

**Global Youth Tobacco Survey
(GYTS)
Kingdom of Bahrain
Report (2003)**

Prepared By

Public Health Department
Ministry of Health
Kingdom of Bahrain
October 2003

Introduction

Tobacco use is one of the chief preventable causes of death in the world. There are over a billion smokers across the world. Smoking now causes million deaths a year worldwide and if trends continue, there will be 10 million deaths from smoking worldwide in about 30 years time. The spread of tobacco epidemic is a global problem with serious consequences for public health that calls for the participation of all countries in an effective, appropriate and comprehensive international response.

The concern is about the ongoing increase in smoking and other forms of tobacco consumption by children and adolescents. Approximately 80% of adults who started smoking before the age of 18. Every day, nearly 4000 young people under the age of 18 try their first cigarettes.

The international society, represented by TFI (tobacco free initiative), WHO (world health organization), CDC (center for disease control and prevention), has been developing international programs to control this epidemic, however, regardless of the worldwide movement against tobacco, tobacco companies still control the tobacco market.

Tobacco in Bahrain

Tobacco is not grown in Bahrain. Although no tobacco is manufactured in Bahrain, there still exists an export/import trade in tobacco products.

In 1990, Bahrain imported 170 tones of unmanufactured tobacco. In 1993, export earnings from cigarettes totaled US\$ 2.5 millions, while cost of tobacco was US\$ 17.3 million.

Some studies done in Bahrain among youth:

---In 1991 study done by Bahrain central statistics organization showed that the prevalence of smoking among males aged 12-14 was 23%, while it was 0.2 % among females of the same age.

---In 1997 study was done among secondary school students aged 13-20 showed a prevalence of 25.8% of males were smokers, with none of the females.

Anti-smoking in Bahrain

The Bahrain anti smoking society was formed in 1979 and was reestablished in 1990.

In 1994 an amiri decree was issued which stated the following:

- No tobacco is cultivated in Bahrain.
- Banning smoking in closed public places.
- Banning smoking in public transport.
- No sponsorship for any kind of sports or contests by tobacco companies.
- No tobacco factories can be built, no machines for displaying cigarettes are allowed.
- Tobacco cannot be sold to those less than 18.
- The ministry of health and including other members from other ministries and NGOs should form anti- smoking committee.
- Anti- smoking committee is responsible for:

- a. Identifying the upper limit for nicotine, tar, and other toxic substances in cigarettes.
 - b. Limit the advertisement, set the warning signs on the advertised material.
 - c. Conduct studies needed in the subject of tobacco.
- Ministry of health responsible to have the inspectors, which can issue tickets for the lawbreaker.

GYTS goals and objectives

GYTS is a school- based tobacco specific survey, which focus on adolescent's age 13-15 years (grade 7-10). It assess students attitude, knowledge, and behavior related to tobacco use and exposure to environmental tobacco smoke, as well as youth exposure to prevention programs, and media messages aimed preventing and reducing youth tobacco use.

Also the GYTS provides information on where tobacco products are obtained and used, as well as the effectiveness of enforcement measures.

The GYTS will address the following issues:

- *Determining the level of tobacco use.*
- *Estimating the age of initiation of cigarette use.*
- *Estimating the level of susceptibility to become a cigarette smoker.*
- *Estimating the exposure to tobacco advertising.*
- *Identifying key intervening variable, such as attitude and beliefs on behavioral norms with regard to tobacco use among young people.*
- *Assessing the extent to which major prevention programs are reaching school-based populations and establish the subjective opinions of those populations regarding such intervention.*

Methodology

Study design and sample

Our sampling frame consists of all schools containing grades 7, 8 9, and 10. with grades 7, 8, 9 being intermediate, and 10 being 1st of the secondary. A two- stage cluster sample design was used to produce a representative sample of students in grade 7 through 10. Data about schools and the number of students were obtained from the ministry of education.

School level –the first stage-sampling frame consisted of all schools containing grades 7 through 10. Since many of the schools had zero enrollments for some of the grades, our sampling frame was broken in two as follows: 76% of the schools were intermediate, and 24% were secondary. Schools were selected with probability proportional to school enrollment size.

Class level- the second sampling stage consisted of systematic equal to probability sampling (with a random start) of classes from each school that participated in the survey. All classes in the selected intermediate schools were included in the sampling frame .in

the case of secondary schools; only all 10th grade classes were included in the frame. All students in the selected classes were eligible to participate in the survey.

Overall response rate:

Schools-100% (50 of 50 sampled schools participated)

Students-95.19% (2158 of the 2269 sampled students completed usable questionnaire).

Overall response rate-100% *85.66%=95.19%.

