



Smoking and Associated Factors in the Occupied Palestinian Territory

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TABLE OF CONTENTS

PROJECT TEAM	iii
ACKNOWLEDGMENTS	v
TABLE OF CONTENTS	vii
LIST OF TABLES	ix
LIST OF FIGURES	xi
ABBREVIATIONS	xii
DEFINITIONS	xiii
EXECUTIVE SUMMARY	xv
BACKGROUND	1
Literature Review	1
Objectives	4
METHODS	7
Research instrument	7
Sampling design	9
Field work	9
Quantitative data collection	9
Qualitative data collection	11
Quantitative data analysis	12
STUDY POPULATION	13
Demographic characteristics	13
Smoking	15
Exposure to violence	20
Violence from the Israeli occupation	20
Violence at home or at school	22
Resilience and reported health status	24
FACTORS ASSOCIATED WITH SMOKING	27

Classical factors associated with smoking	27
Perceptions and attitudes	27
Exposure to smoking	28
Knowledge	30
Non classical factors affecting smoking	31
Violence	31
Resilience and reported health status	32
QUALITATIVE ANALYSIS	35
DISCUSSION	41
RECOMMENDATIONS	45
REFERENCES	47
ANNEX 1 – Scales	49
Standard of living scale	49
Resilience scale	50
ANNEX 2 – Questionnaire	53
ANNEX 3 – Policy Brief	65

LIST OF TABLES

Table 1:	Sample size and response rate in each governorate	28
Table 2:	School characteristics for pre-survey focus groups	29
Table 3:	School characteristics for post- survey focus groups	30
Table 4:	General characteristics of the schools in the study sample stratified by governorate, N=3,107	32
Table 5:	Percent of current smokers according to school characteristics, N=3,107	35
Table 6:	Characteristics of current cigarette smokers, N=276	37
Table 7:	Nargileh related exposures, N=3,107	38
Table 8:	Percentage of students exposed to different types of Israeli violence, N=3,107	39
Table 9:	Reported beating by school personnel by type, place beaten and consequence	41
Table 10:	Resilience indicators by governorate, N=3,107	43
Table 11:	Percentage of current smoking of any type by students' perceptions of smokers, N=3,107	46
Table 12:	Percentage of current smoking status of any type by parents, siblings, teachers and friends smoking status, N=3,107	47
Table 13:	Percentage of students who reported seeing advertisements during the 30 days preceding the study, N=3,107	48

Table 14: Percentage of current smoking of all types by students knowledge about the effects of smoking, N=3,107	48
Table 15: Percentage of current smoking status among the different resilience indicators, N=3,107	51
Table 16: Status of living scale distribution	68
Table 17: Resilience scale distribution	69

LIST OF FIGURES

Figure 1:	Smoking among Palestinian youth, N=3,107	34
Figure 2:	Reported beating by school personnel, parents, siblings and other students, N=3,107	40
Figure 3:	Reported exposure to insult by school personnel, parents, siblings and other students, N=3,107	41
Figure 4:	Perceived general health and satisfaction from health, N=3,107	43
Figure 5:	Prevalence of students reporting feeling tense or feeling down, N=3,107	44
Figure 6:	Percentage of current tobacco smokers by type of violence exposure, N=3,107	49

ABBREVIATIONS

oPt	Occupied Palestinian Territory
DHS	Demographic and Health Survey
PCBS	Palestinian Central Bureau of Statistics
ICPH	Institute of Community and Public Health
WHO	World Health Organization
GYTS	Global Youth Tobacco Survey
UNRWA	United Nations Relief and Works Agency
MoH	Ministry of Health
MoEHE	Ministry of Education and Higher Education
HWC	Health Work Committees
NIS	New Israeli Shekel (1USD = 3.38 NIS at the time of the study)
STL	Standard of Living

DEFINITIONS

Cigarette smokers

Reported smoking at least 1 cigarette during the month preceding the study (GYTS 2002) but did not smoke any Nargileh

Nargileh smokers

Reported smoking Nargileh during the month preceding the study but did not smoke any cigarettes

Smokers of both types

Reported smoking cigarettes and Nargileh

Total smokers

Reported smoking cigarettes only, Nargileh only, or both

EXECUTIVE SUMMARY

This report aims to investigate the factors associated with smoking among youth living in the occupied Palestinian territory (oPt). These include the well known factors such as societal perceptions and attitudes towards smoking; exposure to smoking behavior by adult role models, and knowledge regarding the dangers of smoking. In this study, we have also investigated the relation between smoking and exposure to Israeli army and other types of violence, and youth resilience.

The study targeted 7-10th grade school students living in the Ramallah governorate in the center of the West Bank, and the Jenin governorate in the north of the West Bank . The methodology included a qualitative as well as a quantitative aspect. The qualitative aspect included 2 phases, one conducted before the quantitative research was completed (included 4 Focus Group Discussion – FDG - with around 12 students in each) and aimed to adapt a resilience scale to the Palestinian context. The second phase was conducted after the quantitative phase was completed, in order to build on and explain some of the results (included 7 FGD with around 10 students in each).

The quantitative survey included 4 sections, the first contained questions on demographic characteristics, the second inquired about smoking behavior, some of the questions were extracted from the Global Youth Tobacco Survey (GYTS) and was adapted to the Palestinian context. The third section included questions on violence and the fourth was about resilience. The study sample included 3,107 students who were divided equally between Ramallah and Jenin governorates, and equally between the two sexes. 80% of the students attended governmental (public) schools, 13% attended UNRWA schools, which cater to the needs of Palestinian refugees, and the rest attended private schools.

Results show that close to 25% of respondents smoked cigarettes and/or Nargileh. Smoking was higher among males students, had employed fathers, and had a higher standard of living (STL). The prevalence of cigarette smoking varied by gender, while Nargileh smoking varied by school governorate. Among those who reported that they smoked cigarettes, 20% also reported having started smoking before they were 10 years old; the majority (85%) smoked less than 5 cigarettes per day; close to half of the smokers were able to purchase their cigarettes from stores without problems; while around 12% got them from their homes.

The prevalence of smokers was higher among those who had a positive attitude towards smokers. The prevalence of smokers was also higher among students who were exposed to other smokers, i.e. students with mothers, fathers, siblings, school personnel, and/or friends who smoked. As expected, the percentage of smokers was lower among students with more knowledge about the negative effects of smoking. For example, students were more likely to report that they smoked if they reported that smoking and second hand smoking were not harmful. Students who reported being smokers (cigarettes and/or Nargileh) were more likely to have a Nargileh at home and to have family members smoking the Nargileh at home as well.

Half of the respondents were directly exposed to Israeli violence, while a very high 97% witnessed Israeli violence. Students were also highly exposed to other types of violence: close to half were beaten by school personnel during the 6 months preceding the study, 41% were beaten by parents, 16% were beaten by their siblings, and around 35% were beaten by other students at school. The percentage of smokers was higher among students who reported being exposed to violence (Israeli violence, at school or at home). This relationship held for cigarette smokers as well as Nargileh smokers. Coping mechanisms were also statistically significantly related to smoking status; positive coping mechanisms included talking to a friend or a family member about the problem, drawing or playing sports, while negative coping mechanisms included more violent reactions such as hitting or humiliating others.

Qualitative methods were also utilized after the questionnaire was administered, with the focus group discussion results supporting the results of the quantitative analysis. The themes that were raised for the reasons to smoke were: to calm down, to show off, violence exposure, role models, acceptability and accessibility. As for violence, the 2 main themes that came up were the different types of violence exposure as well as the reactions from the students to such exposures.

BACKGROUND

Literature Review

It is estimated that of the 1 billion current smokers living in the world, around 500 million will die as a result of tobacco smoking. More than 80% of the world's related deaths will be in low- income countries (WHO 2008). In terms of intervening, it appears that working with youth might be most beneficial step to take in order to curb the tobacco epidemic. This is due to the increasing smoking epidemic among youth, and also because interventions might be more effective if they aim to prevent initiation of tobacco smoking rather than cessation.

The Global Youth Tobacco Survey (GYTS) was initiated by the WHO, CDC, and OSH in 1999 with the aim of developing a database for smoking prevalence and pattern, and to formulate tobacco prevention and control programs in developing countries. Nationwide surveys have been conducted among students 13 to 15 years old in over 43 countries, including the occupied Palestinian territory (oPt), at least once. (GYTS 2002) Several countries have already conducted a second

and third wave of surveys in order to monitor the change in smoking prevalence among youth over time. Data collection is conducted through a self-administered questionnaires. Information collected from students includes prevalence of tobacco use, age of initiation, tobacco advertising, and school curriculum. (GYTS 2002)

Results from the first wave of surveys, conducted between 2000 and 2005, indicate a median prevalence of ever smoking (minimum one puff) among 43 countries of 33%, with the highest prevalence in the Northern Mariana Islands (79.8%). Current cigarette smokers were defined as those who smoked 1 or more cigarettes in the past 30 days, with the median of current cigarette smokers found to be 13.9%. Current cigarette smoking for the oPt in the first survey wave (2001) was 14.1% in North of the West Bank and 14.7% in the Center of the West Bank. Current cigarette smoking increased in the second survey wave, collected in 2005, to 18% for all of the West Bank. (GYTS 2002)

Determinants of smoking among youth have been studied in a variety of different settings. A study conducted in New Mexico for middle and junior high school students found that current users were more likely to perceive smoking as normative, had more smoking friends, and considered smoking more permissible at home than did past users (Buller, Borland et al. 2003). Another study conducted among middle school Dutch students indicated that having a smoking best friend increased the likelihood of smoking onset. Results also show that students were more likely to be smokers if their parents smoked. This likelihood was higher for those with 2 parents who smoked than those with only one parent who smoked. Parental smoking also affected the selection of new friends, where students with smoking parents were more likely to choose friends who are smokers (Engels, Vitaro et al. 2004). Exposure to anti-tobacco advice/information at school, and difficulty of access to cigarettes were associated with a lower probability of being a smoker. (Ertas 2007)

Self-reported health status measures were also significant factors in explaining the likelihood of being a current daily smoker, where individuals reporting excellent or very good health were less likely to be smokers than individuals who reported good health. Coming from a single parent household was also associated with a higher prevalence of smoking (Tewolde, Ferguson et al. 2006). Socioeconomic status also affects the prevalence of smoking, where higher education and social class of parents protected against smoking. Further, the personal income of adolescents has been associated with smoking, where those with higher spending money found to be more likely to smoke (Tyas and Pederson 1998).

Stress and associated distress are important factors related to the initiation of smoking, where smoking has been cited as a means of dealing with stress among young smokers as well as adults (Tyas and Pederson 1998). Higher prevalence of smoking was also associated with emotional problems, boredom, and low self-esteem (van Oort, van der Ende et al. 2006). Stress, defined as separation from a close friends or violent behavior at home also appear to be related to a higher prevalence of smoking (Ozge, Toros et al. 2006).

The occupied Palestinian territory has been observed to be undergoing a tobacco smoking epidemic, as judged by the increasing rates of smoking among youth over time. A combination of lack of awareness of the dangers of smoking to health, exposure to role models who smoke, such as parents and teachers, even physicians caring for the sick, lack of regulation implementation of cigarette sales to minors and other factors have all been identified as possible determinants of the rise in tobacco smoking levels. In addition to these factors as well as the educational level and living standard of parents which the oPt may have in common with other countries, the oPt is usually described as undergoing extraordinary conditions, characterized by years of protracted conflict and exposure of ordinary people to Israeli army violence, which intensify periodically. Indeed, since 2000 life for Palestinians has become more

dangerous, less secure, and with very high levels of exposure of the civilian population to different types of violence (Batniji, Rabaia et al. 2009). This raises questions as to the relation between such exposure to violence, resilience and positive coping mechanisms in dealing with problems and tobacco smoking as additional factors related to smoking behavior specific to the country.

This study is a policy/action oriented research aiming to identify the various factors associated with smoking behavior among young Palestinians, including factors related to the exceptional conditions in which Palestinians live. It is hoped that by providing the evidence for the link between smoking and its associated factors to policy makers, health care providers and educators especially, more stringent regulations are adopted and implemented in public life prohibiting tobacco advertising and sales to minors; a systematic effort at curbing teacher and other adult smoking at schools is achieved by the ministry of education; and awareness campaigns are launched by educators and health professionals alike, focusing on increasing the awareness of young people to the dangers of smoking, as well as special campaigns for smoking cessation for those who have already begun smoking.

Objectives

The main objective of this study is to provide the empirical evidence related to smoking and associated factors that is needed to develop health, educational and public policies aiming to reduce smoking behavior among young people. The objective is to also provide the information needed for community based interventions aiming to reduce the burden of smoking among youth living in the oPt. This empirical evidence includes:

- Prevalence of smoking among 7th-10th grade students attending schools in the Ramallah and Jenin governorates of the oPt.
- Habits, knowledge, and practices related to smoking among school students in the Ramallah and Jenin governorates.
- Factors related to the induction and maintenance of smoking behavior among Palestinian youth, including classical and non-classical factors such as exposure to violence, distress levels and resilience.

