

Report on the Results of the Global Youth Tobacco Survey in Kuwait Kuwait 2001

**Dr. Sami El-Nasser, Chief Public Health Office,
Hawalli Health Region, Kuwait
Kuwait GYTS -coordinator**

1-INTRODUCTION

Tobacco smoking has been implicated as an important factor that causes lots of dangerous diseases (e.g.; Atherosclerosis, heart diseases, cerebrovascular, intrauterine growth retardation, cancer in different body organs...etc). Furthermore, low birth weight and infant mortality (approximately 10%) have been attributed to tobacco use during pregnancy. Cigarette smoking also contributes to cancers of pancreas, kidney, and cervix (1,2)

Tobacco smoking is considered to be the chief preventable cause of death in USA (1). The outcome of WHO reports is frightening, as it was found out that there are 4 million deaths annually due to tobacco use and this figure is expected to rise to 10 million deaths a year by 2030. By that time 70% of these deaths will be occurring in the developing countries. Tobacco use is responsible for more than one of every five deaths in the United States (3).

Studies in the developed countries show that most people begin using tobacco before the age of 18 years (4, 5). Recent trends indicate an earlier age of initiation and rising smoking prevalence rate among children and Adolescents. If these patterns continue, tobacco use will result in the death of 250 million of people who are children and adolescents today, many of them in the developing countries (6).

However, many children and adolescents do not understand the nature of tobacco addiction, and are unaware of, or underestimate, the important health consequences of tobacco use (1) In one study which considered smoking as an addiction reported that 75% of teenagers who smoke have made at least one unsuccessful effort to quit (7).

Therefore, youths are considered as the target population of tobacco companies. Besides, as there is no data about the prevalence of tobacco consumption among this young age group, WHO (World Health Organization), in 1998 through Tobacco Free Initiative (TFI), in collaboration with the US CDC (Centers for Disease Control and Prevention), through the Office on Smoking and Health (OSH) has initiated a global surveillance project of tobacco use among young people (Global Youth Tobacco Survey (GYTS)) in consultation with countries in the six WHO regions.

The GYTS is a school-based tobacco specific survey which focuses on adolescents aged 13-15 (grades 8-10). It assesses student' attitudes, knowledge and behaviors related to tobacco use and exposure to environmental tobacco smoke (ETS) as well as youth exposure to prevention curriculum in school, community programs, and media messages aimed at preventing and reducing youth tobacco use. School surveys are useful tools in gathering data, as they are relatively inexpensive, easy to administer, tend to report reliable results, and refusals are significantly lower than that of household surveys.

Objectives of the GYTS

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

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

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

Content of the GYTS

The GYTS addresses the following issues:

- Level of tobacco-use
- Age at initiation of cigarette use
- Levels of susceptibility to become cigarette smokers
- Exposure to tobacco advertising
- Identifying key intervening variables, such as attitudes and beliefs on behavioral norms with regards to tobacco-use which can be used in prevention programmers.

2-METHODS

Kuwait is divided into 5 governorates, we have carried out the survey in 3 governorates: Al-Assema, Hawalli, and Al-Ahmadi. These 3 governorates represent 61% of Kuwaiti population.

A-SAMPLING:

- The 2001 Kuwaiti GYTS is a cross sectional school-based survey which employed a two-stage cluster sample design to produce representative sample of students in grades: 4th from intermediate school, 1st, and 2nd grades from high school, in the three Governorates: Al-Assema, Hawalli, and Al-Ahmadi. These represent students' 13-15 year age group.

Data about schools (governmental only) were obtained from Kuwait Ministry of Education. This data along with the number of students in the age group from 13-15 year of age in each school in the 3 governorates were sent to CDC.

-First stage: School selection:

Schools were selected from the above mentioned 3 governorates with probability proportional to school enrollment size, the outcome has appointed 25 selected schools from each governorate, with a total number 75 schools.

-Second stage: Class selection:

With a random start, this stage consisted of systematic equal probability sampling of classes from each school that was selected in the first stage and participated in the survey. In each selected school, all 4th intermediate, 1st, and 2nd secondary grades were included in the sampling frame. And all students in the selected classes were eligible to participate in the survey.

A weighting factor was applied to each student record to adjust for non-response and for the varying probabilities of selection.

B-Data collection:

Survey procedures were designed to protect the students' privacy by allowing for anonymous and voluntary participation. The self-administered questionnaire was administered in the classroom. Student recorded their responses directly on an answer sheet that could be scanned by a computer. The questionnaire contained 56 core multiple-choice questions, in addition to 22 others (Total of 78 multiple-choice questions).

- Kuwait is divided into 5 governorates, the survey was carried out in only 3 of them: Al-Assema, Hawalli, and Al-Ahmadi. These 3 governorates represent 61% of Kuwaiti population.
- A team that consists of: 1 survey administrator (Physician Epidemiologist, MBBCH, MPH), 25 school social workers, and 4 Public Health Nurses, was appointed for Each governorate.
- Two separate training workshop sessions have been held: one for the school social workers, and the second for the Public workers.

