and still get their messages out;
8. Restrictions on promotions and sponsorship of tobacco products;
9. Restrictions on smoking in public places;

10. Increased taxation on tobacco products so as to make them less affordable to children and adolescents.
11. Implementation of cessation programmes that will encourage children and adolescents who smoke to quit the habit.

Recognizing the complexity of the strategy that has to be employed to deter and control the life threatening practice of cigarette smoking, a Working Paper by the Trinidad and Tobago Law Commission in August of 2000 states that:

“In order to achieve downward trends in tobacco consumption, tobacco advertising, promotion and sponsorship bans should form but one part of an overall tobacco control strategy which should include measures such as public education and counter-marketing campaigns; effective enforcement of bans on the sale of cigarettes to underage smokers; smoke-free public places and workplaces; and appropriate financial measures.”.

The Paper therefore recommends the prohibition of all forms of direct and indirect advertising, promotion and sponsorship of tobacco products and the sale of tobacco products to persons 18 years and under as well as restricts the use of cigarette vending machines and smoking in certain public places.

It also recommends that there be tremendous increases in the Ministry of Health funding of tobacco control measures to include large-scale education and cessation programmes. Recommendations are also made in this Paper for including tobacco education in the curriculum at the

primary, secondary and tertiary education levels and these should go a long way in lifting the awareness of the population to the dangers of tobacco use.

These noble ideals, however, will not be easily implemented given the might of the pro-tobacco lobby and the claim by smokers of their right to follow the lifestyle choice of their own. If tobacco use is to be reduced to 20% by 2004 (baseline 1995) as advocated by the Ministry of Health in the publication *Spotlight on Health*⁸, political commitment will be vital in bringing these ideals into reality.

It is important, therefore, that at the levels of the Ministry of Health and the community, advocacy to have these measures implemented must be intensified in the years ahead.

Follow up

The survey should be repeated every three years to allow for continuous monitoring of the tobacco use situation among teenagers. In addition a school-based survey should be conducted among teachers and other staff who work in schools to determine the extent to which cigarettes and other tobacco products are being used among this group.

A separate school-based survey using a much larger sample should be conducted also in Tobago. This should provide much more useful data for which comparisons can be made of the differences in tobacco use among teenagers 13-15 in the two islands. The GYTS sample size used did not allow for an effective comparison to be undertaken in Tobago.

REFERENCES

1. **Murray CGL, Lopez AD**, *Alternative projections of mortality and disease by cause, 1990-2020: global burden of disease study*. *Lancet*, 1997, 349: 1498-1504.
2. **Peto R et al.**, *Developing populations: the future health effects of current smoking patterns*. In: *Mortality from smoking in developed countries, 1950-2000*. Oxford, Oxford University Press, 1994: A101-103.
3. **US Department of Health and Human Services**, *Preventing tobacco use among young people: a report of the Surgeon General*. Atlanta GA, US Department of Health and Human Services, Public Health Service, Centers for Disease Control and Prevention, National Center for Chronic Disease Prevention and Health Promotion, Office of Smoking and Health, 1994. Reprinted with corrections, July 1994.
4. **A World Bank Publication 1999**, *Curbing the Epidemic: Governments and the Economics of Tobacco Control*.
5. **Zhu SH, Li D, Feng B, Zhu T, Anderson CM**. *Perception of foreign cigarettes and their advertising in China: A study of college students from 12 universities*. *Tobacco Control* 1998 Summer; 7(2): 134-40.
6. **Miller, G.J. et al. (1989)**, *Ethnicity and other characteristics predictive of coronary heart disease in a developing community: principal results of the St James Survey, Trinidad*. *Int. J Epidemiol* 18(4), 080-817.
7. **Singh H, Maharaj HD, Shipp M**. *Pattern of Substance Abuse Among Secondary School Students in Trinidad and Tobago*. *Public Health* (1991), 105, 435-441.
8. **Patrick, et al**, *Health Needs Assessment, 1995; and Spotlight on Health*
9. *Annual Statistical Digest 1998-1999*, Central Statistical Office.
10. *TMA International Tobacco Guide*.
11. **World Health Organization**. *Women and Tobacco*. Geneva: World Health Organization, 1992: 16.
12. **Biglan A, Duncan TE, Ary DV, et al.**, *Peer and parental influences on adolescent tobacco use*. *J. Behav Med* 1995; 18:315-30.
13. Jennifer J. Tickle, *Favourite movie stars, their tobacco use in Contemporary movies, and its association with adolescent smoking*, Dept. of Psychological and Brain Sciences, Dartmouth College Hanover, June 2000.