METHODS

Research instrument

Qualitative research methods (focus group discussions) were used to adapt the international instrument to the local context, then to help in explaining some of the quantitative results. The quantitative instrument consisted of a self-administered questionnaire which was translated into Arabic and included 4 sections:

- 1. Demographic characteristics:** respondent's age, sex and place of residence, as well as general information about the parents including whether they live at home or not and their educational attainment. This section also included several questions about different amenities that the household owns, as proxy measures for socio-economic/living standard family status (Standard of Living scale –STL scale). The questions were derived from previous research done in the oPt which identified different socio-economic categories by amenity ownership.

2 .Smoking: this section used questions extracted from the Global Youth Tobacco Survey questionnaire (GYTS). The GYTS was conducted in the oPt in 2001 and again in 2005, and thus using these questions for this survey would allow for smoking prevalence comparisons over time. The following themes were included:

- Tobacco use
- Knowledge and attitudes toward tobacco
- Exposure to other people’s smoking
- Attitudes toward stopping smoking
- Knowledge of media messages about smoking
- Smoking issues in school teaching

One more theme on the use of Nargileh (water pipe) was added to the questionnaire, since Nargileh smoking is a common leisure time activity of families and individuals in the oPt.

3 . Exposure to violence: questions inquired about violence in three different settings: exposure to violence by the Israeli army, including being directly affected or indirectly through seeing someone else being violated; exposure to violence at schools by school personnel (teachers, principal, school counselor) as well as from friends and schoolmates; and exposure to violence from parents and/or siblings. These questions have been previously used and validated to the Palestinian context (Giacaman 2004).

4 . Resilience: questions in this section of the survey were based on the qualitative part of this research, which was completed in order to identify main themes related to resilience as understood in the local culture. FGDs were chosen as appropriate method since they facilitate exploring participants’ knowledge and experiences and can investigate what people’s thoughts are as well as how and why they think in certain ways (Kitzinger 1995). Results from the qualitative methods were used to adapt a resilience questionnaire(Wagnild and Young 1993) to the Palestinian context so that it can be used in the questionnaire.

Sampling design

A one stage cluster sampling design was used to select the sample of schools from two governorates in the oPt: Ramallah, which is located in the center and Jenin, which is located in the North of the West Bank. Sample size calculations included an accuracy level of $E = \pm 2\%$. This accuracy is at the level of the two governorates, but the error at the level of each governorate is 3%. The number of students was divided equally between the two, leaving 1500 student to fill out the questionnaires in each governorate. Given an average number of 52 (STD 40.6) students in each section, the number of students participating in the survey was obtained by sampling 47 schools in Ramallah and 45 schools in Jenin. Due to potential non response, 3 schools were added to the sample in Ramallah and 5 to Jenin. The primary sampling unit was 7th, 8th, 9th and 10th grades of all schools in the Ramallah governorate (549 schools) and in the Jenin governorate (541 schools).

Field work

Quantitative data collection

The survey data were collected between March 23rd and April 7th, 2008 by 8 teams of two fieldworkers at each school. Four teams were located in the Ramallah governorate while the other four were located in the Jenin governorate. Each governorate also had a coordinator who organized the school visits and monitored the fieldworkers so that data collection is consistent and according to the protocol. Collection lasted for 2 weeks, where an average of 4 schools per day were covered in each of the two governorates. The majority of schools were visited during the second and third periods, 7th and 8th graders needed the full two classes to finish the questionnaires (80 minutes), while 9th and 10 graders were able to finish in 1 and a half classes (60 minutes). One of the fieldworkers gave a short background of the study including its aims and importance, followed by an explanation of the confidentiality of the information gathered from the students. The questionnaires were

then distributed to the students and certain questions and concepts were explained to the whole class. Students were finally told that they should each fill their own questionnaire and that they should ask the fieldworkers if they have any questions. Weak students (those with problems in reading and/or writing) in each class were identified by the fieldworkers and were given extra attention so that they can understand and fill in the questionnaire.

At the end of the study 3,107 questionnaires were completed from 100 schools located in cities, villages and refugee camps in the West Bank. The 50 schools in the Ramallah governorate included 1,583 complete questionnaires, while the 50 schools in the Jenin governorate included 1,524 completed questionnaires. Two schools were dropped from the study: one was located behind the Separation Wall and fieldworkers could not get access to it, while the other only had students who do not read or write in Arabic (English speaking school). Both schools were replaced by random sampling.

School principals were very cooperative with the fieldworkers. None refused to participate in the study and thus the school response was 100%. Students were also cooperative and non response was negligible (22 students), with the main reason for non-response being the student absence or drop out from school (Table 1).

Table 1: Sample size and response rate in each governorate					
	Number of schools	Number of students	School non-response	Student non-response	Percent of students 13-15 years old*
Jenin	50	1,583	0	1	73.77
Ramallah	50	1,524	0	21	72.89
Total	100	3,107	0	22	73.19
* The total sample included students between the ages of 11-17 years					

Qualitative data collection

Two sets of FGDs were completed:

- 1 . The first set included 4 focus groups that were conducted before the quantitative data collection; pre-FGDs. These focus groups were organized in order to adapt a Resilience Scale (Wagnild and Young 1993) to the Palestinian context. Themes in these group discussions focused on problems and/or difficulties at home, at the school, as well as due to SES and political problems. The questions also included discussions on how they deal with their problems. The four focus group discussions were sampled from the Ramallah area, taking into consideration the different supervising authorities (public, private and UNRWA) and the sex of students of the schools. Table 2 below provides a brief description of these groups.

Table 2: School characteristics for Pre- survey focus groups

Supervising Authority	Gender	Grades	Locality	Area
UNRWA	Females	Ages 12-16	Village	Ramallah
Public	Males	10 th	Village	Ramallah
Private	Coed	7 th	City	Ramallah
Public	Females	9 th and 10 th	City	Ramallah

- 2 . The second set included 7 focus groups and were conducted after the quantitative data collection, post-FGDs. These discussions focused on smoking among youth, mainly why smoking was initiated, as well as how smokers are perceived in the community. The discussions also covered physical and mental exposure to violence at school and at home. Three FGDs were completed in the Jenin area and 4 from the Ramallah area, taking into consideration the different supervising authorities and the sex of students. Table 3 provides a brief description of these groups.

Table 3: School characteristics for post-survey focus groups

Authority	Gender	Grades	Locality	Area
Private	Coed	9+10 th	City	Ramallah
UNRWA	Girls	7+8 th	Camp	Ramallah
Public	Girls	9+10 th	Village	Ramallah
Public	Boys	7+8 th	City	Ramallah
Public	Boys	9+10 th	Village	Jenin
UNRWA	Boys	7+8 th	Camp	Jenin
Private	Coed	9+10 th	Village	Jenin

All focus groups were conducted in the same way. One note taker and 2 co-facilitators were present in each. The FGD started with a brief description of the study and an introduction of the researchers. This was followed by a discussion of a group of rules that the students agreed on. The first two FGD lasted for about 1.5 hours while the rest lasted for about 1 hour.

Quantitative data analysis

Data was cleaned and analyzed using STATA 10.0. The scales described previously were created using factor analysis (see annex 1). Since data sampling only included Ramallah and Jenin governorates the data was weighted based on total numbers of students in grades 7th to 11th in each governorate. Sampling weights that donate the inverse of the probability that the observation is included were used (StataCorp 2007). Data analysis mainly included bivariate analysis using cross tabulations for percentages and p-values derived from univariate logistic regression analysis.

STUDY POPULATION

Demographic characteristics

Table 4 presents a summary of the characteristics of the respondents. Students were roughly equally sampled from grades 7th to 10th, with slightly more students in 7th and 8th graders compared to 9th and 10th graders. This difference occurred mainly because younger grades have more students. Slightly more than half of the students lived in villages while the rest lived in cities. A very small percentage of students lived in camps. The majority of schools were governmental schools, around 10% were UNRWA schools and only 5% were private schools. Males and females were equally distributed in the sample. Up to 61% of fathers had a fulltime job, while the majority of mothers were housewives. Half of the students had an allowance of 2-4 NIS per day.

Because Ramallah has more camps than Jenin, more students in Ramallah reported living in camps compared to Jenin. Similarly, more schools were located in camps (i.e. UNRWA schools) in Jenin. More schools in Ramallah were female only schools and thus the sample included more

females in Ramallah and more males in Jenin. Due to the sampling criteria grades were equally sampled between the 2 governorates. Students in Ramallah reported a higher daily allowance compared to Jenin; around 15% receive 5+ NIS in Jenin, while up to 34% receive the same amount in Ramallah. More students had employed fathers with full time jobs in Ramallah compared to Jenin. The STL scale also showed differences between the two governorates with generally higher STL among students in Ramallah compared to Jenin.

Table 4: General characteristics of the schools in the study sample stratified by governorate, N=3,107

	Jenin (%)	Ramallah (%)	Total (N)	Total (%)
Grade				
7 th grade	28	28	872	28
8 th grade	30	30	914	30
9 th grade	21	21	660	21
10 th grade	21	21	661	21
Type of locality				
City	37	33	1,100	35
Village	57	57	1,767	57
Refugee camp	6	10	238	8
Supervising authority				
Government	90	81	2,657	86
UNRWA	7	13	306	10
Private	3	6	144	4
Gender				
Females	43	51	1,463	47
Males	57	49	1,644	53
Allowance/ day				
0-1 NIS	37	16	827	27
2-4 NIS	49	50	1,531	49
5+ NIS	14	34	748	24

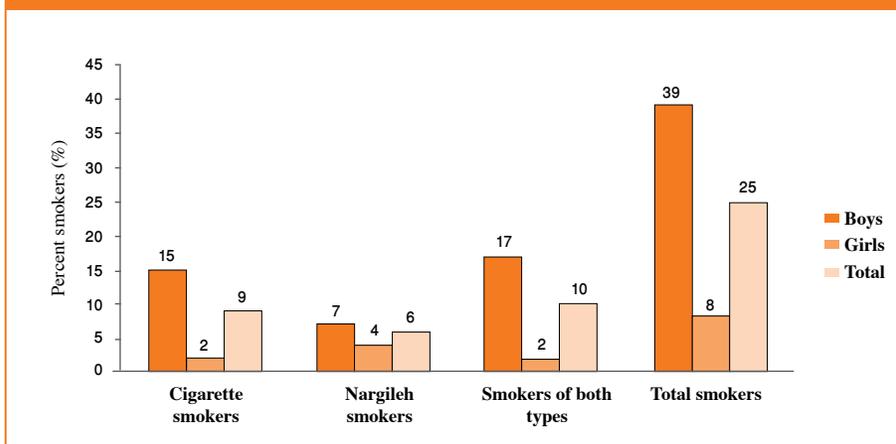
Table 4: General characteristics of the schools in the study sample stratified by governorate, N=3,107 (Cont'd.)

	Jenin (%)	Ramallah (%)	Total (N)	Total (%)
Father's employment				
Full time job	54	69	1,754	61
Part time job	30	19	704	25
Unemployed	16	12	408	14
Mother's employment				
Employed	13	16	441	14
Homemaker	87	84	2,606	86
STL scale				
Low STL	43	25	1,071	35
Middle STL	36	32	1,052	34
High STL	21	43	974	31

Smoking

Cigarette smokers are defined as those who reported smoking at least one cigarette per month. Nargileh smokers are defined as those who reported smoking Nargileh in the month preceding the study. Figure 1 shows that in total, 25% of the total sample (i.e. ages 12 to 17) reported that they smoked cigarettes, Nargileh or both. 9% of respondents smoked cigarettes only, while 6% smoked Nargileh only. The prevalence of smoking was higher among boys. Among boys, the prevalence of cigarette smoking (15%) was higher than Nargileh smoking (7%). Whereas among girls Nargileh smoking (4%) was higher than cigarette smoking (2%). In terms of students who reported smoking both cigarettes and Nargileh (10%), 17% were males while 2% were females.

Figure 1: Prevalence of smoking among Palestinian youth, N=3,107



Results from this study shows a slightly higher prevalence of smoking among the same age group (13- 15 years old) compared to other studies using the GYTS. Using the GYTS definition of smoking, i.e. “smoked at least one cigarette during the past month” (GYTS 2002), 18.7% of the total sample in this study were smokers, this percentage is comparable to results of the 2005 wave of the GYTS (CDC 2008). The first wave of the GYTS (GYTS 2002), conducted in 2001 shows a smaller prevalence of smokers in the North (14.1%) and Center (14.7%) of the West Bank compared to results from this study.

