WHO-EM/WRH/044/E

The Role of Medical Students in Promoting Adolescent Health

A survey of risk behaviours among medical students in selected countries in the Eastern Mediterranean Region

World Health Organization
Regional Office for the Eastern Mediterranean

International Federation of
Medical Students' Associations

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A joint initiative by the International Federation of Medical Students' Associations in collaboration with the World Health Organization Regional Office for the Eastern Mediterranean

World Health Organization
Regional Office for the Eastern Mediterranean
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Contents

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1. Introduction

Adolescence is a time when young people, who are no longer children but are not yet adults, experience new ideas, relationships and lifestyles. The difficulties of this transitional age, combined with relative change in the surrounding environmental conditions, lead to dramatic changes in the attitudes of some adolescents and adoption of behaviours and practices that may have lifelong consequences.

Knowledge of the significant, rapid changes occurring during adolescence can help young people to understand and adapt, enabling them to avoid falling victim to many harmful practices and serious illnesses.

Of the 1.2 billion adolescents worldwide, about 85% live in developing countries, with the remainder in the industrialized world (1). This project focuses specifically on a subgroup of adolescents, "youth", defined by the World Health Organization (WHO) as individuals in age groups between 15 and 24 years old (2).

Youth is a sensitive and impressionable period in the lifecycle of a person. This is the time when healthy habits, such as eating a balanced diet, exercising, and abstaining from alcohol and tobacco, are formed. These healthy habits can protect a person from many lifestyle-related diseases later in life (3). Conversely, youth is also a period of change and experimentation, where risk behaviours are tried and sometimes maintained to the detriment of future health: illegal substances are used for the mere thrill of engaging in anti-establishment activities, as a means of escape from a harsh reality, or simply as a means of fun with the minimum of effort (4).

During this crucial, formative time, while respecting their personal growth and promoting their involvement as active members of their communities, young people must be called on to become responsible and educated individuals. From a community heath perspective, it is important to monitor trends both in risk taking and in health promotion behaviours and to report their prevalence, thus providing data for policy-making and priority-setting and for the planning and evaluation of interventions (5). In this project, student associations affiliated with the International Federation of Medical Students' Associations (IFMSA) from various Arab countries, along with WHO Regional Office for the Eastern Mediterranean (WHO/EMRO), have initiated a survey of various youth risk behaviours among medical students. The willingness of these young people to participate in community health promotion was also surveyed. This project was also cosponsored by WHO Regional Office, reflecting the importance of the topic for health policy-makers. Specific health behaviours, such as cigarette or water pipe smoking, alcohol use and illegal drug use, were selected for their perceived magnitude in the Eastern Mediterranean Region and/or their potential for grave, long-term health consequences.

Tobacco use: cigarette smoking

Smoking cigarettes is an enormous threat to public health and is, therefore, of great concern to medical students all over the world. Smoking is a risk factor for numerous diseases. Data from WHO indicate that "every eight seconds a person dies of tobacco related diseases and almost as quickly another victim is recruited" (6). While smoking prevalence rates have decreased 1% per year in the industrialized countries since the mid-1970s, tobacco use has surged in the developing world (7). Worldwide estimates indicate that annual deaths from cigarette smoking will rise from

the current figure of 3 million to 10 million by 2025, with approximately 70% of these deaths occurring in developing countries (8). At present, an estimated 150 million adolescents use tobacco (1).

In the countries of the Eastern Mediterranean Region, over 45% of men and fewer than 15% of women are smokers, with a mean age of initiation of 15 (9). It is postulated that smoking among adolescent students is at the same level or higher. In the Islamic Republic of Iran, a country that is geographically and demographically very similar to our study sample, smoking was reported at 18.48% among medical students (10). In 1999, a previous study in Kuwait found that smoking rates among medical students were 37% for males and 4% for females (11). This compares unfavourably with smoking rates of 2% among American medical students (12). Personality and behavioural studies have suggested various perceived advantages that smokers derive from smoking tobacco, such as smoking to modify mood, relax, or serve as a food substitute for people trying to control their weight. (13,14).

Tobacco use: water pipe smoking

Water pipe, or *shisha*, is a device for tobacco smoking widely used in the Arab world. A tobacco mix enriched with glycerol is placed within the head of the water pipe and covered with charcoal. The smoker then inhales deeply on a long mouthpiece, causing the smoke produced to go down the long stem of the pipe, pass through the water in a container, and be expelled through the mouthpiece. Passage through water dissolves most of the nicotine in the tobacco smoke, but the rest of the insoluble tar and carbon monoxide pass through to the smoker.

Studies have shown that water pipe smokers have higher carboxyhaemoglobin (COHb) levels in their blood than cigarette smokers. Cigarette smokers require a nicotine level corresponding to the degree of addiction to this substance. Thus, the number of cigarettes smoked, frequency of puffing and depth of inhalation will be adjusted according to the addiction of each smoker's level. Water pipe smokers, on the other hand, will inhale more deeply and frequently without reaching a level of nicotine "satisfaction". This leads to higher COHb levels in water pipe smokers and, therefore, to greater health risks. COHb levels are taken as an index of consumption of tobacco smoke and subsequent development of diseases (15,16). Water pipe smokers are at a higher risk of developing obstructive airway diseases than cigarette smokers. In addition, headaches, blurred vision, dizziness and palpitations have been reported more frequently by water pipe smokers than by cigarette smokers (17).

Water pipe smoking has been a traditional social behaviour practised in the Ottoman Empire since the 18th century. Various types of water pipes have been used in Egypt, Lebanon and the Gulf area in the past three centuries. Although there are no data related to the use of the water pipe in earlier times, the behaviour was often considered as a recreational activity for those of low income groups. In the past 10 years, however, an increasing trend towards water pipe smoking has been reported across the Arab world. The increase in water pipe use is especially remarkable among young and educated people who gather in trendy cafes to engage in the use of this legal, mood-altering drug. In 1997, the prevalence of water pipe smoking among medical students in Kuwait was 12.5% for males and 4% for females (18). However, that rate increased among the male university student population to 15% in 2002 (19).

Alcohol abuse

Although alcoholic drinks may help to relax social constrains and to lower inhibitions, they may also increase the chances of risk-taking behaviours. Among adolescents, drinking alcohol increases the likelihood of unsafe sex, which can lead to HIV infection and other sexually transmitted diseases, as well as unplanned, unwanted pregnancies. Alcohol use is also associated with increased violence, suicide and traffic accidents among adolescents. The younger an adolescent starts drinking the greater the chance is of developing a clinical alcohol disorder as an adult. According to a WHO study, alcohol is responsible for 3.5% of global diseases (20). Alcohol abuse is currently the first leading cause of disability among men in industrialized countries and the fourth in developing countries. The situation is likely to become worse as multinational alcohol manufacturers are now aggressively targeting developing countries (20).

Illegal drug use

Illegal drug abuse became a global problem in the 20th century, often affecting more advanced societies. The drugs being abused are numerous. Globally, cannabis is probably the most widespread and commonly used illicit drug. The United Nations International Drug Control Programme has estimated the number of cannabis users worldwide to be 141 million people (20). In industrialized countries, cannabis use is reported at lower levels than in developed ones, although data from many developing countries is limited. In some Arabic countries, the use of cannabis, known as "*hashish*", has had a long if somewhat stigmatized tradition. The prevalence of this traditional use is generally low, for example, 5% in Egypt and 8% in Morocco (21). In Yemen and the African Horn, the habit of chewing *khat* leaves, which induce slight euphoria with an affect similar to that brought about by coca leaves, is very much part of the everyday life of large numbers of average citizens. Other illicit drugs may be less available and of lower use in the Arab world than *hashish*. These would include cocaine and its derivative "crack", heroin, amphetamines and, in recent years, "designer pills" such as Ecstasy. Data on illegal drug use are very difficult to obtain in the Arab world, where they are either non-existent, incomplete, or kept obsessively secret by law enforcement authorities. Thus, the prevalence of drug use by Arab youth is almost totally unknown (21).

2. Background

This project corresponds to the intersection of two research agendas: that of WHO Eastern Mediterranean Region and that of the IFMSA. The former is interested in designing strategic responses to adolescent health and lifestyle challenges in a period of rapid social and economic development. A recent review of the need for adolescent health and development policy, strategy and programmes in the Region recognized, for example, tobacco and other substance use as an area of high priority and called for renewed action. IFMSA is affiliated with the United Nations system and has, since 1969, been recognized by WHO as the official international forum for international medical students. IFMSA exists to serve as a forum for medical students to share ideas and expertise pertaining to public health, medical education, reproductive health, refugees, peace and human rights. The agenda for global activity of IFMSA includes the investigation of the health behaviour of medical students. A cross-country collaborative survey in the Eastern Mediterranean Region will enhance WHO and IFMSA contacts with national medical and allied professional associations as well as student and youth movements. Cooperation between these two entities in research in the Region will also complement their respective aims and extend the

effects of technical assistance. At the same time, it will provide much needed data in an area where information on adolescent health is still relatively scarce.

Delegates from medical students' associations participating in a meeting were able to perceive these advantages. Consequently, they decided to initiate an intercountry survey of medical students. Such a cross-national activity would probably be the first in this part of the world to be run simultaneously and by grass-roots organizations. Delegates from Egypt, Kuwait and Lebanon, with support from designated members of IFMSA staff, prepared a proposal, which obtained funding from the Regional Office. Subsequent efforts to include participation from the Islamic Republic of Iran, Jordan, Palestine and Tunisia did not succeed for various reasons. Delegates met in May 2002 in Amman, Jordan, to agree on a standardized questionnaire and a plan for the implementation of the process. The meeting was attended by staff members from the Eastern Mediterranean Regional Office, who helped elaborate the study instrument. The resulting questionnaire was piloted in various locations, modified as needed and adopted by June 2002. The field survey activities per se were conducted mainly in August and September 2002, when classes resumed for all schools. Data were entered and analysed during October and November, and the survey report was elaborated in December 2002.

3. Objectives

The principal objectives of the intercountry survey were to measure the prevalence of smoking, alcohol and drug use among medical students, assess the prevalence of smoking among the students' families and examine their parents' attitudes towards the habit. It was also hoped to identify stressful situations prompting smoking and evaluate the students' beliefs and attitudes towards smoking in order to estimate their potential as community health counsellors.

In the long-term, it was hoped that medical students, by simply responding to this questionnaire, would be prompted to reflect more seriously on their own risk-taking behaviours and improve their roles as agents of social change and education in their communities. It is anticipated that results may be disseminated to help decision-makers formulate needed interventions and evaluate and improve the efficiency of existing ones.

4. Methodology

4.1 Study design, target population and sampling procedures

An intercountry survey of medical students was planned for the academic year 2002–2003. Although originally to be conducted in five countries, Egypt, Jordan, Kuwait, Lebanon and Palestine, Jordan and Palestine were unable to participate.

4.2 Egypt

The survey covers five medical schools in different geographical regions of the country: Cairo, Assiut, Mansoura, Zagazig and Suez Canal. The curriculum for medical schools in Egypt is unified and consists of six years: three academic and three clinical, in addition to one year of clinical internship. There are currently 14 medical schools in Egypt. The average number of students in each of the schools selected for this survey is about 4000. The study planned to cover approximately 15% of the total medical student population in each school; this corresponded to 600 students per school, excluding students in the internship year. In view of difficulties in

locating and randomly selecting all students in each class, the sampling was a purely convenient one. Pens carrying the logo of the project were distributed along with the questionnaire to motivate students to participate.

4.3 Kuwait

There is only one medical school in Kuwait and that is part of Kuwait University. The medical school system in Kuwait consists of seven years: two preparatory, two academic, and three clinical years. From the third to the seventh year, students physically attend the Faculty of Medicine on a permanent basis. All 443 students in these five years were targeted to participate in the survey. Banners about the project were posted in the entrance of the faculty to increase the students' awareness of the study.

4.4 Lebanon

The survey covered the American University of Beirut (AUB), one of the major medical schools of the five currently operating in the country. AUB students are drawn from all strata and areas of Lebanese society, but with a predominance of middle-to-upper socioeconomic classes. AUB follows the American system of education with students joining the medical school after receiving a bachelor degree and completing other additional selection requirements. Students usually spend four years at the medical school, two in basic sciences and two in clinical training. They later rotate for training as interns in different departments at AUB Medical Centre, other hospitals, and certain institutions and medical centres abroad. There were 298 medical students at AUB during the academic year of the survey and all were targeted for participation.

4.5 Study instrument

An anonymous, self-administered, structured questionnaire was designed by an IFMSA steering committee. A number of similar surveys, such as Global Youth Tobacco Survey (GYTS) 2001 were reviewed as sources for some questions included in this survey. The World Health Organization (WHO) and Centers for Disease Control and Prevention (CDC) developed the GYTS to track tobacco use among youth across countries, using a common methodology and core questionnaire. The questionnaire was originally formulated in English (See Appendix 1). Later, it was translated into Arabic and French, and pilot tested with 50 medical students in Egypt. Following the pilot testing, a few questions were modified for clarity. Eventually, the French version was not used, as the need did not arise. Only the English version was used in Lebanon, only the Arabic version in Egypt and both were used in Kuwait. IFMSA affiliated medical students working with their peers completed data collection.

4.6 Study variables

Variables were obtained in the questionnaire using 84 questions divided into three sections.

Section I: This section included a total of 22 questions covering personal, social and demographic data, such as age, sex, religious background, place of residency, education of parents, and a measurement of the "health locus of control" (HLC). The HLC assesses the degree to which individuals believe they have control over health-related events in their lives. Those who believe they have good control are described as having an "internal locus of control" while those who believe their health status is generally not under their control are described as having an "external locus of control." Locus of control is measured using a standardized scale developed by Wallston et al. (22). These authors identified the relationship between a belief in internal control and

physical health or well-being as an important emergent area. The scale contains 12 items; each one is scored on a 6 Likert scale from 1 (strongly disagree) to 6 (strongly agree) in the external direction.

Section II: This section, consisting of 58 questions, assessed the prevalence of cigarette and water pipe smoking and attitudes and beliefs regarding smoking. Furthermore, students' opinions about the role of the government in tobacco control were obtained. Family smoking status and attitudes towards smoking were also evaluated as potential determinants of personal behaviour. In addition to tobacco use, alcohol and drug abuse and consumption of caffeine were assessed, though in a briefer form.

Section III: This section was specifically designed to assess the way medical students perceive the health effects of studying medicine on their lives and their roles as health promoters.

In order to add an educational dimension to the study a detachable pamphlet, presenting facts about the hazards of smoking and the role of medical students in health promotion, was included to be kept by participants after completion of the questionnaire (Appendix 1).

4.7 Statistical analysis

Data coding, entry and cleaning were performed using a statistical package for social sciences (SPSS version 10). For the purposes of this report, data were presented in simple tabulation. Means, standard deviations (SD), medians, and ranges were obtained for quantitative variables. Frequencies and percentages were obtained for qualitative variables. Tables presented values summarized across all three countries and eight medical schools for easy comparisons. The secondary analysis of this data will take place at a later time. Behavioural outcomes will be defined as dependent variables, and their association with various independent ones will be assessed both within and among countries.

4.8 Limitations

The study faced certain limitations, of which some are intrinsic to the nature of the questionnaire and thus common to all countries, while others are related to the particularities of different participating countries.

Potential selection bias: This bias may have affected, to varying degrees, all components of the survey. The response rates in some classes, especially the more senior ones, both in Kuwait and Lebanon, were relatively low. This was largely caused by the difficulty of reaching senior students on clinical duty at a time when they were able and willing to participate. While the expected numbers of participants in Egypt were generally obtained, students were free to refuse participation. One pretext for not participating may have been the length of the questionnaire. However, it is well known that individuals who elect to participate in health surveys differ from those who do not take part; the former tend to be more health conscious and health involved than the latter. This might have led to an underestimation of the prevalence of negative health outcomes.

Potential social bias: Behavioural studies are subject to "social bias" because some individuals prefer not to disclose socially or legally unacceptable or unusual behaviours for fear of possible prosecution or stigma. Some may even deny certain behaviours as a mechanism to counteract

guilt feelings. Using self-completed, anonymous questionnaires was an attempt to minimize this type of bias.

External validity: While results from Kuwait are largely representative of the medical student body in that country, the same cannot be said for Egypt or Lebanon. The sample from Egypt is a very small portion of the total population of medical students in a country that has 14 medical schools. A more representative survey from Egypt would necessitate a larger sample drawn from more locations. However, the inclusion of five differently located schools may have helped reduce the potential limitation on the external validity of the Egyptian component. The same cannot be said of the Lebanese component. The study there was conducted only at AUB. Because of the relatively high tuition fees (US$ 20 000 per academic year), the vast majority of medical students at AUB come from middle to high socioeconomic status and may be socioeconomically different from colleagues at other Lebanese medical schools. Here, too, a more representative sample would be needed to draw medical students from other Lebanese medical schools besides AUB.

Logistical limitations: Restrictions on timetables and budgets made it difficult to complete the study in an optimal fashion. In addition, in Egypt, lack of official documents from IFMSA and WHO Regional Office led to rejection of the project by the local administrations in Alexandria and Cairo. The study was, nevertheless, conducted "unofficially" in Cairo, but the sample could not be properly selected from all classes.

5. Results

5.1 Data compiled from the tables

The study included 2622 medical students in three countries enrolled in seven medical schools: five in Egypt, one in Kuwait and one in Lebanon. Of the 2033 Egyptian participants (77.5% of the total sample), 10.9% were from Cairo, 19.9% from Zagazig, 22.9% from Mansoura, 5.3% from Suez Canal, and 18.5% from Assiut. The study included 257 (9.8%) medical students in Lebanon and 332 (12.7%) in Kuwait.

