

# THE GLOBAL YOUTH TOBACCO SURVEY IN SEYCHELLES - 2007

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5 October 2008

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## EXECUTIVE SUMMARY

**OBJECTIVES:** This survey describes behaviors, knowledge, beliefs, opinions and other variables related to tobacco use among students of secondary schools aged 13-15 years in Seychelles.

**METHODS:** The survey was conducted in October 2007. A two-stage cluster sample design was used to produce a representative sample of all students in grades S1, S2, S3, S4 and S5 from all public and private schools in Seychelles. Data were collected through a questionnaire self-administered to all participants on an anonymous and voluntary basis. The questionnaire was completed by 1508 (86%) of the 1754 eligible students. In this report, we considered only the 834 children (398 boys and 436 girls) aged 13-15 years, consistent with the methodology of GYTS.

### RESULTS:

- 48.4% of students ever tried a cigarette (54% boys and 42% girls). In 2002, this figure was 50% (55% boys and 46% girls).
- 22% of students smoked at least one cigarette on at least 1 day during the past 30 days (23.2% boys and 20.0% girls). In 2002, the prevalence was 27% (30% boys and 24% girls).
- 19% of students who ever smoked had first tried a cigarette before the age of 10 (19% boys and 20% girls). This figure was 19% in 2002 (21% boys and 15% girls).
- 73% of current smokers wanted to quit smoking (74% of boys and 74% girls). In 2002, this figure was 76% (79% boys and 72% girls).
- 57% of students had been exposed to cigarette smoke in public places during the past 7 days (54% of boys and 60% of girls). In 2002, this figure was 60% (59% boys and 61% girls).
- 84% of students saw or heard advertisements against tobacco during the past 30 days (80% of boys and 87% girls). In 2002, this figure was 90% (89% of boys and 91% of girls).
- 69% of students saw advertisement for tobacco products during the past 30 days (69% boys and 68% girls). In 2002, this figure was 76% overall (75% boys and 78% girls).
- 60% of students recalled of a discussion on dangers of smoking in class during the past 12 months with 58% boys and 62% girls. In 2002, this figure was 60% (61% boys and 60% girls).

**CONCLUSIONS:** The survey in 2007 shows that as many as 22% of youth aged 13-15 years smoke at least one cigarette during the past month, however a slight improvement compared to 2002 (27%). The findings also show that a large number of smokers start early (before age 10), that the vast majority of smokers wish to stop smoking, that a large proportion of children are exposed to second-hand smoke, and that 'only' 60% of children recall a health education class on tobacco during the past 12 months.

These findings emphasize the need to 1) tighten relevant policy and/or legislation (e.g. to protect non-smokers from environmental tobacco smoke); 2) strengthen school-based education programs to further raise awareness on tobacco and resistance skills among children, and ensure that such programs also target very young children, and 3) develop smoking cessation programs accessible to the youth for young smokers who wish to quit. School-based surveys should be conducted at regular time intervals to monitor tobacco use among students and assess the impact of tobacco control programs and policy.

## **INTRODUCTION**

### **The tobacco epidemic**

Tobacco use is the leading preventable cause of death and therefore a leading public health problem worldwide (1-3). According to the World Health Organization, tobacco use caused 5 million deaths per year in 2000 and this figure is expected to rise to 10 million by the year 2020, as tobacco use spreads, particularly in developing countries in view of tobacco control policy in many low or middle income countries.

Various mechanisms underlie the epidemic of tobacco use: the strongly addictive nature of nicotine -which is as powerfully addictive as heroin or cocaine (4); a traditionally large social acceptance of this culturally ingrained habit; a low recognition by the public of the health hazard of smoking; and an active and skilled advertising and promotion of tobacco use by the tobacco industry (5,6).

In most countries, the vast majority of adult smokers start using tobacco before the age of 18, and even often before the age of 10. Young people are at particularly high risk of taking up smoking, and they constitute a preferred target of the tobacco industry. Indeed, children tend to largely underestimate the health hazards of smoking and the strong addictive nature of nicotine and children tend to emulate what they perceive as an adults' behavior. This underlies why the tobacco industry is so keen to sponsor tobacco control programs in schools in many countries, which fuels the message that smoking is no children's business (hence a desirable adult attribute). Hence, young people should be a primary focus for intervention strategies to curb the tobacco epidemic. The difficulty of imparting education messages for tobacco control to children emphasizes the critical role for policy and structural changes (e.g. high cost of cigarettes, ban of smoking in enclosed public places such as discotheques, etc).

Despite evidence for a decreasing prevalence of tobacco use in adults in Seychelles in the past decade, the first GYTS conducted in students aged 13-15 years in 2002 showed that as many as 26% of students were current smokers -with little difference between boys and girls- and exposure to tobacco products was high (40% and 60% reported to have been exposed to environmental smoke at home and in places other than home, respectively) (7-10). These findings in 2002 were likely to predict detrimental trends in tobacco use in the future generation of adults, particularly among girls.

In this context, GYTS can be a powerful tool for monitoring the situation of tobacco use in adolescents, for highlighting the need for new policy and programs, and for evaluating the impact of current and future programs.

### **The Global Youth Tobacco Survey (GYTS)**

The World Health Organization (WHO), spearheaded by its Tobacco Free Initiative (TFI) department, the United Nations Children' Fund (UNICEF) and the Office on Smoking and Health in the Centers for Disease Control and Prevention (OSH-CDC), has developed the Global Youth Tobacco Survey (GYTS). This survey is a standard instrument to assess the smoking prevalence and various other variables related to smoking in youths aged 13-15 years (11).

The GYTS has been administered in 151 countries worldwide, including Seychelles in 2002 (7-10). The GYTS is not only useful to assess the tobacco situation among the youth at one point in time but repeat surveys over time (e.g. every 4-5 years) provide useful information for monitoring the tobacco situation and the impact of interventions.

The GYTS is a school-based tobacco survey that focuses on students aged 13-15 years. This age is chosen because the smoking habit is taken up often in teen years or before and monitoring (surveys) can be conveniently conducted in schools (before secondary education is completed). The GYTS addresses the following issues:

- Determine the prevalence of tobacco use
- Estimate the age of initiation of cigarette use among cigarette smokers
- Estimate the levels of susceptibility to become a cigarette smoker among non-smokers

- Estimate the exposure to tobacco advertising and counter-advertising in young people
- Identify key intervening variables, such as attitudes and beliefs on behavioral norms with regard to tobacco use among young people
- Assess the extent to which prevention programs are reaching school-based populations and establish the subjective opinions of those populations regarding such interventions

### **The main steps of the Global Youth Tobacco Survey in Seychelles - 2007**

The first Global Youth Tobacco Survey (GYTS) in Seychelles was conducted in 2002 (7-10) so the survey in 2007 is a second wave of this same survey. For the 2007 GYTS, a representative of Seychelles (BV) attended a meeting organized by WHO and CDC in Brazzaville, 8-10 October 2006, aimed at training the participants on the GYTS methodology. The Ministry of Health and Social Development and the Ministry of Education in Seychelles subsequently agreed to conduct a second GYTS.

Preparatory work was conducted by the Unit for Prevention and Control of Cardiovascular Disease (UPCCD) in the Ministry of Health with support of CDC and took place between January-September 2007, including the finalization of the budget (with the support of the WHO), selection of a two-stage random sample of students (i.e. selection of a random sample of schools and classes), preparation of the final questionnaire, printing of the questionnaire and answer forms, and training of 33 field supervisors.