The questionnaire used is the same used by all countries at EMRO who took part in the GYTS with 18 of the questions were modified to take into account local tobacco-using behavior and the psycho- social and cultural differences so it can suits Bahrain.

A weight has been associated with each questionnaire to reflect the likelihood of sampling each student and to reduce bias by compensating for differing patterns of non-response. The weight used for estimation is given by:

$$W=W1*W2*f1*f2*f3*f4$$

W1= the inverse of the probability of selecting the school

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

f1= a school-level non-response adjustment factor calculated by school size category (small, medium, large).

f2 = a class adjustment factor calculated by school

f3 = a student- level non-response adjustment factor calculated by class

f4= a post stratification adjustment factor calculated by gender and grade

Analysis

We used Epi-info 2002, software package that accounted for the complex sampling design and weighing factors in the data set, to calculate slandered errors and prevalence estimates. Statistical differences included in the report were determined by comparing the 95% confidence intervals. If the ranges of the 95% CI did not overlap then the difference were statistically significant.

Results

Tobacco use

Table 1: Percent of students who use tobacco, Bahrain GYTS, 2003

Category	Ever Smoked Cigarettes, Even One or Two Puffs ESMOKER Table 1	Current Use			Never Smokers – Susceptible to Initiating Smoking SUSCEPNS Table 112
		Any Tobacco Product CTOB Table 5	Cigarettes CSMOKER Table 3	Other Tobacco Products OTOB Table 2	
Total	28.4 (±6.2)	23.3 (±4.6)	14.3 (±3.8)	18.2 (±3.5)	
Sex					
Male	41.5 (±6.2)	33.5 (±4.6)	23.1 (±4.0)	24.9 (±3.8)	
Female	14.1 (±3.8)	11.9 (±2.8)	4.6 (±1.8)	10.6 (±2.4)	

About 3 in ten (28.4%) of all students have ever smoked cigarettes, with ever smoking significantly higher for males than females. About one quarter of students currently use any tobacco products, with 14.3% currently smoking cigarettes and 18.2% currently using other tobacco products. Current use of tobacco of any tobacco products was significantly higher for male students than female students.

Schools and tobacco

Table 2: School Curriculum, Bahrain GYTS, 2003

Category	Percent taught dangers of smoking CORE50C Table 27	Percent discussed reasons why people their age smoke CORE51C Table 28
Total	45.4 (± 5.3)	37.3 (± 5.5)
Sex		
Male	48.6 (± 7.0)	38.2 (± 7.0)
Female	42.3 (± 8.8)	36.3 (± 8.9)

More than 4 in ten (45.4%) of all students had been taught in school during the past year about the dangers of smoking, and 37.3% of them had discussed in school during the past year reasons why people their age smoke. There is no significant difference by gender.

Cessation

Table 3: Cessation, Bahrain GYTS, 2003

Category	Current Smokers	
	Percent desire to stop CORE35A Table 19	Percent tried to stop this year CORE36A Table 20
Total	65.3 (± 7.8)	62.8 (± 8.2)
Sex		
Male	67.3 (± 8.8)	64.7 (± 8.7)
Female	50.6 (± 17.1)	58.3 (± 24.1)

Over six in ten students who currently smoke cigarettes stated that they want to stop smoking during the past year but failed (62.8%). There was no significant difference by gender (no. Of females<35).

Environmental Tobacco Smoke

Table 4: Environmental Tobacco Smoke, Bahrain GYTS, 2003

Category	Exposed to smoke from others in their home		Exposed to smoke from others in public places		Percent think smoking should be banned from public places		Definitely think smoke from others is harmful to them	
	Never Smokers CORE32A Table 77	Current Smokers CORE32B Table 78	Never Smokers CORE33A Table 79	Current Smokers CORE33B Table 80	Never Smokers CORE34A Table 81	Current Smokers CORE34B Table 82	Never Smokers CORE31A Table 75	Current Smokers CORE31B Table 76
Total	33.4 (±4.0)	63.3 (±5.9)	38.8 (±3.5)	72.0 (±6.4)	85.9 (±2.3)	61.7 (±6.9)	69.1 (±3.6)	52.4 (±7.5)
Sex								
Male	30.6 (±4.3)	58.9 (±7.5)	40.1 (±5.5)	73.9 (±6.0)	85.4 (±3.6)	64.0 (±7.4)	67.7 (±6.3)	52.8 (±7.4)
Female	35.2 (±4.8)	82.7 (±10.7)	38.2 (±4.3)	67.8 (±12.7)	86.7 (±2.8)	50.5 (±13.2)	70.3 (±4.6)	46.6 (±21.8)

Exposure of second hand smoke was high for all students (current and never smokers), both at home or in public places (33.4%), (63.3%), (38.8%), (72%) respectively. students who had never smoke cigarettes were significantly less likely to be exposed to second hand smoke. There were no significant difference for those who had never smoker in the exposure to second hand smoke by gender, while females who are currently smoking were significantly highly exposed to second hand smoke than males.