In Egypt, 600 completed questionnaires initially distributed differed from one region to another, resulting in different completion rates: Assiut (91%), Cairo (25.5%), Mansoura (100%), Suez Canal (23.3%) and Zagazig (91.6%), with a total average of 66.3%. The low response rate in Cairo and Suez Canal was due to administrative problems that prevented the study from being completed efficiently. In Kuwait, 332 students returned completed questionnaires, a response rate of 75.2%. In Lebanon, the response rate ranged from 76% to 98.7% in different classes, with an average response rate of 86.2%. Data from the survey can be found in Tables 1–17 in Appendix 2.

Table 1: Social and demographic background of participants

The mean age of participants differed little among the various components. The component with the older average age was that of Lebanon while the youngest average was from Suez Canal. In all locations, most participants were either the first or the second sibling within families with 3 or 4 siblings. The smallest range of siblings was found in Lebanon and the largest in Kuwait. The percentage of female respondents was highest in Suez (66%) followed by Kuwait (58%). It was lowest in Cairo (30%).

A majority of students in all components reported fathers and mothers with secondary or higher education. Fathers with primary education or less were reported least in Suez (2%) followed by Lebanon (3%). Generally, the proportions of lower education were more frequent in mothers than in fathers in all locations except Lebanon. The majority in all components reported parents still living together. Death of fathers was more frequently found in all three locations than that of mothers. Highest proportion of divorce (5%) and lowest proportion of parents away for work were reported in Kuwait (less than 1%) Approximately 50% of the sampled individuals in Kuwait and Lebanon and 75% in Egypt considered their family background as religious. The distribution of background religiosity was generally wider in Lebanon and in Kuwait. Lebanon reported the highest proportions of the extremes: “very religious” (7%) and “not religious” (15%).

In all locations, the majority of students were still living with their parents. The lowest proportions still living with their parents were in Assiut (69%) and Lebanon (67%). In all components, the second most reported living situation was with friends. Particularly in Lebanon, 15% lived alone (highest) while in Kuwait 7% lived with spouses (highest).

Differences in Internet use as a source of information appeared only at the extremes of the distribution. The highest proportions of "never use" were found in Egypt, with a peak in Mansoura (43%) and a minimum in Cairo (23%). The highest levels of "often use" were found in Lebanon (37%) and Kuwait (27%).

Table 2: Current participation or intention to engage in public service

The highest levels of past and present membership in social organizations were found in Lebanon (33%) while the highest level of non-participation was in Kuwait (64%). The average time that students were currently engaging in or were willing to dedicate for volunteer health education in schools was approximately two hours for Kuwaiti students and one hour for the Lebanese. In Egypt, the number varied from approximately one hour in Cairo, Zagazig, Mansoura and Assiut to two hours in Suez. The same low levels of current or intended participation were found with regard to peer counselling, health awareness campaigns, heath promotion in the media and other such public health services. A small yet apparently active minority in Kuwait may have affected the relatively higher numbers of hours found in that component for all types of services as compared to all other components.

Table 3: Perceived and potential stressors

A number of potential stressors were assessed among medical students (Table 3). Differences between components often appeared at the extremes of the distribution. For example, in most locations, a majority reported “sometimes” worrying about the future. In Lebanon, students reported the highest proportion of “always” worrying (43%) while a majority in Cairo (55%) reported “never” worrying. Family expectations were “always” stressors most in Kuwait (27%) and least in Zagazig (18%). Health worries appeared higher in Egypt than in Lebanon and Kuwait while the reverse was found for academic worries. Emotional issues and poor social interaction were also highly reported as stressors in Egypt. More than 60% of Kuwaitis never felt any political or national concern versus 34% in Lebanon. Only 16% of students in Cairo, 19% in Zagazig, 21% in Mansoura, 17% in Suez Canal, and 17% in Assiut reported never having any political or national concern.

Regarding the major preoccupation among the medical students, the study revealed that worries about the future represented the highest percentage and academic worries the second highest in all locations except Kuwait, where the order was reversed. The order of importance of other preoccupations varied from one component to the other.

Trends regarding life satisfaction were relatively similar in all locations, with a majority of participants reporting being "fairly" or "very satisfied" with their lives. Approximately 75% of both Lebanese and Kuwaiti students were satisfied with the quality of their life. In Egypt, 74% of the students in Suez Canal and 70% in Assiut were satisfied, with more than 60% of students in the other three medical schools reporting satisfaction. Most Lebanese and Kuwaiti students perceived themselves as being in good health, as did 80% of the students in Cairo and Assiut. Interestingly, Mansoura stands out with the highest report of "fair health" (31%).

Fifty-two percent of the Lebanese students and 75% of the Kuwaiti students were not currently involved in a relationship. Approximately 86% of the medical students in Suez and Assiut and 75% in other Egyptian cities were not currently involved in a relationship. Approximately 50% of the Lebanese participants currently in a relationship did not perceive it as a commitment to marriage. Among those reporting a relationship, most in all components believed it had a positive effect on their everyday stress. The highest perception of negative effects of a relationship came from Assiut (28%).

Table 4: Ways of coping with stress

In all components, most suggestions for coping with stress were rejected by a majority of participants. Eating high-caloric food, followed by driving at high speeds, was the major way of coping with stress among Lebanese and Kuwaiti students. Smoking and drinking alcohol were equally common among Lebanese students, and using prescription drugs for the Kuwaiti students was in the same rank**.** Using prescribed drugs was the most common way of coping with stress in all five Egyptian medical schools.

Table 5: Health locus of control (HLC)

Detailed findings on all 12 dimensions of the HLC can be found in Table 5. Approximately half of the Lebanese students and two thirds of the Kuwaiti students and Egyptian students believe that they are directly responsible for their health and that they can avoid illness by taking care of themselves. In Lebanon, 40.5% of the students disagree with the statement "good health is largely a matter of good fortune" as compared to 71.6% of Kuwaiti students and 67.4% of Egyptian students. When responding to the statement "there are so many strange diseases that you can never know how or when you might pick one up," 15.6% of the Lebanese and 11.7% of the Egyptians disagreed while only 8.5% of the Kuwaitis disagreed. In Lebanon 40.7% and in Kuwait 45.7% disagreed that being sick is a matter of luck. Secondary analysis will involve creating overall HLC scores within components and comparing those across components.

Table 6: Cigarette smoking status

Current smokers represent approximately 10% of the Lebanese sample, 2.7% of the Kuwaiti, and about 6% of the Egyptian, with the highest frequency in Mansoura (10.7%) and the lowest frequency found in Assiut (3%) and Suez (4%). The mean age of smoking for the first time was

approximately 16 years in both Lebanon and Kuwait while in Egypt it was 15. The average number of cigarettes smoked daily by current smokers was about 9 cigarettes in both Lebanon and Kuwait while in Egypt it was 16 cigarettes per day. The greatest rates of persons never having smoked were found in Kuwait (93%) and Assiut (93%). For most participants, the age of initiation was between 15 and 17. Most of those who smoked became regular smokers at the age of 17 or 18, except in Lebanon, where the median age was 19.

Lebanese students spent an average of approximately US$ 17 for cigarettes in the month prior to the survey, as compared to US$ 28 for Kuwaitis, or to US$ 10 for Egyptians. While only approximately 11% of students in Lebanon and Kuwait considered the cost of cigarettes to be an important financial burden, 46.7% of students in Egypt reported the cost to be burdensome.

In Kuwait, approximately the same percentage of fathers and mothers (43%) knew that their offspring smoke. However, in Lebanon and Egypt the percentage of mothers who knew was higher than that of fathers (71% versus 57% in Lebanon and 48% versus 40% in Egypt, respectively).

Table 7: Perception regarding cigarette smoking among current smokers

The same general trends in answers were found across components. About half of the Lebanese students and a quarter of the Kuwaiti students often smoke cigarettes mainly for pleasure and relaxation; however, in Egypt, the major reason cited was that smoking was an automatic habit (33%). Dealing with stressful situations in Lebanon, helping with mental concentration in Kuwait, and dealing with anger in Egypt were the second most common reasons to smoke. Smoking to deal with depression and sadness was often experienced by 10.9%, 15.6% and 22.5% of students in Lebanon, Kuwait and Egypt, respectively.

Responses to the perception that "running out of cigarettes is unbearable" varied. The maximum proportion of those most addicted was in Zagazig (26%) and the least in Lebanon (13%).

Table 8: Reasons for which a smoker would want to quit smoking

Details of the 13 reasons investigated are presented in Table 8. Two thirds of both Lebanese and Kuwaiti students and approximately half of the Egyptian students considered the possibility of quitting smoking to keep oneself healthy very important. Approximately a quarter of Lebanese, Kuwaiti and Egyptian students would quit smoking in order to avoid a medical problem. While only 9.4% of the Lebanese students would quit smoking to avoid the discomfort of people nearby, 27.6% of Kuwaiti and 13.5% of Egyptian students considered this a very important issue.

Quitting smoking because it is against religious beliefs was considered very important by only 1.9% of the Lebanese students as compared to 35.7% of the Kuwaiti and an average of 34.2% of the Egyptian students with the highest frequency in Assiut (55.6%), respectively. None of the Lebanese students would consider quitting smoking to comply with the cultural norm that it is not acceptable for a woman to smoke as a very important issue whereas 28.6% and 37.4% of Kuwaiti and Egyptian students would do so.

Table 9: Practical issues regarding stopping cigarette smoking

Table 9 shows that, although more than a third of the Kuwaiti and Egyptian students desired to stop smoking (37% and 38.7%, respectively), only approximately 19% of the Lebanese expressed a desire to quit. In general, a majority desired to quit in all components. Approximately 74% of the Kuwaiti, 67% of the Egyptian, and 58% of the Lebanese students had ever tried to stop smoking.

Receiving help or advice to help stop smoking from a family member, a religious person, or a friend was reported by the Kuwaiti students (64%, 44%, and 72%, respectively); in Lebanon it was 22.6%, 0%, and 37.7%, respectively; however, in Egypt it was 69.5%, 60.2%, and 81.2%, respectively.

Regarding important topics that should be included in cigarette cessation programmes, stress reduction techniques were reported by all three components (59.2% Lebanon; 43.6% Kuwait; 29.2% Egypt); ways of remaining a non-smoker after quitting were mentioned by 87.1% in Lebanon, 62.9% in Kuwait, and 61.1% in Egypt. Health advantages of quitting were reported by students in Lebanon, Kuwait, and Egypt (86.8%, 74%, and 55.6%, respectively).

The importance of a variety of topics related to cessation was assessed (Table 9). Concerning known and preferable methods for quitting smoking, the table shows that a self-help smoking cessation programme was reported by 50% of the Lebanese, 57.6% of the Kuwaiti, and 51.9% of the Egyptian students. About 48%, 61% and 50.3% of the students (Lebanese, Kuwaiti and Egyptians respectively) stated making a deal with a friend to quit together. Using a nicotine patch or gum was known and preferred by the Lebanese (38% versus 36%) and by the Kuwaitis (42% versus 21%) while 36.8% versus 30.7% of the Egyptians reported them to be known and preferable methods. Quitting independently using nothing and telling no one was mentioned by all three nationalities: Egyptian 63.2%, Kuwaiti 51.5% and Lebanese, 75.5%.

Table 10: Smoking situation among family members

Table 10 reveals that the students who have fathers and mothers who regularly smoke were about 32% versus 27% of the Lebanese, 23% versus 1% of the Kuwaiti, and 20% versus 0.6% of the Egyptian students respectively. The highest proportion of fathers who currently smoke was found in Lebanon (32%) and the lowest in Cairo (17%). The highest proportion of mothers who regularly smoke was also in Lebanon (27%) and contrasted greatly with all other components, where this proportion never exceeded 2%. Students with an older brother or sister who regularly smoked accounted for 11% and 5% respectively, of the Lebanese respondents and 18% and 0.4% of the Kuwaitis. However, in Egypt, it varied from 4% (Cairo) to 9.2% (Mansoura) for brothers who regularly smoke and from 0.2 %(Assiut) to 1.2% (Zagazig and Cairo) for sisters who smoke.

The study showed that the great majority of the families of the student population have either negative or extremely negative attitudes towards smoking cigarettes (90.4% Egypt, 92.4% Kuwait, 86.7% Lebanon,). The great majority of students in Egypt, Kuwait and Lebanon believe in the harmful effects of cigarette smoking. Table 10, in addition, shows that 18.3% (Egypt), 13.8% (Kuwait) and 22.6% (Lebanon) of the students reported the prevalence of smoking among friends. In most components, a majority reported that harmful effects of cigarettes had been discussed within the family and with friends.

Table 11: Attitudes and beliefs about cigarette smoking

Table 11 illustrates that less than 5% of the students in all three countries believed that cigarette smoking could help them have more friends. A negative or extremely negative attitude towards male smokers was apparent among Egyptian students (62%), Kuwaiti students (60%), and more than a third of the Lebanese students (37%). The same attitude towards female smokers was reported (82%, 92%, and 56%, respectively).

The majority of Kuwaiti and Egyptian students supported banning smoking in the faculty or school, at work, in restaurants and bars, in planes and trains, and in all public places. The same opinion was expressed by the Lebanese students regarding these places except for in restaurants, bars, and all public places, where approximately two thirds of them agreed that smoking should be prohibited.

More than three quarters of Egyptian and Kuwaiti students believed that the role of the government, public opinion and individual choice was important or very important in the regulation of smoking. Among the Lebanese students, approximately two thirds of them had the same opinion.

The great majority of Egyptian, Kuwaiti and Lebanese students (more than 90%) agreed or strongly agreed that the sale of tobacco to people under 18 should be prohibited. Banning all advertisement of tobacco products was advocated by 92.3% of the Kuwaiti students, 89.1% of Egyptian students, and 74% of the Lebanese students. Sharply increasing the price of tobacco products as a method of preventing cigarette smoking was cited by more than three quarters of the Lebanese and the Kuwaiti students as compared to approximately 71% of the Egyptian students.

Table 12: Water pipe smoking status

Most respondents in all components except Lebanon were non-smokers. The prevalence of water pipe smoking in the study group was an average of 3.8% in Egypt (ranging from 5.8% in Mansoura and 1.6% in Suez), 5.1% in Kuwait, and 32.8% in Lebanon. An additional 32.7% were occasional water pipe smokers in Lebanon compared to 2.5% and 5.4% in Egypt and Kuwait. The mean age of water pipe smoking initiation was about 17 years in all three countries. The mean number of days of water pipe smoking per week was about 2 or 3 in all locations. Though water pipe smokers were less frequent in Egypt than in Lebanon, the level of addiction appeared somewhat higher in some Egyptian components. While the water pipe was smoked a median of once a week in Lebanon, it was smoked up to 5 days in Zagazig and 7 days in Suez. About one water pipe head was smoked per session in Kuwait and Lebanon as compared to an average of two heads in Egypt.

The mean amount of money spent on water pipe smoking during the month prior to the survey was an average of US$ 4.1 in Egypt with the highest in Cairo (US$ 6.7), US$ 26.5 in Kuwait, and US$ 5.1 in Lebanon. The financial burden of water pipe smoking was important for 9% of Egyptian students (14.6% in Zagazig), 16% of the Kuwaiti students, but only 1.8% of the Lebanese. None of the students in the latter two countries considered water pipe smoking as a very important financial burden in contrast to 6.3% of Egyptian students (Zagazig only).

The desire to stop water pipe smoking was reported by approximately a quarter of the Kuwaitis, and 48% of them had tried stopping in the past. In Lebanon approximately only 4% had the desire to stop, and approximately 13% had tried previously. In Egypt, 22% expressed the same desire, and 26.5% had attempted to do so previously. In all components except Cairo, the desire to quit the water pipe was much lower than that for cigarettes.

A small percentage of the students had fathers or mothers who regularly smoke the water pipe. The highest proportion of mothers who regularly smoke was found in Lebanon (5%). Students in all three components reported having an older brother who is a regular water pipe smoker (2.4%, Egypt; 3%, Lebanon; 5.4%, Kuwait).

Family attitudes towards water pipe smoking were negative or extremely negative among 93.3%, 58.2%, and 91.4% of the Egyptian, Lebanese, and Kuwaiti students respectively. More than half of the respondents (58.9%, Egypt; 62.5%, Kuwait 50% Lebanon) from all three countries perceived smoking the water pipe to be more harmful than smoking cigarettes.

Table 13: Reasons why a smoker would want to quit smoking the water pipe

The majority of students (89% Egypt; 88% Lebanon, 93% Kuwait) wanted to quit smoking the water pipe to maintain their health (Table 13). About two thirds of the study sample (63%, 66%, and 71%, respectively) in the three countries wanted to quit smoking because of medical problems.

Only approximately 75% of the Kuwaiti students and 23.5% of the Lebanese, compared to 85% of Egyptians, wanted to quit smoking because it is against their religious beliefs.

Most of the students in the three countries (66.2% Egypt, 72% Kuwait, 61% Lebanon) wanted to quit smoking to avoid discomfort for people nearby.

More than three quarters of the Egyptian and Kuwaiti students (81% and 78%, respectively) cited complying with the cultural norm that it is not acceptable for women to smoke the water pipe. However, only 12% of the Lebanese students reported a desire to comply with this norm, reflecting the historical tradition of water pipe smoking among women in Lebanon, which can be traced to the Ottoman Empire.

Table 14: Alcohol use

Only 5.8% of the Kuwaiti students had ever tried alcohol in comparison to an average of 10% of the Egyptian students (highest prevalence in Cairo, 30%; and lowest in Assiut, 2.7%) and 74 % of the Lebanese students. The mean age at the first trial of alcohol was 18, 17 and 14 years in Kuwait, Egypt and Lebanon respectively. Among those who had tried alcohol, most reported drinking occasionally, with the largest distribution of patterns of use in Zagazig, Cairo, and Lebanon.