Analysis

For the analysis, a weighting factor was applied to each student record to adjust for non-response and the varying probabilities of selection. The programs SUDAAN and Epi-Info were used to compute rates and 95% Confidence Intervals for the estimates. A weight was associated with each questionnaire to reflect the likelihood of sampling each student and to reduce bias by compensating for differing patterns of non-response. The weight used for estimation is given by: $W=W1*W2*f1*f2*f3*f4$

Where,

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-level non-response adjustment factor calculated for each school

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

f4 = a post stratification adjustment factor calculated by form

Weighting, Variance Estimation, & Statistical Testing

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

A percent and its estimated standard error may be used to construct confidence intervals (C.I.) about the percent.

The C.I. is expressed as a range (upper and lower) around the percent. The C.I. range contains the average value of the percent, which would result if all possible samples were produced. The 95% C.I. suggests that if 100 samples were drawn and C.I.s were calculated for each, then the average value of the percent would be contained in 95 of the 100 C.I.s

Statistical Testing

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

- E.g. In the table on prevalence, 30.1% males and 21.5% females had ever tried smoking. The 95% C.I. for each percent is calculated by multiplying the standard error (SE) by 1.96, giving 6.9 & 4.0 for males and females respectively.
- Therefore the lower and upper bounds for the two percentages are Males 30.1% = [23.2,37.0] & Females 21.5% = [17.5,25.5]
- Statistical difference is determined by comparing the upper bound, for the smaller % and the lower bound, for the larger %
- if the two ranges do not overlap, then the two %s are statistically (significantly) different at the 95% C.I.
- If the two ranges overlap, then there is no statistical (significant) difference between the two %s, at the 95% C.I. In this example, the percentages 30.1 [23.2, 37.0] and 21.5 [17.5, 25.5] overlap, therefore there is no significant difference in students who have ever smoked, between male and female students.

3-RESULTS:

For the 2001 Kuwait GYTS: A total of 6330 questionnaires were completed in 75 schools, in the three governorates (Al-Ahmadi, Al-Assema, and Hawalli).

In Al-Ahmadi Governorate, twenty-five schools and 2266 students were sampled, but 2137 questionnaires were completed (The school response rate 100%, and the student response rate 94.31%).

In Al-Assema governorate, twenty five schools and 2229 students were sampled, but 2161 questionnaires were completed (The school response rate 100%, and the student response rate 96.95%)

In Hawalli governorate, twenty-five schools and 2185 students were sampled, but 2032 questionnaires were completed (The school response rate 100%, and the student response rate 93%).

With 75 schools (The overall school response rate 100%, and the overall student response rate 94.76%).

Epi Info was used to compute 95% confidence intervals for the estimates.

| | Number of schools | | Number of students | | Response rate | | |
|------------------|-------------------|--------------|--------------------|--------------|---------------|---------------|---------------|
| | Sample | Participated | Selected | Participated | School | Student | Overall |
| Al-Ahmadi | 25 | 25 | 2266 | 2137 | 100% | 94.31% | 94.31% |
| Al-Assema | 25 | 25 | 2229 | 2161 | 100% | 96.95% | 96.95% |
| Hawalli | 25 | 25 | 2185 | 2032 | 100% | 93% | 93% |
| Total | 75 | 75 | 6680 | 6330 | 100% | 94.76% | 94.76% |

Prevalence

Percentage of students who used tobacco

Table 1: Percent of students who use tobacco, Kuwait - Total GYTS, 2001

| | Ever Smoked Cigarettes, Even One or Two Puffs | Current Use Category | | | Never Smokers B Susceptible to Initiating Smoking |
|------------------|---|----------------------|---------------------|-----------------------|---|
| | | Any Tobacco products | Cigarettes | Other Tobacco Product | |
| Total | 28.8 (± 3.1) | 27.0 (± 2.5) | 14.9 (± 2.4) | 20.4 (± 1.9) | 20.0 (± 1.6) |
| Sex | | | | | |
| Male | 37.6 (± 3.5) | 33.3 (± 2.8) | 21.1 (± 2.7) | 24.1 (± 2.3) | 23.3 (± 2.6) |
| Female | 17.6 (± 2.8) | 18.4 (± 2.1) | 6.7 (± 1.5) | 15.3 (± 1.9) | 17.6 (± 2.2) |
| Al-Ahmadi | 31.3 (± 7.3) | 26.1 (± 5.7) | 15.6 (± 5.6) | 18.1 (± 3.2) | 17.9 (± 2.9) |
| Al-Assema | 24.5 (± 4.0) | 24.4 (± 3.5) | 12.2 (± 3.1) | 19.3 (± 3.2) | 17.9 (± 2.9) |
| Hawalli | 31.5 (± 4.4) | 31.2 (± 3.8) | 17.7 (± 3.5) | 24.1 (± 3.2) | 19.9 (± 2.9) |

Ever Smoked Cigarettes

From this table , approximatly one third of all students (28.8%) have ever smoked cigarettes (smoked cigarettes even one or two puff), and the prevalence among males (37.6 (± 3.5)) is significantly higher than that among females (17.6 (± 2.8)).

Any Tobacco Product

The percentage of students currently use (one or more days in the past 30 days preceding the survey) any tobacco product is 27.0 (± 2.5), the percentage among current use any tobacco prodcut male students 33.3 (± 2.8) is significantly higher than that among female students 18.4 (± 2.1).

Current use of cigarettes

The percentage of students currently use (one or more days in the past 30 days preceding the survey)of Cigerattes Is 14.9 (+-2.4), with current of use cigarettes significantly higher for male 21.1(± 2.7) than females students 6.7(± 2.1).