The study took place for a period of 10 days on 1-10 October 2007, 8:00-9:00 am and 1.30-2.30 pm, in the selected 66 classes of S1, S2, S3, S4 and S5 on Mahé, Praslin and La Digue. A total of 1754 students in 66 classes throughout the country were eligible to participate. Along with the standard procedures used in all participating countries, answer sheets were sent by FEDEX from Seychelles to CDC in Atlanta for automated data entry (using scanning and optic character recognition of the answers to generate an electronic data file of results).

A second workshop was organized in Brazzaville, 31 March to 4 April 2008 by the CDC and WHO with the representatives of the participating countries, including Seychelles (BV) in order to develop skills in data analysis and report writing. Based on the outcomes of these meetings and other resources within MOHSD, and with the support of other academic partners, UPCCD issued a report of the results in August 2008.

## **METHODS**

### **Sample and design**

All schools containing the grades S1, S2, S3, S4 and S5 were included in the sampling frame. Nearly all children aged 13-15 years attend school in the Seychelles (hence surveys of students at school are truly representative of all children). Approximately 95% of students at primary and secondary levels attend public schools in Seychelles, while the remaining students attend private schools. Data for public schools were obtained from the Ministry of Education and data for the 3 private schools were obtained from the respective schools. A list of all schools, classes and students was produced.

A two-stage cluster sample design was used to produce a representative sample of all students attending S1 to S5. The first-stage sampling frame consisted of all schools containing the grades S1, S2, S3, S4 and S5. Schools were selected with a probability proportional to the school enrollment size. The second-stage sampling frame consisted of an equal-probability sampling (with a random start) of all S1-S5 classes from the selected schools. All students in the selected classes were eligible to participate in the survey.

### **Questionnaire**

The questionnaire was anonymous and self-administered and it explicitly did not include any information that would permit to identify participants. The questionnaire consisted of “core” and “optional” questions. Core questions are mandatorily used in all countries conducting the GYTS study and allow for international comparison of results. Optional questions address specific issues in individual countries selected by the local

investigators. The questionnaire used in Seychelles contained all 56 core questions of the GYTS standard questionnaire and 6 optional questions.

In this survey, and consistent with the GYTS methodology, *regular smoking* was considered for “smoking at least one cigarette on at least one day over the past 30 days”. Data on other tobacco products were obtained by the question: during the past 30 days, have you ever used any form of tobacco products other than cigarettes (e.g. chewing tobacco, snuff, dip, cigars, cigarillos, little cigars, pipe)?

### **Data collection**

The Ministry of Education (MOE) provided assistance in terms of schools registries for the selection of the sample of students and to organize the necessary contacts with the randomly selected schools. The Ministry of Health and Social Development (MOHSD) was responsible for selecting, training and supervising the field supervisors. The field supervisors were mainly NCD nurses, student nurses, and staff members of UPCCD. Thirty three field supervisors were trained during a half-day workshop organized one week before the survey. The participants were assigned to the participating schools. They were responsible for the delivery and collection of the survey documentation forms, answer sheets and questionnaires and for reporting on the number of students who had not been attending class on the date of the survey or who had refused to participate to the survey. The survey took place between 1 and 10 October 2007 in the whole country (i.e. on the 3 largest inhabited islands that account for >99% of the total population of Seychelles) and between 8:00 and 9:00 am or between 1.30 and 2.30 pm in most classes. The students were informed on the aims of the survey and that they were free to participate. Most students took around 45-60 minutes to complete the questionnaire, but a minority of students needed up to 90 minutes. One field supervisor was present in each participating class. The supervisor introduced the survey to the students and was the only adult present in the classes during the conduct of the survey.

### **Analyses**

In this report, we consider only the data for all students aged 13-15 years (as self-reported by the children). A weight was associated with each questionnaire to reflect the likelihood of sampling each student within the two-stage sampling frame and to reduce bias by compensating for differing patterns of non-response. The weight used for estimation is given by the equation:  $W = W1 * W2 * f1 * f2 * f3 * f4$  where W1 is the inverse of the probability of selecting the school, W2 is the inverse of the probability of selecting the classroom within the school, f1 is a school-level non-response adjustment factor calculated by school size category (small, medium, large), f2 is a class adjustment factor calculated by school, f3 is a student-level non-response adjustment factor calculated by class, and f4 is a post-stratification adjustment factor calculated by gender and grade. Analyses were made using the EPI INFO 3.3 software. 95% confidence intervals were calculated for all weighted estimates of frequency.

## RESULTS (AGE 13-15 YEARS)

### 1) Participation rates

All 13 schools in Seychelles that harbor S1 to S5 grades were selected. **Table 1** shows the distribution of participants by sex and school grade.

**Table 1.** Number of students who participated in the Global Youth Tobacco Survey in Seychelles in 2007.

Region	No. of students who were eligible (Secondary 1-5)	No. of students who have participated	No of students who have participated and were aged 13-15 (as self reported)
Total	1754	1508	
S1	370	331	70
S2	383	288	262
S3	423	379	350
S4	241	191	126
S5	334	267	26
12 and less		307	
13		277	277
14		343	343
15		224	224
16 and more		332	

At the first stage of the sampling frame (school level), 13 (100%) of the 13 sampled schools participated. At the second sampling frame (student level within each selected class), 1508 (86%) of the 1754 sampled students completed usable questionnaires. The overall response rate was therefore  $100\% * 86.0\% = 86.0\%$ .

### 2) Tobacco use

The proportion of students who ever tried a cigarette, even a puff, was 48.4% in 2007 with no statistically significant difference between boys and girls. 20% of students who had ever smoked tried their first cigarette before the age of 10 years. Overall, 21.5% of all students smoked a cigarette on at least one day during the past 30 days ('current smoker'). The proportion of students who had never smoked but were susceptible to initiate smoking in the next year was 15.4%\* (12).

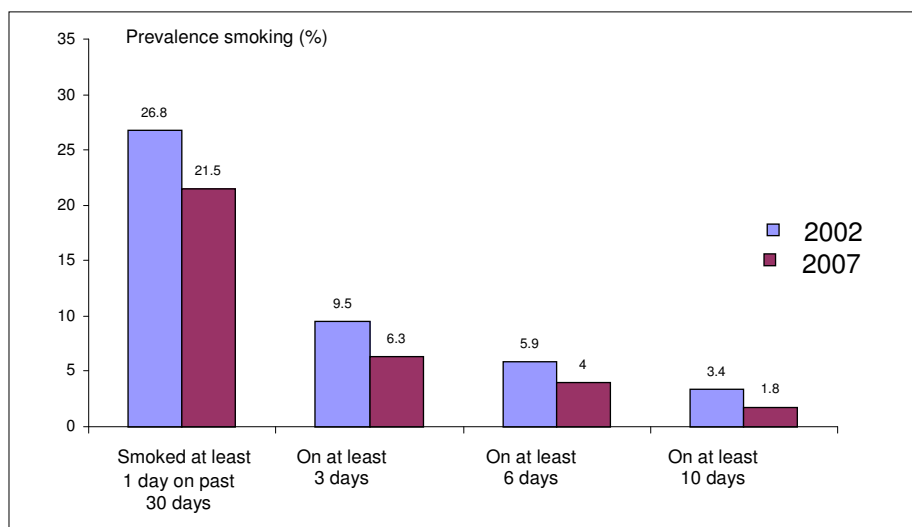
Comparing data in 2002 and 2007, we can observe the following. The prevalence of smoking ( $\geq 1$  cigarette on  $\geq 1$  day during the past 30 days) was 27% in 2002 and 22% in 2007. However this 5% decrease was not statistically significant. The change seemed larger in boys than girls (30% in boys and 24% in girls in 2002 and 23% in boys and 20% in girls in 2007).