Stores or shops were the major sources of alcohol among 9.5% in Kuwait even though sale of alcohol is illegal in that country. Approximately a third of the students in Egypt and a quarter in Lebanon obtained alcohol from the same source. Friends were the second source for alcohol for approximately 5% of both Lebanese and Kuwaiti students as compared to 15% of Egyptian students. Alcohol was always available in the homes of 20% of the Lebanese students but in none

of the Kuwaiti and most of the Egyptian homes. The most common place to drink alcohol was at social events (9.2% Egypt, 15% Kuwait, 36% Lebanon). Approximately 90% of both Lebanese and Kuwaiti students, compared to 74% of Egyptians, never drank while driving.

Table 15: Drug use

The majority of students in all components had never tried any of the 13 specified drugs in the checklist (Table 15). The most common drug ever used among the medical students in Lebanon was cannabis (marijuana) (12.1%), followed by tranquillizers (11%) and hashish (10%). In Egypt and Kuwait, the most common drugs ever used were barbiturates (21% and 11% respectively), followed by tranquillizers (14% and 7% respectively). Hashish was the third choice among Egyptian students (4.4%) while it was morphine in Kuwait (2%). All specified drugs had been tried even if by only a few of the students in each component of the study (Table 15).

The median age of first trial varied from one component to the other. It was the lowest in Suez (16 years) and the highest in Lebanon (20 years). Friends were the chief source for obtaining drugs among approximately 15% of students in all components. Surprisingly, drugs availability at home was relatively high, more than 25% of each subgroup except in Cairo (7%) and Lebanon (11%).

Table 16: Caffeine consumption

The median daily consumption of coffee and caffeinated cold drinks was approximately 1 cup for all the study population while that of tea was slightly higher, reaching about 2 cups in all components. The consumption of caffeinated pills and so-called energy drinks was generally rare.

Around a quarter of Egyptians and Lebanese students were never able to go through a normal day without having caffeine in comparison to 19% of the Kuwaiti students. Approximately 5% of both Lebanese and Kuwaiti students, compared to 8% of Egyptians, believed that the daily use of caffeine could result in negative effects on health. In general, approximately 50% of all components adopted a carefully non-committed attitude of “probable impact” regarding potential caffeine health consequences.

Table 17: Variables specific to medical students’ lives and choices

Approximately 45% of Egyptian, Lebanese and Kuwaiti students would certainly choose to study medicine again if given the chance. The mean daily hours of studying on campus were 2.16 hours in Lebanon as compared to 4 in Kuwait and 4.3 in Egypt, but the mean daily hours of studying at home were 2.9 in Lebanon as compared to 3.9 in Kuwait and Egypt.

The mean time dedicated to non-academic reading was approximately 1 hour, and the mean time for rest and recreation was approximately 3 hours in all components. In Lebanon and Kuwait, the mean daily sleeping hours were 7 as compared to 8 hours in Egypt.

More than half of the students in all components believed that their medical studies had an important or very important impact on their physical health. In addition, approximately two thirds of the Lebanese and Egyptians, compared to approximately three quarters of the Kuwaitis, perceived the impact of medical studies on their mental health to be important. Two thirds of the Lebanese and the Kuwaitis thought that their medical studies had an important impact on both

their spiritual and social well-being. In Egypt, the majority of students (approximately 60% and 68% respectively) were of the same opinion.

In all components, 60%–70% of students agreed that it was “very much” their role to contribute to a healthier community. The highest level of agreement was in Suez (96%) and the lowest in Cairo (55%). Those who believed it was not their role did not exceed 5% in any component.

5.2 Discussion of the results

The study reflects the diversity of economic and societal backgrounds from which samples were drawn. Socio-demographic and family variables were most heterogeneous in Lebanon. Within Egypt, differences appeared between more urbanized/less traditional areas such as Cairo and Suez in comparison with more traditional ones such as Zagazig and Assiut. Access to information on the Internet was more common in more affluent places such as Kuwait, Lebanon and Cairo in comparison with elsewhere in Egypt.

In all the studied countries, the majority of students were still living with parents. This has both a cultural and an economic component. In most of the Arab world, students tend to live with their parents until adulthood because of traditions, demonstrating the close familial ties in societies that still retain much of their traditional values, and because of financial dependence on their families since they cannot afford the cost of living on their own. On the other hand, most of the students living alone are compelled to do so because their universities, located either in another city or a different country, are too far from their homes.

The results of this study revealed that the students from the three locations were dedicated to participation in raising the health status of their communities through health awareness campaigns, media programmes for health promotion and other public health services. This indicates the commitment of medical students to participate in community work despite their tight schedules.

Amongst the medical students study population, the potential stressors differed from one location to another, reflecting different national problems as perceived by the students. Regarding the major preoccupation, worries about the future ranked first followed by academic worries in Egypt and Lebanon; however the rankings were reversed in Kuwait. This illustrates the considerable amount of stress medical students are under in different aspects of their lives, especially in the context of the transitional economic phase marked by financial difficulties faced by the students in Egypt and Lebanon. In Kuwait, the situation is different as the academic worry of the students was ranked first, possibly due to the rigorous nature of the medical curriculum exemplified by the high failure and attrition rate, 60% and 30% respectively. The economic factor came second, reflecting the high social standard, quality of life and affluent nature of the Kuwaiti population.

Cultural and social norms deeply influence the behaviour of the students in the three countries and the majority of the students were not involved in a relationship. This might also be due to religious beliefs that disapprove of such behaviour, although medical students from Lebanon reported great involvement in such relationships.

Fortunately, most of the medical students in all of the locations had strong beliefs that they are responsible for their own health. As they will be doctors in the future, this result was expected because they are more informed about the etiology and risky behaviours that contribute to adverse

health effects than the general population. Thus, they have less unrealistic and superstitious ideas having learned the thinking process through their medical education.

This study found that cigarette smoking is practiced by approximately 10% of the students in both Egypt and Lebanon but only by approximately 3% of those in Kuwait. This small percentage in Kuwait might be due to the high percentage of females in the Kuwaiti sample (58%) since it is socially unacceptable for females to smoke. The prevalence of smoking among Kuwaiti females is 1.9% compared to 34.4% among males. Smoking is a behaviour that is influenced more strongly by factors related to individual characteristics (such as maturation and coping strategies) and the social environment (peer group or culture). Generally, the percentage of current smokers among this group of medical students is considered lower than that of the general population. For example, in Kuwait, the prevalence of smokers among the population is approximately 17%.

Furthermore, the socioeconomic level of the country has a great influence on the different ways of coping with stress. On the one hand, among this sector of adolescents, the mean number of cigarettes smoked per day by Egyptian smokers was almost double that of the Lebanese or Kuwaiti smokers. On the other hand, the Egyptian smokers spent the least for cigarettes (US$ 10 per month) followed by the Lebanese (US$ 17 per month), but the Kuwaitis, with the smallest percentage of smokers, reported the highest money expenditure for cigarettes (US$ 28 per month).

These preliminary results appear to indicate that greater wealth confers greater alternative choices, as the Kuwaiti students reported using other ways for coping with stress rather than smoking cigarettes.

The familial stigma of smoking is more apparent in Lebanon and Egypt, and among mothers rather than fathers. It is the mothers who know that their children smoke. This is probably due to Arabic culture, in which smoking in front of the father is considered disrespectful behaviour. Children are usually reared to fear their fathers more than their mothers.

The main reason for smoking differed according to the socioeconomic level in the three localities. Half of the Lebanese students and a quarter of the Kuwaiti students reported smoking for pleasure and relaxation. (Although the economic level of the Lebanese is not high, the sample was drawn from AUB students, who represent the highest social class in Lebanon.) In a study conducted among the general population in Kuwait, respondents rated relaxation and relief from boredom as the most important factor for smoking. However, the main reason for smoking differed among the Egyptian students, with approximately half of the respondents reporting that smoking is an automatic habit among and 32.4% stating that it helps them to deal with sadness and depression.

Only a small percentage (13%) of the smokers in all three countries reported nicotine dependency so great that being out of cigarettes is unbearable. This fact can have important implications in the intervention programme because it implies that success in such programmes may be feasible.

The motivation for wanting to quit smoking was that expected from medical students. The majority of the students in the three countries reported quitting to keep themselves healthy and to avoid medical problems as the main factors. This reflects a similar way of thinking among medical students everywhere, as the harmful effects of smoking and its complications are well known to them. However, there was diversity among the students regarding religion as a reason to

quit smoking. While more than 50% of the Kuwaiti students and more than 33% of the Egyptian students consider smoking against their religious beliefs, this point was considered by only approximately 2% of the Lebanese students. However, this percentage may be inaccurate in regard to all Lebanese medical students because, as mentioned previously, this group of students represented a special category and special class of the Lebanese community.

Furthermore, quitting smoking to comply with the cultural norm (i.e., socially unacceptable for females to smoke cigarettes) was an important point only among the Egyptians and the Kuwaitis. None of the Lebanese perceived its importance because smoking among females does not carry a major social stigma; in Lebanon, women smoke openly everywhere, and there is no real difference between them and men concerning this issue, showing the cultural differences in norms and traditions between the studied countries.

The desire to stop smoking or the discomfort associated with the cessation process was mentioned by most of the students in the three countries. Although there is a discrepancy between the percentage of students who desire to stop and those who successfully do so, this might be the result of repeated failed attempts to quit in the past which resulted in decreased enthusiasm to try again. The desire to quit and the discomfort associated with quitting are expected from medical students for two reasons. First, they are knowledgeable about the negative aspects of smoking as well as the dangerous effects of long-term use of cigarettes with their carcinogenic contents. Consequently, the students care about their own health.

In addition, the study reveals the great effect of peers, in all locations, as the first source of students' advice regarding quitting smoking and also as advisers for practical ways to stop smoking. Since this finding reflects the peer group pressure and influence associated with this period of adolescence, it should be considered when planning smoking cessation programmes.

The difference between the cultural norms and habits in the three locations was very clear when studying the smoking patterns of the students' parents. The frequency of fathers who currently smoke was almost the same in all components, however, the frequency for mothers and sisters varied greatly between Lebanon, where it is considered normally acceptable social behaviour, and Kuwait and Egypt, where smoking by females is socially taboo.

Although family members might smoke, their attitude towards smoking was negative. Most parents in the three locations had discussed the harmful effects of smoking with their children. This might reflect parental concern for their offspring and their interest in protecting them from the dangerous side-effects of smoking. They are worried about their children and do not wish them to become addicted; this shows the strong parental ties and care present among Arab families.

The negative attitude of the medical students towards female smokers was very high among the Egyptian and the Kuwaiti students but, as expected, lower among their Lebanese counterparts. The same negative attitude towards male smokers was the least among the Lebanese students when compared to the other two countries. This again reflects how much social norms influence the attitudes of the students and illustrates the great influence of culture on shaping children's attitudes and behaviours. Another finding supported this proof; only the Lebanese students refused banning smoking in restaurants, bars and all public places whereas it was a matter of agreement between the Egyptian and the Kuwaiti students.

There was total agreement among the vast majority of the students in all locations that the sale of tobacco to people less than 18 years old should be prohibited. This shows the medical students' knowledge regarding the side-effects of smoking, especially when begun at an early age. This should be taken into consideration by governments for important mandatory legislation that should be executed firmly as it will help, to a great extent, to decrease the prevalence of smoking among teenagers.

The frequency of water pipe smoking shows greater diversity in comparison to cigarette smoking. Lebanese students were the most frequent water pipe smokers (three times more than the number of cigarette smokers) compared to very small percentages among Egyptians or Kuwaitis. This high percentage in Lebanon has been on the rise in the last few years as an important component of social events and as a new fashion among both male and female adolescents. Many older water pipe smokers defend it as part of their tradition and erroneously believe that, unlike cigarette smoking, it is relatively safe because when the smoke passes through the water, many of the harmful substances are filtered out, thus making it is less dangerous than cigarette smoking. Furthermore, while in traditional Arab society where a young man or woman cannot smoke cigarettes in front of his elders as a matter of respect, water pipe smoking signifies a social occasion on which everyone can participate. It is socially acceptable for a father to offer his teenage child a puff of the water pipe. In Kuwait, the prevalence of smoking the water pipe is almost double that of cigarettes and coffee shops offering it are on the increase in Kuwait, being used by many as a place for social gatherings, much like a bar or pub.

The situation in Egypt differs completely from the other two locations. Water pipe smoking represented almost half the percentage of cigarette smoking. Although this figure is the reverse of that in Lebanon and Kuwait, Egyptians were more addicted than smokers in the other two countries as their rate of water pipe smoking was the highest. Furthermore, the number of heads used per session was far higher than that used in Lebanon or in Kuwait. As mentioned previously, in Egypt smoking the water pipe is also considered a way to cope with stress, so although the percentage is low, its use is the highest.

The cost of smoking the water pipe was considered as a financial burden by a very small percentage of the participants as compared to that of smoking cigarettes despite the average cost of smoking either the water pipe or cigarettes being nearly the same. This may be attributed to the elective use of the water pipe when compared to the more addictive use of cigarettes, making the water pipe a "want" rather than a need. This might also explain the finding that, in all components except Cairo, the desire to stop and the discomfort associated with quitting water pipe smoking was much lower than that for cigarettes.

Parents who are regular water pipe smokers represented a small percentage in all locations. The highest percentage of mothers smoking the water pipe was among the Lebanese students. This could be another reason for the prevalence of water pipe smoking among the Lebanese students, as parents are usually the first role models for children to imitate.

The increasing use of water pipe smoking among adolescents as a new fashionable social habit that threatens their future health requires rapid intervention programmes in order to prevent a new generation of adolescent water pipe smokers. In addition, although the percentage of water pipe smokers is relatively high, the majority of parents in all locations have negative attitudes towards

smoking the water pipe, with the lowest percentage among the Lebanese parents. This, too, should be considered when planning preventive smoking programmes. Furthermore, a sound knowledge by most of the students about the greater harmful effects of the water pipe in comparison to those of cigarettes must be enforced and feasible plans for encouraging this segment of adolescents to quit smoking the water pipe should be implemented.

The main reason for the students' desire to quit smoking the water pipe did not differ from that for quitting cigarette smoking. Approximately 90% of all the Egyptian, Kuwaiti, and Lebanese students cited wanting to quit smoking the water pipe in order to maintain their health. Avoiding medical problems was the second reason. This indicates their awareness of the adverse side-effects of smoking and their high level of concern and responsibility for their own health. The religious factor ranked third as a reason for quitting water pipe smoking. This reason was reported by the great majority of the Egyptians (93%) followed by the Kuwaitis (75%), which is the reverse of the percentages regarding cigarette smoking. The smallest percentage was among the Lebanese students (23.5%) although it is a much higher percentage than that for those students wanting to quit cigarettes for the same reason. Although this number is lower in Lebanon, this might be due to the effects of addiction and, in the case of water pipe smoking, due to an old cultural habit. However, among the students in all three countries, the role of religion is stronger and more obvious for quitting the water pipe than it is for giving up cigarettes.

The majority of students in both Egypt and Kuwait complied with the cultural norm that water pipe smoking by females is socially unacceptable. This is similar to their response to cigarette smoking by women. In contrast, only 12% of the Lebanese students complied with this norm. Although the percentage is higher than that for smoking cigarettes, it is still very low in comparison with the other two countries. This indicates the difference in societal backgrounds and cultural effects on the attitudes of people, despite the type or the level of their education.

The Lebanese medical students reported the highest percentage of alcohol use in terms of ever trying it as compared to Egyptians and Kuwaitis. In addition, 20% of Lebanese students stated its availability at home while students in the other two countries reported its not being available at all. The percentage of non-drinkers was highest among Egyptian students from Upper Egypt (65% in Assiut) and Kuwait (62%). These unexpected findings from medical students, who should know about the dangerous effects of alcohol on the body systems and generally on their health, reflect the role of culture, differences in childrearing, and the role of parents as healthy behavioural models for their children. In areas having more religious and cultural bonds, such as Upper Egypt and Kuwait, the effect of parents on the behaviour of the medical students was found to be stronger, the reverse of what was discovered in other areas that are more urban and follow modern behavioural fashions.

The study revealed that stores and shops were the main source of obtaining alcohol. This illustrates the negligent role of the governments in controlling the availability of such substances to teenagers despite the existence of legislation to prohibit the sale of alcohol in most Arab countries to the general population, not just to adolescents.

The findings of this study illustrate that the majority of the medical students in all locations have never used illegal substances. This shows the awareness and the high level of self-control

expected from such a group of adolescents studying medicine who know the dangerous effects of these drugs.

On the other hand, among the small percentage that used illegal substances, there were differences in the type of drug used in the studied locations. In Lebanon, cannabis and *hashish* were the drugs used by about 10% of the students. This is in contrast to the Egyptian and the Kuwaiti students, who used barbiturates and tranquillizers. The Egyptians' use was double that of the Kuwaiti students. One explanation for this is that these medical students, as future doctors, gave themselves the right to prescribe and use the drugs to help themselves cope with the stress of heavy studying, especially when studying for exams. This explanation also might clarify the availability of such drugs at home. In other words, these students might use these drugs to cope temporarily with certain stressful situations, not as a matter of dependency or addiction.

The daily consumption of tea or coffee as a usual drink was not abnormally high among the studied groups in all the countries. They reported drinking, on average, about one cup of coffee and two cups of tea, which is considered within the normal range of consumption of the general population. The negative side-effects of such substances contained in either tea or coffee on their health were reported mainly by the Egyptian students. Although a relatively small percentage, it was more than double the percentage by the Lebanese or the Kuwaiti students. This difference in the level of knowledge might be due to the consumption of Arabic coffee or tea, in Kuwait and Lebanon, as old traditional drinks, which again illustrates the role of cultural habits in shaping the attitudes and, consequently, the behaviours of the people.