Overall, table 5 shows that cigarette and Nargileh smoking is higher among higher grades. There are more smokers in Ramallah compared to Jenin, and the prevalence is much higher among boys compared to girls. In terms of the effect of parents’ employment, a higher percentage of smokers was reported for students whose fathers did not have fulltime jobs. Further, the prevalence of smoking increases with higher allowance and with a higher STL scale.

Patterns of cigarette and Nargileh smoking appeared to be different. In terms of the supervising authority, students attending governmental schools had the highest prevalence of smoking cigarettes. Cigarette

smoking was also higher among students whose fathers were unemployed. Mothers employment, allowance and STL were not statistically significantly related to cigarette smoking.

More students reported smoking Nargileh in Ramallah compared to Jenin. Nargileh smokers were also the highest in private schools compared to the other supervising authorities. The prevalence of Nargileh smokers increased with increasing allowance and STL and was not affect by parents' employed.

Table 5: Percent of current smokers according to school characteristics, N=3,107					
	Total (N)***	Cigarettes only (%)	Nargileh only (%)	Both types (%)	Total smokers (%)
Total % (N)	100 (3,017)	9 (276)	6 (180)	10 (316)	25 (772)
Grade					
7 th grade	872	6	5	7	18
8 th grade	914	9	4	9	22
9 th grade	660	10	8	12	30*
10 th grade	661	12	7	15*	34*
Area					
Ramallah	1,583	7	9	10	26
Jenin	1,524	10	3**	10	23
Locality					
City	1,100	8	6	12	26
Village	1,767	10	5	9	24
Camp	238	6	4	14	24
Supervising authority					
Government	2,657	9	5	10	24
UNRWA	306	7	6	12	25
Private	144	3	15*	13	31

Table 5: Percent of current smokers according to school characteristics, N=3,107 (Cont'd.)

	Total (N)***	Cigarettes only (%)	Nargileh only (%)	Both types (%)	Total smokers (%)
Total % (N)	100 (3,017)	9 (276)	6 (180)	10 (316)	25 (772)
Gender					
Females	1,463	2	4	2	8
Males	1,644	15**	7*	17**	39**
Allowance					
0-1 NIS	827	8	3	5	16
2-4 NIS	1,531	9	4	8	21
5+ NIS	748	11	12**	20**	43**
Father's employment					
Full time job	1,754	7	6	9	22
Part time job	704	11**	4	13	28*
Unemployed	408	11*	5	11	27
Mother's employment					
Employed	441	7	8	13	29
Housekeeper	2,606	9	5	10	24
STL scale					
Low STL	1,071	11	3	8	21
Middle STL	1,050	8	4	10	22
High STL	974	9	10**	13*	32**

* Difference in smoking prevalence is statistically significant between each category in the group and the reference category (reference category is the first category in the group) with p-value < 0.05

** Difference in smoking prevalence is statistically significant between each category in the group and the reference category (reference category is the first category in the group) with p-value < 0.001

*** N values do not always add up to 3,107 due to don't know or not applicable answers.

Table 6 provides a descriptive analysis of current cigarette smokers only (excluding those who smoke Nargileh or Nargileh and cigarettes), who represent 9% of the sample. Of those, 20% tried smoking at least once before the age of 10 years old. 18% smoked more than 5 cigarettes per day, 25% smoked any kind of cigarettes, while the rest specifically stated that they smoked only local (27%) or only imported cigarette (48%) brands. Half of the respondents stated that they can easily buy cigarettes from stores, and 13% stated that they usually get them from their home. The rest (34%) get cigarette from “other” places. This last category includes stealing and giving someone money to buy them the cigarettes.

Table 6: Characteristics of current cigarette smokers, N=276

	Percentage (%)
Age when student started smoking	
Before 10 years old	20
At 10 years old or after	80
Cigarettes/ day	
5 or less	82
More than 5	18
Get cigarettes from	
Buy from store	52
From home	13
other	34
Type of cigarettes smoked	
Local	27
Imported	48
Not specified	25
Total %(N)	9 (276)

Since up to 6% of the sample reported smoking Nargileh, it is worthwhile to look closer at some of the determinants that are specific to Nargileh smoking (table 7). Instead of stratifying by smoking of any type, table 8

compares Nargileh and non Nargileh smokers. 70% of Nargileh smokers reported having a Nargileh at home, compared to only 37% who did not have one. 40% of the Nargileh smokers stated that their parents allow them to smoke the Nargileh, compared to only 10% of those who were not Nargileh smokers. Further, 64% of Nargileh smokers have family members who smoke Nargileh at home, while only 35% of non Nargileh smokers have family members who smoke the Nargileh at home.

Table 7: Nargileh relates exposures, N=3,107

	Nargileh smokers (%)	Nargileh non smokers (%)
Have a Nargileh at home*	70	37
Allowed to smoke Nargileh by parents*	40	10
Any family members smoke Nargileh at home*	64	35
Total	180 (6%)	2,927 (94*)
* Differences in prevalence of smoking between yes and no answers is statistically significantly different with p-value <0.001		

Exposure to violence

Violence from the Israeli occupation

Most of the students reported being directly and indirectly exposed to (witnessed) Israeli army violence during the academic year. Table 8 shows that sound and gas bomb exposure were the most common types of violence students were directly exposed to, followed by being body searched. Up to 3% and 8% were shot by live and rubber bullets respectively. As for witnessing violence, shooting was the most prevalent type of exposure to violence (48%). This was followed by witnessing a stranger being humiliated, arrested, injured or killed. Overall, more than half of the students were directly exposed to violence, and up to 67% witnessed Israeli violence.

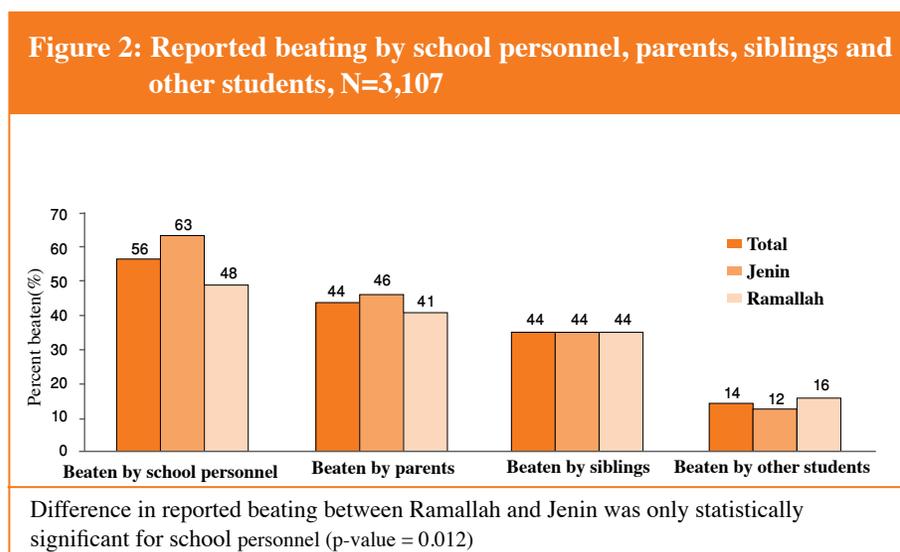
Table 8: Percentage of students exposed to different types of Israeli violence, N=3,107

Exposed to	Jenin (%)	Ramallah (%)	Total (N)	Total (%)
Shooting by live bullets	3	3	97	3
Shooting by rubber bullets	7	9	241	8
Gas bombs	34	36	1,103	35
Sound bombs	38	41	1,220	39
Beating from army or settlers	11	12	361	12
Body searching	26	28	842	27
Humiliation	15	16	488	16
Exposed to any type of violence	55	60	1,787	58
Witnessed	Jenin (%)	Ramallah (%)	Total (N)	Total (%)
Shooting	50	45	1,478	48
Explosions/shelling*	26	17	671	22
A stranger being humiliated, arrested, injured or killed	37	39	1,174	38
A family member being humiliated, arrested, injured or killed	15	18	515	17
A friend being humiliated, arrested, injured or killed	29	28	886	29
Witnessed any type of violence	67	66	2,072	67
* Difference in exposure to violence between Ramallah and Jenin is statistically significantly different, p-value<0.05				

Trends in prevalence for each type of reported exposure were similar in both governorates, i.e. students in Ramallah and Jenin both reported sound bombs and gas bombs more than any other exposure, while being shot by live bullets was the least prevalent in both governorates. Witnessing violence was similar across the 2 governorates, where close to 67% of the sample stated witnessing at least one type of violence. Students reporting witnessing explosion/shelling was statically significantly higher in Jenin compared to Ramallah.

Violence at home or at school

Figure 2 below compares exposures to violence by parents or at school, and shows the variations between Ramallah and Jenin (those beaten reported being beaten all the time, sometimes, or rarely during the current academic year). Students reported the highest level of exposure due to beating by school personnel, while the lowest exposure to beating came from siblings. Exposure to beating from school personnel and parents was higher in Jenin compared to Ramallah, but exposure to beating by siblings was higher in Ramallah compared to Jenin. Exposure to beatings from other students was similar in the two governorates.



Similar to beating, figure 3 shows that students reported the highest prevalence of insult (i.e. students who reported being insulted all the time, sometimes, or rarely during the current academic year) to come from school personnel (45%), followed by insults from their parents (40%).

Figure 3: Reported exposure to insult by school personnel, parents, siblings and other students, N=3,107

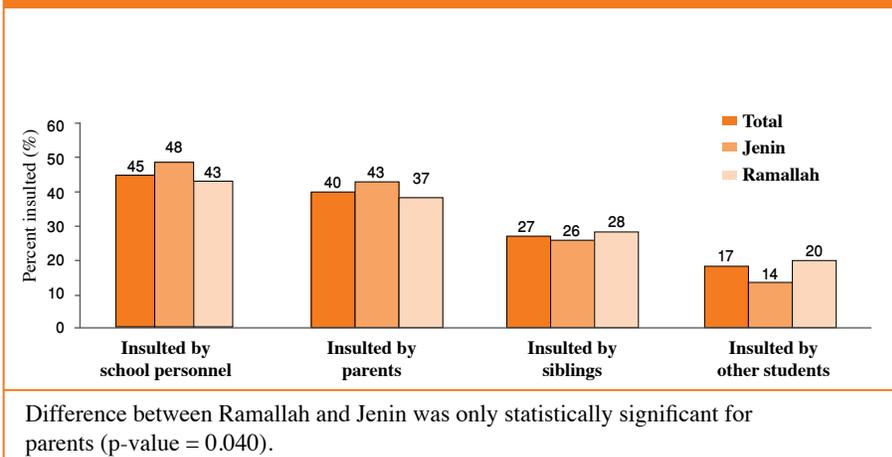


Table 9 provides more details on exposure to violence from school personnel. The table presents information on students reporting beating i.e. 56% of the sample. More students in Jenin reported being beaten by school personnel compared to Ramallah. Those who were beaten reported that the stick was the most prevalent instrument used for beating in both governorates. The majority were beaten on their hands. Close to half of the students reported being injured resulting in bruises, wounds, broken bones or even passing out, as a result of these beatings in Ramallah, while around 40% reported being injured in Jenin.

Table 9: Reported beating by school personnel by type, place beaten and consequence

	Jenin (%)	Ramallah (%)	Total (%)	P-value**
Reported beating	63	48	56	0.012
Beaten with*				
Hands	36	45	42	0.007
Stick	74	61	69	0.001
Belt/ hose	34	50	41	0.017
Shoes	17	23	20	0.014

Table 9: Reported beating by school personnel by type, place beaten and consequence. (Cont'd.)

	Jenin (%)	Ramallah (%)	Total (%)	P-value**
Beaten on*				
Head	17	21	19	0.059
Face	29	33	30	0.025
Hands	79	75	78	0.005
Legs	18	23	21	0.025
Back	19	22	21	0.025
Result of beating*				
No injury***	61	52	57	
Bruises	24	23	23	0.086
Wounds	14	17	15	0.434
Broken bones	6	7	6	0.101
Passing out	4	4	4	0.700
* Results indicate percentages of those who were beaten only , i.e. N=1,738 ** P-values represent differences between Jenin and Ramallah and compares each category in each group with those who were not beaten. *** Injuries are not mutually exclusive and thus the total does not necessarily add up to 100%				

Resilience and reported health status

As explained in the methodology section, the resilience scale was categorized into 3 groups. Results show that 30% showed high resilience and close to 23% demonstrated low resilience. Differences in resilience scores were not statistically significantly difference between students in Ramallah and students in Jenin (table 10).