The proportion of students who smoked more often was also lower in 2007 compared to 2002. For example, the proportion of students smoking on at least 3 days during the last 30 days decreased from 9.5% to 6.3% in 2007. However, the proportion of students who used other tobacco products was higher in girls in 2007 compared to 2002 (respectively and 9.2% and 5.5%), but this difference was not significant. The proportion of students who had never smoked but were susceptible to initiate smoking in the next year was 15.4%\*.

\*Students who have never smoked and whose response was anything but "definitely no" to both of the following questions were defined as susceptible to initiate smoking in the next year (Pierce): • If your best friend offered you a cigarette, would you smoke it? • Do you think you will try smoking a cigarette in the next year?

**Table 2.** Prevalence of tobacco use in students aged 13-15 years in 2002 and 2007

Prevalence	2002			2007		
	Total	Boys	Girls	Total	Boys	Girls
Ever smoked cigarettes	<b>50.6</b> (46.1-55.1)	<b>55.7</b> (49.3-61.9)	<b>45.9</b> (39.0-52.9)	<b>48.4</b> (42.4-54.4)	<b>54.1</b> (46.8-61.3)	<b>42.4</b> (35.2-49.9)
Smoked cigarettes before the age of 10	<b>18.9</b> (15.0-23.5)	<b>21.6</b> (16.6-27.6)	<b>15.1</b> (10.8-20.8)	<b>19.4</b> (15.1-24.6)	<b>18.9</b> (14.1-24.9)	<b>20.5</b> (14.7-27.9)
Current cigarette smoker (smoked $\geq 1$ day during past 30 days)	<b>26.8</b> (21.9-32.2)	<b>29.9</b> (23.3-37.4)	<b>23.9</b> (18.7-30.0)	<b>21.5</b> (16.7-27.2)	<b>23.2</b> (17.4-30.2)	<b>20</b> (15.0-26.2)
Smoked cigarette on $\geq 3$ days during the past 30 days	<b>9.5</b> (6.9 – 13.0)	<b>12.9</b> (9.1-17.8)	<b>6.5</b> (4.0-10.3)	<b>6.3</b> (4.2-9.2)	<b>8.4</b> (5.2-13.3)	<b>4.5</b> (2.6-7.7)
Smoked cigarettes on $\geq 6$ days during the past 30 days	<b>5.9</b> (4.3-8.2)	<b>8.5</b> (5.8-12.3)	<b>3.5</b> (2.0-6.0)	<b>4.0</b> (2.7 – 6.0)	<b>4.9</b> (2.7-8.6)	<b>3.3</b> (1.9-5.8)
Smoked cigarettes on $\geq 10$ days during the past 30 days	<b>3.4</b> (2.3-4.9)	<b>4.7</b> (3.0-7.3)	<b>2</b> (1.0-3.9)	<b>1.8</b> (1.1-3.0)	<b>2.6</b> (1.2-5.3)	<b>1.1</b> (0.4-3)
Current user of other tobacco products	<b>9.3</b> (7.0-12.3)	<b>13.0</b> (9.5-17.4)	<b>5.5</b> (3.5-8.4)	<b>10.5</b> (7.7-14.1)	<b>10.6</b> (6.9-16.0)	<b>9.2</b> (6.4-13.0)
Never smokers likely to initiate smoking in the next year	<b>16.5</b> (12.9-20.9)	<b>17.7</b> (12.1-25.2)	<b>15.6</b> (11.2-21.4)	<b>15.4</b> (12.1-19.4)	<b>14.4</b> (9.5-21.2)	<b>16.2</b> (12.4-20.9)

**Figure 1.** Prevalence of cigarette smoking during the past 30 days in students aged 13-15 years in 2002 and 2007

### 3) Smoking cessation and factors influencing tobacco use

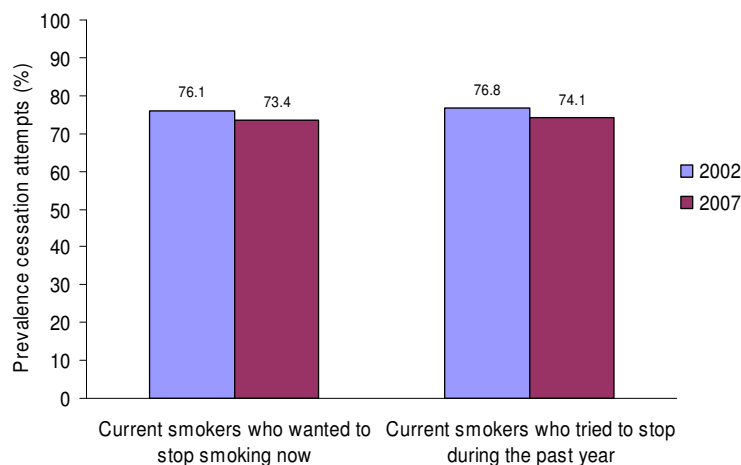
Over three quarters of current smokers wanted to stop smoking during the past 12 months and a similar proportion reported to have tried to stop during the past 12 months (Table 3). These proportions did not differ substantially by sex or by survey year.

**Table 3.** Proportion of smokers who wish to quit smoking in students aged 13-15 years in 2002 and 2007

Schools	2002			2007		
	Total	Boys	Girls	Total	Boys	Girls
Current smokers who wanted to stop smoking now	<b>76.1</b> (67.4-83.2)	<b>79.5</b> (66.8-88.2)	<b>72.3</b> (61.9-80.8)	<b>73.4</b> (63.2-81.5)	<b>74.4</b> (58.0-85.9)*	<b>74</b> (57.1-85.8)*
Current smokers who tried to stop smoking during the past year	<b>76.8</b> (68.6-85.1)	<b>76.6</b> (66.7-86.4)	<b>76.2</b> (60.8-91.7)	<b>74.1</b> (64.2-82.0)	<b>76.3</b> (62.6-86.1)	<b>70.9</b> (51.9-84.6)

\* cell size is less than 35

**Figure 2.** Proportion of smokers who attempted to quit smoking in students aged 13-15 years in 2002 and 2007



### 4) Environmental tobacco smoke

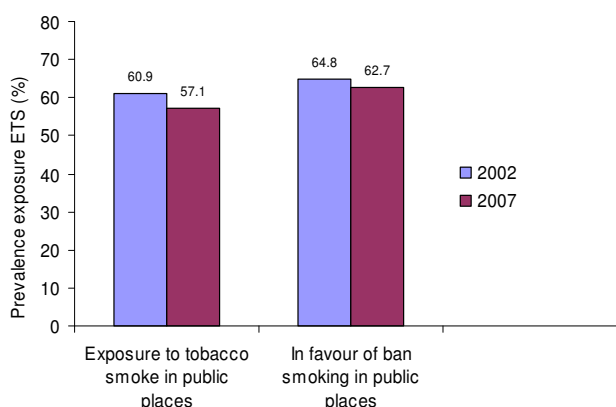
Around one third of students reported to have one or more parents who smoked cigarettes (Table 4). Approximately 60% of students stated that they were exposed to environmental tobacco smoke in enclosed public places.