More than 8 in ten (85.9%) of those who had never smoked cigarettes and 61.7% of the current smokers think that smoking should be banned in public places. almost 7 in ten (69.1%) of the students who had never smokers, and 52.4% of those who are current smokers think smoke from others is harmful to them. there is a significant difference between those who had never and those who are current smokers in their perception

Knowledge and attitudes

Table 5: Knowledge and Attitudes, Bahrain GYTS, 2003

Category	Think boys who smoke have more friends		Think girls who smoke have more friends		Think smoking makes boys look more attractive		Think smoking makes girls look more attractive	
	Never Smokers CORE20A Table 55	Current Smokers CORE20B Table 56	Never Smokers CORE21A Table 57	Current Smokers CORE21B Table 58	Never Smokers CORE 23A Table 61	Current Smokers CORE23B Table 62	Never Smokers CORE24A Table 63	Current Smokers CORE24B Table 64
Total	19.3 (±2.4)	36.1 (±4.7)	13.0 (±2.0)	24.1 (±5.6)	18.2 (±2.1)	24.1 (±5.8)	12.0 (±2.3)	19.2 (±4.7)
Sex								
Male	22.6 (±4.9)	38.4 (±5.9)	14.5 (±4.0)	24.3 (±6.1)	18.8 (±4.0)	24.9 (±5.7)	15.7 (±4.3)	17.7 (±5.3)
Female	16.7 (±1.7)	30.7 (±14.1)	11.5 (±1.7)	28.2 (±10.8)	17.4 (±2.4)	25.6 (±12.0)	9.5 (±1.9)	25.9 (±11.2)

Around 2 in ten (19.3%) of never smoker and 36.1% of current smoker think that boys who smoke have more friends. In contrast, both never smokers (13%) and current smokers (24.1%) are less likely to think girls who smoke have more friends than non-smokers. Less than 3 in ten students think boys or girls who smoke are more attractive than non-smokers. Attitude towards students who smoke do not differ significantly by gender.

Significantly, more current smokers think that girls or boys who smoke have more friends. There were no significant difference between smokers and non smokers about their thinking that smoking makes boys look more attractive, while, current smokers think significantly more that smoking makes girls look more attractive.

Media and advertisement

Table 6: Media and Advertising Bahrain GYTS, 2003

Category	Percent Saw Anti-Smoking Media Messages CORE41A Table 22	Percent Saw Pro-Tobacco Messages in Newspapers and Magazines		Percent Who Had Object With a Cigarette Brand Logo On It		Percent Offered " Free" Cigarettes by a Tobacco Company Representative	
		Never Smokers CORE47A Table 108	Current Smokers CORE47B Table 109	Never Smokers CORE44A Table 103	Current Smokers CORE44B Table 104	Never Smokers CORE49A Table 110	Current Smokers CORE 49B Table 111
Total	69.4 (±2.1)	77.7 (±2.9)	78.6 (±6.9)	19.3 (±2.0)	43.8 (±6.5)	7.6 (±1.6)	23.7 (±4.1)
Sex							
Male	70.1 (±3.4)	69.8 (±4.6)	80.3 (±8.0)	19.1 (±3.3)	43.4 (±8.0)	8.0 (±2.8)	25.3 (±5.6)
Female	68.5 (±2.7)	83.5 (±2.5)	85.7 (±11.2)	19.4 (±2.3)	46.8 (±13.4)	7.3 (±2.0)	15.7 (±9.4)

Around 7 in ten students (69.4%) saw an anti- smoking media message in the past 30 days. Over 7 in ten students from both those are never smokers, or those who are current smokers saw a pro- tobacco message in newspapers or magazines during the past 30 days. There was no significant difference in media exposure by gender except for female student who had never smoker they were significantly highly exposed than males to pro-tobacco message in newspaper and magazine

Access and availability

Table7: Access and Availability, Bahrain GYTS, 2003

Category	Percent Current Smokers who Usually Smoke at Home CORE12A Table 10	Percent Current Smokers who Purchased Cigarettes in a Store CORE5BB Table 11	Percent Current Smokers Who Bought Cigarettes in a Store Who Were Not Refused Because of Their Age CORE10A Table 12
Total	13.4 (± 5.6)	52.4 (± 7.3)	75.3 (± 8.2)
Sex			
Male	7.1 (± 4.3)	55.9 (± 6.7)	76.7 (± 8.3)
Female	40.3 (± 16.1)	25.8 (± 13.6)	77.6 (± 23.9)

Only 13.4% of current smokers usually smoke at home and more than half (52.4%) purchase their cigarettes in stores. Almost three quarter of current smoker who usually buy their cigarettes in a store had not been refused purchase because of their age. Significantly females smoke more at home than males, also males significantly higher in purchasing cigarettes in stores than females.