Table 10 also shows that slightly more than a third reported negative mechanisms of coping with problems, including fighting and violence, humiliating others and isolating oneself (sleeping, crying...). Examples of positive coping, which constituted 64% of the students included talking to someone about their problems, including family members, friends and school personnel. Other examples included playing sports, expressing their

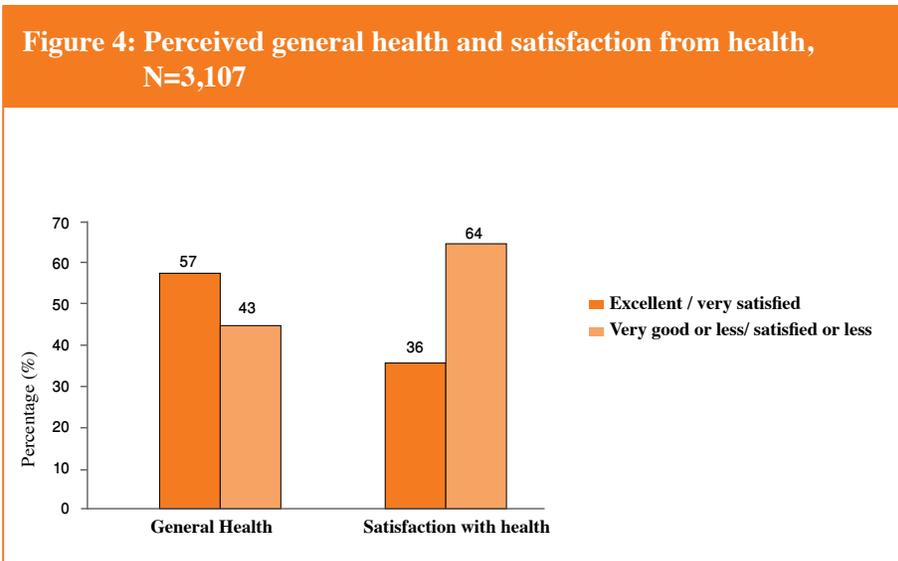
thoughts through drawing, writing or poetry. Reports of negative coping mechanisms were higher among students in Ramallah compared to Jenin.

Table 10: Resilience indicators by governorate, N=3,107

	Jenin (%)	Ramallah (%)	Total (%)	P-value*
Resilience scale				
Low resilience	17	18	23	
Moderate resilience	56	51	47	0.209
High resilience	27	31	30	0.274
Coping				
Positive	67	61	64	
Negative	33	39	36	0.002

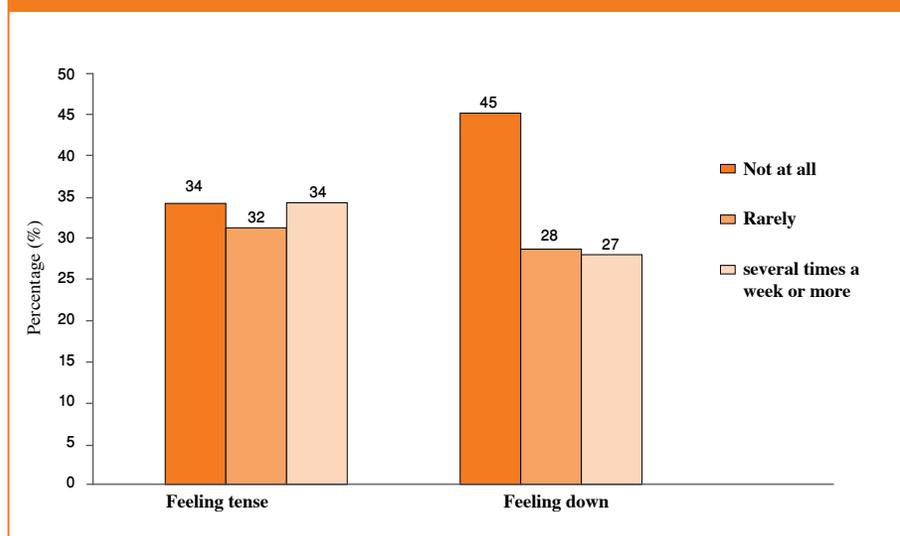
* P-value compares each group in the resilience scale/coping to the reference category (first category) and compares between Ramallah and Jenin

In terms of health perceptions and satisfaction, more than half of the students reported excellent health, and close to 36% reported being very satisfied with their health. Results were similar for Ramallah and Jenin and thus only the overall prevalence is reported in figure 4.



In terms of how they felt in the 2 weeks preceding the study, close to a third reported feeling tense several times a week or more and a similar proportion reported not feeling tense at all. Reports of feeling down were different, where close to half of the students (45%) reported not feeling down at all, compared to 27% who felt down several times or more. Results were similar for Ramallah and Jenin and thus only the overall prevalence is reported in figure 5.

Figure 5: Prevalence of students reporting feeling tense and/or feeling down, N=3,107



FACTORS ASSOCIATED WITH SMOKING

This study examined the different student characteristics as possible factors associated with smoking. These factors were divided into classical and non classical ones.

Classical factors associated with smoking

Results presented previously show that there were differences in demographic characteristics between cigarette smokers and Nargileh smokers. Yet analysis of smoking determinants presented below showed similar results between Nargileh and cigarette smokers and thus most of the remaining analysis presents data on smokers of any type, i.e. cigarette smokers, Nargileh smokers and cigarette and Nargileh smokers compared to non-smokers.

Perceptions and attitudes

Table 11 compares perceptions regarding smokers between students who smoke and students who do not smoke. Perceptions of other smokers were similar between males and females, but statistically

significantly different between smokers and non smokers. Smokers were more likely to think that male smokers have more friends compared to non smokers. Similarly, smokers were more likely to state that smoking makes both males and females more attractive.

Table 11: Percentage of current smoking of any type by students' perceptions of smokers, N=3,107

	Males			Females		
	smoker	nonsmoker	P-value*	smoker	nonsmoker	P-value*
Male smokers have more friends than male non smokers	42	33	<0.001	48	40	<0.001
Female smokers have more friends than female non smokers	18	15	0.231	21	20	0.405
Smoking makes males more attractive	34	21	<0.001	28	21	<0.001
Smoking makes females more attractive	20	12	0.003	20	17	0.035

* P-value represents difference of smoking prevalence between those who reported more friends/more attractive and those who reported less friends/less attractive

Exposure to smoking

Table 12 compares the percentages of students who are smokers by whether family members/acquaintances smoke or do not smoke. Smoking was higher among students who have at least one parent who smokes, at least one sibling who smokes, a friend who smoke. Smoking was also higher among students who reported seeing their teachers smoke in the school and inside the classroom.

Table 12: Percentage of current smoking status of any type by parents, siblings, teachers and friends smoking status. N=3,107

Parents smoking	Non smokers (%)	Smokers (%)	P-value*
None smoke	45	36	
Either or both	55	64	<0.001
Siblings smoking			
None smoke	77	51	
At least 1 smokes	23	49	<0.001
Teachers smoking			
Did not see any	42	12	
Inside school premises	40	52	<0.001
Inside classroom	18	36	<0.001
Friends smoking			
Non smoke	62	15	
Some smoke	36	71	<0.001
All smoke	2	14	<0.001
Total	75 (2,330)	52 (772)	---
*P-values represent difference of smoking prevalence between each category in the group and the reference (reference category is the first category in each group)			

Overall, students reported high exposure to smoking and cigarette advertisements, the highest being on TVs (69%), followed by billboards (65%) on the streets. Comparing smokers to non smokers shows that, a higher percentage of smokers reported seeing these advertisements on TV, billboards, newspapers, magazines and in social events compared to non smokers (table 13).

Table 13: Percentages of students who reported seeing advertisements during the 30 days preceding the study, N=3,107

	Non smokers (%)	Smokers (%)	Total sample (%)
On TV*	65	79	69
On billboards*	60	78	65
In newspapers or magazines*	54	68	57
In sport events, fairs, concerts, or community events*	50	66	55

* Statistically significant difference in the prevalence of smokers between those who saw each advertisement and those who did not, with p-value less than 0.001

Knowledge

Table 14 presents the knowledge of the harmful effects of smoking. Students who do not smoke appear to have more knowledge of such harmful effects. Reporting that smokers can quit and that Nargileh is less harmful than cigarettes if they were smokers was higher among smokers than it was among non smokers. Further, reports that smoking and secondhand smoking are harmful were lower among smokers.

Table 14: Percentages of current smoking of all types by students knowledge about the effects of smoking, N=3,107

	Smokers (%)	Non smokers (%)	P-value*
Can quit smoking after a year or two	59	50	<0.001
Smoking is harmful	86	93	<0.001
Second hand smoking is harmful	81	85	0.025
Nargileh less harmful than cigarettes	29	18	<0.001
Total	25 (772)	75 (2,330)	

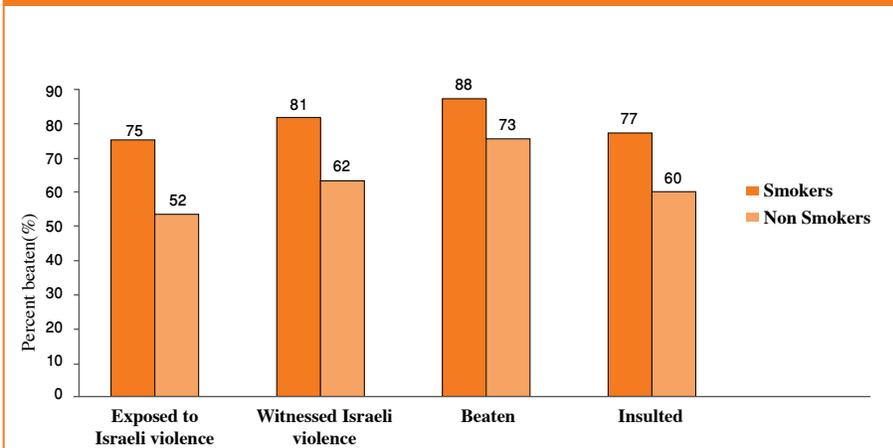
* P-values represent difference in smoking prevalence between yes and no categories

Non classical factors affecting smoking

Violence

Exposure to violence was strongly associated with being a current smoker. Smoking was higher among students who reported any exposure to Israeli violence in the year preceding data collection compared to students who were not exposed to Israeli violence. This was also true for students who reported witnessing violence from the Israeli army or settlers. This relationship also appeared with reports of exposure to beating and/or insults at home (parents and/or siblings) or at school (school personnel and/or friends) (Figure 6).

Figure 6: Percentage of current tobacco smokers by type of violence exposure, N=3,107



* Differences between smokers and non smokers were statistically significant for all types of violence (p-values <0.05)

Resilience and reported health status

The relationship between smoking and the different measures of resilience presented in table 15 were not consistent. The resilience scale developed shows that the percentage of smokers was higher among the “high resilience group” compared to nonsmokers. In terms of coping those who reported using negative coping mechanisms had a higher percentage of smokers compared to those reporting more positive coping mechanisms.

Health perceptions also appear to be statistically significantly related to smoking status, where smoking was lower among students who are satisfied with their health as well as those who perceive their health as excellent. Mental health reports were also statistically significantly related to smoking behavior; with a higher percentage of smokers among students reporting feeling down/desperate or tense.

Patterns were similar when stratifying by gender, were both boys and girls were more likely to report smoking if they had negative coping mechanisms, if they perceived their health as less than excellent, and if they felt tense and down/desperate in the past week. Results for the resilience scale were also similar between boys and girls.

Table 15: Percentage of current smoking status among the different resilience indicators, N=3,107

Resilience scale	Non Smokers (%)	Smokers (%)	P-value
Low resilience	19	13	
Moderate resilience	54	52	<0.001
High resilience	27	35	<0.001
Coping	Non Smokers (%)	Smokers (%)	P-value
Positive	69	50	
Negative	31	50	<0.001
Perceived health	Non Smokers (%)	Smokers (%)	P-value
Excellent	61	46	
Very good or less	39	54	<0.001
Satisfaction	Non Smokers (%)	Smokers (%)	P-value
Excellent	40	25	
Very satisfied or less	60	75	<0.001
Feeling tense	Non Smokers (%)	Smokers (%)	P-value
Not at all	36	30	
Rarely	32	32	0.124
All the time	32	38	<0.001
Feeling down/desperate	Non Smokers (%)	Smokers (%)	P-value
Not at all	47	40	
Rarely	28	26	0.398
All the time	24	34	<0.001
Total	75 (2,330)	25 (772)	

* P-value represent difference of smoking prevalence between each category in the group and the reference (reference category is the first category in each group)

QUALITATIVE ANALYSIS

Focus groups revealed that, in general, students know of the harmful effects of smoking, mainly from warnings on cigarette packs but also from school, TV, and other peoples' experience. Students also agreed that smoking Nargileh is as harmful if not more harmful than cigarettes, yet it is more acceptable in the community and among parents. Several themes were discussed concerning the different reasons for smoking and concerning types of exposure to violence as well as how the students react to such exposure.