Two thirds of students reported to support a ban of smoking in enclosed public places during the past 7 days. The proportions did not differ significantly by sex and survey year.



**Table 4.** Prevalence of students exposed to various factors related to environmental tobacco smoke (ETS) in students aged 13-15 years in 2002 and 2007

Exposure to smoke	2002			2007		
	Total	Boys	Girls	Total	Boys	Girls
One or more parents smoke	<b>31.4</b> (28.7-34.3)	<b>25.5</b> (21.9-29.5)	<b>36.1</b> (31.1-41.4)	<b>30.5</b> (27.5-33.8)	<b>30.2</b> (26.2-34.5)	<b>30.7</b> (26.1-35.7)
All or most best friends smoke	<b>12.1</b> (9.5-15.1)	<b>14.9</b> (10.9-20.1)	<b>9.0</b> (6.4-12.5)	<b>11.3</b> (8.9-14.3)	<b>13.1</b> (9.5-17.9)	<b>9.4</b> (6.1-14.1)
Exposed to smoke in public places during the past 7 days	<b>60.9</b> (56.9-64.8)	<b>59.5</b> (54.1-64.8)	<b>61.4</b> (55.1-67.3)	<b>57.1</b> (53.1-61.1)	<b>54.3</b> (48.6-59.9)	<b>60.6</b> (54.4-66.6)
In favor of banning smoking in public places	<b>64.8</b> (56.6-72.2)	<b>63.8</b> (55.4-71.5)	<b>65.9</b> (56.4-74.3)	<b>62.7</b> (55.9-69.1)	<b>58.7</b> (51.4-65.7)	<b>67.2</b> (58.6-74.7)

**Figure 3.** Exposure and opinion to ban ETS in public places in students aged 13-15 years in 2002 and 2007

### 5) Prevalence of students who recalled discussion on tobacco in class during the past 12 months

Approximately 60% of students recalled a lesson in class on the dangers of smoking during this school year (Table 5).

**Table 5.** Education on tobacco smoke in students aged 13-15 years in 2002 and 2007

School	2002			2007		
	Total	Boys	Girls	Total	Boys	Girls
During the past 12 months, were taught in any classes about the dangers of smoking	<b>60.4</b> (54.1-66.4)	<b>60.6</b> (53.5-67.3)	<b>59.9</b> (52.3-67.0)	<b>60.0</b> (55.1-64.6)	<b>58.1</b> (52.5-63.6)	<b>62.5</b> (56.4-68.2)

## 6) Access and availability

Approximately 28.2% of the current smokers got at least 1 cigarette from a store during the past 30 days in 2007 (Table 6). This is a 5% increase compared to 2002 although the difference is not statistically significant. The increase seems particularly large among girls (21.4% in 2007 vs. 10.8% in 2002).

Shopkeepers did not refuse to sell cigarettes to students (minors) for two thirds of the students who attempted to buy cigarettes from a shop. Around 7.8% of the students were offered a free cigarette by a cigarette company representative.

**Table 6.** Access to cigarettes among smokers in 2002 and 2007

Access	2002			2007		
	Total	Boys	Girls	Total	Boys	Girls
Current smokers who usually buy their cigarettes in a store during past 30 days	<b>23.4</b> (17.7-30.4)	<b>34.4</b> (24.9-45.1)	<b>10.8</b> (6.0-18.5)	<b>28.2</b> (22.2-35.2)	<b>35.8</b> (27.0-45.7)	<b>21.4</b> (14.1-31.0)
Ever offered a "free" cigarette by a cigarette company representative	<b>7.6</b> (5.4-10.6)	<b>10.5</b> (7.2-15.0)	<b>5.3</b> (3.2-8.6)	<b>7.8</b> (5.7-10.7)	<b>9.3</b> (6.5-13.3)	<b>5.7</b> (3.4-9.5)

## 7) Media and advertising for and against smoking

Almost 84% of students saw advertisements against smoking during the past 30 days, irrespective of sex (Table 7). Almost 69% of students saw any advertisements for cigarettes on billboards during the past 30 days. Around 49.4% of the students saw advertisements or promotions for cigarettes in news papers or magazines in 2007 and this figure is slightly lower than in 2002.

**Table 7.** Prevalence of all students exposed to advertising for and against smoking in 2002 and 2007

Media/Advertising	2002			2007		
	Total	Boys	Girls	Total	Boys	Girls
During the past month saw any anti-smoking media messages	<b>90.5</b> (86.4-93.5)	<b>89.5</b> (85.3-92.6)	<b>91.8</b> (86.6-95.1)	<b>84.1</b> (80.3-87.3)	<b>80.4</b> (74.8-84.9)	<b>87.7</b> (83.4-91.0)
During the past month saw any advertisement for cigarettes on billboards	<b>76.6</b> (70.7-81.6)	<b>75.1</b> (68.8-80.4)	<b>78.2</b> (70.6-84.3)	<b>69.0</b> (63.8-73.8)	<b>69.5</b> (62.3-75.9)	<b>68.8</b> (62.9-74.1)
During the past month saw any advertisements or promotions for cigarettes in newspapers or magazines	<b>62.3</b> (55.6-68.6)	<b>59.0</b> (51.4-67.7)	<b>64.4</b> (56.9-71.3)	<b>49.4</b> (43.3-55.5)	<b>47.4</b> (40.8-54.1)	<b>51.0</b> (42.5-59.4)
Have an object (t-shirt, pen, backpack, etc) with a cigarette brand logo on it	<b>18.2</b> (15.5-21.1)	<b>19.8</b> (16.0-24.3)	<b>16.6</b> (12.8-21.2)	<b>16.2</b> (13.4-19.5)	<b>16.8</b> (12.8-21.7)	<b>15.9</b> (12.4-20.3)

## SUMMARY OF SELECTED MAIN FINDINGS

- 48.4% of students ever tried a cigarette (54% boys, 42% girls). In 2002, this figure was 50% (55% boys and 46% girls).
- 22% of students smoked on at least 1 day during the past 30 days (23.2% boys, 20.0% girls). In 2002, the prevalence was 27% (30% boys and 24% girls).
- 19% of students who ever smoked had first tried a cigarette before the age of 10 years in 2007 (19% boys and 20% girls). In 2002, this figure was 19% (21% boys and 15% girls).
- 73% of current smokers said they wanted to quit smoking (74% of boys and girls). In 2002, this figure was 76% (79% boys and 72% girls).
- 57% of students had been exposed to cigarette smoke in public places during the past days (54% of boys and 60% of girls). In 2002, this figure was 60% (59% boys and 61% girls).
- 84% of students saw or heard advertisements against tobacco during the past 30 days (80% of boys and 87% girls). In 2002, this figure was 90% (89% of boys and 91% of girls).
- 69% saw an advertisement for tobacco products during the past 30 days (69% boys and 68% girls). In 2002, this figure was 76% (75% boys and 78% girls).
- 60% of students recalled of a discussion on dangers of smoking in class during the past 12 months (58% boys and 62% girls). In 2002, this figure was 60% (61% boys and 60% girls).