The study of medicine was interesting to only half of the sample in all locations in that they would choose it again if given the chance. This may be due to the heavy curricula that consume long hours of studying from their daily life. This type of studying also affects the number of sleeping hours and the time available for recreation and rest, which was about 3 hours in all the studied countries.

Most of the students in all three countries believed that studying medicine has an important impact on their physical, mental, spiritual and social well-being. This indicates the important role of the medical contents and studied materials that influenced the beliefs, attitudes and behaviours of these adolescents, first, towards their own health and, second, towards the health of their surroundings.

Moreover, the study revealed that around two thirds of the students in the three countries believe that medical students should play a leading role in the quest for a healthier community. This indicates the commitment of most of the medical students and the sense of responsibility to dedicate themselves to their communities. However, this is a relatively lower percentage than should be expected from all the medical students, thus identifying a flaw in the attitude of some of these future doctors towards community medicine and perhaps signalling a need for further educational modifications and attitudinal improvement.

6. Conclusions

Half of the students in the three countries were satisfied with their decision to study medicine, and most of them agreed that it was "very much" their role to contribute to a healthier community.

Students in all locations were dedicated to volunteering in community health services despite their tight curricula. Anxiety about the future and academic achievement were the two main stress factors reported by all the students. Methods of coping with worries and stress differed from one country to another; Kuwaiti and Lebanese students reported eating high caloric foods and driving at high speeds, while smoking and the use of prescription drugs were reported by their Egyptian peers. As expected from medical students, the majority of respondents in all three countries believed in their responsibility for their own health.

7. Recommendations

Short-term plan

1. Medical students should be encouraged to participate in the implementation of community based anti-tobacco health campaigns.

2. The medical students' belief about their responsibility for their own health should be reinforced and promoted through posters, discussions and lectures in medical schools

3. The relatively small percentage of medical school students who smoke should be encouraged to participate in smoking cessation programmes.

4. Panel discussions, guided by a consultant, should be organized in medical schools, between smokers, ex-smokers and non-smokers, to exchange their own experiences and beliefs about the advantages of stopping smoking.

5. A permanent anti-tobacco consultation team should be arranged in each medical school to help smokers use feasible methods to quit smoking. This team would be available all the time and would include a chest specialist, psychologist, social worker, and some students who have successfully quit smoking.

6. Medical students should be encouraged to attend regular classes for health education about the dangerous side-effects of smoking. These classes should be included in the medical curriculum.

7. A consultant on religious subjects should be available at the medical school to reinforce the positive religious belief of the students against tobacco smoking.

8. There should be a psychological counsellor in every school to help students cope with the stress factors in healthy ways and avoid smoking as a dangerous way to cope with stress.

9. There should be encouragement of the negative attitude of parents towards smoking and enhancement of such attitudes through parents' active participation as a part of anti-tobacco programmes.

10. Students should be encouraged to participate in different sports and to exercise. This should be done through medical schools or social clubs and by the help of the nongovernmental organizations in different countries. This will help students relax and overcome a lot of stress factors due to heavy curricula or other socioeconomic stressors.

11. Medical students who are currently smokers but wish to quit smoking should be encouraged to join anti-tobacco campaigns, consult an anti-tobacco consultation team and be involved in groups with similar goals, thus increasing their motivation to stop smoking.

12. The great influence of peer groups should be harnessed by arranging regular meetings with friends who have succeeded in quitting smoking and motivating smokers to follow their experience.

13. Governments should be encouraged to prohibit the sale of tobacco to people under the age of 18 and medical students encouraged to ask for firm implementation of this legislation.

14. Health education campaigns in medical schools, the media, mosques, and churches should be implemented to correct the misconception of people (including medical students) that water pipe smoking is less dangerous than cigarette smoking.

15. There should be health education of parents in the media, mosques, and churches to prevent the availability of alcohol at home and to illustrate the dangerous side-effects of alcohol use on health, especially during adolescence.

16. There should be prohibition by the governments of Arab and Islamic countries of the sale and consumption of alcohol in shops, restaurants and public places, especially to adolescents.

17. Drugs should not be available to adolescents without a physician's prescription.

18. Meetings guided by a physician, a psychologist, a religious cleric, or an administrator should be organized in medical schools, the media and clubs to highlight the negative side-effects of using drugs.

19. The effect of excessive amounts of caffeine on health should be added to the medical curricula. Reinforcement classes discussing the same topic should be arranged for the students.

20. There should be an increase of the awareness of medical students and all adolescents in general about the dangerous side-effects of alcohol consumption, use of drugs and excessive caffeine consumption. This should be accomplished through health education lectures, workshops, discussions, and posters in medical schools, the media, social clubs, and community campaigns.

Long-term plan

21. There should be health education programmes in schools. These should be aimed at increasing awareness among younger adolescents about the dangerous effects on their health associated with adverse health behaviour, such as tobacco smoking, alcohol consumption and drug use.

22. Health education campaigns should be established in elementary schools. These should aim at building positive attitudes towards healthy habits and educating students about their responsibility for their own health.

23. Community awareness should be increased, especially among parents, about the side-effects of adverse health behaviour on health and how to prevent such behaviour by their children, especially their adolescent children.

24. Medical students should be engaged in planning and conducting community anti-tobacco programmes, related educational events and campaigns.

25. Medical students should develop educational presentations for strengthening tobacco use policies in schools, colleges, and different community workplaces.

26. Medical students should be educated on the motivational aspects of assisting patients to stop smoking. This could be done through including such topics in the medical curricula and in extra-curricular activity classes.

27. There should be collaboration for joint programmes within youth nongovernmental organizations to cover all aspects of adolescent life in regard to education, leisure, sport, and community involvement.

28. There should be recognition, appreciation, respect, and assistance for youth actions by policy-makers, government and nongovernmental organizations to include mentoring, budgeting and technical support.

29. The outcomes of any of these intervention steps should be measured using surveillance and evaluation techniques. This will help to identify crucial points that need modification of the implemented programme.

30. There should be a continuous connection with leading structures in the community, producing an adequate flow of ideas and, hence, leading to contribution in policy-making with an accent on adolescent problems and needs.

31. This study should be re-implemented every two years with some modification of the tools used, to make a longitudinal follow-up study of substance use and stressful situations to which adolescents are exposed and the different coping methods used by them. In this way, intervention programmes can be followed and evaluated and others can be readjusted according to the updated results.

8. References

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Appendix 1

Role of university students in promoting adolescent health

FILL IN YOUR ANSWER OR MARK IT WITH A CIRCLE ON THE APPROPRIATE ANSWER

SECTION I: PERSONAL DATA:

1. ***Serial number***: _____

2. ***Country:*** _____

3. ***Faculty*****:** _____

4. ***Age (in years):*** _____ years

5. ***Gender:*** 1. Male 2. Female

6. ***Birth order among your siblings (Brothers and Sisters):*** _____

7. ***Total number of brothers and sisters:*** _____

8. ***Education of father:***

1. Illiterate
2. Primary
3. Intermediate
4. Secondary school
5. University and more

9. ***Education of mother:***

1. Illiterate
2. Primary
3. Intermediate
4. Secondary school
5. University and more

10. ***Compared to people in your age, do you consider yourself as:***

1. Very religious
2. Religious
3. Somewhat religious
4. Not religious

11. ***Circle the situation which best describes your current residence state in the following table (Please choose one answer ONLY)***

1. I live alone

2. I live with my parents
3. I live with relatives
4. I live with friends
5. I live with a spouse

6. Other situations (specify) _____.

12. ***How many hours per week would you be willing to volunteer (or are already volunteering) for any of the following activities?***

1. Health education in schools --- hours
2. Peer counselling to other university students --- hours
3. Health awareness campaigns in the public --- hours
4. Working in centres for addicts --- hours
5. Participation in media-based health promotion (such as journal articles or radio/TV programs) --- hours
6. Creating or promoting health websites --- hours
7. Telephone hotlines --- hours

13. ***How often do you use the Internet as a source of personal health information?***

1. Never
2. Sometimes
3. Often

14. ***Are you a member of any youth group such as Scouts or Guides, social clubs, community organizations?***

1. Yes
2. No
3. I used to be a member in the past

15. ***How do you best describe the current situation of your family?***

1. Parents live together
2. Father deceased
3. Mother deceased
4. Both parents deceased
5. Father is away from the country for work
6. Both father and mother are away from the country for work
7. Parents divorced or separated

16. ***Are you currently involved in a relationship?***

1. No **(Please go to Q 18)**
2. Yes with no future commitments
3. Yes with a possibility of getting married

17. ***If you are in a relationship, rate the effect of this relationship on your daily stress:***

1. Very negative
2. Negative
3. Has no effect on my daily stress
4. Positive
5. Very positive

18. ***How often do you perceive the following issues to be personally stressful?***

	Always	**Sometimes**	**Never**
1. Worries about the future			
2. Family expectations			
3. Health problems			
4. Academic worries			
5. Family problem			
6. Personal emotional problems			
7. Personal financial problems			
8. Unsatisfactory social connections			
9. Political and national worries			
10. Public interest concerns (environment, poverty, discrimination, …)			
11. Religious beliefs			
12. Practical aspects of everyday life (transport, communication, etc…)			

19. ***Describe the one major preoccupation in your life from the list in the table in Q18.***

---

20. ***In general, how satisfied or dissatisfied are you with your general quality of life?***

1. Very dissatisfied
2. Fairly dissatisfied
3. Neither satisfied nor dissatisfied
4. Fairly satisfied
5. Very satisfied

21. ***How do you rate your general health?***

1. Poor
2. Fair
3. Good
4. Excellent

22. State your opinion regarding the following statements:

Strongly disagree = 1 Disagree = 2 Somewhat disagree = 3

Somewhat agree = 4 Agree = 5 Strongly agree = 6

Items	**1**	**2**	**3**	**4**	**5**	**6**
1. If I take care of myself, I can avoid illness.						
2. Whenever I get sick it is because of something I've done or not done.						
3. Good health is largely a matter of good fortune.						
4. No matter what I do, if I am going to get sick I will get sick.						
5. Most people do not realize the extent to which their illness is controlled by accidental happenings.						
6. I can only do what my doctor tells me to do.						
7. There are so many strange diseases around that you can never know how or when you might pick one up.						
8. When I feel ill, I know it is because I have not been getting the proper exercise or eating right.						
9. People who never get sick are just plain lucky.						
10. People's ill health results from their own carelessness.						
11. I am directly responsible for my health.						
12. When I become ill, it's a matter of fate						

SECTION II: NEED FOR INTERVENTIONS IN HEALTH BEHAVIOR

23. How often do you use any of the following ways to cope with stress?

	Never	*Rare*	*Sometimes*	*Often*
1. Eating high fat/high calories food items				
2. Using illicit drugs				
3. Using on-the-counter drugs such as pain-killers or anti-histamines				
4. Using prescription drugs				
5. Smoking				
6. High-speed driving				
7. Drinking alcohol				

24. Have you <u>ever</u> smoked cigarettes before?

1. Yes
2. No, never **(If No, please go to Q 45)**

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

I was _____ years

26. Have you smoked at least 100 cigarettes during your lifetime?

1. Yes
2. No **(If No, Please go to Q 45)**

27. How old were you when you first smoked cigarettes on a daily basis?

1. I have never smoked on a daily basis

2. I was _____ years

28. How do you describe your current smoking status?

1. Daily smokers (at least one cigarette per day)
   average number _____ cigarette per day
2. Occasional smokers (less than one cigarette per day)
3. Ex-smoker ..
   How long has it been since you stopped smoking?

   _____ months OR _____ years

(If you are an ex-smoker, Please go to Q 45)

29. What is the most common brand that you currently smoke? _____

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

1. I did not spend money on cigarettes during the past 30 days (one month)
2. I spent about _____ (your currency)

31. What is the relative burden of the cost of cigarettes on your monthly budget?

1. negligible
2. small
3. important
4. very important

32. Do your parents know that you smoke cigarettes?

	Knows	**Does not know**	**I do not know**
1. Father			
2. Mother			

33. Are you looking for the following feelings when smoking?

	Never	**Rare**	**Sometimes**	**Often**
1. To be stimulated and alert				
2. To help deal with anger				
3. To improve my self-image				
4. For pleasure and relaxation				
5. Automatically as a habit				
6. To help deal with depression and sadness				
7. To lose weight				
8. To help in mental concentration				
9. To deal with boredom				
10. To deal with stressful situations				
11. Others (specify):----------				

34. When you are out of cigarettes, you find the situation unbearable until you get some.

1. Totally agree
2. Somewhat agree
3. Not at all

35. How easy or difficult do you think it would be for you to give up smoking?

1. Very difficult
2. Difficult
3. Easy
4. Very easy

36. What is the relative importance of the following reasons that would make you want to stop smoking?

	Not important at all	**Somewhat important**	**Important**	**Very important**
1. To keep myself healthy				
2. To save money				
3. Because my family does not like it				
4. Because my friends do not like it				
5. Because my boyfriend/girlfriend does not like it				
6. Because I have a medical problem				
7. Because it is against my religious beliefs				
8. To set a good social example				
9. Not to create discomfort in people nearby				
10. To comply with professional or social pressures not to smoke				
11. Self-discipline				
12. It is not acceptable for a woman to smoke in our culture				
13. I do not like its taste or smell				
14. Other reasons (specify):---------				

37. Do you want to stop smoking now?

1. Very much
2. Somewhat
3. Not at all

38. Have you ever tried to stop smoking?

1. Yes
2. No

39. If yes, were you ever able to stop completely for more than one month?

1. Yes
2. No

40. If yes, how many times were you able to stop smoking for more than one month in a row?

_____ times

41. Have you ever received help or advice to help you stop smoking?

	Yes	**No**
1. From a professional		
2. From a program		
3. From a family member		
4. From a religious person or organization		
5. From a friend		

42. Rank the following topics that are usually found in cessation programs for smoking according to your perception of their importance:

	Not important at all	**Somewhat important**	**Important**	**Very important**
1. How to cut your smoking through stress reduction				
2. How to stay non-smoker after you quit				
3. Dealing with weight gain after you quit				
4. What withdrawal symptoms you might feel after quitting				
5. Drugs available for cessation				
6. The health advantages of quitting				

43. Do you know of any special groups or classes for students who want to stop smoking?

	School/College	Community
1. Yes	☐	☐
2. No	☐	☐
3. Not sure	☐	☐

44. From the list below, what are the methods of smoking cessation that you <u>KNOW ABOUT</u> and would <u>PREFER TO USE</u> as a way for quitting smoking?

I know about it and prefer to use it = 1

I know about it and do not prefer to use it = 2

I do not know this method = 3

Methods	1	2	3
1. Use a self-help stop-smoking program.			
2. Use the Internet to get information on smoking.			
3. Read a pamphlet about the dangers of smoking.			
4. Make a deal with a friend to quit together.			
5. Call a hotline.			
6. Get a group of friends to quit together.			
7. Attend a group program at school.			
8.Attend a group program in a community organization			
9. Ask a teacher/coach for help.			
10. See a doctor to get a nicotine patch or other medications			
11. Use nicotine “gum”.			
12. Use hypnosis/laser/acupuncture.			
13. Quit independently using nothing, telling no one.			

45. Does anyone of the following family members smoke cigarettes?

Smoking cigarettes	**Father**	**Mother**	**Any older siblings**		**Other adults in the household**
			Brothers	**Sisters**	
1. Non smoker					
2. Occasionally					
3. Regularly (at least one cigarette/day)					
4. I am not sure					

46. In general, your family's attitude towards cigarette smoking is:

1. Extremely positive
2. Positive
3. Indifferent
4. Negative
5. Extremely negative

47. Are you personally convinced that cigarette smoking is harmful to your health?

1. Definitely not harmful
2. Probably not
3. Probably yes
4. Definitely harmful

48. Have the harmful effects of smoking ever been discussed within your family?

	Within the family	**With your friends**
1. Yes	☐	☐
2. No	☐	☐

49. Do you think smoking cigarettes makes you have more or less friends?

1. More friends
2. No difference from non-smokers
3. Less friends
4. I do not know/ not sure

50. Do any of your closest friends smoke cigarettes?

1. None of them
2. Some of them
3. Most of them
4. All of them

51. When you see a person smoking, what is your impression of that person?

	Extremely Negative	**Negative**	**Indifferent**	**Positive**	**Extremely positive**
Male smoker					
Female smoker					

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

1. Definitely not
2. Probably not
3. Probably yes
4. Definitely yes

53. Once someone has started smoking, do you think it would be difficult to quit?

1. Definitely not
2. Probably not
3. Probably yes
4. Definitely yes

54. Do you approve or disapprove of banning smoking in the following situations?

Place	**Strongly disapprove**	**Disapprove**	**Approve**	**Strongly approve**
1. At the faculty/school				
2. At work				
3. In restaurants and bars				
4. In planes and trains				
5. In all public places				

55. In your opinion, who should decide where and when smoking is allowed?

	Not important at all	**Somewhat important**	**Important**	**Very important**
1. Government				
2. Society/public opinion				
3. Individual choice				

56. The following are some suggestions to reduce smoking through legislative action (by law). What is your opinion about these suggestions?