Reasons to smoke

To Calm down

Smoking in order to calm down was a common theme that was raised in most of the groups, students agreed that people smoke to calm down, and to forget their problems. Students gave stories about family member and said that they have noticed that their fathers and or brothers smoke when they are angry in order to calm down, they also said that they noticed that when their fathers smoked they felt better afterwards.

Show off/peer pressure

When students discussed reasons behind smoking they always distinguished males from females. Males smoke because it shows they are men/mature. They also said that guys smoke to show off and to prove that they are mature. Some said they do it for fun when they are bored. Others said it attracts girls. Girls also thought that boys mainly smoked to show off and to prove that they are now men, Some also smoke just because it's a trend among their friends and it is something everyone does, and that friends imitate each other and their parents; they gave stories of even just holding a pen like a cigarette, or folding a piece of paper in the shape of a cigarette even if they didn't smoke, just to show that they are now grown up and smoke.

Violence

Repression from parents may cause students to start smoking. If parents beat their children they are also more likely to smoke, because they are suppressed and can't express their feelings. Students in 2 of the focus groups stated that Israeli prisons are a main reason for how many of their relatives who have been jailed started to smoke. One of the students talked about her brother who smoked while in an Israeli prison. Students also talked about their relatives/parents who started smoking while in Israeli prisons.

Role models

Different opinions were mentioned on whether parents' smoking status affects students smoking initiation. Some students said that parents smoking does not really affect whether their children smoke. Also the community as a whole does not influence smoking behavior among children, only close friends do. Pressure to smoke is mainly from friends and maybe from siblings of close age, they challenge each other to see who can smoke more.

Even though some students said that the smoking status of their parents should not necessarily affect their own smoking status, many students

stated that their first smoking experience was left over cigarettes that their fathers leave at home, or stealing a cigarette from their parents' pack. This was common among girls and not only boys. For example, one girl stated that she tried her father's cigarette while he was in the bathroom. This was also very common among Nargileh users, where several boys as well as girls said that they usually prepare the Nargileh for their father's and that they often take a couple of puffs while their fathers are not watching.

The presence of a father figure at home also came up as a theme in most of the groups, where students stated that the presence of the father might affect whether the student smoked or not. The same was not true for the presence of the mother at home, as this did not seem to make a difference to the students. Fathers' presence at home affects whether children smoke or not; the father figure is scary; and fathers usually are more aware of what their children are up to; and thus if fathers are not always at home (travel a lot, work late) children are more likely to smoke because they are relieved that their fathers will not find out. Students agreed that they all worry about their fathers finding out that they smoke, and that they try really hard to hide that they do. One of the fathers found out that his son smokes, so he tied his son and beat him so hard that his son never tried smoking again. Yet not all students had that extreme experience. Instead, they stated that even though in many cases parents beat their children when they realize they smoke, yet students will only smoke more when beaten, which ties up to the previous theme on smoking due to violence. Students were not so worried about their mothers, although some students said the mom would tell the father if she found out they smoked. But the majority said mothers don't usually do much if they find out that they smoked. Overall, students said that mothers are more caring and are easier to lie to.

Acceptability

According to the participants, smoking is a lot more acceptable for boys compared to girls; boys are more likely to say that they smoke and are

proud of it while girls are more secretive about it. Also students freely speak about their smoking fathers but are more reserved to say whether their mothers smoke or not. Girls agreed that smoking is not acceptable among girls in the community. They stated that boys don't usually hide the fact they smoke, but that girls on the other hand do hide it, and people don't usually know which girl smokes and which does not. The girls said that if a girl smokes it gave the wrong image about her, that she is a "bad girl" and that the community would not accept her. One girl did not agree and stated that it depends on the way that girl smoked. The boys had similar negative opinions about girls smoking. They said that they have seen girls smoking, but that smoking among girls is not the norm, and that girls who usually smoke are considered "bad girls".

Nargileh smoking is more common and more acceptable among girls, at it is for boys. Yet all students agreed that it is as harmful, if not more, than cigarettes. Students also stated that Nargileh smoking is more acceptable for parents; many parents did not mind if their children smoked the Nargileh.

Accessibility

Students stated that getting access to cigarettes was not hard at all. Students in all of the schools mentioned that stores would sell individual cigarettes, to make it cheaper for children to buy them. This statement was repeated in all schools as one major way to get cigarettes. Other means included stealing cigarettes from parents, and in many cases stealing money from parents to buy cigarettes. Students also saved their allowance to buy cigarettes. In some schools students stated that they would collect money from a group of friends and share a pack together. Other ways of gaining money to get cigarettes included working, where students would collect iron/steel from the streets and sell this material to buy cigarettes.

Nargileh was also appeared to be very accessible as it is present at most homes and is smoked by adults during various social events. Students could also go to coffee shops and order a Nargileh, and usually can easily get it. And if the waiter refuse's they pay him 5 NIS extra to get a Nargileh to smoke.

Violence

Types of exposure

Exposure to violence from school personnel varied by type of school. Students at private schools stated that they are not beaten by teachers, but get insulted by the teacher instead. As for public and UNRWA schools, students had many stories of being beaten by teachers. They even stated that beating is normal and that it is for their own good; and that usually there is a good reason for the teacher to beat the students. Students were also exposed to violence at home: girls were usually beaten up by their mothers, and boys by their fathers. One student was beaten by his father for holding his pencil in the form of a cigarette, while another was beaten because he was caught smoking.

Students from all schools had many stories on exposure to Israeli violence, either through direct exposure, mainly insults, or through witnessing family and community members being insulted as well as physically exposed to violence by Israeli soldiers. Students at private and public schools were mainly exposed to Israeli violence at Israeli army checkpoints. In contrast, students at both UNRWA and governmental schools (where the poorer students study) talked about incidences of soldiers entering homes at night and forcing the family to leave the house while they search it, as well as soldiers entering the school and being locked in small rooms for long hours.

Reaction to violence (resilience/coping)

Reactions to violence varied among students. Some students did not react at all. Others stated that they felt they had to do something because

it affects their dignity. Others said they discuss the problem until it's solved; and some students said the only way of dealing with violence was by beating those who insult them. Most students said that they felt angry and wanted to react to being exposed to violence with violence. For example after being beaten by a teacher, a student wanted to throw the chair at him; another student actually hit his teacher back. After being in a fight with his neighbor one student went to the neighbor's house and broke the window. Students from Jenin camp go to the "mountain" nearby when they are exposed to violence (beating and/or insult) from teachers or at home. They said that the mountain is close by, and that they usually walk there and hang out in groups and usually take a Nargileh with them for fun or relief.

When insulted, girls said they feel embarrassed or ashamed, and feel like they just want to disappear in shame, while others said that they usually cry. Several girls also stated that they would talk to a relative about what happened, while others said they go home and beat their younger siblings. Other more positive reactions included thinking about what happened and trying to solve the problems.

Reactions to Israeli violence were very different. Remarkably, all students had a story of how they dealt with the insult. One girl hit a soldier back when he pushed her away. Another girl was asked to take off her jewelry (shaped as a bullet) if she wanted to pass the checkpoint, but she would not do it; and finally, the soldier let her pass.

DISCUSSION

Twenty five percent of the students in the sample reported smoking: 9% smoked cigarettes only, 6% smoked Nargileh only and up to 10% smoked both Nargileh and cigarettes. The prevalence of smoking among youth appears to be on the rise in the West Bank. During the first wave of the GYTS conducted in 2001 the prevalence of cigarette smokers was 14.1% in North of the West Bank, and a 14.7% in Middle West Bank (GYTS 2002). This increased to 18% overall prevalence during the second wave of the GYTS(CDC 2008). In this study and using the GYTS group definitions, the prevalence of cigarette smoking among 13 to 15 year olds increased to 18.7%.

Smoking of all types was considerably higher among boys, an expected result which has been observed all over the region(Bawazeer, Hattab et al. 1999; Baddoura and Wehbeh-Chidiac 2001). The prevalence of smoking among females is very low, and is likely due to traditions, norms and family values (Maziak, Asfar et al. 2003) that sanction smoking among boys but not girls. This was also observed in focus group discussion where boys and girls stated that it is not acceptable to

see a girl smoking a cigarette. Nargileh smoking was more prevalent among girls. Similarly, focus group discussions revealed that it is more acceptable for girls and females in general to smoke Nargileh than it is to smoke cigarettes. However, while the prevalence of smoking among girls is very low, the findings of this study indicate a rising level of Nargileh smoking by grade, a warning sign of what is to come, and an indication for an intensive anti-smoking campaign among the girls.

Trends of cigarette and Nargileh smoking also differed by area of residence. Smoking of any type was higher in Ramallah compared to Jenin, mainly because Nargileh is more popular in Ramallah. This higher Nargileh popularity in Ramallah can be partially explained by the higher availability of coffee shops offering Nargileh in Ramallah compared to Jenin. Indeed, this western style coffee shop phenomenon where both men and women go for entertainment is very much a function of the Ramallah open lifestyle, and is absent in Jenin. Coffee shops in Jenin are reserved for men only usually, reflecting a more conservative way of life (Taraki and Giacaman 2006). These results alert the need to place a special emphasis on the health education of an urban central West Bank public that is increasingly being globalized/westernized as well.

Different measures were used to assess socioeconomic status (SES), and even though cigarette smoking was not strongly associated with these SES measures, trends for the effect of SES on Nargileh smoking were observed. Nargileh smokers were more likely to have a higher allowance and to score higher on the Standard of living scale (STL), where STL measures can be used as indicators for better off households. As stated above Nargileh is offered at coffee shops, places where the richer or better off globalized individuals usually go to. Another indicator of SES was mother's employment: mothers who were employed were more likely to have children who are Nargileh smokers. This may be explained in terms of employed mothers being more likely to belong to less reserved or less conservative families which allow women to work to begin with. And maternal education and work in turn open up

the space for a more liberal approach to child rearing, leading to higher levels of smoking among children in these family compared to the other families, perhaps because such students are more likely to visit coffee shops and be exposed to Nargileh smoking as a sign of “modernity”.

A number of classical factors appear to affect smoking status, with such factors having been studied in different regions and cultures, and as in this study conducted in Palestine, demonstrate an association with smoking behavior among students. Smokers are more likely to perceive other smokers more positively (Islam and Johnson 2005); they are more likely to have acquaintances, whether its family, friends, or teachers, who are smokers (Engels, Vitaro et al. 2004; Islam and Johnson 2005). Smokers are also less likely to know about the dangers of smoking compared to non smokers. Access to cigarettes appears to play an important role in encouraging smoking behavior and was observed with both cigarettes and Nargileh in this study. Focus group discussions also revealed that the majority of smokers had their first experience of smoking at home, whether it was secretly taking a puff while lighting their father’s Nargileh at home or secretly experiencing a cigarette after stealing it from their older brothers. Students also stated that its very easy to buy cigarettes from stores, and that money is usually not an issue since they can buy single cigarettes. Similarly, coffee shop owners easily provide students with Nargileh if they ask for it. These findings were supported the quantitative analysis, where students who smoke have family members who are smokers and thus might have access to these cigarette at home. Similarly, smokers are more likely to have a Nargileh at home owned by the family. These results do indicate the need for tobacco cessation and tobacco smoking prevention policies and programs that entail strict measures at the level of public spaces banning the sales and advertisements of tobacco; and at the health education level focusing not only on students, but also parents, family and community at large.

Exposure to violence was strongly associated with being a current smoker. To begin with, students were highly exposed to violence whether from

Israeli violence or at home and school. Students who had any exposure to Israeli violence in the year preceding data collection were more likely to smoke cigarettes and Nargileh compared to those who were not exposed to Israeli violence. This was also true for students who were exposed to beatings from their parents, siblings, school personnel and/or friends at school where the relationship held for cigarette and Nargileh smokers. Further those who were insulted by their parents, siblings, school personnel, and/or school friends were also more likely to be current cigarette and Nargileh smokers. While there is little that can be done in relation to violence by the Israeli army, every effort must be made to ban violent behavior at school and to work with schools and parents to locate alternative to violent methods of disciplining students and children.

We were unable to find studies relating violence to smoking behavior, yet research indicates that stress might increase the uptake of smoking (Tyas and Pederson 1998; Vlahov, Galea et al. 2002). It is likely that students who are exposed to such stressful events (exposure to soldiers and/or violence from school personnel and at home) might take up smoking as a coping mechanism. Focus group discussions also indicated that these students observed their parents' and siblings' behavior and noticed that they smoke when they are stressed in order to "calm down". Interestingly, students who smoke also reported other negative coping mechanisms when faced with problems, i.e. when they experience stress. Students who smoke were more likely to start fights or isolate themselves (sleep, cry alone...) instead of positive coping mechanisms, such as talking to a family member or trying to find a solution for the problem. The relationship between resilience and smoking, based on the resilience scale developed, did not support these findings. While more research needs to be completed focusing on the link between resilience and smoking behavior, this study demonstrates that students need counseling attention at school and at home, in order to better cope with difficult life events.