Discussion

Tobacco use

The current trend is that smoking begins with teenager group, as around 80% of all the adults smokers started smoking before the age Of 18, while few of the adult begin their smoking habit as an adult .Our study confirmed this trend as the results of the study revealed that more than one quarter (28.4%) of the study group tried smoking even with one puff. It also showed that around one quarter (23.3%)of the sample who are using at least one of the tobacco products. Other tobacco consumption represents 18.2% of our sample, which we believe that sheesha consists the majority of them (it is the trend in Bahrain as people of Bahrain think that it is less harmful than cigarettes, in the contrary it is the opposite).

School curriculum

Despite the presence of the information about the hazards of smoking in the intermediate and secondary school curriculum, there was a high percentage responded that they were not taught about the dangers of smoking and did not discuss the reasons that make young people their age smokes. This may lead to the conclusion that either our school curriculum information is not well designed to address this issue, or the teachers don't properly send the message to the students. This alarms to the necessity of revising the school curriculum and to introduce them earlier.

Cessation

The indication that more than 60% of the current smokers desire to stop smoking and have actually tried to stop, dictates the urge need to establish youth- oriented counseling services and smoking cessation programs to help young smokers quit smoking.

Environmental tobacco smoke

Our teenagers are exposed to second hand smoke everywhere, at home and in the public places. As more than one third of them live in homes where other family members smoke. It is well known that the environment of smokers play an important role in encouraging young people to smoke, especially if role models like parents smoke. This shows how important to educate the community of the hazards of smoking and the second hand smoking, and to show them how the role model can help in starting or preventing smoking.

Knowledge and attitude.

More current smokers have positive attitude regarding smoking than never smokers, and more than one tenth of never smokers think that boys and girls who smoke have more friends and look more attractive. Therefore, there is an urgent need for intervention to remove these misleading and false images of smokers that are usually promoted by the tobacco industry.

Exposure to media and advertisement

Tobacco industry promoting their products in a wide different ways, this makes the young people more exposed to these advertisement which glamorize the tobacco products and leads them more likely to start smoking. The result of our study gave a clear evidence that the advertisement can reach the young population as more than 7 in ten saw pro-tobacco messages in media. This makes us to think more of controlling this type of advertisement, esp. in Bahrain where the advertisements of the sheesha are shown in newspapers and within the cafés. It is also recommended to increase the anti smoking advertisement all over the country to discourage the youth from smoking.

Access and availability

Young people aged 13-15, smoking at home with or without their parents knowledge reveals the absence of a very important factor of preventing smoking. The study shows that a high percentage of females smoke at home (as smoking in the public is still culturally not accepted for females). Although the law in Bahrain forbids selling tobacco to young people less than 18, yet we see a high percentage (52.4%) purchase their cigarettes from stores and 75.3% were not stopped from purchasing because of their age. Thus we should focus more on applying the laws and to give tickets for all lawbreaker.

Conclusion & Recommendations

Tobacco industry keeps the tobacco consumption persisting despite all the effort exerted to control it. It is threatening our youth whom we depend on for our future, as starting smoking at young age increases the risk of addiction and consequently increasing the risk of death from smoking.

More than 80% of adult smoking starts before the age 18. That's why focusing the intervention programs to those people will reduce the prevalence of tobacco among adults and ultimately reduce the prevalence among adults.

The prevalence rates of tobacco use presented in this report are alarming

So we should have to:

- Increase prevention programs among the whole community to increase the awareness, so we can or reduce initiation and increase the role models for the teenagers.
- Ban smoking in all public, governmental, and private sectors to reduce exposure of second hand smoke especially sheesha.
- Revise the information fed to students through our schools curriculum, and the introduction of them earlier.
- Increase the anti- smoking advertisement and messages through the media and the public places.
- Impose the application of the law, which forbids the advertisement through the mass media (as nowadays sheesha smoking is promoted through the newspapers as part of cafes).
- Reestablish the anti- smoking clinic in Bahrain and increase the smoking cessation counseling programs.
- Impose the application of the law of not selling cigarettes to those less than 18.
- Repeat these types of studies to see the effect of intervention programs.