	Strongly disagree	**Disagree**	**Agree**	**Strongly agree**
1. The price of tobacco products should be increased sharply				
2. The sale of tobacco to people under 18 should be completely prohibited				
3. Health professionals should get specific training on how to support patients who want to stop smoking				
4. Health services should provide assistance in smoking cessation				
5. All advertisement of tobacco products should be forbidden				

57. Did you ever smoke shisha (narguila/water pipe/hubble bubble)?

1. Yes
2. No **(Please go to Q 66)**

58. How old were you when you first smoked shisha?

I was _____ years

59. If you ever smoked shisha, how you categorize yourself?

1. I tried it occasionally and then stopped completely **(Please go to Q 66)**
2. I smoked it regularly (at least once per week) and then stopped completely. **(Please go to Q 66)**
3. I am still smoking shisha.

60. If you are smoking shisha currently, how often do you do smoke?

1. I smoke shisha less than once per week.
2. I smoke shisha on _____ days per week.

61. The average number of shisha heads (hagar) smoked per session is

_____ heads.

62. During the past 30 days (one month), how much did you spend on shisha?

1. I did not spend money on shisha during the past 30 days (one month).
2. I spent about ---------- (your currency).

63. What is the relative burden of shisha's cost on your monthly budget?

1. Negligible
2. Small
3. Important
4. Very important

64. Do you want to stop smoking shisha now?

1. Very much
2. Somewhat
3. Not at all

65. During the past year, have you ever tried to stop smoking shisha?

1. Yes
2. No

66. Do any of the following family members smoke shisha?

Smoking shisha	Father	Mother	Any older siblings		Other adults living with you
			Brothers	Sisters	
1. Non user					
2. Occasionally					
3. Regularly (at least once /week)					
4. I am not sure					

67. In general, your family's attitude towards shisha smoking is

1. Extremely positive
2. Positive
3. Neutral
4. Negative
5. Extremely negative

68. In comparison to cigarette smoking, what do you think is the harmful effect of shisha ?

1. Not harmful at all
2. Less harmful than cigarettes
3. The same harmful effect as cigarettes
4. More harmful than cigarettes

69. What is the relative importance of the following reasons that would make you want to stop shisha?

	Not important at all	**Somewhat important**	**Important**	**Very important**
1. To keep myself healthy				
2. To save money				
3. Because my family does not like it				
4. Because my friends do not like it				
5. Because my boy friend/girl friend does not like it				
6. Because I have a medical problem				
7. Because it is against my religious beliefs				
8. To set a good social example				
9. Not to create discomfort in people nearby				
10. To comply with professional or social pressures not to smoke				
11. Self-discipline				
12. It is not acceptable for a woman to smoke shisha in our culture				
13. I do not like its taste or smell				

14. Others (specify) _____

70. Have you ever tried an alcoholic drink (such as: beer, wine, spirits…)?

1. Yes
2. No **(If No, Please go to Q 75)**

71. How old were you when you first tried an alcoholic drink?

I was _____ years.

72. At present, how often do you drink anything alcoholic regardless of the amount?

1. I do not take any alcoholic drinks.
2. At least once per day
3. At least once per week
4. At least once per month
5. Only occasionally

73. How do you usually get your alcoholic drink?

	Never	**Sometimes**	**Always**
1. I buy it from a store or a shop			
2. I obtain it from friends			
3. I get it from my house			
4. I buy it from a dealer			

74. Where do you drink alcohol?

	Never	**Sometimes**	**Always**
1. At home / in private place			
2. At friends'/relatives houses			
3. At social events (such as: parties, weddings, etc.)			
4. In public places such as cafes or restaurants			
5. In parks or gardens			
6. While driving.			

75. Have you ever used drugs like the following even once in your life without medical supervision?

Drugs	**Yes**	**No**	**Don't know**
1. Tranquillizers			
2. Barbiturates			
3. Morphine			
4. Amphetamine (uppers)			
5. Codeine			
6. Cannabis (marijuana)			
7. Heroine			
8. Hashish			
9. Crack-cocaine			
10. Ecstasy			
11. Khat			
12. Slash pills			
13. Bango			

Please add other drugs you have tried. _____

If you have never tried any of those drugs, skip to Q 78

76. How old were you when you used any of these drugs for the first time?

I was _____ years old.

77. From where do you usually obtain these drugs?

	Never	**Sometimes**	**Always**
1. I buy them from a dealer			
2. I obtained them from friends			
3. I got them from my house			

78. Specify your usual daily use of caffeine from the following sources

	Coffee	**Tea**	**Pills**	**Cold beverages (cola type)**	**Energy drinks (Red Bull, Ecstasy, etc..)**
	Cups	Cups		Cans or bottles	Cans or bottles
Number of units consumed					

79. Can you go through a normal day without having caffeine (in any of the above mentioned forms)?

1. Yes
2. No
3. Do not know

80. Do you believe that your usual daily caffeine intake may have a negative impact on your health?

1. No negative impact at all
2. Probable impact
3. Important impact
4. Serious impact

SECTION III: SPECIAL FOR MEDICAL STUDENTS

81. As a student, if you could choose again, would you study medicine?

1. Certainly not
2. Probably not
3. Probably yes
4. Certainly yes

82. How many hours daily on average do you devote to

1. Study on campus _____
2. Study at home _____
3. Non-academic reading _____
4. Rest and recreation _____
5. Sleep _____

83. How would you assess the impact of your medical studies so far on the aspects of your life listed below?

	Not important at all	**Somewhat important**	**Important**	**Very important**
1.Physical health				
2.Mental health				
3.Spiritual well-being				
4.Social well-being				

84. Do you believe that medical students should play a leading role for a healthier community?

1. It is not their role at all.
2. It is partly their role.
3. It is very much their role.

THANK YOU

☐ ***Yes, I would like to be contacted in the future to give my opinion on health issues or to participate in health campaigns among adolescents.***

Name in full ----------

E-mail ----------

Mobile phone ----------

TEAR THIS PART OFF TO PRESERVE THE ANONYMITY OF THIS SURVEY

INFORMATION SHEET

HEALTH EFFECTS OF TOBACCO SMOKING

The numerous health consequences of tobacco smoking include:

1. Lung cancer
2. Lip and mouth cancer
3. Laryngeal cancer
4. Esophageal cancer
5. Bladder cancer
6. Duodenal ulcer
7. Osteoporosis
8. Chronic lung diseases such as emphysema
9. Cardiac problems such as myocardial infarction
10. Stroke
11. Male infertility, low sperm count, impotence
12. Discoloration of the teeth and lips
13. Wrinkled skin
14. Congenital problems in fetuses of smoking mothers
15. Delivery problems
16. Passive smoking effects on children: poor respiratory immunity, delayed growth, lower IQ

AVOID SMOKING FOR THE SAKE OF YOUR LIFE AND THAT OF YOUR FAMILY

- SMOKING EVEN ONE SHISHA PER DAY IS AS BAD FOR YOUR HEALTH AS SMOKING 10 CIGARETTES…AVOID SHISHA
- SOFT DRINKS WITH GAS, COFFEE AND TEA ALL CONTAIN CAFEINE. CAFEINE IN EXCESSIVE QUANTITIES CAUSES SLEEP DISTURBANCES, GASTRIC ACIDITY AND POSSIBLY BLADDER CANCER. TEA CAN CAUSE ANEMIA IN CHILDREN.
- MEDICAL STUDENTS HAVE A PIONEERING ROLE IN PROMOTING HEALTHY LIFESTYLES AMONG ADOLESCENTS AND IN THE LARGER COMMUNITY
- TAKE CHARGE OF YOUR HEALTH…STAYING HEALTHY DEPENDS LARGELY ON YOU
- BY 2030, 70% OF THE TOTAL TEN MILLION EXPECTED DEATHS DUE TO SMOKING WILL COME FROM THE DEVELOPING COUNTRIES

Appendix 2

Role of university students in promoting adolescents' health: an Inter-Arab survey

Table 1. Social and demographic background of participants

VARIABLES	EGYPT (n = 2033) (77.5%)					LEBANON	KUWAIT
	Cairo	Zagazig	Mansoura	Suez	Assiut		
(n = 2622)	288	521	600	140	484	257	332
(%)	10.9	19.9	22.9	5.3	18.5	9.8	12.7
1. Age: (Q 4)							
Mean ± SD	20.85 ±2.09	20.07 ±1.88	19.96 ±1.73	18.90 ± 1.72	19.31 ±1.87	22.43 ± 1.49	21.53 ±1.95
Median	20	20	20	19	19	22	21
Minimum	17	15	17	16	15	19	16
Maximum	30	29	26	23	25	28	28
2. Gender: (%) (Q 5)							
Male	70.3	57.4	61.1	34.3	61.6	65.2	41.8
Female	29.7	42.6	38.9	65.7	38.4	34.8	58.2
3. Birth order among siblings: (Q6)							
Mean ± SD	1.99 ±1.22	2.1 ±1.42	1.96 ±1.27	1.87 ±1.25	2.23 ±1.4	1.80 ±1.01	2.59 ±2.16
Median	2	2	2	1	2	1	2
Minimum	1	1	1	1	1	1	1
Maximum	8	14	13	7	9	6	14
4. Total number of brothers and sisters: (Q7)							
Mean ± SD	3.36 ±1.55	3.75 ±1.65	3.60 ±1.38	3.42 ±0.64	4.15 ±1.56	2.64 ±1.36	4.72 ±2.54
Median	3	4	3	3	4	3	4
Minimum	0	1	0	1	0	0	0
Maximum	10	14	18	8	10	9	16
5. Education of the father: (%) (Q 8)							
Illiterate	4.2	3.3	3.5	0.7	3.8	0	3.6
Primary	1	2.9	5.0	1.4	5.3	3.1	4.5
Intermediate	2.4	2.3	1.7	2.2	1.9	3.5	8.3
Secondary school	8.4	6.3	11.9	13.8	10.3	15.2	19.9
University and more	84	85.2	77.9	81.9	78.7	78.2	63.7

VARIABLES	**EGYPT (n = 2033) (77.5%)**					**LEBANON**	**KUWAIT**
	Cairo	**Zagazig**	**Mansoura**	**Suez**	**Assiut**		
(n = 2622)	**288**	**521**	**600**	**140**	**484**	**257**	**332**
(%)	**10.9**	**19.9**	**22.9**	**5.3**	**18.5**	**9.8**	**12.7**
6. Education of the mother: (%) (Q 9)							
Illiterate	4.5	4.8	6.3	2.9	8.9	0	7
Primary	2.8	4.6	6.8	5.1	8.5	1.2	3.9
Intermediate	3.8	1.9	2.5	1.4	3.8	3.8	10.3
Secondary school	9.8	13.9	21.1	15.9	11.3	32.7	23.6
University and more	79.1	74.8	63.3	74.7	67.5	62.3	55.2
7. Religious background: (%) (Q 10)							
Very religious	6.4	4.8	1	1.1	4.8	7.4	2.4
Religious	64.6	76.4	73.9	76.5	76.1	43.6	48.8
Somewhat religious	23.3	16.1	23.1	19.5	16.9	34.2	43.3
Not religious	5.7	2.7	2	2.9	2.2	14.8	5.5
8. Living arrangement: (%) (Q 11)							
Lives alone	4.6	5.3	2.7	5.1	5.3	14.8	0.6
Lives with parents	77.9	86.8	88.1	72.5	69.3	66.9	88.5
Lives with relatives	7	4.1	2.9	0.7	1.9	5.4	2.7
Lives with friends	5.3	2.3	4.1	16.7	18.4	8.6	0
Lives with spouse	3.4	0.5	0.7	0.7	1.5	1.2	7.3
Other situations	1.8	1	1.5	4.3	3.6	3.1	0.9
9. Current situation of the family: (%) (Q 15)							
Parents live together	76.3	78.1	85.9	81.2	88.5	84.4	86.4
Father deceased	3.5	8.9	7.2	8	6.1	6.2	6.3
Mother deceased	2.8	2.7	0.7	2.2	1.3	1.2	1.5
Both parents deceased	6.2	1.8	0.5	0.7	1	0	0.6
Father is away from the country for work	5.6	4.3	3.2	5.1	1.7	5.4	0.4
Both father and mother are away for work	2.1	2.7	1.8	1.4	0.8	1.2	0
Parents divorced or separated	3.5	1.5	0.7	1.4	0.6	1.6	4.8
10. Use of Internet as a source of information: (%) (Q 13)							
Never	23	39.8	42.9	36.5	36.5	17.2	15.4
Sometimes	56.1	50	45.9	45.3	51.4	45.7	57.7
Often	20.9	10.2	11.2	18.2	12.1	37.1	26.9

Table 2. Current participation or intention to engage in public service

VARIABLES	EGYPT (n = 2033) (77.5%)					LEBANON	KUWAIT
	Cairo	Zagazig	Mansoura	Suez	Assiut		
(n = 2622)	288	521	600	140	484	257	332
(%)	10.9	19.9	22.9	5.3	18.5	9.8	12.7
Hours/ week participation in: (Q 12)							
1. Health education in schools:							
Mean ± SD	1.10 ±2.05	1.08 ±1.77	0.65 ±1.55	1.80 ± 5.71	1.28 ±2.35	1.59 ±1.84	2.04 ±3.08
Median	0	1	0	1	1	1	1
Minimum	0	0	0	0	0	0	0
Maximum	14	21	15	48	24	15	30
2. Peer counselling:							
Mean ± SD	1.40 ±2.28	1.43 ±0.18	0.85 ±1.84	1.84 ±3.92	1.64 ±2.89	1.31 ±1.64	2.09 ±2.74
Median	1	1	0	1	1	1	1.5
Minimum	0	0	0	0	0	0	0
Maximum	14	18	24	24	25	10	30
3. Health awareness campaigns:							
Mean ± SD	1.23 ±2.16	1.29 ±2.21	0.89 ±1.85	2.13 ±5.8	1.41 ±2.23	1.57 ±2.12	2.71 ±4.35
Median	0	0	0	1	1	1	2
Minimum	0	0	0	0	0	0	0
Maximum	14	24	15	48	24	15	35
4. Work in centres for addicts:							
Mean ± SD	0.89 ± 2.15	1.42 ±2.85	1.14 ±3.23	2.34 ±4.58	1.61 ±2.87	1.70 ± 2.12	3.30 ±5.13
Median	0	0	0	1	1	1	2
Minimum	0	0	0	0	0	0	0
Maximum	21	28	48	24	24	14	35
5. Participation in health promotion in the media:							
Mean ± SD	1.33 ± 2.50	1.42 ±2.05	0.87 ±2.21	1.26 ±4.48	1.58 ±3.11	1.17 ± 1.83	2.25 ±3.24
Median	0	1	0	1	1	0	1
Minimum	0	0	0	0	0	0	0
Maximum	14	14	24	10	31	10	30

VARIABLES	**EGYPT (n = 2033) (77.5%)**					**LEBANON**	**KUWAIT**
	Cairo	**Zagazig**	**Mansoura**	**Suez**	**Assiut**		
(n = 2622)	**288**	**521**	**600**	**140**	**484**	**257**	**332**
(%)	**10.9**	**19.9**	**22.9**	**5.3**	**18.5**	**9.8**	**12.7**
6. Creation of health Websites:							
Mean ± SD	1.65 ± 2.81	1.82 ±2.40	1.31 ±2.86	2.70 ±4.48	2 ±3.79	0.91 ± 2.07	2.40 ±3.15
Median	1	1	0	1	1	0	2
Minimum	0	0	0	0	0	0	0
Maximum	21	20	24	24	38	12	30
7. Operation of telephone hotlines:							
Mean ± SD	1.09 ± 3.27	1.4 ±2.28	0.93 ±2.54	1.90 ± 3.78	1.25 ±2.8	0.77 ± 1.81	2.01 ±2.78
Median	0	0	0	1	0	0	1
Minimum	0	0	0	0		0	0
Maximum	35	18	24	24		10	21
8. Membership in a social organization: (%) (Q 14)							
Yes	26.1	32	26.9	21.7	21.3	33.1	17.9
Past membership	20.5	17.8	17.4	16.7	19.1	25.3	18.2
No	53.4	50.2	55.7	61.6	59.6	41.6	63.9

Table 3. Perceived and potential stressors

VARIABLES	EGYPT (n = 2033) (77.5%)					LEBANON	KUWAIT
	Cairo	Zagazig	Mansoura	Suez	Assiut		
(n = 2622)	288	521	600	140	484	257	332
(%)	10.9	19.9	22.9	5.3	18.5	9.8	12.7
Perceived stressors: (Q 18)							
1. Worries about the future: (%)							
Always	13.4	19	17.9	17	17.5	43.3	26.1
Sometimes	31.9	45.4	49.4	53.4	56.5	52	51.5
Never	54.7	35.6	33.7	29.6	26	4.7	22.4
2. Family expectations: (%)							
Always	18.7	17.9	19.1	19.3	20.5	21.6	26.7
Sometimes	48.3	45.2	38.2	36.3	43	54	42
Never	33	36.9	42.7	44.4	36.5	24.4	31.3
3. Health problems: (%)							
Always	40	39.2	50.8	44.4	50	13.9	12.2
Sometimes	37.8	45.0	41.4	42.2	40.6	54.8	47.9
Never	22.2	15.8	7.8	13.4	9.4	31.3	39.9
4. Academic worries: (%)							
Always	21.5	21.4	18.1	15	19	36.9	35.6
Sometimes	40.9	51.4	42.2	43.6	49.3	55.6	49.5
Never	37.6	27.2	39.7	41.4	31.7	7.5	14.9
5. Family problems: (%)							
Always	40.6	45.3	53.1	59.1	57.3	18.7	16.1
Sometimes	37.6	39.9	34.4	34.1	31.2	53	35
Never	21.8	14.8	12.5	6.8	11.5	28.3	48.9
6. Personal emotional problems: (%)							
Always	46.3	50.7	56.1	70.2	64.6	22.3	12.1
Sometimes	41.5	35.8	30	18.5	27.3	61.8	34.3
Never	12.2	13.5	13.5	11.3	8.1	15.9	53.6
7. Personal financial problems: (%)							
Always	36.5	45.8	43.9	53	50.6	20.3	11.4
Sometimes	39.9	42	44.3	38.1	39.2	53.4	40.1
Never	23.6	12.2	11.8	0.9	10.2	26.3	48.5