## DISCUSSION

### Tobacco use

It is well established that most smokers start smoking, in many countries, before the age of 18 years. Early smoking initiation relates to several factors, including an inclination of children for experimentation, social and peer pressure, and advertising strategies by tobacco companies that preferentially target the young. This early initiation of smoking underlies the need to give particular attention to the youth when considering tobacco control measures.

The main goal of a comprehensive tobacco control program is to improve the health of the population by eliminating exposure to secondhand smoke, and encouraging people not to initiate tobacco use, and encouraging smokers to quit. Previous studies have shown that reducing the demand for tobacco products, e.g. by increasing prices of tobacco, is the most effective means to reduce initiation of tobacco use and consumption among young people (13). In addition, comprehensive tobacco control programs often include non-price interventions such as complete ban on smoking in enclosed public places and work places; complete ban on advertising and promotion by tobacco companies; providing information on the health consequences of smoking, such as having prominent warning labels on cigarette packets; mobilization of community efforts to restrict minors' access to tobacco products; implementation of school-based educational programs; and, finally, smoking cessation programs (14).

The prevalence of tobacco use in Seychelles students remains high in 2007. The GYTS 2007 findings in Seychelles shows that approximately half of the students aged 13–15 years have tried smoking and that 21.5% students were regular smokers (i.e. smoking at least one cigarette on at least one day during the past 30 days) (**Table 2**). Comparison of the GYTS studies in 2002 and 2007 shows a 5% absolute decrease in the prevalence in 2007 compared to 2002 (26.8% vs. 21.5%) but this decrease was not statistically significant. Current smoking was reported by 23% of boys and 20% of girls and these proportions were slightly higher in boys than girls (but not statistically different).

Based on serial independent population based surveys in adults aged 25–64 years in Seychelles, smoking prevalence declined substantially in both men and women between 1989 (54% males; 10% females), 1994 (37% males; 7% females), and 2004 (31% males; 4% females) (Bovet et al., 1991, 1997, 2006a,b). This decreasing prevalence of smoking in both children and adults is likely to reflect the important tobacco control measures taken in Seychelles over the past decades, e.g. total ban on advertising in national mass media, billboards and other means for more than 2 decades, high taxes on cigarettes, absence of vending machines nationwide, and ban of smoking in public transports, schools and health facilities (10). However, the high proportion of girls who currently report smoking (compared to their female adult counterparts) likely predicts an increasing prevalence of smoking in women in the next adult generation.

Furthermore, the proportion of students who used other tobacco products has increased from 5.5% in 2002 to 9.2% in 2007 amongst girls, although this difference was not a statistically significant. It must be noted that tobacco products other than cigarettes (e.g. cigars, pipe, bidies, and smokeless tobacco) are not marketed in the country (i.e. cannot be bought) and therefore further study needs to be done to clarify the significance of such figures on other tobacco products. In particular, it should be examined how this figure may relate to marijuana use. For example, we found that most marijuana users also reported to smoke cigarettes in the previous GYTS study in 2002 (8).

A decrease in the smoking prevalence may also reflect, to some extent, some systematic misclassification in 2007 compared to 2002, e.g. a social desirability bias. It may be that because of increasing tobacco control measures over time, young cigarette smokers are less likely to recognize that they smoke, even in an anonym self-reported questionnaire.

A large proportion of students tried their first cigarette before the age of 10 years. The prevalence seemed to be slightly decreasing from 2002 to 2007, although the difference was not statistically different. This emphasizes the need to ensure that school-based awareness programs age and relevant tobacco control policies also target young children (e.g. education programs, complete ban of smoking in enclosed public places, particularly in places that youth tend to attend e.g. discotheques, bars).

It should also be recognized that the prevalence of smoking among non participants tends to be larger than among participants, as we have shown in Seychelles in 2002 (9), so that the prevalence of smoking found in the survey (that achieved a 96% participation rate) may be underestimated.

### **Smoking cessation**

GYTS 2007 results shows that almost 74% of current youth smokers stated that they wanted to quit smoking and/or had tried to do so during the past 12 months (**Table 3**). This figure was similar to that found in 2002. This finding is consistent with the powerful addictive nature of nicotine. This finding emphasizes the need to provide more information on the addictive nature of tobacco use through school-based health education programs (to deter youth to start) and to develop and implement a formal tobacco cessation program accessible to youth, including counselling and provision of nicotine replacement therapy or similar treatments.

### **Environmental tobacco exposure**

It is now well demonstrated that environmental tobacco smoke increases the risk of cardiovascular disease, cancer and other smoke-related diseases among non-smokers (15-20) and recent landmark studies have shown a rapid and important decrease in the total mortality and mortality from heart attack –reflected by avoidance of tens of thousands of deaths- in countries that have instituted a ban on smoking in enclosed places (e.g. Italy, Scotland, New York, etc).

The GYTS data in 2007 in Seychelles shows that 54.3% of boys and 60.6% of girls reported exposure to tobacco smoke in public places and two-thirds of students reported to support a ban of smoking in enclosed public places. These figures were similar to findings in 2002.

These findings remind the need to implement a total ban on smoking in all enclosed public places e.g. restaurants, bars and discotheque. Smoking is currently not banned in enclosed public or working places in Seychelles, except for schools, health facilities and transport. A ban on smoking in such places is also required by Article 8 of the Framework Convention on Tobacco Control (13). A related guideline on that provision (ref: A/FCTC/COP/1/7 (26 Apr 2007) states that “approaches other than 100% smoke free laws environments have repeatedly been shown to be ineffective”, “all indoor work places and indoor public places should be smoke free” and that “voluntary smoke-free policies have repeatedly shown to be ineffective and do not provide adequate protection”.

### **Exposure to education on tobacco**

GYTS 2007 shows that around 60% of children recalled a discussion on tobacco in class during the past 12 months (**Table 5**). This fairly high level of exposure to health education is consistent with the fact that tobacco is a topic included in the school curriculum, namely, within the ‘Personal and Social Education’ program. The fact that 40% of students did not remember a discussion on tobacco during the past 12 months stresses the need to administer such health education more often and the need to provide relevant training to teachers to better equip them to teach these topics.

### **Access and availability**

GYTS data in 2007 show that 28% of the students in Seychelles who currently smoke bought their cigarettes from shopkeepers despite a law that bans sale to minors (Amendment to the 1998 Children Act) (21). The figure was 5% higher in 2007 than in 2002, emphasizing a lack of enforcement of an existing legal ban for the sale of cigarettes to minors (**Table 6**). Sales to minors may be facilitated by the fact that the sale of cigarettes by single units is allowed and common. Measures should be taken to enforce the current regulation that prohibits the sale of cigarette to minors. Also, new regulations should prohibit the sale of cigarettes by single units as requested by article 16 of the WHO FCTC since “sale by units encourages cigarette use by persons with low purchasing power”, which includes youth.

Around 7.8% of the students were offered a free cigarette by a cigarette company representative. It has to be noted that, there are no promotion of tobacco products whatsoever in Seychelles for decades and we are not aware of any free provision of cigarette samples in the country for decades. This finding raises the issue of the significance of the finding. Similarly, 10% of students reported to use tobacco products other than cigarette while such products are not available in Seychelles (unless students referred to marijuana). Are there a systematic percentage of wrong answers? Does it correspond to misunderstanding of the questions? Does it correspond to a deliberate attempt by some students to provide an unhealthy response? Further studies are needed to address these issues, e.g. by conducting focus group studies or other qualitative studies.