Other tobacco products

The percentage of students currently use (one or more days in the past 30 days preceding the survey) tobacco products other than cigarettes is 20.4 (± 1.9) with a gender significant difference as it is higher in males 24.1

(± 2.3) than that in females 15.3 (± 1.9).

Never Smokers Susceptible to Initiating Smoking

The percentage of never smoke students who are susceptible to initiating smoking next year is 20.0 (± 1.6) and the percentage is significantly higher among male students 23.3 (± 1.6) than that among female students 17.6 (± 2.2)

Table 2: School Curriculum, Kuwait - Total GYTS, 2001

| Category | Percent taught dangers of smoking | Percent discussed reasons why people their age smoke |
|------------------|------------------------------------|--|
| Total | 29.1 (± 2.4) | 30.0 (± 2.3) |
| Sex | | |
| Male | 34.6 (± 3.5) | 33.6 (± 3.2) |
| Female | 24.3 (± 2.6) | 26.9 (± 3.2) |
| Al-Ahmadi | 25.6 (± 6.0) | 28.0 (± 6.0) |
| Al-Assema | 29.3 (± 2.7) | 29.4 (± 2.6) |
| Hawalli | 32.6 (± 3.7) | 33.1 (± 3.2) |

Percent taught dangers of smoking

Almost only one third (29.1%) of students had been taught the dangers of smoking in school during the past year, and the percentage is significantly higher among male students {34.6 (± 3.5)} than that among female students {24.3 (± 2.6)}

Percent-discussed reasons why people their age smoke

One third (30%) of students discussed in school during the past year why people their age smoke, and the percentage is significantly higher among male students {33.6 (± 3.2)} than that among female students {26.9 (± 3.2)}

Table 3: Cessation, Kuwait - Total GYTS, 2001

| Category | Current Smokers | |
|------------------|------------------------------------|-------------------------------------|
| | Percent desire to stop | Percent tried to stop this year |
| Total | 63.9 (± 4.0) | 27.6 (± 4.8) |
| Sex | | |
| Male | 67.0 (± 4.1) | 23.6 (± 4.7) |
| Female | 50.4 (± 8.9) | 38.3 (± 11.6) |
| Al-Ahmadi | | |

| | | |
|------------------|---------------------|----------------------|
| | 67.4 (± 6.6) | 25.7 (± 9.4) |
| Al-Assema | 62.2 (± 8.5) | 28.7 (± 10.3) |
| Hawalli | 62.7 (± 5.8) | 28.5 (± 5.4) |

Over six in ten (63.9%) students who currently smoke cigarettes desire to stop smoking ,with students who currently smoke cigarettes desire to stop smoking significantly higher for male 67.0 (± 4.1) than female students 50.4 (± 8.9)

Approximately three in ten (27.6%) students who currently smoke cigarettes tried to stop smoking in the past year but failed, and there was no significant difference by gender .

Table 4: Environmental Tobacco Smoke, Kuwait - Total GYTS, 2001

| 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 | Current Smokers | Never Smokers | Current Smokers | Never Smokers | Current Smokers | Never Smokers | Current Smokers |
| Total | 38.3 (± 2.2) | 68.4 (± 3.3) | 54.5 (± 1.9) | 83.1 (± 2.4) | 85.8 (±1.4) | 59.5 (± 3.1) | 68.2 (± 2.0) | 51.4 (±2.9) |
| Sex | | | | | | | | |
| Male | 32.7 (± 3.7) | 65.0 (± 4.1) | 54.0 (± 3.3) | 85.1 (± 3.0) | 84.1 (± 1.8) | 58.8 (± 3.9) | 66.0 (± 2.8) | 55.9 (± 3.7) |
| Female | 41.4 (± 2.5) | 72.4 (± 6.4) | 54.8 (± 2.1) | 83.1 (± 4.1) | 87.4 (± 2.0) | 62.7 (± 6.6) | 70.5 (± 2.3) | 46.6 (± 7.4) |
| Al-Ahmadi | 41.4 (± 3.7) | 69.9 (± 4.2) | 52.1 (± 3.5) | 81.7 (± 3.6) | 86.4 (± 3.7) | 59.3 (± 4.8) | 66.3 (± 3.7) | 51.4 (± 4.5) |
| Al-Assema | 35.4 (± 4.0) | 66.8 (± 8.1) | 56.8 (± 2.5) | 83.9 (± 5.0) | 85.7 (± 1.3) | 62.0 (± 5.7) | 69.8 (± 3.2) | 51.6 (± 5.2) |
| Hawalli | 38.9 (± 2.9) | 68.6 (± 5.8) | 53.8 (± 3.9) | 83.9 (± 4.1) | 87.3 (± 2.1) | 57.4 (± 5.3) | 67.9 (± 3.6) | 51.4 (± 5.2) |

The exposure to secondhand smoke was high for all students in Kuwait ,both in their home and in public place.

Percentage of students who had never smoked cigarettes was significantly lesser than current smoker in exposure to a second hand smoker at home and public places.

85.8% of students who never smoked cigarettes, and 59.5% of students who are currently smokers think that smoking should be banned in public places, and there is a significant difference between them.