VARIABLES	EGYPT (n = 2033) (77.5%)					LEBANON	KUWAIT
	Cairo	Zagazig	Mansoura	Suez	Assiut		
(n = 2622)	288	521	600	140	484	257	332
(%)	10.9	19.9	22.9	5.3	18.5	9.8	12.7
8. Unsatisfactory social connections: (%)							
Always	48.2	51.5	63.6	68.2	58.9	9.2	13.5
Sometimes	39	35.6	26.3	26.5	30.2	41.2	32.7
Never	12.8	12.9	10	5.3	10.9	49.6	53.8
9. Political and national worries: (%)							
Always	44.7	40.4	47.3	52.3	50.3	19	10.6
Sometimes	39.7	40.4	31.4	31.1	32.8	47.4	29.3
Never	15.6	19.2	21.3	16.6	16.9	33.6	60.1
10: Public interest concerns: (%)							
Always	43.2	53.6	61	65.9	54.8	16.9	7.1
Sometimes	29.7	36.2	30.2	24.3	33	62.1	26
Never	27.1	10.2	8.8	9.8	12.2	21	66.9
11. Religious beliefs: (%)							
Always	33.5	45.9	44.8	60.5	54.6	12.7	7.2
Sometimes	47.5	38.1	35.9	23.2	31.5	48.3	32.1
Never	19	16	19.3	16.3	13.9	39	60.7
12. Practical aspects of everyday life: (%)							
Always	33.3	32.5	24.6	31.6	29.9	9.2	5
Sometimes	37	42	38.5	40.6	43.5	56.6	29.3
Never	29.7	25.5	36.9	27.8	26.6	34.2	65.7
13. The major preoccupation is: (%) (Q 19)							
Worries about the future	26.9	28.2	29.4	30.9	28.9	40.4	26.1
Family expectations	5.2	14.9	6.6	8.2	10.9	1.8	5.6
Health problems	8.7	3.4	2	3.1	4.6	1.8	1.9
Academic worries	15.5	17.6	25.3	32	21.8	28.7	37.3
Family problems	1	6.2	2.9	5.2	5.7	2.7	5.2
Personal emotional problems	5.2	5.3	7.4	7.2	4	8.5	7.1
Personal financial problems	11.9	4.6	2.7	4.1	2.6	4	3.4
Unsatisfactory social connections	0.5	1.6	0.4	1	1.4	1.9	3.8
Political and national worries	3.5	6.8	7.8	4.1	5.2	2.7	3.4
Public interest concerns	2.4	1.5	1.8	1.1	2.3	2.2	2.5
Religious beliefs	2.6	3.1	4.7	0	2.6	3.1	2.2
Practical aspects of everyday life	16.6	6.8	9	3.1	10	2.2	1.5

VARIABLES	EGYPT (n = 2033) (77.5%)					LEBANON	KUWAIT
	Cairo	Zagazig	Mansoura	Suez	Assiut		
(n = 2622)	288	521	600	140	484	257	332
(%)	10.9	19.9	22.9	5.3	18.5	9.8	12.7
14. Degree of satisfaction with quality of life: (%) (Q 20)							
Very dissatisfied	9.1	6.4	3.7	3.6	3.4	4.3	2.1
Fairly dissatisfied	13.1	10.3	16	8.1	9.5	10.1	10.6
Neither satisfied nor dissatisfied	17.3	16.4	16.6	13.9	17.1	12.1	11.2
Fairly satisfied	35	43.7	45.6	44.5	42.3	53.3	43.8
Very satisfied	25.5	23.2	18.1	29.9	27.7	20.2	32.3
15. Perceived general health: (%) (Q 21)							
Poor	3.1	4.1	2	5.1	2.5	0.8	3
Fair	19.3	20.4	30.6	18.8	18	8.6	8.7
Good	49.4	57.6	56.7	61.6	58.4	57	53.9
Excellent	28.2	17.9	10.7	14.5	21.1	33.6	34.4
16. Current involvement in a relationship: (%) (Q 16)							
No	79.3	72.9	72.4	86.2	85.6	52	74.5
Yes, with no future commitments	11.3	11.3	10	7.3	8.4	27.3	9.7
Yes, with a possibility of getting married	9.4	15.8	17.6	6.5	6	20.7	15.8
17. Effect of existing relationship on daily life stress: (%) (Q 17)							
Very negative	11.6	10	6.1	18.2	11.4	2.4	8.6
Negative	15.1	13.9	8.5	13.6	16.8	7.3	25
No effect on daily stress	31.4	23	20.5	31.9	33.5	19.6	18
Positive	31.4	39.7	39.4	22.7	28.2	43.1	38.3
Very positive	10.5	13.4	25.5	13.6	10.1	27.6	10.1

Table 4. Ways of coping with stress

VARIABLES	EGYPT (n = 2033) (77.5%)					LEBANON	KUWAIT
	Cairo	Zagazig	Mansoura	Suez	Assiut		
(n = 2622)	288	521	600	140	484	257	332
(%)	10.9	19.9	22.9	5.3	18.5	9.8	12.7
1. Eating high fat/high calories food: (%) (Q 23)							
Never	59.4	40.7	37.2	27.3	36.2	26.3	25.8
Rarely	18.4	19.1	22.4	25	22.5	22.4	21.5
Sometimes	17.7	31.2	32.5	34.8	31.5	32.5	33.6
Often	4.5	9	7.9	12.9	9.8	18.8	19.1
2. Using illegal drugs: (%)							
Never	72.2	78.1	84.1	85.2	84.2	86.2	94
Rarely	18	13.8	11.1	11.7	11.9	5.9	3
Sometimes	9	5.9	3	2.3	2.8	7.5	3
Often	0.8	2.2	1.8	0.8	1.1	0.4	0
3. Using over-the-counter drugs such as pain-killers or anti-histamines: (%)							
Never	60.7	60.7	60.1	59.1	62.6	67.4	75.5
Rarely	18	19.5	19.8	21.2	19.9	16.1	13.6
Sometimes	14.2	16.2	17.1	17.3	14.9	13.4	10
Often	4.1	3.6	3	2.4	2.6	3.1	0.9
4. Using prescription drugs: (%)							
Never	52.6	40.5	36	34.4	37.1	77	60
Rarely	20.7	18.2	17.5	16.7	19.1	9.5	14.3
Sometimes	16.2	19.2	22.5	19.1	23.2	12.7	12.7
Often	10.5	22.1	24	29.8	20.6	0.8	13
5. Smoking: (%)							
Never	67.4	74.1	76.8	82	81.1	68.4	86.6
Rarely	13.9	9.3	6.7	10.2	9.4	11.5	3
Sometimes	9.3	8	7.5	3.9	6.2	13	6.1
Often	9.4	8.6	9	3.9	3.3	7.1	4.3
6. High-speed driving: (%)							
Never	53.4	65.8	70.6	71.4	71.9	49.8	39
Rarely	15.4	12.8	10.4	14.3	13.6	16.9	20.5
Sometimes	19.5	12.3	12.6	11.9	10.5	25.1	29
Often	11.7	9.1	6.4	2.4	4	8.2	11.5
7. Drinking alcohol: (%)							
Never	78.7	83.9	89.2	88.2	89.8	62.5	94.3
Rarely	6	8	5.9	7.1	6.4	17.3	2.1
Sometimes	4.8	4.7	3	3.9	2.9	17	2.7
Often	10.5	3.4	1.9	0.8	0.9	3.2	0.9

Table 5. Health locus of control

VARIABLES	EGYPT (n = 2033) (77.5%)					LEBANON	KUWAIT
	Cairo	Zagazig	Mansoura	Suez	Assiut		
(n = 2622)	288	521	600	140	484	257	332
(%)	10.9	19.9	22.9	5.3	18.5	9.8	12.7
1. If I take care of myself, I can avoid illness: (%) (Q 22)							
Strongly disagree	24.8	6.1	7.3	7.4	5.1	3.9	3.3
Disagree	6.2	5.5	8	3	5.7	7	3.6
Somewhat disagree	8.8	4.9	5.4	4.4	7.4	10.6	5.4
Somewhat agree	13.5	21.3	26.2	19.2	19.5	27.3	28.2
Agree	23	30.7	32	35.6	35.7	33.2	35.6
Strongly agree	23.7	31.5	21.1	30.4	26.6	18	23.9
2. Whenever I get sick, it is because of something I've done or not done: (%)							
Strongly disagree	8.7	4.7	3.8	5.3	6.4	17.5	4.5
Disagree	14.3	13.9	13.9	8.3	11.9	21	15.5
Somewhat disagree	11.4	7.1	12	11.3	14.3	21.4	14.2
Somewhat agree	30.6	27.1	25.5	29.3	23.5	27	37.9
Agree	15.4	28.4	29.5	27.8	27.1	9.1	19.1
Strongly agree	17.6	18.8	15.4	18	16.8	4	8.8
3. Good health is largely a matter of good fortune: (%)							
Strongly disagree	38.7	29.7	43.2	39.2	39.3	17.1	40.8
Disagree	22.9	27.4	31	33.8	31.7	23.4	30.8
Somewhat disagree	10	10.8	10.1	10.9	11.5	23.8	12.7
Somewhat agree	12.5	12	8.6	6.9	7.8	21	10.9
Agree	8.5	12.4	4.6	7.7	5.4	9.9	3.9
Strongly agree	7.4	7.7	2.5	1.5	4.3	4.8	0.9
4. No matter what I do, if I am going to get sick, I will get sick: (%)							
Strongly disagree	22.8	12.4	19.2	15.9	18.1	17.5	27.7
Disagree	25.9	22.7	26.5	25.8	22.9	32.5	28
Somewhat disagree	5.3	13.9	11.9	15.2	15.3	25	14.7
Somewhat agree	14.1	14.6	11.7	16.6	12.3	12.7	15.9
Agree	15.2	18.7	13.3	17.4	17.1	6.3	8.5
Strongly agree	16.7	17.7	17.4	9.1	14.3	6	5.2

VARIABLES	EGYPT (n = 2033) (77.5%)					LEBANON	KUWAIT
	Cairo	Zagazig	Mansoura	Suez	Assiut		
(n = 2622)	288	521	600	140	484	257	332
(%)	10.9	19.9	22.9	5.3	18.5	9.8	12.7
5. Most people do not realize the extent to which their illness is controlled by accidental happenings: (%)							
Strongly disagree	13.7	14.9	10.5	7.7	9.9	3.2	13.4
Disagree	20.5	16.7	20	12.3	14.4	12.9	21.8
Somewhat disagree	18.6	11.6	12.2	3.1	15.2	28.5	24
Somewhat agree	19.8	20.5	18.7	22.3	25.3	32.1	27.4
Agree	17.1	27.1	30.7	35.4	27.8	20.9	10.9
Strongly agree	8.3	9.2	7.9	9.2	7.4	2.4	2.5
6. I can only do what my doctor tells me to do: (%)							
Strongly disagree	8.3	5	6.1	3	5.3	16.5	11
Disagree	26.3	10.7	17.5	16.7	16.2	25.4	27.6
Somewhat disagree	19.1	14.1	13.8	15.9	15.3	27.8	21.5
Somewhat agree	9.8	20.1	25.1	16.7	20.2	19.8	23
Agree	25.6	34.2	27.6	28.8	27.3	7.3	12.9
Strongly agree	10.9	15.9	9.9	18.9	15.7	3.2	4
7. There are so many strange diseases around that you can never know how or when you might pick one up: (%)							
Strongly disagree	5.9	4	3.8	5.3	3.1	4.8	2.7
Disagree	13.6	8.7	4.1	5.2	4.8	10.8	5.8
Somewhat disagree	5.8	4.6	5.2	2.2	4.6	20.4	7.7
Somewhat agree	15.1	13.6	2.4	12.1	16.8	26	18.3
Agree	35.3	39.5	41.9	37.1	39.6	25.2	40.2
Strongly agree	24.3	29.6	32.6	37.1	31.1	12.8	25.3
8. When I feel ill, I know it is because I have not been getting the proper exercise or eating right: (%)							
Strongly disagree	4.5	8.1	4.8	4.5	6.6	5.5	7
Disagree	13.9	14.2	16.2	16.7	13.7	17.3	10.7
Somewhat disagree	14.2	9.4	9.7	10.6	8.1	27.2	13.5
Somewhat agree	31.8	22.7	27.6	20.4	28	31.9	35.8
Agree	14.6	30.8	30.1	36.4	28.6	13.8	22
Strongly agree	21	14.8	11.6	11.4	15	4.3	11

VARIABLES	EGYPT (n = 2033) (77.5%)					LEBANON	KUWAIT
	Cairo	Zagazig	Mansoura	Suez	Assiut		
(n = 2622)	288	521	600	140	484	257	332
(%)	10.9	19.9	22.9	5.3	18.5	9.8	12.7
9. People who never get sick are just lucky: (%)							
Strongly disagree	19.9	24.2	28.2	72.3	29.4	17.8	24.1
Disagree	24.7	32.6	26.6	26.5	72.6	22.9	21.6
Somewhat disagree	11.2	9.2	12.6	9.8	10.2	31.2	17.8
Somewhat agree	16.4	14.1	15.5	14.4	11.7	17.8	21
Agree	18.4	15.4	9.3	16.7	10.8	7.1	9.1
Strongly agree	9.4	13.5	7.8	5.3	9.3	3.2	6.4
10. People's ill health results from their own carelessness: (%)							
Strongly disagree	3.4	1.8	2	5.3	3.6	4	2.1
Disagree	9.5	8	3.1	2.3	4.2	14.4	4.9
Somewhat disagree	10.6	4.8	5.4	6.2	4.9	26.8	9.5
Somewhat agree	22	14.9	17.4	16.8	18.8	37.2	28.2
Agree	28.4	44.5	41.1	30.5	34.2	13.6	37.9
Strongly agree	26.1	26	30	38.9	33.3	4	17.4
11. I am directly responsible for my health: (%)							
Strongly disagree	6.7	3.2	5.3	5.3	4.6	1.6	2.1
Disagree	12.6	8.9	10.7	3.8	6.3	5.5	3.9
Somewhat disagree	8.9	8.7	10.2	13.7	9	12.1	5.4
Somewhat agree	21.6	21.1	21.4	17.4	25.2	29.4	26.3
Agree	31.6	36.8	32.6	34.8	33.5	31.8	39.3
Strongly agree	18.6	21.3	19.8	25	21.4	19.6	23
12. When I become ill, it is a matter of fate: (%)							
Strongly disagree	4.1	6.6	6.1	9.1	7.6	22.4	8.8
Disagree	6.3	9	8	10.6	12	20.8	10.9
Somewhat disagree	12.7	10.5	9.1	4.5	12	28.3	19
Somewhat agree	23.9	18.8	21.9	25	23.5	18	27.5
Agree	19.8	32.1	30.5	34.1	23.1	7.8	18.1
Strongly agree	33.2	23	24.4	16.7	21.8	2.7	15.7

Table 6. Cigarette smoking status

VARIABLES	EGYPT (n = 2033) (77.5%)					LEBANON	KUWAIT
	Cairo	Zagazig	Mansoura	Suez	Assiut		
(n = 2622)	288	521	600	140	484	257	332
(%)	10.9	19.9	22.9	5.3	18.5	9.8	12.7
1. Smoking status: (%)							
Current smokers (Q 28/1)	6.6	6.7	10.7	3.6	3.1	10.1	2.7
Occasional smokers (Q 28/2)	3.5	3.6	1.2	1.3	1.7	11.3	2.4
Ex-smokers (Q 28/3)	0.7	2.9	1.4	2	2.6	1.9	2.1
Non-smokers (remaining participants)	89.2	86.8	86.7	93.1	92.6	76.7	92.8
2. Age of initiation of smoking: (Q 25)							
Mean ± SD	16.58 ± 3.31	15.05 ±3.9	15.73 ±3.76	15.42 ±1.83	14.20 ±4.37	16.01 ± 3.59	16.13 ± 3.04
Median	17	15	17	16	15	16	17
Minimum	2	2	1	11	2	4	8
Maximum	21	21	22	18	20	24	23
3. Age when first smoked on a daily basis: (Q 27/2)							
Mean ± SD	17.17 ± 2.81	17.29 ±1.75	17.46 ±2.77	16.25 ±2.05	16.26 ±3.96	18.82 ± 2.53	16.95 ±2.53
Median	18	17	18	16	17	19	17
Minimum	10	14	5	12	12	14	13
Maximum	20	20	23	18	21	23	24
4. Daily number of cigarette smoked by current smokers: (Q28/1)							
Mean ± SD	10.65 ±7.56	22.15 ±16.92	17.15 ±10.11	14.67 ±9.24	14 ±10.98	9.69 ± 5.52	9.19 ± 9.28
Median	10	20	18	20	2	10	5
Minimum	2	2	2	4	1	3	1
Maximum	25	60	60	20	40	20	40
5. Period in months since stopped regularly smoking (for ex-smokers): (Q 28/ 3)							
Mean ± SD	13 ±1.41	18.57 ±18.64	23.29 ±33.53	4.25 ±1.71	21.56 ±28.08	3.17 ± 2.04	4.20 ±5.07
Median	13	12	5	4.5	6	3.5	4.20
Minimum	12	4	3	2	3	1	4
Maximum	14	60	96	6	84	5	4