### **Media and advertising for and against smoking**

The study shows that as many as 80% of students saw advertisements against smoking during the past 30 days, without substantial difference by sex (**Table 7**). This may reflect a large exposure of most students to the numerous anti-smoking programs on the national mass media. However, this figure seems overoptimistic in view of the ongoing activities (which are not occurring every month) and we must wonder if such answer reflects some social desirability bias. The study also showed that 69% of students saw, any advertisements for tobacco products during the past 30 days on bill boards. Again, we must question the significance of such answers since there has been strictly no advertising for tobacco products on billboards or any other national media in Seychelles for several decades. The figure that 49% of the students had seen advertisements or promotions for cigarettes in newspapers or magazines in 2007 is also challenging since only very few foreign newspapers or magazines are sold in Seychelles and their reading by youth is not common.

While cigarette advertising in national electronic and printed media and on billboards has been banned (and implemented) for decades in Seychelles, there is no regulation to ban transborder tobacco advertising e.g. imported newspapers, cable TV, Internet.

However, the impact on such transborder advertising is likely minimal as there is no direct tobacco advertising on the cable TV stations currently available in Seychelles, and few magazines and journals are available in the local market (and most of them do not feature advertisement for tobacco products). Further studies should address the discrepancy on results in answers and the local situation, e.g. focus group discussions.

More generally, the reliability and precision of self reported data remain an issue when data are obtained from anonymous, self reported questionnaires, e.g. with regards to students who may not be able to read and/or understand questions well.

## **Conclusion**

The GYTS study in 2007 shows a high prevalence of cigarettes smoking and high exposure to SHS amongst students in Seychelles. There was a slight decrease, yet not statistically significant, in the prevalence of smoking between 2002 and 2007. The prevalence of cigarette smoking was similar in boys and girls which may predict a future large increase in tobacco use in women in the net generation. These findings suggest that tobacco control measures that impact on tobacco use by children should have high priority.

## **RECOMMENDATIONS**

Measures that impact on tobacco use in youth are important because most smokers start smoking at a young age; smoking is a gate way to the consumption of other substances (alcohol, drugs); youth is a period where life-long lifestyle habits are internalized; and school age provides favorable opportunities for health education and behavior change in the school setting. The following issues are particularly important with respect to young persons:

- High taxes on tobacco products are the main deterrent for smoking, particularly by youth who have limited purchasing power. Taxes on cigarettes should be gradually increased over time and exceed inflation rates, as required by the FCTC.
- A total ban on smoking in all enclosed work and public places is very effective to reduce smoking and it may be a particularly important measure to reduce smoking by youth as many adolescents may initiate smoking, under peer pressure, in bars or discotheques. Article 8 of the Framework Convention on Tobacco Control (FCTC) requires that Parties enact total ban on smoking in all enclosed public and work places.
- The ban in Seychelles on tobacco advertising, promotion and sponsoring should be formalized through appropriate legislation. Legislation and other measures should also be developed to address trans-boarder advertising (e.g. ban on imported journals carrying tobacco advertising, in movies, or through the Internet).
- The sale of cigarettes by units should be banned, consistent with Article 16 of the FCTC.
- Measures should be taken to enforce the existing ban on sales of cigarettes to minors.
- Educational programs in schools and in the mass media should be strengthened and sustained in order to keep informing on the hazards of smoking, the addictive nature of cigarette smoking and the need to abstain from smoking. Such efforts must be continuously conducted to target the new generations of young children and to reinforce previous messages to older persons.
- A quit smoking program accessible to the youth should be developed and maintained, including counseling and the provision of nicotine replacement therapy or similar treatments.
- The GYTS or similar surveillance programs should be conducted at regular time intervals to monitor tobacco use among students and to assess the impact of tobacco control programs.

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## ACKNOWLEDGEMENTS

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## APPENDIX I: Fact sheet, GYTS Seychelles 2007

# Seychelles Global Youth Tobacco Survey (GYTS) **FACT SHEET • 2007.**



The Seychelles GYTS includes data on prevalence of cigarette and other tobacco use as well as information on five determinants of tobacco use: access/availability and price, environmental tobacco smoke exposure (ETS), cessation, media and advertising, and school curriculum. These determinants are components Seychelles could include in a comprehensive tobacco control program. The Seychelles GYTS was a school-based survey of students in S1, S2, S3, S4, and S5 conducted in 2007.

A two-stage cluster sample design was used to produce representative data for Seychelles. At the first stage, schools were selected with probability proportional to enrollment size. At the second stage, classes were randomly selected and all students in selected classes were eligible to participate. The school response rate was 100.0%, the student response rate was 86.0%, and the overall response rate was 86.0%. A total of 1,508 students participated in the Seychelles GYTS.

### Prevalence

47.6% of students had ever smoked cigarettes (Boy = 53.1%, Girl = 40.4%)  
26.3% currently use any tobacco product (Boy = 28.9%, Girl = 22.4%)  
20.9% currently smoke cigarettes (Boy = 23.0%, Girl = 17.8%)  
11.3% currently use other tobacco products (Boy = 13.0%, Girl = 9.0%)  
14.5% of never smokers are likely to initiate smoking next year

### Knowledge and Attitudes

36.8% think boys and 19.3% think girls who smoke have more friends  
16.8% think boys and 10.3% think girls who smoke look more attractive

### Access and Availability - Current Smokers

15.7% usually smoke at home  
29.3% buy cigarettes in a store  
67.1% who bought cigarettes in a store were NOT refused purchase because of their age

### Environmental Tobacco Smoke

40.1% live in homes where others smoke in their presence  
56.7% are around others who smoke in places outside their home  
60.7% think smoking should be banned from public places  
53.0% think smoke from others is harmful to them  
29.2% have one or more parents who smoke  
10.9% have most or all friends who smoke

### Cessation - Current Smokers

64.5% want to stop smoking  
70.4% tried to stop smoking during the past year  
70.7% have ever received help to stop smoking

### Media and Advertising

83.8% saw anti-smoking media messages, in the past 30 days  
66.8% saw pro-cigarette ads on billboards, in the past 30 days  
50.7% saw pro-cigarette ads in newspapers or magazines, in the past 30 days  
16.0% have an object with a cigarette brand logo  
8.5% were offered free cigarettes by a tobacco company representative

### School

58.9% had been taught in class, during the past year, about the dangers of smoking  
39.0% had discussed in class, during the past year, reasons why people their age smoke  
47.1% had been taught in class, during the past year, the effects of tobacco use

### Highlights

- Over 2 in 10 students currently use any form of tobacco; 20.9 % currently smoke cigarettes; approximately 1 in 10 currently use some other form of tobacco.
- ETS exposure is high – 4 in 10 students live in homes where others smoke, half of the students are around others who smoke in places outside of their home; almost 3 in 10 students have one or more parent who smoke.
- Over half of the students think smoke from others is harmful to them.
- Six in 10 students think smoking should be banned from public places.
- More than 6 in 10 students who are currently smoking indicated that they want to stop smoking now; 7 in 10 students currently smoking tried to stop during the past year.
- More than three quarters of the students saw anti-smoking messages while two thirds saw pro-cigarette ads on billboards, and half of the students saw pro-cigarettes ads in newspapers & magazines.