68.2% of students who had never smoked cigarettes and 51.4% of students who currently smoke think smoke from others is harmful to them, and there is a significant difference between male {66.0 (± 2.8)}, and female students (70.5 (± 2.3)) who had never smoked cigarettes think smoke from others is harmful to them.

Percentage of students who are exposed to environmental tobacco smoke and their attitude towards it.

Table 5: Knowledge and Attitudes, Kuwait - Total GYTS, 2001

| 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 | Current Smokers | Never Smokers | Current Smokers | Never Smokers | Current Smokers | Never Smokers | Current Smokers |

| | | | | | | | | |
|------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|
| Total | 24.0 (± 1.5) | 34.4 (± 3.3) | 17.5 (± 1.9) | 29.5 (± 3.7) | 20.1 (± 1.5) | 36.7 (± 3.9) | 13.3 (± 1.6) | 28.3 (± 2.8) |
| Sex | | | | | | | | |
| Male | 24.0 (± 2.5) | 36.3 (± 4.0) | 21.3 (± 2.8) | 30.5 (± 5.3) | 20.2 (± 2.7) | 33.9 (± 4.7) | 18.2 (± 2.3) | 27.8 (± 3.2) |
| Female | 23.6 (± 2.1) | 29.7 (± 7.5) | 14.2 (± 2.0) | 26.9 (± 6.6) | 19.4 (± 1.9) | 44.2 (± 6.8) | 9.4 (± 2.0) | 25.4 (± 6.1) |
| Al-Ahmadi | 26.7(± 3.3) | 35.2(± 5.3) | 18.9(± 3.9) | 32.6(± 6.2) | 18.8(± 1.7) | 41.9(± 6.2) | 14.3(± 3.9) | 32.5(± 3.8) |
| Al-Assema | 21.6(± 2.1) | 34.8(± 6.6) | 15.7(± 3.1) | 27.1(± 6.9) | 20.3(± 2.9) | 29.8(± 6.9) | 12.1(± 1.9) | 24.8(± 5.3) |
| Hawalli | 24.7(± 2.3) | 33.3(± 5.1) | 18.4(± 2.6) | 28.9(± 5.3) | 21.0(± 2.9) | 38.1(± 5.9) | 14.1(± 3.0) | 27.6(± 4.7) |

Percentage of student knowledge and the attitudes towards smoking ,for both never and current smokers.

About one forth (24%) of students who never smoke and one third (34.4%) of students who currently smoke think boys who smoke have more friends. There was no significant difference between male

students and female students.

17.5% of students who never smoke and 29.5% of students who are currently smoke think girls who smoke have more friends . There is significant difference between males and females that never smoke, and there is a significant difference between never smoked and currently smoke students who think smoked girls have more friends.

20.1% of students who never smoked, and 36.7% of students who are current smoke think smoking makes boys look more attractive, there is a significant difference between never smoked {20.1 (± 1.5)} and current smoke students {36.7 (± 3.9)}.

13.3% of students who never smoked and 28.3% of students who are current smoke think smoking makes girls look more attractive. There is a significant difference between never smoke {13.3 (± 1.6)} and current smoke students { 28.3 (± 2.8)}

Table 6: Media and Advertising Kuwait - Total GYTS, 2001

| Category | Percent Saw Anti-Smoking Media Messages | Percent Saw Pro-Tobacco Messages in Newspapers and Magazines | | Percent Who Had Object With a Cigarette Brand Logo On It | | Percent Offered Afree Cigarettes by a Tobacco Company | |
|------------------|---|--|---------------------|--|---------------------|---|---------------------|
| | | Never Smokers | Current Smokers | Never Smokers | Current Smokers | Never Smokers | Current Smokers |
| Total | 68.4 (± 1.5) | 89.2 (± 1.1) | 87.8 (± 2.3) | 17.0 (± 1.3) | 34.8 (± 3.6) | 18.0 (± 1.7) | 58.3 (± 3.9) |
| Sex | | | | | | | |
| Male | 69.7 (± 2.1) | 87.5 (± 1.8) | 89.7 (± 2.0) | 19.8 (± 2.3) | 34.1 (± 4.1) | 25.6 (± 2.3) | 61.2 (± 4.5) |
| Female | 66.9 (± 2.3) | 90.3 (± 1.3) | 89.2 (± 3.8) | 15.2 (± 1.6) | 37.8 (± 7.3) | 12.8 (± 1.6) | 51.2 (± 6.4) |
| Al-Ahmadi | 70.4(± 3.4) | 90.8(± 2.0) | 86.9 (± 4.5) | 17.5 (± 2.6) | 38.5 (± 5.5) | 17.7 (± 4.7) | 55.6 (± 6.5) |
| Al-Assema | 65.8(± 2.0) | 89.2(± 1.8) | 85.2 (± 4.2) | 16.0 (± 1.5) | 30.4 (± 5.2) | 18.1 (± 1.8) | 60.0 (± 6.6) |
| Hawalli | 69.7(± 2.9) | 87.6(± 2.0) | 90.9 (± 3.6) | 17.9 (± 3.0) | 35.5 (± 7.6) | 18.3 (± 2.2) | 59.2 (± 6.9) |

Percentage of students who have seen anti-smoking messages, and advertisement for cigarettes

-Nearly seven in ten (68.4%) of students saw anti-smoking media messages in the past 30 days with no significant difference by gender.