VARIABLES	EGYPT (n = 2033) (77.5%)					LEBANON	KUWAIT
	Cairo	Zagazig	Mansoura	Suez	Assiut		
(n = 2622)	288	521	600	140	484	257	332
(%)	10.9	19.9	22.9	5.3	18.5	9.8	12.7
6. Money spent on cigarette smoking last month (US$): (Q 30)							
Mean ± SD	4.2 ±10.4	11.9 ±23.5	15.7 ±18.3	7.3 ±17.5	10.8 ± 2.8	17.1 ± 23.6	27.9 ±37.6
Median	0.4	0.9	11.1	0.4	0.4	6.7	16.5
Minimum	0.2	0.2	0.2	0.2	0.2	0.01	3.3
Maximum	55.6	133.3	133.3	55.6	155.6	133.3	165
7. Relative financial burden of cigarettes cost: (%) (Q 31)							
Negligible	21.6	24.2	14.9	10	30.3	77.4	37
Small	37.9	45.5	27	40	15.1	11.3	51.9
Important	27	18.2	41.9	10	45.5	9.4	11.1
Very important	13.5	12.1	16.2	40	9.1	1.9	0
8. Father knows about smoking: (%) (Q32)							
Knows	48.6	47	44.3	38.5	19.4	57.4	42.3
Does not know	31.4	24.2	39.7	11.5	64.5	25.9	38.5
I do not know	20	28.8	16	50	16.1	16.7	19.2
9: Mother knows about smoking: (%) (Q 32)							
Knows	51.4	56.1	60.5	44.4	30	70.9	44.4
Does not know	35.1	28.7	25	11.2	60	16.4	37.1
I do not know	13.5	15.2	14.5	44.4	10	12.7	18.5
10. Most common brand of cigarettes used: (%) (Q 29)							
Marlboro Lights	0	1.9	5.7	44.4	19.2	29.4	50
Marlboro	19.2	50.9	25.7	33.3	23.1	33.3	0
L.M. light	0	1.9	2.9	0	3.8	0	4.5
L.M.	11.5	1.9	2.9	0	15.4	0	4.5
Merit Light	3.8	5.7	0	0	3.8	0	4.5
Merit	32.1	7.5	1.4	0	11.5	0	0
Cleopatra	62.9	26.4	58.6	22.2	23.1	0	0
Rothman	3.8	0	1.4	0	0	0	0
Kent Light	0	0	0	0	0	2	0
Kent	11.5	3.8	0	0	0	3.9	0
West	0	0	1.4	0	0	0	0
Winston	0	0	0	0	0	5.9	0
Gitane	0	0	0	0	0	17.6	0
Davidoff	0	0	0	0	0	0	31.8
Philip Morris	0	0	0	0	0	0	4.5
Others	0	0	0	0	0	7.8	0

Table 7. Perceptions regarding cigarette smoking among current smokers

VARIABLES	EGYPT (n = 2033) (77.5%)					LEBANON	KUWAIT
	Cairo	Zagazig	Mansoura	Suez	Assiut		
(n = 2622)	288	521	600	140	484	257	332
(%)	10.9	19.9	22.9	5.3	18.5	9.8	12.7
1. To be stimulated and alert: (%) (Q 33)							
Never	52.9	38.8	41.1	22.2	44.1	41.8	59.4
Rarely	11.8	26.8	20.6	44.5	26.5	23.7	21.8
Sometimes	23.5	26.9	26	22.2	20.6	20	9.4
Often	11.8	7.5	12.3	11.1	8.8	14.5	9.4
2. To help deal with anger: (%)							
Never	40	20.9	19.2	0	26.5	27.3	37.5
Rarely	22.9	26.8	13.6	11.1	23.5	14.6	25
Sometimes	17.1	25.4	28.8	66.7	32.4	43.6	21.9
Often	20	26.9	38.4	22.2	17.6	14.5	15.6
3. To improve self-image: (%)							
Never	61.8	62.7	76.7	77.8	61.8	76.4	81.3
Rarely	26.5	17.9	6.8	0	11.7	12.7	12.5
Sometimes	8.8	13.4	11	22.2	14.7	10.9	3.1
Often	2.9	6	5.5	0	11.8	0	3.1
4. Pleasure and relaxation: (%)							
Never	24.2	22.1	31.5	22.2	24.2	10.9	25
Rarely	36.4	30.9	15.1	11.2	15.2	12.7	25
Sometimes	27.3	27.9	37	33.3	33.3	30.9	25
Often	12.1	19.1	16.4	33.3	27.3	45.5	25
5. Automatic habit: (%)							
Never	33.3	24.2	16.7	33.4	27.2	32.7	38.7
Rarely	33.4	21.2	8.3	0	12.1	16.4	16.1
Sometimes	8.1	28.8	27.8	44.4	15.2	34.5	32.3
Often	24.2	25.8	47.2	22.2	45.5	16.4	12.9
6. To help deal with depression and sadness: (%)							
Never	48.6	20.9	23.6	0	23.5	29.1	37.5
Rarely	22.8	28.3	15.3	33.3	23.5	20	18.8
Sometimes	20	22.4	29.2	55.6	20.6	40	28.1
Often	8.6	28.4	31.9	11.1	32.4	10.9	15.6

Table 8. Reasons for which a smoker would want to quit smoking

VARIABLES	EGYPT (n = 2033) (77.5%)					LEBANON	KUWAIT
	Cairo	Zagazig	Mansoura	Suez	Assiut		
(n = 2622)	288	521	600	140	484	257	332
(%)	10.9	19.9	22.9	5.3	18.5	9.8	12.7
1. To keep oneself healthy: (%) (Q 36)							
Not important at all	26.5	23.1	16	10	8.1	5.6	6.9
Somewhat important	26.5	16.9	17.3	20	13.5	5.5	17.3
Important	23.5	33.8	20	20	24.3	16.7	10.3
Very important	23.5	26.2	46.7	50	54.1	72.2	65.5
2. To save money: (%)							
Not important at all	32.4	21.5	7.9	20	10.9	61.1	20.7
Somewhat important	17.6	38.5	42.1	30	21.6	24.1	41.4
Important	26.5	33.8	28.8	40	43.2	7.4	17.2
Very important	23.5	6.2	21.1	10	24.3	7.4	20.7
3. Because the family does not favour smoking: (%)							
Not important at all	42.4	29.2	19.7	10	18.9	24.1	7.1
Somewhat important	24.2	32.4	24	40	24.4	42.5	35.7
Important	18.2	24.6	24	30	32.4	20.4	28.6
Very important	15.2	13.8	33.3	20	24.3	13	28.6
4. Because friends do not favour smoking: (%)							
Not important at all	54.5	44.6	57.3	20	58.3	52.8	42.9
Somewhat important	18.2	27.7	21.4	30	22.3	35.9	32.1
Important	18.2	23.1	9.3	30	13.8	3.8	10.7
Very important	9.1	4.6	12	20	5.6	7.5	14.3
5. Because a boyfriend/girlfriend does not favour smoking: (%)							
Not important at all	42.4	38.5	43.1	50	51.4	41.5	53.6
Somewhat important	33.3	20	23.5	20	18.9	34	14.2
Important	18.2	33.8	15.3	30	24.3	15.1	14.3
Very important	6.1	7.7	19.1	0	5.4	9.4	17.9
6. Because of a medical problem: (%)							
Not important at all	41.2	24.6	23	50	21.6	35.8	31
Somewhat important	41.2	21.5	25.7	10	37.9	11.4	20.7
Important	14.7	30.8	27	30	13.5	26.4	20.7
Very important	2.9	23.1	24.3	10	27	26.4	27.6

VARIABLES	EGYPT (n = 2033) (77.5%)					LEBANON	KUWAIT
	Cairo	Zagazig	Mansoura	Suez	Assiut		
(n = 2622)	288	521	600	140	484	257	332
(%)	10.9	19.9	22.9	5.3	18.5	9.8	12.7
7. Because it is against religious beliefs: (%)							
Not important at all	17.6	17.5	13.3	20	8.3	87	17.9
Somewhat important	44.2	23.8	20	20	19.4	5.5	21.4
Important	17.6	39.7	30.7	20	16.7	5.6	25
Very important	20.6	19	36	40	55.6	1.9	35.7
8. To set a good social example: (%)							
Not important at all	34.4	16.9	30.7	10	31.4	51.8	17.9
Somewhat important	34.3	33.9	22.6	40	20	24.1	28.5
Important	18.8	27.7	22.7	30	22.9	20.4	14.3
Very important	12.5	21.5	24	20	25.7	3.7	39.3
9. To avoid discomfort for people nearby: (%)							
Not important at all	37.5	22.5	24.7	30	29.8	26.4	17.2
Somewhat important	37.5	32.4	27.3	40	27	37.8	34.5
Important	15.6	29.2	24.7	30	24.3	26.4	20.7
Very important	8.4	16.9	23.3	0	18.9	9.4	27.6
10. To comply with professional or social pressures not to smoke: (%)							
Not important at all	43.8	29.2	38.4	30	37.1	44.4	21.5
Somewhat important	50	32.3	28.8	50	28.7	22.3	25
Important	3.1	23.1	16.4	20	17.1	29.6	21.4
Very important	3.1	15.4	16.4	0	17.1	3.7	32.1
11. Self-discipline: (%)							
Not important at all	28.1	28.6	13.5	0	16.2	20.4	17.2
Somewhat important	53.1	22.2	23	30	21.7	25.9	34.6
Important	12.5	31.7	29.7	30	27	31.5	17.2
Very important	6.3	17.5	33.8	40	35.1	22.2	31
12. To comply with the cultural norm that it is not acceptable for a woman to smoke: (%)							
Not important at all	32.3	22.2	18.5	10	14.7	90.9	28.6
Somewhat important	48.4	25.4	20	10	17.6	6.8	17.8
Important	3.2	25.4	18.6	20	26.5	2.3	25
Very important	16.1	27	42.9	60	41.2	0	28.6
13. Does not like cigarettes' taste or smell: (%)							
Not important at all	71.4	30.8	51.4	60	43.3	46.3	41.4
Somewhat important	28.6	33.8	15.2	0	26.7	29.6	34.5
Important	0	27.7	15.3	30	10	14.8	3.4
Very important	0	7.7	18.1	10	20	9.3	20.7

Table 9. Practical issues regarding stopping cigarette smoking

VARIABLES	EGYPT (n = 2033) (77.5%)					LEBANON	KUWAIT
	Cairo	Zagazig	Mansoura	Suez	Assiut		
(n = 2622)	288	521	600	140	484	257	332
(%)	10.9	19.9	22.9	5.3	18.5	9.8	12.7
1. Desire to stop smoking now: (%) (Q 37)							
Very much	18.4	30.2	40.5	50	54.5	18.9	37
Somewhat	71	57.1	40.6	50	39.4	45.3	51.9
Not at all	9.6	12.7	18.9	0	6.1	35.8	11.1
2. Previous attempts to stop smoking: (%) (Q38)							
Yes	40	65.1	75.3	77.8	78.8	57.7	74.1
No	60	34.9	24.7	22.2	21.2	42.3	25.9
3. Ability to stop for more than one month: (%) (Q 39)							
Yes	43.5	54.9	60.9	71.4	66.7	61.1	81
No	56.5	45.1	39.1	28.6	33.3	38.9	19
4. Number of attempts to stop smoking for at least one month in the past: (Q 40)							
Mean ± SD	3.13 ± 2.70	2.91 ±2.66	1.89 ±1.46	2.25 ±0.96	3.86 ±3.66	1.70 ± 2.15	2.88 ±2
Median	3	2	2	3	2	1	3
Minimum	0	0	1	1	1	0	1
Maximum	7	11	12	3	12	10	14
Receiving help or advice to help stop smoking: (Q 41)							
5. From a professional: (%)							
Yes	50	70.5	66.2	62.5	60	5.7	40
No	50	29.5	33.8	37.5	40	94.3	60
6. From a programme: (%)							
Yes	39.3	57.4	39.7	37.5	36.7	1.9	32
No	60.7	42.6	60.3	62.5	63.3	98.1	68
7. From a family member: (%)							
Yes	50	68.1	75	87.5	66.7	22.6	64
No	50	31.9	25	12.5	33.3	77.4	36
8. From a religious person or organization: (%)							
Yes	50	73.8	60.3	50	66.7	0	44
No	50	26.2	39.7	50	33.3	100	56

VARIABLES	**EGYPT (n = 2033) (77.5%)**					**LEBANON**	**KUWAIT**
	Cairo	**Zagazig**	**Mansoura**	**Suez**	**Assiut**		
(n = 2622)	**288**	**521**	**600**	**140**	**484**	**257**	**332**
(%)	**10.9**	**19.9**	**22.9**	**5.3**	**18.5**	**9.8**	**12.7**
9. From a friend: (%)							
Yes	75	65.6	85.3	100	80	37.7	72
No	25	34.4	14.7	0	20	62.3	28
Importance of topics related to cigarette cessation programmes: (Q 42)							
10. Inclusion of stress reduction techniques: (%)							
Not important at all	25.8	40	32.4	44.4	33.3	18.5	29.6
Somewhat important	54.8	31.7	33.8	33.3	24.3	22.3	25.8
Important	16.2	25	16.9	11.1	24.2	33.3	29.6
Very important	3.2	3.3	16.9	11.2	18.2	25.9	14
11. Ways of staying a non-smoker after quitting: (%)							
Not important at all	34.4	21.7	12.9	11.1	12.5	1.8	7.4
Somewhat important	21.8	33.3	17.1	11.1	18.7	11.1	29.7
Important	25	28.3	20	11.1	21.9	24.1	29.6
Very important	18.8	16.7	50	66.7	46.9	63	33.3
12. Dealing with weight gain after quitting: (%)							
Not important at all	48.4	38.3	43.1	33.3	21.8	18.5	29.7
Somewhat important	22.6	31.7	23.6	11.2	28.1	25.9	25.9
Important	19.4	25	19.4	44.4	31.3	35.2	25.9
Very important	9.6	5	13.9	11.1	18.8	20.4	18.5
13. Knowledge about withdrawal symptoms: (%)							
Not important at all	58.1	13.3	19.7	22.2	25	5.6	7.4
Somewhat important	12.9	35	22.5	0	31.2	30.2	44.5
Important	12.9	31.7	29.6	22.2	25	43.4	29.6
Very important	16.1	20	28.2	55.6	18.8	20.8	18.5
14. Knowledge about drugs available for cessation: (%)							
Not important at all	56.2	26.7	52.8	55.6	45.4	18.9	37
Somewhat important	25	31.7	18.1	11.1	15.2	39.6	22.3
Important	9.4	38.3	20.8	33.3	21.2	32.1	18.5
Very important	9.4	3.3	8.3	0	18.2	9.4	22.2

VARIABLES	EGYPT (n = 2033) (77.5%)					LEBANON	KUWAIT
	Cairo	Zagazig	Mansoura	Suez	Assiut		
(n = 2622)	288	521	600	140	484	257	332
(%)	10.9	19.9	22.9	5.3	18.5	9.8	12.7
15. Health advantages of quitting: (%)							
Not important at all	28.1	15	15.3	22.3	15.2	3.8	7.4
Somewhat important	37.5	25	22.2	11.1	30.3	9.4	18.6
Important	12.5	28.3	15.3	22.2	12.1	15.1	25.9
Very important	21.9	31.7	47.2	44.4	42.4	71.7	48.1
Knowledge about special classes for students who want to stop smoking: (Q 43)							
16. In school/ college: (%)							
Yes	36.3	45	37.8	40	34.3	24.1	33.3
No	57.6	33.3	44.6	30	45.7	64.8	30
Not sure	6.1	21.7	17.6	30	20	11.1	36.7
17. In the community: (%)							
Yes	4.6	40.7	33.8	40	37.1	23.1	33.3
No	50	40.7	40.5	20	28.6	59.6	30
Not sure	9.4	18.6	25.7	40	34.3	17.3	36.7
Preferable methods for quitting smoking (Q 44)							
18. Self-help stop-smoking programme: (%)							
Knows about it and prefers to use it	50	51.7	46.5	55.6	55.6	50	57.6
Knows about it and prefers not to use it	21.9	15.5	22.5	22.2	22.2	22.2	18.2
Does not know this method	28.1	32.8	31	22.2	22.2	27.8	24.2
19. Internet as a source of information on smoking: (%)							
Knows about it and prefers to use it	40.6	20.7	12.9	33.3	16.7	28.3	27.3
Knows about it and prefers not to use it	40.6	53.4	51.4	44.4	50	45.3	63.6
Does not know this method	18.8	25.9	35.7	22.3	33.3	26.4	9.1
20. Pamphlets about the dangers of smoking: (%)							
Knows about it and prefers to use it	37.5	41.4	36.2	55.6	48.6	35.2	33.3
Knows about it and prefers not to use it	50	43.1	43.5	33.3	34.3	55.6	60.6
Does not know this method	12.5	15.5	20.3	11.1	17.1	9.2	6.1