RECOMMENDATIONS

This report sheds light on the increasing prevalence of smoking among students in the oPt as well as on the factors associated with this smoking epidemic. Intervening to reduce this epidemic should take place on two levels: 1) the policy level, 2) working directly with community members, to include schools, families and students themselves.

The results of this study indicate high exposure to cigarette consumption from advertisements, mainly TVs and billboards and from adults who are considered role models to students, these include parents and school personnel. Policy initiative should be initiated to ban smoking advertisements and smoking in public places, and among teachers in schools. Results also provide evidence on how easily students can access cigarettes and Nargileh in the oPt. Moreover, focus group discussions revealed that such easy access plays a role in initiating and sustaining smoking among these students. This is why store owners should be banned from selling cigarettes to minors, and banned from selling single cigarettes which makes access to smoking even easier. Such a ban should be accompanied by preventing coffee shop owners from

providing Nargileh to minors. Such laws and bans have been passed in other neighboring countries mainly through the Framework Convention for Tobacco Control (FCTC), including Jordan, Egypt, and Syria. These measures have been successful rise in reducing the smoking epidemic in several countries. A law has been recently passed in the oPt, which includes banning smoking in public, banning advertisements of smoking, as well as prohibiting the selling tobacco products to minors, yet this law has not yet been fully implemented.

The second level of intervening should include community members. Interventions, specifically at school levels of all supervising authorities, should target the banning of smoking at school by all. Even though smoking is much higher among boys, special attention should be given to the rising epidemic of Nargileh smoking among girls.

The report indicates a strong association between violence exposure and smoking. It also indicates a high prevalence of exposure to violence, whether at home or in schools or that inflicted by Israeli violence. Although not much can be done with Israeli army violence, violence against students at school and at home should be reduced, if not eliminated, primarily for the wellbeing of these students, but also as an attempt to reduce smoking. Further, community based interventions mainly at schools should be directed towards helping students to cope with stress and with problems, especially stress due to humiliation/ violence inflicted by Israeli soldiers. Interventions should encourage students to deal with such stress more positively (enforce positive coping mechanisms), instead of releasing anger through more violence, or through smoking.

REFERENCES

- Baddoura, R. and C. Wehbeh-Chidiac (2001). "Prevalence of tobacco use among the adult Lebanese population." **East Mediterr Health J** 7(4-5): 819-28.
- Batniji, R., Y. Rabaia, et al. (2009). "Health as human security in the occupied Palestinian territory." **Lancet** 373(9669): 1133-43.
- Bawazeer, A. A., A. S. Hattab, et al. (1999). "First cigarette smoking experience among secondary-school students in Aden, Republic of Yemen." **East Mediterr Health J** 5(3): 440-9.
- Buller, D. B., R. Borland, et al. (2003). "Understanding factors that influence smoking uptake." **Tob Control** 12 Suppl 4: IV16-25.
- CDC (2008). Global Youth Tobacco Surveillance, 2000-2007. **Morbidity and Mortality Weekly Report**.
- Engels, R. C., F. Vitaro, et al. (2004). "Influence and selection processes in friendships and adolescent smoking behaviour: the role of parental smoking." **J Adolesc** 27(5): 531-44.
- Ertas, N. (2007). "Factors associated with stages of cigarette smoking among Turkish youth." **Eur J Public Health** 17(2): 155-61.
- GYTS (2002). "Tobacco use among youth: a cross country comparison." **Tob Control** 11(3): 252-70.
- Islam, S. M. and C. A. Johnson (2005). "Influence of known psychosocial smoking risk factors on Egyptian adolescents' cigarette smoking behavior." **Health Promot Int** 20(2): 135-45.
- Kitzinger, J. (1995). "Qualitative research. Introducing focus groups." **Bmj** 311(7000): 299-302.
- Maziak, W., T. Asfar, et al. (2003). "Why most women in Syria do not smoke: can the passive barrier of traditions be replaced with an information-based one?" **Public Health** 117(4): 237-41.

- Ozge, C., F. Toros, et al. (2006). "Which sociodemographic factors are important on smoking behaviour of high school students? The contribution of classification and regression tree methodology in a broad epidemiological survey." **Postgrad Med J** 82(970): 532-41.
- Rita Giacaman, H. S., Viet Nguyen-Gillham, Anita Abdullah, Ghada Naser (2004). *Palestinian Adolescents Coping with Trauma*. Palestine, Institute of Community and Public Health.
- StataCorp (2007). *STATA Statistics/Data Analysis*. Texas.
- Taraki, L. and R. Giacaman (2006). *Modernity aborted and reborn. Ways of being urban in Palestine. Living Palestine. Family Survival and Mobility under Occupation*. T. L. Syracuse, New York, Syracuse University Press: 40-42.
- Tewelde, S., B. S. Ferguson, et al. (2006). "Risky behavior in youth: an analysis of the factors influencing youth smoking decisions in Canada." **Subst Use Misuse** 41(4): 467-87.
- Tyas, S. L. and L. L. Pederson (1998). "Psychosocial factors related to adolescent smoking: a critical review of the literature." **Tob Control** 7(4): 409-20.
- van Oort, F. V., J. van der Ende, et al. (2006). "Determinants of daily smoking in Turkish young adults in the Netherlands." **BMC Public Health** 6: 294.
- Vlahov, D., S. Galea, et al. (2002). "Increased Use of Cigarettes, Alcohol, and Marijuana among Manhattan, New York, Residents after the September 11th Terrorist Attacks." **Am. J. Epidemiol.** 155(11): 988-996.
- Wagnild, G. M. and H. M. Young (1993). *14-Item Resillience Scale*.
- WHO (2008). **WHO Report on the Global Tobacco Epidemic, 2008: The MPOWER Package**. Geneva, World Health Organization.

ANNEX 1 – Scales

Standard of living scale

Based on a review of the literature (Giacaman 2004), socioeconomic status in the oPt can be estimated by developing a standard of living (STL) scales derived from the availability of a number of amenities at the household level well as the crowding rate for each household (number of persons per room). For this study the following variables were included:

- Do you have a bathroom inside your house
- Do you have a running water system at home
- Do you have a refrigerator at home
- Do you have a full automatic washing machine at home
- Do you have a colored TV at home
- Do you have a satellite dish at home
- Do you have a computer at home
- Do you have a dish washer at home
- Do you have a microwave at home
- Do you have a vacuum machine at home
- Do you have a central heating at home
- Crowding rate

To calculate the crowding rate, the questionnaire included information about the number of individuals living in the household as well as the number of rooms at each house (excluding kitchens, bathroom, and balconies). Crowded homes were those with more than 2 individuals per room.

Principal component analysis was then employed to create a scale from the variables listed above. The first component explained the most variance and thus it was chosen. The second step was to assess the loadings of each of the variables, the first variable (do you have a bathroom) in the list had a loading factor of less than 0.3 and was thus excluded from the analysis leaving 12 variables to create the scales with a Chronbach’s alpha (Bland and Altman 1997) of 0.68. The scales included 3 sections presented in table 16 below.

Table 16: Status of living scale distribution		
	Frequency	Percentage (%)
Low STL	1,077	35
Middle STL	1,053	34
High STL	977	31
Total	3,107	100

Resilience scale

Qualitative methods were utilized in order to develop indicators to measure resilience in the Palestinian context. Results from the focus groups provided 4 types/causes of stressors that students are exposed to; school, home, socioeconomic status, and Israeli military occupation. As for dealing with these stressors or problems students identified 3 main themes that were repeated in all focus groups: taking action, talking about the problem with a family member or a friend, and not sharing the problem with anyone. This information was incorporated into the quantitative instrument (questionnaire) through 4 questions that inquired about students’ resilience. Students were asked whether they strongly disagree, disagree, neither agree nor disagree, agree or strongly agree to the following statements:

- 1 . I usually manage one way or another
- 2 . I deal with life events without fear
- 3 . I am determined to accomplish my goals
- 4 . When I am in a difficult situation, I can usually find my way out

The 4 statements had a Chronbach’s alpha (Bland and Altman 1997) of 0.79, a scale to assess resilience was developing using these 4 statements. The scale included 3 categories and is presented in table 17 below:

- Low resilience: students who strongly disagreed, disagreed and/or nor agreed neither disagreed to all of the 4 statements.
- Some resilience: students who agreed and/or strongly agreed to more than 1 statement
- High resilience: students who agreed and/or strongly agreed to all 4 statements.

Table 17: Resilience scale distribution		
	Frequency	Percentage (%)
Low resilience	1,044	34
Some resilience	1,127	36
High resilience	933	30
Total	3,107	100

ANNEX 2 – Questionnaire

Smoking Among Youth Questionnaire

	Questionnaire information (filled by fieldworker)
	Questionnaire number:.....
	School name:
	Field workers name:
	Date of filling the questionnaire:
	Fieldwork validation
	Date of reviewing the questionnaire by field worker:
	Date of reviewing the questionnaire by coordinator:
	Office validation
	Date of receiving questionnaire:
	Date of reviewing questionnaire by coordinator:
	Result: 1. Complete questionnaire 2. Incomplete questionnaire
	School information (filled by fieldworker)
	V1. Location of the school (Provide name of village, city or camp).....
	V2. School locality 0. City 1. Village 2. Camp
	V3. School district 0. Ramallah 1. Jenin
	V4. School grade 0. 7th 1. 8th 2. 9th 3. 10 th
	V5. Grade section 0. A 1. B 2. C 3.D 4. E
	V6. Sex of the grade 0. Females 1. Males 2. Coeducational
	Demographic characteristics
	V7. What is your age in full years? 0. 12 years 1. 13 years 2. 14 years 3. 15 years 4. 16 years 5. 17 years
	V8. What was the month you were born in?
	V9. What was the year you were born in?.....

	V10. Sex: 0. female 1. male
	V11. Current place of residence (please provide name of village, city, or camp)
	V12. Does your father live at home? 0. Yes 1. No, deceased 2. No, divorced 3. No, traveling 4. No, in prison 5. No, other.....
	V13. Father's education 0. Bachelor's degree of more 1. Diploma 2. High school 3. Less than high school 4. Does not read/write 5. Don't know
	V14. Father's current occupation 0. Does not work 1. Works in a full time job 2. Works in a part time job 3. Don't know
	V15. Does your mother live at home? 0. Yes 1. No, deceased 2. No, divorced 3. No, traveling 4. No, prison 5. No, other.....
	V16. Mother's education 0. Bachelor's degree of more 1. Diploma 2. high school 3. less than high school 4. Does not read/write 5. don't know
	V17. Mother's current occupation 0. Does not work (house wife) 1. Works 3. Don't know
	V18. What is the total number of family members living at home (count yourself).....
	V19. Do you have any health problems? 0. No 1. Yes, I have asthma 2. Yes, other.....
	V20. Are you involved in any sports outside school (multiple answers possible) 0. No 1. Yes, soccer 2. Yes, Swimming 3. Yes, Karate 4. Yes, other.....
	V21. Is your house? 0. Owned 1. Rented 2. Other..... 3. don't know
	V22. Number of rooms in the house (excluding kitchen, bathroom, open balcony, and corridors)
	V23. Does your family own a private car? 0. Yes 1. No
	V24. Do you own a cell phone? 0. Yes 1. No
	V25. Do any of your family members own a cell phone? 0. Yes 1.No

	Does your house have:		
	V26. A bathroom	0. Yes	1. No
	V27. A running water system (Tap)	0. Yes	1. No
	V28. A refrigerator	0. Yes	1. No
	V29. Full automatic machine washer	0. Yes	1. No
	V30. Color TV	0. Yes	1. No
	V31. Satellite dish	0. Yes	1. No
	V32. Computer	0. Yes	1. No
	V33. Dish washer	0. Yes	1. No
	V34. Microwave	0. Yes	1. No
	V35. Vacuum machine	0. Yes	1. No
	V36. Central heating	0. Yes	1. No
	V37. Where do you use the internet now? 0. At home 1. Outside the house 2. Both 3. I don't use it		
	Smoking GYTS		
	V38. Have you ever tried or experimented with cigarette smoking, even one or two puffs? 0. Yes 1. No		
	V39. Do you currently smoke? 0. I do not smoke 1. Sometimes I smoke one cigarette per month 2. I usually smoke more than one cigarette per month, but less than one per week 3. I usually smoke more than one cigarette per week, but less than one per day 4. I smoke one cigarette per day at least		
	V40. How old were you when you first tried a cigarette? 0. I do not smoke 1. less than 8 years old 2. 8 to 9 years old 3. 10 to 11 years old 4. 12 to 13 years old 5. 14 to 15 years old 6. 16 years old or older		
	V41. During the past 30 days (one month), on how many days did you smoke cigarettes? 0. I don't smoke 1. 1 or 2 days 2. 3 to 5 days 3. 6 to 9 days 4. 10 to 19 days 5. 20 to 29 days 6. All 30 days		