-Approximately 9 in every 10 students(89.2%) who never smoked and 8 in ten(87.8%) currently smokers students saw pro-tobacco messages in newspapers and magazines, there is a significant difference between never smoked {17.0 (\pm 1.3)} and current smoke students {34.8 (\pm 3.6)}.

-17% of never smoked and 34.8% of current smoker's students had an object with a cigarette brand logo on it, and there is a significant difference between never smoked{18.0 (\pm 1.7)} and current smoke students {58.3 (\pm 3.9)}.

-18% of never smoked, and 58.3% of current smokers students have been offered a free cigarettes by a tobacco company. There is a significant difference between never smoked {(18.0 (\pm 1.7))} and current smokers students { 58.3 (\pm 3.9)}.

Table7: Access and Availability, Kuwait - Total GYTS, 2001

| Category | Percent Current Smokers who Usually Smoke at Home | Percent Current Smokers who Purchased Cigarettes in a Store | Percent Current Smokers Who Bought Cigarettes in a Store Who Were Not Refused Because of Their Age Table 12 |
|-----------|---|---|--|
| Total | 21.2 (\pm 3.7) | 24.6 (\pm 4.1) | 89.4 (\pm 3.8) |
| Sex | | | |
| Male | 13.0 (\pm 2.4) | 27.2 (\pm 5.2) | 88.7 (\pm 5.5) |
| Female | 46.3 (\pm 9.7) | 16.5 (\pm 5.8) | * |
| Al-Ahmadi | 23.8 (\pm 8.4) | 20.6 (\pm 8.3) | 84.9 (\pm 6.4) |
| Al-Assema | 19.2 (\pm 5.4) | 28.4 (\pm 7.4) | 95.1 (\pm 6.8) |
| Hawalli | 20.5 (\pm 5.3) | 25.0 (\pm 4.8) | 88.1 (\pm 5.1) |

*The number of respondents (n) in this cell less than 35

Percentage of students who currently smoke cigarettes by where they usually smoke and how they obtain their cigarettes.

- Almost one fifth of students (21.2%) who currently smoke cigarettes, smoke at home, and approximately one fourth of them (24.6%) purchased their cigarettes at stores, with a significant difference between male 13.0 (\pm 2.4) and female 46.3 (\pm 9.7) students who usually smoke at home.
- Almost 9 in every 10 of (89.4%) of currently smokers cigarettes who bought cigarettes in a store were not refused because of their age.

Discussion:

The Global Youth Tobacco Survey (Kuwait 2001) is the first nation wide survey done in Kuwait concerning issues about tobacco use by school students age 13 to 15 years old .

The Global Youth Tobacco Survey is a school-based survey which was undertaken among school students aging 13 - 15 years old. It presents a clear picture of the magnitude of the problem of tobacco use among youths. The survey in Kuwait was done in three governorates (Al-Ahmadi,Al-Assema and Hawalli) which differ in population composition, and represent 61% of the whole Kuwait population.

Tobacco use is quite high among school students, where nearly one third (28.8%) of students sample in the survey tried smoking cigarettes even if it was one or two puffs . Like in most countries males were significantly more likely than females to have ever tried smoking cigarettes. .

14.9% of students sample were current use of cigarettes on one or more days in the past 30 days preceding the survey . Males who currently use cigarettes were significantly more than female students.

24.1% of students currently use other tobacco products other than cigarettes such as water pipe ,little cigar,cigar and pipe.The percentage of students with current use of other tobacco products other than cigarettes was significantly more than the current smoking cigarette students. Female students who currently use other tobacco products other than cigarettes were significantly more than female students who currently use cigarettes. We should encompass all types of tobacco use when developing the intervention and not only focus on cigarette smoking.

One in five (20%) of never smoke students are susceptible to initiating smoking in future. This figure is quite high and need more effort and co-operation between Ministry of Education , Ministry of Health and all governmental and non-governmental agencies to establish intervention to protect the susceptible students. Significantly more male than female students are susceptible to initiating smoking in future.

The majority of current smoking students want to stop smoking . Six in ten (63.9%) of current smoking students want to stop smoking. Only near three in ten (27.6%) of current smoking students tried to stop smoking but failed . There is a study which showed that those who start smoking at younger age find more difficulty to stop smoking (10.11) . This means that the current smoking students need more effort and intervention to help them.

Exposure of the young to environmental tobacco smoke is high in Kuwait. A significantly more percentage of current smoking students than never smoker students are exposed to someone else smoke in their home or in public places. Despite the presence of a legislation in Kuwait banned smoking in public places, the law has not been successfully implemented. On the other hand we need wide awareness campaigns to alert current smoker parents, teachers and other current smokers about the harmful effect of smoking on themselves and on the others around them. We need also to enforce the law. A positive finding was the high percentage of both never and current smoker students who want to ban smoking in public places.

The current smoker students think that smoker students have more friends and look more attractive. This shows shortness in knowledge and bad attitude of the young about smoking. Regarding this matter we need to develop a plan of education especially for the young to change these attitudes.

The international research shows that tobacco advertising targets and influences smoking patterns of the young (12,13). A large percentage of students saw anti-smoking media messages, also a large percentage of students saw pro-tobacco messages in newspapers and magazines. Despite we have a legislation in Kuwait banned tobacco advertising in media, the law has not been successfully implemented.