## APPENDIX II: Questionnaire, GYTS Seychelles 2007

Dear Student,

This survey is about your health and the things you do that may affect your health. Students like you all over your country are doing this survey. Students in many other countries around the world also are doing this survey. The information you give will be used to develop better health programs for young people like yourself.

DO NOT write your name on this survey or the answer sheet. The answers you give will be kept private. No one will know how you answer. Answer the questions based on what you really know or do. There are no right or wrong answers.

Completing the survey is voluntary. Your grade or mark in this class will not be affected whether or not you answer the questions. If you do not want to answer a question, just leave it blank.

Make sure to read every question. Fill in the circles on your answer sheet that match your answer. Use only the pencil you are given. When you are done, do what the person who is giving you the survey says to do.

Thank you very much for your help.

### THE NEXT 14 QUESTIONS ASK ABOUT YOUR USE OF TOBACCO.

1. Have you ever tried cigarette smoking, even one or two puffs?

- a. Yes
- b. No

2. How old were you when you first tried a cigarette?

- a. I have never smoked cigarettes
- b. 7 years old or younger
- c. 8 or 9 years old
- d. 10 or 11 years old
- e. 12 or 13 years old
- f. 14 or 15 years old
- g. 16 or 17 years old
- h. 18 years old or older

3. During the past 30 days (one month), on how many days did you smoke cigarettes?

- a. 0 days
- b. 1 or 2 days
- c. 3 to 5 days
- d. 6 to 9 days
- e. 10 to 19 days
- f. 20 to 29 days
- g. All 30 days

4. During the past 30 days (one month), on the days you smoked, how many cigarettes did you usually smoke?

- a. I did not smoke cigarettes during the past 30 days (one month)
- b. Less than 1 cigarette per day
- c. 1 cigarette per day
- d. 2 to 5 cigarettes per day
- e. 6 to 10 cigarettes per day
- f. 11 to 20 cigarettes per day
- g. More than 20 cigarettes per day

5. During the past 30 days (one month), how did you get your own cigarettes most often? (SELECT ONLY ONE RESPONSE)

- a. I did not smoke cigarettes during the past 30 days (one month)
- b. I bought them in a store or a shop
- c. I gave someone else money to buy them for me
- d. I borrowed them from someone else
- e. I stole them
- f. An older person gave them to me
- g. I got them some other way

6. During the past 30 days (one month), what brand of cigarettes did you smoke most often? (SELECT ONLY ONE RESPONSE)

- a. I did not smoke cigarettes during the past 30 days
- b. Mixture of various brands
- c. Sword Fish
- d. Mahe King
- e. Benson & Hedges
- f. 555
- g. Marlboro
- h. Other

7. During the past 30 days (one month), how many cigarettes did you usually buy at one time for your own use?

- a. I did not buy cigarettes during the past 30 days
- b. Generally I buy 1 cigarette at a time
- c. Generally I buy 2-3 cigarettes at a time
- d. Generally I buy 4-5 cigarettes at a time
- e. Generally I buy a pack of 10 cigarettes at a time
- f. Generally I buy a pack of 20 cigarettes at a time

8. How much do you usually pay for a pack of 20 cigarettes that you smoke?

- a. I don't smoke cigarettes
- b. I only buy cigarettes by units (1 or a few cigarettes at a time)
- c. SR. 20 to 24 for 1 pack of 20 cigarettes
- d. SR. 25 to 29 for 1 pack of 20 cigarettes
- e. SR. 30 to 34 for 1 pack of 20 cigarettes
- f. SR. 35 to 49 for 1 pack of 20 cigarettes

g. SR. 50 and more for 1 pack of 20 cigarettes

9. During the past 30 days (one month) how much did you spend on cigarettes?

- a. I don't smoke cigarettes
- b. I smoke cigarettes but I don't buy my cigarettes
- c. Less than SR. 10
- d. SR 11 to 20
- e. SR 21 to 40
- f. SR 41 to 60
- g. SR 61 to 100
- h. More than SR 100

10. In a usual month (30 days) how much pocket money (or income or allowance) do you get?

- a. I don't receive any pocket money (or income or allowance)
- b. Less than SR. 5
- c. SR 5 to 25
- d. SR 26 to 50
- e. SR 51 to 100
- f. SR 100 to 150
- g. More than SR 150

11. During the past 30 days (one month), did any shopkeeper ever refuse to sell you cigarettes because of your age?

- a. I did not try to buy cigarettes during the last 30 days
- b. Yes, the shopkeeper refused to sell me cigarettes because of my age
- c. No, my age did not keep me from buying cigarettes

12. During the past 30 days (one month), did you use any form of smoked tobacco products other than cigarettes (e.g. cigars, cigarillos, little cigars, pipe)?

- a. Yes
- b. No

13. During the past 30 days (one month), did you use any form of smokeless tobacco products other than cigarettes (e.g. chewing tobacco, snuff, dip)?

- a. Yes
- b. No

14. Where do you smoke most often? (SELECT ONLY ONE RESPONSE)

- a. I have never smoked cigarettes
- b. At home
- c. At school inside premises
- d. At school outside premises
- e. At friends' places
- f. At social events (e.g. discos, fancy fairs)
- g. In public places (e.g. in town, streets, beach, near shops)
- h. Other

15. Do you ever smoke a cigarette or feel like smoking a cigarette first thing in the morning?

- a. I have never smoked cigarettes
- b. I no longer smoke cigarettes
- c. No, I don't smoke or feel like smoking a cigarette first thing in the morning
- d. Yes, I sometimes smoke or feel like smoking a cigarette first thing in the morning
- e. Yes, I always smoke or feel like smoking a cigarette first thing in the morning

THE NEXT 17 QUESTIONS ASK ABOUT YOUR KNOWLEDGE AND ATTITUDES TOWARD TOBACCO.

16. Do your parents (or stepparents/guardians who stay at your home) smoke?

- a. None
- b. Both
- c. Father or stepfather (boper) only
- d. Mother or stepmother (manman swanye) only
- e. I don't know

17. If one of your best friends offered you a cigarette, would you smoke it?

- a. Definitely not
- b. Probably not
- c. Probably yes
- d. Definitely yes

18. Has anyone in your family discussed the harmful effects of smoking with you?

- a. Yes
- b. No

19 Do you think you will smoke a cigarette at any time during the next 12 months?

- a. Definitely not
- b. Probably not
- c. Probably yes
- d. Definitely yes

20 Do you think you will be smoking cigarettes 5 years from now?

- a. Definitely not
- b. Probably not
- c. Probably yes
- d. Definitely yes

21. Do you think it would be difficult to quit once someone has started smoking?

- a. Definitely not
- b. Probably not
- c. Probably yes

d. Definitely yes

22. Do you think boys who smoke cigarettes have more or less friends?

- a. More friends
- b. Less friends
- c. No difference from non-smokers

23. Do you think girls who smoke cigarettes have more or less friends?

- a. More friends
- b. Less friends
- c. No difference from non-smokers

24. Does smoking cigarettes help people feel more or less comfortable at celebrations, parties, or in other social gatherings?