	<p>V42. During the past 30 days (one month), on the days you smoked, how many cigarettes did you usually smoke?</p> <p>0. I did not smoke cigarettes during the past 30 days (one month)</p> <p>1. I smoked only during some of the days of the month</p> <p>2. I smoke every day (I smoke one cigarette per day)</p> <p>3. 2-5 cigarettes per day</p> <p>4. 6-10 cigarettes per day</p> <p>5. 11 to 20 cigarettes per day</p> <p>6. More than 20 cigarettes per day</p>
	<p>V43. During the past 30 days (one month), how did you usually get your own cigarettes?</p> <p>0. I did not smoke cigarettes during the past 30 days (one month)</p> <p>1. I bought them in a store, shop or from a street vendor</p> <p>2. I gave someone else money to buy them for me</p> <p>3. I borrowed money from someone else</p> <p>4. I stole the cigarettes</p> <p>5. Someone else gave me the cigarettes</p> <p>6. I took the cigarettes from my home</p> <p>7. I got them some other way</p>
	<p>V44. During the past 30 days (one month), what brand of cigarettes did you usually smoke?</p> <p>0. I did not smoke cigarettes during the past 30 days (one month)</p> <p>1. No usual brand</p> <p>2. I smoke local cigarettes only</p> <p>3. I smoke imported cigarettes only</p> <p>4. I smoke other types</p>
	<p>V45. Who do you usually buy cigarettes for?</p> <p>0. I never buy cigarettes</p> <p>1. For myself</p> <p>2. For my father</p> <p>3. For my mother</p> <p>4. For a relative</p> <p>5. For a friend</p> <p>6. Other.....</p>
	<p>V46. How much do you usually pay for a pack of 20 cigarettes?</p> <p>0. I never buy cigarettes.</p> <p>1. I buy them by the cigarette</p> <p>2. I buy rolling tobacco</p> <p>3. I buy the pack for:.....shekels</p>
	<p>V47. During the past 30 days (one month) how much do you think you spent on cigarettes?</p> <p>0. I do not smoke cigarettes.</p> <p>1. I do not buy cigarettes.</p> <p>2. I spent.....shekels</p>
	<p>V48. During the past 30 days (one month), did anyone ever refuse to sell you cigarettes because of your age?</p> <p>0. I did not try to buy cigarettes during the past 30 days (one month)</p> <p>1. Yes, someone refused to sell me cigarettes because of my age</p> <p>2. No, no one refused to sell me cigarettes because of my age</p>

	<p>V49. Where do you usually smoke?</p> <p>0. I do not smoke cigarettes</p> <p>1. At home</p> <p>2. At school</p> <p>3. At friends' houses</p> <p>4. At social events</p> <p>5. In public spaces (e.g. parks, shopping centers, restaurants, coffee shops...)</p> <p>6. Other,.....</p>
	<p>V50. Do you have a cigarette or feel like having a cigarette first thing in the morning?</p> <p>0. I do not smoke cigarettes</p> <p>1. No, I don't have or feel like having a cigarette first thing in the morning</p> <p>2. Yes, I sometimes have or feel like having a cigarette first thing in the morning</p> <p>3. Yes, I always have or feel like having a cigarette first thing in the morning</p>
	<p>V51. How do you evaluate yourself as a smoker?</p> <p>0. I do not smoke cigarettes 1. I sometimes smoke 2. I smoke regularly</p>
	<p>Arghelleh</p>
	<p>V52. During the past 30 days (one month), have you ever used any form of tobacco products other than cigarettes</p> <p>0. I do not smoke cigarettes</p> <p>1. I only smoke cigarettes and no other type</p> <p>2. Arghelleh</p> <p>3. Other, such as pipes, cigars, and snuff</p>
	<p>V53 Do you have an arghelleh at home? 0.Yes 1. NO</p>
	<p>V54 Does any of your family members smoke arghelleh at home?</p> <p>0. Yes 1. No</p>
	<p>V55 Does your parents or caregivers allow you to smoke arghelleh?</p> <p>0. Yes 1. No</p>
	<p><i>The following questions ask about your knowledge and attitudes toward tobacco</i></p>
	<p>V56 Do your parents smoke?</p> <p>0. None 1. Both 2. Father only 3. Mother only 4. I don't know</p>
	<p>V57. Do your brothers/sisters smoke?</p> <p>I have no brothers/sisters</p> <p>Yes, one or more of my brothers smoke</p> <p>Yes, one or more of my sisters smoke</p> <p>Yes, my brothers and sisters</p> <p>None smoke</p> <p>I don't know</p>
	<p>V58. Have you seen a teacher smoke in school (multiple answers):</p> <p>0. Yes, inside the class 1. Yes, at school but outside class 2. No</p>

	<p>V59. If one of your best friends offered you a cigarette, would you smoke it? 0. Definitely not 1. Probably not 2. Probably yes 3. Definitely yes</p>
	<p>V60. Has anyone in your family discussed the harmful effects of smoking with you? 0. Yes 1. No</p>
	<p>V61. At any time during the next 12 months do you think you will smoke a cigarette? 0. Definitely not 1. Probably not 2. Probably yes 3. Definitely yes</p>
	<p>V62. Do you think you will be smoking cigarettes 5 years from now? 0. Definitely not 1. Probably not 2. Probably yes 3. Definitely yes</p>
	<p>V63. Once someone has started smoking, do you think it would be difficult to quit? 0. Definitely not 1. Probably not 2. Probably yes 3. Definitely yes</p>
	<p>V64. Do you think smoking arghelleh is less harmful than smoking cigarettes? 0. Yes 1. No 2. I don't know</p>
	<p>V65. Do you think that quitting cigarettes is harder than quitting arghelleh? 0. Yes 1. No 2. The same 3. I don't know</p>
	<p>V66. Do you think boys who smoke cigarettes have more or less friends? 0. More friends 1. Less friends 2. No difference from non-smokers</p>
	<p>V67. Do you think girls who smoke cigarettes have more or less friends? 0. More friends 1. Less friends 2. No difference from non-smokers</p>
	<p>V68. Do you think smoking cigarettes makes boys look more or less attractive? 0. More attractive 1. Less attractive 2. No difference from non-smokers</p>
	<p>V69. Do you think smoking cigarettes makes girls look more or less attractive? 0. More attractive 1. Less attractive 2. No difference from non-smokers</p>
	<p>V70. Do you think that smoking cigarettes makes you gain or lose weight? 0. Gain weight 1. Lose weight 2. No difference</p>
	<p>V71. Do you think cigarette smoking is harmful to your health? 0. Definitely not 1. Probably not 2. Probably yes 3. Definitely yes</p>
	<p>V72. Do you think that smoking light cigarettes is less harmful than smoking regular cigarettes? 0. Light cigarettes are less harmful 1. Light cigarettes are more harmful 2. No difference 3. I don't know</p>
	<p>V73. Do any of your closest friends smoke cigarettes? 0. None of them 1. Some of them 2. Most of them 3. All of them</p>
	<p>V74. When you see a man smoking what do you think of him? Strong personality 1. Successful Lacks confidence 3. Weak 4. Not in concordance with religious beliefs No difference between smokers and non smokers</p>

	<p>V84. What was the main reason you decided to stop smoking?</p> <p>0. I don't smoke 2. To improve my health 4. Because my family does not like it 6. Other,.....</p> <p>1. I have not stopped smoking 3. To save money 5. Because my friends don't like it</p>
	<p>V85. Do you think you would be able to stop smoking if you wanted to?</p> <p>0. I don't smoke 2. Yes</p> <p>1. I have already stopped smoking cigarettes 3. No</p>
	<p>V86. How many times have you tried to quit smoking?</p> <p>0. I do not smoke 1. I have not tried quitting 2. 1-3 times 3. 4 or more times</p>
	<p>V87. Have you ever received help or advice to help you stop smoking?</p> <p>0. I have never smoked cigarettes 3. Yes, from a program or professional 5. Yes, from a family member</p> <p>2. No, I did not 4. Yes, from a friend</p>
<p><i>The following questions ask about your knowledge of media messages about smoking</i></p>	
	<p>V88. During the past 30 days (one month), how many anti-smoking media messages (e.g., television, radio, newspapers, magazines, movies) have you seen?</p> <p>0. A lot 1. A few 2. None</p>
	<p>V89. How often do you see anti-smoking messages when you go to sports events, fairs, concerts, community events, or social gatherings?</p> <p>0. I never go to such places 2. Sometimes</p> <p>1. A lot 3. Never</p>
	<p>V90. When you watch TV, videos, or movies, how often do you see actors smoking?</p> <p>0. I never watch TV, videos, or movies 2. Sometimes</p> <p>1. A lot 3. Never</p>
	<p>V91. Do you have something (t-shirt, pen, backpack, etc.) with a cigarette brand logo on it?</p> <p>0. Yes 1. No</p>
	<p>V92. 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?</p> <p>0. I never watch TV 1. A lot 2. Sometimes 3. Never</p>
	<p>V93. During the past 30 days (one month), how many advertisements for cigarettes have you seen on billboards?</p> <p>0. A lot 1. A few 2. None</p>
	<p>V94. During the past 30 days (one month), how many advertisements or promotions for cigarettes have you seen in newspapers or magazines?</p> <p>0. A lot 1. A few 2. None</p>
	<p>V95. When you go to sports events, fairs, concerts, or community events, how often do you see advertisements for cigarettes?</p> <p>0. I never attend such events 1. A lot 2. Sometimes 3. Never</p>

Exposure to Violence		
VIOLENCE DUE TO THE ISRAELI ARMY and/or SETTLERS		
During the current school year (since September 2007), were you exposed to:		
V108. Shooting by live bullets	0. Yes	1.No
V109. Shooting by rubber bullets	0. Yes	1.No
V110. Gas bombs	0. Yes	1.No
V111. Sound bombs	0. Yes	1.No
V112. Beaten by the Israeli army or by settlers	0. Yes	1.No
V113. Body Searched	0. Yes	1.No
V114. Humiliated by the Israeli Army	0. Yes	1.No
V115. Since the beginning of this school year do you pass by any checkpoints or through the wall to get to school?	0. Yes	1.No
During the current school year (since September 2007), have you seen:		
V116. Shooting	0. Yes	1.No
V117. Explosions /shelling	0. Yes	1.No
V118. A stranger being humiliated, arrested, injured or killed	0. Yes	1.No
V119. A family member being humiliated, arrested, injured or killed	0.Yes	1.No
V120. A friend being humiliated, arrested, injured or killed	0.Yes	1.No
V121. During your lifetime has a family member been killed by the Israeli army?	0. Yes	1.No
VIOLENCE AT SCHOOL OR AT HOME		
During the current school year (since September 2007), were you exposed to:		
V122. Beating from school personnel (Principal, Teacher, councilor): 0. No 1. Yes, lot 2. Yes, sometimes 3. Yes, a few times only		
V123. What did school personnel use: 0. Hands 1. Stick 2. Belt/hose 3. Feet 4. Shoes 5. I was not beaten		
V124. I was beaten at: 0. Head 1. Face 2. Hands 3. Legs 4. Back/lower back 5. I was not beaten		
V125. Type of injury due to beating: 0. No injury 1. Bruises 2. Wound 3. Broken bones 4. Passing out 5. I was not beaten		

	V126. Beating from parents: 0. No 1. Yes, lot 2. Yes, sometimes 3. Yes, a few times only
	V127. Type of injury due to beating: 0. No injury 1. Bruises 2. Wound 3. Broken bones 4. Passing out 5. I was not beaten
	V128. Beating from siblings: 0. No 1. Yes, lot 2. Yes, sometimes 3. Yes, a few times only
	V129. Type of injury due to beating: 0. No injury 1. Bruises 2. Wound 3. Broken bones 4. Passing out 5. I was not beaten
	V130. Beating from friends at school: 0. No 1. Yes, lot 2. Yes, sometimes 3. Yes, a few times only
	V131. Type of injury due to beating: 0. No injury 1. Bruises 2. Wound 3. Broken bones 4. Passing out 5. I was not beaten
	V132. Insulted by school personnel (principal, teacher, councilor): 0. No 1. Yes, lot 2. Yes, sometimes 3. Yes, a few times only
	V133. Insulted by parents: 0. No 1. Yes, lot 2. Yes, sometimes 3. Yes, a few times only
	V134. Insulted by siblings: 0. No 1. Yes, lot 2. Yes, sometimes 3. Yes, a few times only
	V135. Insulted by school friends: 0. No 1. Yes, lot 2. Yes, sometimes 3. Yes, a few times only
	Resilience
	V136. I usually manage one way or another 0. Strongly disagree 1. disagree 2. Neither agree nor disagree 3. agree 4. strongly agree
	V137. I deal with life events without fear 0. Strongly disagree 1. disagree 2. Neither agree nor disagree 3. agree 4. strongly agree
	V138. I am determined to accomplish my goals 0. Strongly disagree 1. disagree 2. Neither agree nor disagree 3. agree 4. strongly agree
	V139. When I am in a difficult situation, I can usually find my way out of it 0. Strongly disagree 1. disagree 2. Neither agree nor disagree 3. agree 4. strongly agree