The percentage of current smoker students who have object with a cigarette brand logo on it is significantly more than the never smoke students. There is a direct relationship between owning object with a cigarette brand logo on it and increased susceptibility of becoming a smoker (12,13).

There is a significantly higher percentage of current smoker students who were offered a free cigarettes by tobacco company than the never smoke students. We need to renew the legislation of tobacco control in Kuwait to include the ban of free cigarettes and distribution of object with a cigarette brand logo on it to protect future generation.

One in four (21.2%) of current smoker students smoke at home. The percentage of current smoker females who usually smoke at home is significantly more than current smoker male students. This reflects the cultural factor in Kuwait. Nine in ten (89.4%) of current smoker students bought cigarettes in stores without being refused because of their age. Despite the presence of a legislation in Kuwait banned sale of cigarettes to the young below 18 years, the law has not been successfully implemented. It is important to find suitable mechanisms to enforce the law and ensure that transgressors of the law are prosecuted, and it is important to alert the retailers about this legislation to protect the health of young generation.

Recommendation and conclusion

The GYTS Kuwait 2001 has shown high prevalence of ever smoke cigarette students. This indicates we need to establish and adopt a strategy especially for youth to decrease prevalence of smoking and to help smokers to stop smoking and to protect school environment from smoking.

Despite high percentage of ever smoke students, only 30% of students discussed the harmfulness of tobacco in their school. It is important to establish Tobacco Control Education Committee to develop strategies especially for youth, and develop mechanisms to integrate these strategies through the school curriculum. This committee should include professionals from Ministry of Education, Ministry of Health and other governmental and non-governmental agencies with interest in anti-smoking.

Creation of wide anti-smoking campaigns to focus on the awareness of the dangerous effects of cigarette smoking and other tobacco products on health of students ,through regular health education and health promotion campaigns. It is important that students and parents participate in this activity .

From the survey we notice that students in schools of Kuwait use other tobacco products other than cigarettes more than cigarettes, this point needs more investigation and we should consider this matter when developing youth tobacco control intervention .

There is a high percentage of current smoker students who desire to stop however those who tried to stop smoking failed. All these students need support and intervention to help them. I think to develop anti-smoking clinic in school is very helpful for them .

Despite the presence of a legislation banned smoking in school, there are many teachers and school workers who smoke cigarettes in front of students at school. Awareness of teachers and school workers about the legislation is important to enforce the legislation and ensure that transgressors of law are prosecuted. On the other hand we have in Kuwait good legislation for banned smoking in public places, health sector and schools but we need to enforce these laws to develop free tobacco community.

High exposure of the young to environmental tobacco smoke in both home and public places is alarming. We need a plan to increase awareness of the adults especially parents about the harmful effects of smoking on themselves and their children.

Data from the survey show that the youth are highly exposed to extensive cigarette advertisement. Advertisements of cigarettes and other tobacco products should be banned in mass media especially in sport pages. On the other hand, we can use mass media to increase awareness of the community about the harmful effects of tobacco smoking .

WHO recommended to repeat the GYTS every three years. I think it is a good way to evaluate the anti-smoking programs in schools of Kuwait ,also to give clear information about smoking tobacco among students in schools.

Acknowledgment

This survey was supported by ministry of health, ministry of education, EMRO – Tobacco Free Initiative and CDC – Centers For Disease Control and Prevention – Office on Smoking and Health .

We would like to thank all members of ministry of health who participated in this survey, as well as those at the ministry of Education including headmasters and headmistresses of the selected schools .

The participation of Dr. Ahmed Khalil, (Our Physician Epidemiologist in Mubarak Hospital), field Public Health Nurses, and Social Workers from the Ministry of Education in completing this report deserve great acknowledgement and appreciation.

The following organizations, ministries and individuals have contributed towards the successful implementation of this survey :

Ministry of Health:

- Dr. Abderrahim Fahd Alzzeit
- Dr. Ali Yousef Al Saif

Undersecretary of Ministry of Health
Assistant Undersecretary of Public Health - Ministry of Health

Ministry of Education :

- Abdelaziz Al Jarallah

Undersecretary - Ministry of Education

- | | |
|------------------------|---|
| - Mansour Ghaloum | Assistant Undersecretary of Educational development – Ministry of Education |
| - Ali Mohammad Mubarak | Technical Director of Social Service |

World Health Organization :

| | |
|-------------------|--|
| Dr. Fatima Al Awa | Acting Regional Advisor, Tobacco Free Initiative |
|-------------------|--|

Centers For Disease Control and Prevention – Office on Smoking and Health :

- | | |
|-------------------------|-----------------------------------|
| - Dr. Charles W. Warren | Distinguished Fellow Statistician |
| - Mr. Curtis Blanton | Statistician |
| - Ms. Stephanie Staras | Epidemiologist |
| - Ms. Juliette Lee | Epidemiologist |

Field Supervisors :

- | | |
|------------------------------|---|
| - Dr. Ahmad Ibrahim Khalil | Hawalli Health Region – Ministry of Health |
| - Dr. Majid Mohammad Radhwan | Al Assemah Health Region – Ministry of Health |
| - Dr. Mahmoud Emam | Al Ahmadi Health Region – Ministry of Health |

Researchers :