- a. More comfortable
- b. Less comfortable
- c. No difference from non-smokers

25. Do you think smoking cigarettes makes boys look more or less attractive?

- a. More attractive
- b. Less attractive
- c. No difference from non-smokers

26. Do you think smoking cigarettes makes girls look more or less attractive?

- a. More attractive
- b. Less attractive
- c. No difference from non-smokers

27. Do you think that smoking cigarettes makes you gain or lose weight?

- a. Gain weight
- b. Lose weight
- c. No difference

28. Do you think cigarette smoking is harmful to your health?

- a. Definitely not
- b. Probably not
- c. Probably yes
- d. Definitely yes

29. Do any of your closest friends smoke cigarettes?

- a. None of them
- b. Some of them
- c. Most of them
- d. All of them

30. When you see a man smoking what do you think of him? (SELECT ONLY ONE RESPONSE)

- a. He lacks confidence
- b. He is stupid
- c. He is a loser
- d. He is successful
- e. He is intelligent
- f. He is a 'real man'

31. When you see a woman smoking, what do you think of her? (SELECT ONLY ONE RESPONSE)

- a. She lacks confidence
- b. She is stupid
- c. She is a loser
- d. She is successful
- e. She is intelligent
- f. She is sophisticated

32. Do you think it is safe to smoke for only a year or two as long as you quit after that?

- a. Definitely not
- b. Probably not
- c. Probably yes
- d. Definitely yes

THE NEXT 4 QUESTIONS ASK ABOUT YOUR EXPOSURE TO OTHER PEOPLE'S SMOKING

33. Do you think the smoke from other people's cigarettes is harmful to you?

- a. Definitely not
- b. Probably not
- c. Probably yes
- d. Definitely yes

34. During the past 7 days, on how many days have people smoked in your home, in your presence?

- a. 0
- b. 1 to 2
- c. 3 to 4
- d. 5 to 6
- e. 7

35. During the past 7 days, on how many days have people smoked in your presence, in places other than in your home?

- a. 0
- b. 1 to 2
- c. 3 to 4
- d. 5 to 6
- e. 7

36. Are you in favor of banning smoking in public places (such as in restaurants, buses, schools, gyms and sports arenas, discos)?

- a. Yes

b. No

37. Are you in favor of banning smoking in enclosed public places (such as in restaurants, buses, schools, gyms and sports arenas, discos)?

- a. Yes
- b. No

THE NEXT 6 QUESTIONS ASK ABOUT YOUR ATTITUDES TOWARD STOPPING SMOKING

38. Do you want to stop smoking now?

- a. I have never smoked cigarettes
- b. I do not smoke now
- c. Yes
- d. No

39. During the past year, have you ever tried to stop smoking cigarettes?

- a. I have never smoked cigarettes
- b. I did not smoke during the past year
- c. Yes
- d. No

40. How long ago did you stop smoking?

- a. I have never smoked cigarettes
- b. I have not stopped smoking
- c. I have stopped smoking 1-3 months ago
- d. I have stopped smoking 4-11 months ago
- e. I have stopped smoking 1 year ago
- f. I have stopped smoking 2 years ago
- g. I have stopped smoking 3 years ago or longer

41. What was the main reason you decided to stop smoking? (SELECT ONE RESPONSE ONLY)

- a. I have never smoked cigarettes
- b. I have not stopped smoking
- c. To improve my health
- d. To save money
- e. Because my family does not like it
- f. Because my friends don't like it
- g. Other

42. Do you think you would be able to stop smoking if you wanted to?

- a. I have never smoked cigarettes
- b. I have already stopped smoking cigarettes
- c. Yes
- d. No

43. Have you ever-received help or advice to help you stop smoking? (SELECT ONLY ONE RESPONSE)

- a. I have never smoked cigarettes
- b. Yes, from a program or professional
- c. Yes, from a friend

- d. Yes, from a family member
- e. Yes, from both programs and professionals and from friends or family members
- f. No

44. Do your parents know that you smoke cigarettes?

- a. I do not smoke cigarettes
- b. Yes
- c. No

THE NEXT 9 QUESTIONS ASK ABOUT YOUR KNOWLEDGE OF MEDIA MESSAGES ABOUT SMOKING

45. During the past 30 days (one month), how many anti-smoking media messages (e.g., on television, radio, billboards, posters, newspapers, magazines, movies) have you seen or heard?

- a. A lot
- b. A few
- c. None

46. When you go to sports events, fairs, concerts, community events, or social gatherings, how often do you see anti-smoking messages?

- a. I never go to sports events, fairs, concerts, community events, or social gatherings
- b. A lot
- c. Sometimes
- d. Never

47. When you watch TV, videos, or movies, how often do you see actors smoking?

- a. I never watch TV, videos, or movies
- b. A lot
- c. Sometimes
- d. Never

48. Do you have something (t-shirt, pen, backpack, etc.) with a cigarette brand logo on it?

- a. Yes
- b. No

49. During the past 30 days (one month), when you watched sports events or other programs on TV how often did you see cigarette brand names (e.g. Marlboro)?

- a. I never watch TV
- b. A lot
- c. Sometimes
- d. Never

50. During the past 30 days (one month), how many advertisements for cigarettes have you seen on billboards in Seychelles?

- a. A lot
- b. A few
- c. None

51. During the past 30 days (one month), how many advertisements or promotions for cigarettes have you seen in newspapers or magazines in Seychelles?

- a. A lot
- b. A few
- c. None

52. When you go to sports events, fairs, concerts, or community events in Seychelles how often do you see advertisements for cigarettes?

- a. I never attend sports events, fairs, concerts, or community events
- b. A lot
- c. Sometimes
- d. Never

53. Has someone working for cigarette companies ever offered you a free cigarette?

- a. Yes
- b. No

THE NEXT 4 QUESTIONS ASK ABOUT WHAT WAS DISCUSSED ABOUT SMOKING IN SCHOOL

54. During this school year (since January 2007), has a teacher or any other person ever talked in class about the dangers of smoking?

- a. Yes
- b. No
- c. Not sure

55. During this school year (since January 2007), did you discuss in any of your classes the reasons why people of your age smoke?

- a. Yes
- b. No
- c. Not sure

56. During this school year, was there any discussion in any of your classes about the effects of smoking, like it makes your teeth yellow, it causes wrinkles, or it makes you smell bad?

- a. Yes
- b. No
- c. Not sure

57. How long ago was there any discussion on smoking and health as part of a lesson?

- a. Never
- b. This term
- c. Last term
- d. 2 terms ago
- e. 3 terms ago
- f. More than a year ago

THE LAST 3 QUESTIONS ASK FOR SOME BACKGROUND INFORMATION ABOUT YOURSELF.

58. How old are you?

- a. 11 years old or younger
- b. 12 years old
- c. 13 years old
- d. 14 years old
- e. 15 years old
- f. 16 years old
- g. 17 years old
- h. 18 years old or older

59. What is your sex?

- a. Boy
- b. Girl

60. In what grade are you?

- a. S1
- b. S2
- c. S3
- d. S4
- e. S5

61. Does your 'boyfriend' or 'girlfriend' smokes?

- a. I do not have a boyfriend or girlfriend
- b. Never
- c. Occasionally but not every week
- d. Every week, but not every day
- e. Every day

Now all you have to do is to put the questionnaire in the box with the answer sheets.

We'd like to thank you very much for your collaboration.