V140. If you were faced with a problem how do you deal with it? 0. I keep the problem to myself and don't tell anyone about it 1. I talk to my family and to my friends about the problem 2. Through humiliating others 3. Through physically fighting with others 4. Through writing and drawing 5. Other,.....		
When faced with a problem do you go to:		
V141. Your Mother	0. Yes	1.No
V142. Your Father	0. Yes	1.No
V143. Your siblings	0. Yes	1.No
V144. Your relatives	0. Yes	1.No
V145. Your friends	0. Yes	1.No
V146. Your teacher	0. Yes	1.No
V147. Your school councilor	0. Yes	1.No
V148. If you do not smoke, what is the main reason? 0. I do smoke 1. The belief that it is bad for my health 2. Fear from my parents 3. The belief that it is against religious decorum 4. Not accepted in the community 5. Other,.....		
Health		
V149. In general how do you describe your health? 0. Excellent 1. Very good 2. Good 3. Average 4. Below average		
V150. How satisfied are you with your current health? 0. Not satisfied at all 1. Not satisfied 2. Somewhat satisfied 3. Satisfied 4. Very satisfied		
In the past two weeks did you feel:		
V151. Tense: 0. Not at all 1. Rarely 2. Several times 3. A lot 4. All the time		
V152. Down/ Desperate: 0. Not at all 1. Rarely 2. Several times 3. A lot 4. All the time		

ANNEX 3 – Policy Brief

Alarming Prevalence of Smoking Among Palestinian School Students

This policy brief summarizes the results of a recently completed study on the prevalence of tobacco smoking among high school students living in the Jenin and Ramallah governorates of the occupied Palestinian territory, and factors associated with smoking behavior. The study included a representative sample of 3,107 students from public, private and UNRWA schools. Data was collected in 2008 and reflects smoking as well as other behaviors of students during that year. The instrument used for data collection included questions extracted from the Global Youth Tobacco Survey (GYTS), which has been conducted twice already in the oPt. **Comparing with previous results shows an increase in the overall prevalence of smoking among students since 2001.**

How many students smoke?

Overall, a high of 25% of students 7th to 10th grades reported smoking cigarettes, Argileh or both. Nine percent reported smoking cigarettes, 6% reported smoking Argileh, and the rest reported smoking both, cigarettes and Argileh. Gender differences in smoking behavior were also observed:

- A high of 39% of boys were smokers compared to 8% for girls.
- Boys were more likely to smoke cigarettes (15%) compared to Argileh (7%).
- Girls were more likely to smoke Argileh (4%) compared to cigarettes (2%).

Today's teenager is tomorrow's potential regular costumer, and the overwhelming majority of smokers first begin to smoke while still in their teens" [1]
Phillip Morris internal document, 1981

Figure 1: A quarter of the students reported being current smokers

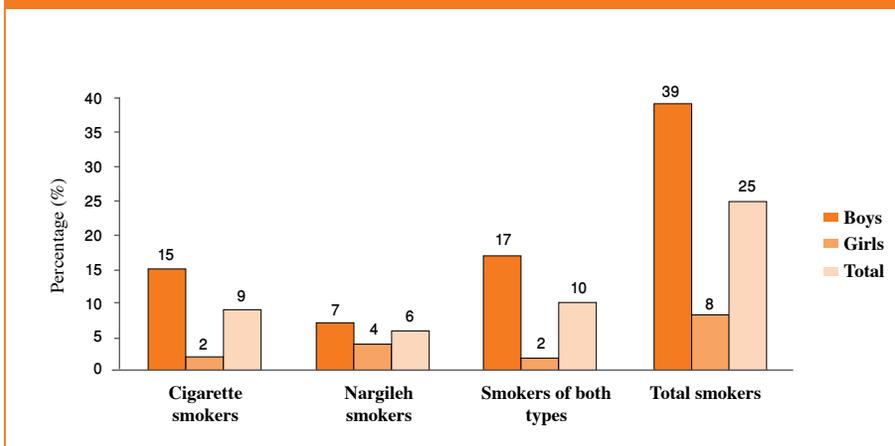


Figure 1: Percentage of students who reported smoking by type of smoking and by gender. **Cigarette smokers** are those who smoked at least 1 cigarette during the month preceding the study. **Nargileh smokers** are those who smoked Nargileh during the month preceding the study.

Characteristics of cigarette smokers in the study sample...

- 20% of cigarette smokers started smoking before the age of 10 years.
- 18% of cigarette smokers smoke 5 cigarettes or more per day.
- More than half of the cigarette smokers (52%) stated that they can easily buy their cigarettes from stores.

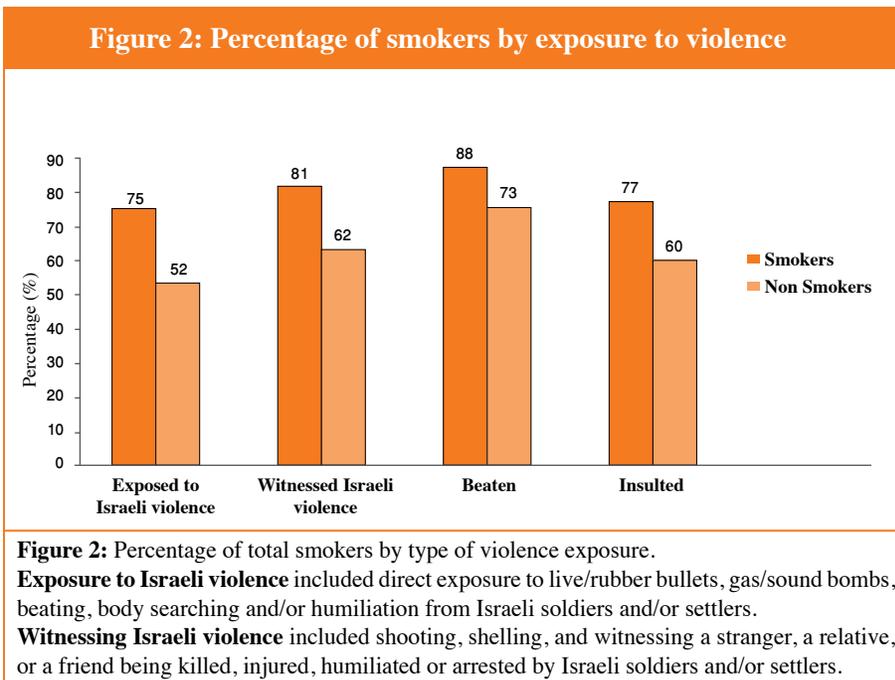
Role models encourage harmful smoking behavior

- 63% of students who are smokers have at least one smoking parent, where as a lower 54% of non smokers have at least one smoking parent.
- Smokers were more likely to have at least one brother or sister who smokes (44%) compared to non smokers (21%).
- 36 % o f smokers saw their teachers smoke com pa red to only 1 8% of nonsmokers.
- Smokers were more likely to report having friends who smoke (85%) compared to non smokers (38%).

How does exposure to violence fit into the picture?

Exposure to violence was strongly associated with being a current smoker. Students were more likely to smoke if:

- They were exposed to Israeli (soldiers and settlers) violence.
- They witnessed any Israeli (soldiers and settlers) violence.
- They were exposed to beating at home (parents and siblings) or at school (teachers and other students).
- They were insulted at home (parents and siblings) or at school (teachers and other students).



What must be done to protect the health of Palestinian students?

Policy level interventions:

- **Ban smoking inside school premises** through the implementation of article (5) of the Palestinian anti-smoking law number 25 [2]. This ban should include students, teachers, other school personnel and any visitors to the school.

- **Prohibit store owners from selling cigarettes to minors** by implementing article (6) of the Palestinian anti-smoking law number 25 [2]. Owners should be monitored and fined if they violate this law. They should especially be prohibited from selling single cigarettes for easy access to minors.
- **Coffee shop owners should be prohibited from serving Nargileh to minors.** They should be monitored and fined if they violate the smoking legislations.
- **Implement the action against violence policy [3]** developed by the Ministry of Education to limit violence against students at schools, primarily for the wellbeing of these students, but also as a measure that can reduce smoking behavior. Such legislative regulations have been implemented in other neighboring countries, mainly through the Framework Convention for Tobacco Control (FCTC). The adoption of this treaty has been successful in reducing the smoking epidemic in many countries. **While a law has been passed in the occupied Palestinian territory [2] banning smoking in public, banning cigarette advertisements, and prohibiting the sale of tobacco products to minors, this law has not yet been fully implemented. There is an urgent need to implement this law and to sign and ratify the FCTC in the occupied Palestinian territory.**

These policy regulations should be accompanied with community level interventions, mainly:

- School interventions should **target the prohibition and cessation of smoking.**
- Even though smoking prevalence is much higher among boys compared to girls, **special attention should be given to the rising levels of Nargileh smoking among girls.**
- **Community based interventions, especially at schools, should be directed towards helping students to positively cope with stress and with problems,** especially the stress of humiliation/ violence inflicted by the Israeli army. Interventions should encourage students to deal with stress more positively (enforce positive coping mechanisms), instead of releasing anger through more violence, or through smoking.

Conclusion

The occupied Palestinian territory seems to be caught in a **tobacco smoking epidemic which MUST be given attention by Palestinian policymakers and educators**. It is hoped that the results of this study providing the link between smoking and its associated factors, **will prompt policy makers, and educators to adopt and implement stringent regulations prohibiting tobacco advertisement and sales to minors, and banning smoking from public place, especially schools.**

“In the 20th century, the tobacco epidemic killed 100 million people worldwide. During the 21st century, it could kill 1 billion” [1]
World Health Organization, 2008

What is the Framework Convention on Tobacco Control (FCTC)?

The Framework Convention on Tobacco Control (FCTC) is **the first treaty negotiated under the auspices of the World Health Organization (WHO). It is an evidence -based treaty that reaffirms the right of all people to the highest standard of health. In contrast to previous drug control treaties**, the FCTC asserts the importance of demand reduction strategies as well as supply issues [4].

The FCTC [4] is the world’s first ever public health treaty; it embraces all elements of a comprehensive tobacco control agenda. The treaty will:

- Require ratifying nations to eliminate all tobacco advertising, promotion and sponsorship, with narrow exception for nations whose constitutions prohibit a complete ban.
- Require warning labels to occupy a minimum of 30% of every pack of cigarettes.
- Urge nations to adopt larger warning labels of 50% or more.
- Requires the prohibition of misleading tobacco product descriptors such as “light” and “mild”.

- Commit nations to protecting non-smokers from tobacco smoke in public places.
- Urge strict regulation of tobacco product contents.
- Call for higher tobacco taxes, global coordination to fight tobacco smuggling, and promotion of tobacco prevention, cessation and research programs.
- Take action against illicit trade in tobacco products.
- Prohibit sales to and by minors.
- Provision of support for economically viable alternative activities.
- Urge the development of education, communication, training and public awareness.
- Demand reduction measures concerning tobacco dependence and cessation.

As of July, 2009, 166 countries joined the FCTC as members [5]. A number of Arab countries have also signed and ratified the FCTC: Bahrain, Egypt, Iraq, Jordan, Kuwait, Lebanon, Morocco, Oman, Qatar, Saudi Arabia, Syrian Arab Republic, Tunisia, United Arab Emirates, and Yemen(4).

“Tobacco use can kill in so many ways that it is a risk factor for six of the eight leading causes of death in the world” [1]

Margaret Chan Fung Fu-Chun. Director General, WHO, 2008

References

1. WHO, WHO Report on the Global Tobacco Epidemic, 2008: The MPOWER Package. 2008, Geneva: World Health Organization.
2. Palestinian Authority, Anti smoking Law 2005: Ramallah, Palestine.
3. Muhammad Rimawi et.al., Violence in schools policy paper. 2009: Ramallah, Palestine.
4. WHO, WHO Framework Convention on Tobacco Control. 2003, World Health Organization: Geneva.
5. WHO, Tobacco Control Country Profiles for the Eastern Mediterranean Region. 2003, Cairo: EMRO.