- | | |
|---------------------------------|--|
| - Fawzi Jaber Saleem | Hawalli Health Region - Preventive Health - MOH |
| - Medhat Fathi Riyadh | Hawalli Health Region - Preventive Health – MOH |
| - Refaa Salem Al Ajmi | Hawalli Health Region - Preventive Health – MOH |
| - Fadhilah Ali Al Shatti | Hawalli Health Region - Preventive Health – MOH |
| - Al Sa'eed Aref Al Jawad | Al Assemah Health Region - Preventive Health – MOH |
| - Taher Al Huseini Essa | Al Assemah Health Region - Preventive Health – MOH |
| - Samira Ali Jassem | Al Assemah Health Region - Preventive Health – MOH |
| - Hanan Abdullah Al Badi | Al Assemah Health Region - Preventive Health – MOH |
| - Mohammd Abdelwahab Al Nasser | Al Ahmadi Health Region - Preventive Health – MOH |
| - Husein Ahmad Husein | Al Ahmadi Health Region - Preventive Health – MOH |
| - Nora Mubarak Mohammad Al Ajmi | Al Ahmadi Health Region - Preventive Health – MOH |
| - Mona Ali Abdullah Al Hajj | Al Ahmadi Health Region - Preventive Health – MOH |

Social Workers :

- | | |
|--------------------------------------|---------------------------------------|
| - Mustapha Dahab Saleh Ali | Abdullah Sanan School for boys |
| - Ayman Ahmad Ali Al Faraj | Othman Bin Matoon School for boys |
| - Al Sa'eed Ameen Al Sa'eed Zaid | Al Ma'arree School for boys |
| - Jamal Ibrahim Ali | Abduallh Al Ahmad Secondary School |
| - Al Sayed Mohammd Abu Essaad | Ennasr Secondary School for boys |
| - Yahia Abdelhameed Nada | Al Sabahiya Secondary School for boys |
| - Fathi Ismael | Fahd Essalem Secondary School |
| - Mustapha Abdelmen'em Mohammad | Hisham Bin Al Ass Secondary School |
| - Abduallah Jerri Fahd Al Jerri | Al Ahmadi Secondary School |
| - Hazem Ali Mahmoud Nadeem | Al Zahr Secondary School |
| - Aref Dandrawi Mohammad Mahmoud | Abbad Bin Bishr Secondary School |
| - Hamdi Zaghlol Atiya Khalid | Al Farazdaq School for boys |
| - Sarah Badran Al Dossari | Heraa Intermediate School |
| - Latifah Mohammad Baheed Al Shemari | Sabeia Bint Al Haress School |
| - Nawal Suliman Omar Mohammad | Al Fahaheel Secondary School |
| - Nora Hanoun Oied Al Shemari | Al Fintas Secondary School |
| - Soad Husein Khalaf Mallalah | Al Manqaf Secondary School |
| - wadha Fahd Mansour AL Ajmi | Al Riqa Secondary School |
| - Amal Ayed Al Sebei'ee | Al Sabahiya Secondary School |
| - Monirah Mohammad Fahad Al Ajmi | Fatmah Bint Assad Secondary School |
| - Ghanimah Barghash Muwazi Harkan | Hadiya Moqarrarrat Secondary School |
| - Sheikha Khalid Bin Awad Al Muteiri | Muaz Al Ghefariya Secondary School |
| - Malekah Mohammad Asselan Al Oteibi | Um Al Alaa Secondary School |
| - Huda Ahmad Shehab | Al Zohr Intermediate School for Girls |
| - Nada Mohammad Souod Al Ja'eeb | Gharb Al Fintas Intermediate School |

- Alaa Atiya
- Sa'eed Mahanna
- Ahmad Sa'eed
- Tharwat Nawar
- Hamdi Al Sharqawi
- Habeeb Al Muteiri
- Mohammad Al Ayadhi
- Zenhom Sayed
- Nasser Al Bassri
- Yousef Ali
- Yousef Mohsen
- Alaa Al Rashedi
- Sahilah Al Zenki
- Amaal Al Bassar
- Masha'el Mohammad
- Amal Al Nasser
- Khetam Al Anzi
- Reem Makki
- Sharefa Bou Rabee
- Eman Abdelhadi
- Reem Al Rumeih
- Assia Al farass
- Kholod Al Kandari
- Monirah Al Nifeissi
- Nabilah Al Assoussi
- Mohammad Mohammad Ghaz
- Hamdi Abdellateef Mussa
- Ahmad El Sayed Faraj
- Hassan Mustapha Hassan
- Mahmoud Abdelhaleem Badawi
- Mamdouh Mohammad Mahmoud
- Mohammad Najeeb Fareed
- Anwar Ezzat Mohammad
- Mohammad Refat Al Bassiuni
- Moheedeem Mohammad Ali
- Salah Eddeen Al Sayed Hussein
- Mohammad Mamoun Al Bakri
- Mohammad Al Anwar Ragheb
- Masoumah Abdelkhdr
- Mona Abderrahman Al Failakawi
- Hanaa Thani Al Twetan
- Mona Mohammad Habeeb
- Narjess Abdelkareem Al Saffar
- Khawla Ibrahim Al Saleh
- Hanadi Faisal Abdullah
- Nada Mahmoud Shaker
- Sarrah Ghaloum Al Ali
- Badriya Saad Al Azmi
- Basmah Mohammad Al Rouq
- Ghanimah Ahmad Al Kandari

Technical assistants :

- Mohammad Abdelhadi Al Bialy
- Kamal Mohammad Mahmoud

Abdelaziz Hussein School for Boys
 Al Faiha Intermediate School for Boys
 Al Yarmouk Intermediate School
 Maan Bin Za'eda Intermediate for Boys
 Seif Al Dawlah Intermediate for Boys
 Abdullah Al Oteibi Secondary School
 Abdullah Al Jaber Al Sabah Secondary School
 Abdullah Al Mubarak Al Sabah Secondary School
 Hamad Al Bishr Al Romi Secondary School
 Al Assma'ee Secondary School for Boys
 Al Awza'ee Secondary School for Boys
 Hamad Essa Al Rujeib Secondary School
 Al Dasmah Intermediate School for Girls
 Nassebah Bint Kaab Intermediate School for Girls
 Um Atiya Al Anssari Intermediate School
 Al Assmaa Bint Al Haress Secondary School
 Al Doha Secondary School for Girls
 Al Ediliyah Secondary School for Girls
 Al Mansouriyah Secondary School for Girls
 Al Rawdha Secondary School for Girls
 Al Yarmouk Secondary School for Girls
 Bebi Al Salem Secondary School for Girls
 Fatmah Bint Al Waleed Secondary School
 Jumanah Bint Abi Taleb Secondary School
 Qurtobah Secondary School for Girls
 Abdelmohsen Al Khourafi Intermediate School
 Mashaan Al Khodeir Intermediate School for Boys
 Salem Al Hassenan School for Boys
 Abdullah Al Ass'ossi Moqarrarrat Secondary School
 Abdullah Abdellateef Al Rujeib Secondary School
 Abderrazaq Al Bosseir Moqarrarrat School
 Al Qurtobi Moqarrarrat School
 Fahd Al Deweri Moqarrarrat School
 Farhan Al Khalid Secondary School
 Palestine Moqarrarrat Secondary School
 Salah Eddeen Shehab Moqarrarrat Secondary School
 Salah Shehab Moqarrarrat Secondary School
 Al Mughera Bin Noufal Intermediate School for Boys
 Al Shaab Intermediate School for Girls
 Al Shefaa Bint Ouf Intermediate for Girls
 Bayan Intermediate for Girls
 Hend Intermediate for Girls
 Um Salama Intermediate for Girls
 Al Salmiya Secondary School
 Bayan Moqarrarrat Secondary School for Girls
 Khaldah Bint Al Asswad Moqarrarrat Secondary School
 Mishref Moqarrarrat Secondary School for Girls
 Salwa Co-educational School
 Amama Bint Bishr Moqarrarrat Secondary School
 25 Febuary Moqarrarrat Secondary School

Ministry of Education
 Ministry of Education

References

1. of Health and Human services, Public health Service, CDC, 1990; DHHS publication no. (CDC) 90-8416.
2. National Cancer Institute. School programs to prevent smoking: the National Cancer Institute guides to strategies that succeed. Rockville, MD: US Department of Health and Human Services, Public Health Service, National Institutes of Health, National Cancer Institute, 1990;DHHS publication no. (NIH) 90-500.
3. CDC. Reducing the health consequences of smoking: 25 years of progress-a report of the Surgeon General. Washington, DC: US Department of Health and Human Services, Public Health Service, CDC, 1989; DHHS publication no. (CDC) 89-8411.
4. CDC. The health benefits of smoking cessation: a report of the Surgeon General. 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 Services,Center of Disease Control and Prevention ,National Center for Chronic Disease Prevention and Health Promotion, Office of Smoking and Health ,1994. Reprinted with correction.July 1994.
5. Secretary of State For Health and Secretaries of State for Scotland , Wales and Northern Ireland. Smoking Kills. A white paper on tobacco .30 November 1999.London,H.m. Stationery Office, 1999
6. Peto R et al. Develping population: the future health effects of current smoking patterns. In: Mortality for smoking in developed countries, 1995- 2000. Oxford, Oxford University Press, 1994: A101-103.
7. CDC. Recent trends in adolescent smoking, smoking-uptake correlates,and expections about the future. Advance data from vital and health statistics: No.221,Dec 2, 1992.
8. WHO/EMRO. Country Profiles on Tobacco Control in the Eastern Medeterranean Region . Cairo 2002.
9. WHO/CDC. Country Fact Sheet. Global Youth Tobacco Survey. CDC 2002 ..
<http://www.cdc.gov/tobacco/global/gyts/reports/htm>.
- 10 Richard H, Swartz MD,Lets help young smokers quit. Patient care 1996; 45-51.
- 11 Bresslu N, Peterson EL.Smoking Cessation in Young Adult: Age at initiation of cigarette smoking and other suspected influence. American Journal of Public Health. 1996; 86: 214 – 220
- 12 Gilpin EA , Piece JP, Rosbook B. Are adoleascents receptive to current sales promotion practices of tobacco industry ? Prevotion Medicine 1997; 26: 14 – 21.
- 13 sargent JD, Dalton M. Expoure to cigarette promotions and smoking uptake in adoleascents: evidence of dose-response relation. Tobacco Control 2000; 9: 163 – 168.