VARIABLES	EGYPT (n = 2033) (77.5%)					LEBANON	KUWAIT
	Cairo	Zagazig	Mansoura	Suez	Assiut		
(n = 2622)	**288**	**521**	**600**	**140**	**484**	**257**	**332**
(%)	**10.9**	**19.9**	**22.9**	**5.3**	**18.5**	**9.8**	**12.7**
21. Making a deal with a friend to quit together: (%)							
Knows about it and prefers to use it	62.1	44.8	58.6	22.2	63.9	48.1	60.6
Knows about it and prefers not to use it	34.5	43.1	27.1	66.7	19.4	33.3	30.3
Does not know this method	3.4	12.1	14.3	11.1	16.7	18.6	9.1
22. Calling a hotline: (%)							
Knows about it and prefers to use it	26.7	25.9	16.9	66.7	22.9	9.3	27.3
Knows about it and prefers not to use it	46.7	41.4	40.8	22.2	37.1	46.3	48.5
Does not know this method	26.6	32.7	42.3	11.1	40	44.4	24.2
23. Getting a group of friends to quit together: (%)							
Knows about it and prefers to use it	60	50	55.7	66.7	61.1	35.8	57.6
Knows about it and prefers not to use it	40	36.2	30	22.2	25	43.4	24.2
Does not know this method	0	13.8	14.3	11.1	13.9	20.8	18.2
24. Attending a group programme at school: (%)							
Knows about it and prefers to use it	25.8	24.6	8.6	33.3	26.5	17	24.2
Knows about it and prefers not to use it	58.1	40.3	48.6	55.6	44.1	54.7	57.6
Does not know this method	16.1	35.1	42.8	11.1	29.4	28.3	18.2
25. Attending a group programme in a community organization: (%)							
Knows about it and prefers to use it	33.3	26.8	7.2	11.1	13.9	26.4	36.4
Knows about it and prefers not to use it	53.3	30.3	5.5	44.4	44.4	49.1	45.5
Does not know this method	13.4	42.9	36.3	44.5	41.7	24.5	18.1

VARIABLES	EGYPT (n = 2033) (77.5%)					LEBANON	KUWAIT
	Cairo	Zagazig	Mansoura	Suez	Assiut		
(n = 2622)	288	521	600	140	484	257	332
(%)	10.9	19.9	22.9	5.3	18.5	9.8	12.7
26. Asking a teacher/coach for help: (%)							
Knows about it and prefers to use it	35.5	50	31	22.2	25	17	24.2
Knows about it and prefers not to use it	51.6	32.8	50.7	44.4	38.9	60.4	63.6
Does not know this method	12.9	17.2	18.3	33.4	36.1	22.6	12.2
27. Seeing a doctor to get a nicotine patch or other medications: (%)							
Knows about it and prefers to use it	35.5	41.4	22.5	44.4	40	37.7	42.4
Knows about it and prefers not to use it	61.3	41.4	54.9	44.4	40	49.1	42.4
Does not know this method	3.2	17.2	22.6	11.2	20	13.2	15.2
28. Using nicotine "gum": (%)							
Knows about it and prefers to use it	32.3	29.8	21.1	44.4	25.7	35.8	21.2
Knows about it and prefers not to use it	61.3	43.9	53.5	44.4	42.9	52.8	60.6
Does not know this method	6.4	26.3	25.4	11.2	31.4	11.4	18.2
29. Using hypnosis/laser/acupuncture: (%)							
Knows about it and prefers to use it	35.5	15.5	11.3	22.2	22.9	7.5	15.2
Knows about it and prefers not to use it	54.8	43.1	46.5	33.3	40	69.8	57.6
Does not know this method	9.7	41.4	42.2	44.5	37.1	22.7	27.2
30. Quitting independently using nothing, telling no one: (%)							
Knows about it and prefers to use it	65.5	39.7	67.6	88.9	54.5	75.5	51.5
Knows about it and prefers not to use it	31	31	16.9	11.1	21.2	15.1	42.4
Does not know this method	3.5	27.3	15.5	0	24.3	9.4	6.1

Table 10. Smoking situation among family members

VARIABLES	EGYPT (n = 2033) (77.5%)					LEBANON	KUWAIT
	Cairo	Zagazig	Mansoura	Suez	Assiut		
(n = 2622)	288	521	600	140	484	257	332
(%)	10.9	19.9	22.9	5.3	18.5	9.8	12.7
1. Father's cigarette smoking status: (%) (Q 45)							
Non smoker	76.5	73.3	69.4	76	74.4	56	72.7
Occasional smoker	4.6	5.9	7.7	2.5	4.8	12.5	3.5
Regular smoker	16.5	19.7	22	19.8	19.9	31.5	22.5
Not sure	2.4	1.1	0.9	1.7	1.9	0	1.3
2. Mother's cigarette smoking status: (%)							
Non smoker	93.9	95.9	99.2	100	98.8	59.4	97.7
Occasional smoker	3.3	1.1	0.4	0	0.5	13.8	0.7
Regular smoker	0.8	1.6	0.2	0	0.5	26.8	1.3
Not sure	2	1.4	0.2	0	0.2	0	0.3
3. Older brother's cigarette smoking status: (%)							
Non smoker	83.1	85	86.9	91.8	88.1	76	73.7
Occasional smoker	9.2	3.4	2.2	0.9	2.9	11.2	3.4
Regular smoker	4	7.5	9.2	6.4	7.6	11.2	18.1
Not sure	3.7	4.1	1.7	0.9	1.4	1.6	4.8
4. Older sister's cigarette smoking status: (%)							
Non smoker	94.9	97.4	99.1	98.2	99.3	90.3	98.6
Occasional smoker	3	0.2	0	0	0.2	3.5	0.7
Regular smoker	0.9	1.2	0.7	0.9	0.2	4.5	0.4
Not sure	1.2	1.2	0.2	0.9	0.2	1.7	0.3
5. Other adults in the household who smoke cigarettes: (%)							
Non smoker	92.6	89.9	92.9	93.1	94.8	92.1	88.6
Occasional smoker	0	1.8	0.7	2	1.3	2	1.8
Regular smoker	0	4.1	4.9	2.9	2.6	5.9	6.4
Not sure	7.4	4.2	1.5	2	1.3	0	3.2
6. The family's attitude towards smoking cigarettes: (%) (Q46)							
Extremely positive	1.5	3.4	1.1	0	0.2	1.2	1.5
Positive	1.1	2.4	0.2	0.7	0.9	1.6	0.9
Indifferent	13.3	7.8	4.3	6.4	4.8	10.5	5.2
Negative	21.1	26.6	21.1	14.4	17.1	50.8	24.4
Extremely negative	63	59.8	73.3	78.5	77	35.9	68

VARIABLES	EGYPT (n = 2033) (77.5%)					LEBANON	KUWAIT
	Cairo	Zagazig	Mansoura	Suez	Assiut		
(n = 2622)	288	521	600	140	484	257	332
(%)	10.9	19.9	22.9	5.3	18.5	9.8	12.7
7. Personal belief about harmful effects of cigarette smoking: (%) (Q47)							
Definitely not harmful	0.8	3.4	0.7	1.5	0.9	0.4	0.9
Probably not	6.8	3	1.4	3.8	0.4	1.2	0.6
Probably yes	9.1	13.2	5.3	94.7	7	5.9	4.3
Definitely harmful	83.3	80.4.	92.6	0	91.7	92.5	94.2
8. The harmful effects of cigarette smoking discussed within the family: (%) (Q48)							
Yes	81.4	84.4	82.5	86.4	81.6	91.4	90.2
No	18.6	15.6	17.5	13.6	18.4	8.6	9.8
9. The harmful effects of cigarette smoking discussed with friends: (%)							
Yes	70.6	77	84.8	83.6	83.2	90.9	87.9
No	29.4	23	15.2	16.4	16.8	9.1	12.1
10. Prevalence of smoking among friends: (%) (Q50)							
None are smokers	32.7	44.2	38.9	67.4	50.3	25.4	53.7
Some are smokers	37.6	38.8	37.1	25	36.3	52	32.5
Most are smokers	23.8	14.1	17.6	6.8	11.9	20.3	12.9
All are smokers	5.9	2.9	6.4	0.8	1.5	2.3	0.9

Table 11. Attitudes and beliefs about cigarette smoking

VARIABLES	EGYPT (n = 2033) (77.5%)					LEBANON	KUWAIT
	Cairo	Zagazig	Mansoura	Suez	Assiut		
(n = 2622)	**288**	**521**	**600**	**140**	**484**	**257**	**332**
(%)	**10.9**	**19.9**	**22.9**	**5.3**	**18.5**	**9.8**	**12.7**
1. Effect of cigarette smoking on number of friends: (%) (Q49)							
More friends	1.9	4.6	2.3	0	1.7	4.3	2.5
No difference from non-smokers	44.8	38.7	41.7	23.5	35.3	71	38.5
Less friends	27	31.5	24.4	40.7	34.9	7.1	21.8
Not sure	26.2	25.2	31.6	35.8	28.1	17.6	37.2
Impression about cigarette smokers: (%) (Q51)							
2. Male smokers:							
Extremely negative	22.5	31.5	23.6	33.6	29.5	9.5	23.9
Negative	22.6	33.7	35.7	39.7	36.2	27.3	35.8
Indifferent	36.7	28.2	33.4	1.8	28.2	62.1	38.8
Positive	9.5	4.6	5.1	4.6	4.8	1.1	1.2
Extremely positive	5.7	2	2.2	2.3	1.3	0	0.3
3. Female smokers: (%)							
Extremely negative	56.3	76.3	72.5	77	77.4	20.2	79
Negative	13	9.5	9.5	6.3	11.2	35.3	13.1
Indifferent	17.3	7.3	8.3	8.7	5.6	43.7	7.3
Positive	5.4	1.4	3	2.4	2.2	0.8	0.6
Extremely positive	**8**	**5.5**	**6.7**	**5.6**	**3.6**	**0**	**0**
4. Perceived safety of smoking for one or two years: (%) (Q52)							
Definitely not	69.7	70.6	88.4	93.6	89.9	34.3	89.5
Probably not	9.5	12.1	2.9	2.4	3.4	29.5	6.5
Probably yes	15.7	14.6	8.2	2.4	4.7	30.7	3.4
Definitely yes	5.1	2.7	0.5	1.6	2	5.5	0.6
5. Perceived difficulty to quit after starting cigarette smoking: (%) (Q53)							
Definitely not	10	8.8	16.1	15	12.4	3.2	9.8
Probably not	24.1	22.5	21.5	16.5	20.5	7	19.4
Probably yes	48.2	49.5	49.7	55.1	49.4	50	47.2
Definitely yes	17.7	19.2	12.7	13.4	17.6	39.8	23.6

VARIABLES	EGYPT (n = 2033) (77.5%)					LEBANON	KUWAIT
	Cairo	Zagazig	Mansoura	Suez	Assiut		
(n = 2622)	288	521	600	140	484	257	332
(%)	10.9	19.9	22.9	5.3	18.5	9.8	12.7
Opinion about banning smoking: (%) (Q54)							
6. At the faculty/school							
Strongly disapprove	26.5	17	13.6	10.5	10.6	7	9.7
Disapprove	12.8	6.5	8	6	2	5.1	5.8
Approve	26.9	28.7	25.7	19.5	29.9	19.1	22.9
Strongly approve	33.8	47.8	52.7	63.9	57.5	68.8	61.6
7. At work							
Strongly disapprove	13.9	12.2	10.1	7.7	8.9	6.3	9.5
Disapprove	18.2	9.4	9.1	9.8	4.1	7.1	8.5
Approve	32.4	33.5	30.4	24.2	33.6	25.6	23.8
Strongly approve	35.5	44.9	50.4	58.3	53.4	61	58.2
8. In restaurants and bars							
Strongly disapprove	17.1	15.6	11.2	9.8	11.1	13.3	9.5
Disapprove	15.6	12.3	11.3	7.5	6.3	23.5	14.1
Approve	31.1	32.4	28	26.3	31.1	27.5	27.2
Strongly approve	36.2	39.7	49.5	56.4	51.5	35.7	49.2
9. In planes and trains							
Strongly disapprove	17.3	12	9.8	9.8	10	6.6	8.8
Disapprove	14.6	5.7	5	3.8	2.3	4.3	6.1
Approve	26.9	25.4	23.9	15.9	26.5	21.5	22
Strongly approve	41.2	56.9	61.3	70.5	61.2	67.6	63.1
10. In all public places							
Strongly disapprove	20.8	14	10.4	6.8	9.8	10.2	9.5
Disapprove	17.6	14.6	12.5	10.5	10.9	23.5	14.4
Approve	31.2	30.7	30.5	28.6	31.7	26.3	32.1
Strongly approve	30.4	40.7	46.6	54.1	47.6	40	44
Preferred role of various decision-makers regarding regulations on smoking: (%) (Q55)							
11. Government							
Not important at all	15.3	12.8	10.7	9.1	7.4	15.4	6.7
Somewhat important	17.3	15.4	16.2	17.6	15.8	22	12.2
Important	33.1	23.1	19.3	20.6	26	29.5	25.3
Very important	34.3	48.7	53.8	52.7	50.8	33.1	55.8

VARIABLES	EGYPT (n = 2033) (77.5%)					LEBANON	KUWAIT
	Cairo	Zagazig	Mansoura	Suez	Assiut		
(n = 2622)	288	521	600	140	484	257	332
(%)	10.9	19.9	22.9	5.3	18.5	9.8	12.7
12. Social/public opinion							
Not important at all	9.2	6	5.6	4.5	3.1	7.1	2.4
Somewhat important	20.1	16.1	13.2	6.9	13.5	14.5	10.1
Important	31.8	28.2	24.9	34.4	33.5	29	30
Very important	38.9	49.7	56.3	54.2	49.9	49.4	57.5
13. Individual choice:							
Not important at all	9.7	12.5	8.7	6.3	8.7	14.2	8.5
Somewhat important	19.8	14.3	16.1	19.4	18	16.5	15.9
Important	32	20.3	21.7	17.1	24.3	17.3	28
Very important	38.5	52.9	53.5	57.2	49	52	47.6
Opinion regarding legislative actions to reduce cigarette smoking: (%) (Q56)							
14. The price of tobacco products should be increased sharply							
Strongly disagree	23.5	14.8	13.2	10.9	13.8	6.2	6.7
Disagree	8.9	13.3	14.8	18.8	12.9	9.1	14.1
Agree	35.6	30.6	28.9	23.4	27.1	33.1	30
Strongly agree	32	41.3	43.1	46.9	45.2	51.6	49.2
15. The sale of tobacco to people under 18 should be completely prohibited							
Strongly disagree	5.7	6.2	2.4	1.6	3.3	3.2	1.9
Disagree	11.7	6.2	4.5	3.1	1.6	6.7	1.2
Agree	25.1	16.5	16.3	16.4	20.6	17.3	13.2
Strongly agree	57.5	71.1	76.8	78.9	74.5	72.8	83.7
16. Health professionals should get specific training on how to support patients who want to stop smoking							
Strongly disagree	13.8	6	1.7	0	2.8	2.3	1.9
Disagree	9.8	5.6	2	3.2	2.5	1.6	2.4
Agree	31.7	30.8	31.4	32.3	36.8	30.7	22
Strongly agree	44.7	57.6	64.9	64.5	58.9	65.4	73.7
17. Health services should provide assistance for smoking cessation							
Strongly disagree	10.6	5.4	2.2	0.9	3.4	1.6	1.2
Disagree	11.8	5.2	2	3.1	2	4.4	2.4
Agree	34.7	34.9	33.9	36.2	34.7	33.3	23.9
Strongly agree	42.9	54.5	62.9	59.8	59.9	60.7	72.5
18. All advertisement of tobacco products should be forbidden							
Strongly disagree	9.4	6.7	2.9	2.3	5.4	5.5	3.1
Disagree	10.6	6.4	4.8	2.4	3.8	20.5	4.6
Agree	22.9	23.4	21.6	26.8	27.5	25.2	18.7
Strongly agree	57.1	63.5	70.7	68.5	63.3	48.8	73.6

Table 12. Shisha smoking status

VARIABLES	EGYPT (n = 2033) (77.5%)					LEBANON	KUWAIT
	Cairo	Zagazig	Mansoura	Suez	Assiut		
(n = 2622)	288	521	600	140	484	257	332
(%)	10.9	19.9	22.9	5.3	18.5	9.8	12.7
1. Smoking status: (%)							
Current smokers (Q 59/3)	2.8	5.6	5.8	1.6	3.3	32.8	5.1
Occasional smokers (Q 60/1)	2.1	4	4	0.8	1.7	32.7	5.4
Ex-smokers (Q 59/2)	1.2	9.4	2.7	6.2	6.2	7.4	2.4
Non-smokers (remaining participants)	93.9	81	87.5	92.4	88.8	27.1	87.1
2. Age of first shisha smoking: (Q 58)							
Mean ± SD	18.4 ±1.5	16.5 ±2.89	17.06 ±3.22	15.29 ±4.34	17.48 ±1.64	17.21 ± 3.61	17.19 ± 2.96
Median	19	17	17	16.5	18	18	18
Minimum	16	12	11	12	13	2	8
Maximum	20	21	23	12	20	24	24
3. Number of days of shisha smoking/week: (Q 60/2)							
Mean ± SD	2 ±0	4.2 ±2.24	1.14 ±0.36	1.39 ±0	3.5 ±1.38	1.68 ± 0.87	3.36 ± 2.46
Median	2	5	1	7	3.5	1.50	3
Minimum	2	1	1	7	2	1	1
Maximum	2	7	2	7	5	3	7
4. Average number of shisha heads smoked per session: (Q61)							
Mean ± SD	2 ±0	3.07 ±2.49	2.28 ±1.43	1.67 ±1.15	1.7 ±0.82	1.02 ± 0.33	1.29 ± 0.90
Median	2	2	2	1	1.5	1	1
Minimum	2	1	1	1	1	0.25	1
Maximum	2	10	8	3	3	2.0	5
5. Money spent on shisha smoking during the previous month (USD): (Q 62/2)							
Mean ± SD	6.7 ±0	4.9 ±7.5	3.1 ±4.1	1.7 ±2.8	3.9 ±5.3	5.1 ± 4.7	26.5 ± 44.1
Median	6.7	1.6	1.3	0.4	3.9	6.7	5
Minimum	6.7	0.2	0.2	0.4	0.2	0	3.3
Maximum	6.7	33.3	14.4	6.7	20	13.3	165

VARIABLES	EGYPT (n = 2033) (77.5%)					LEBANON	KUWAIT
	Cairo	Zagazig	Mansoura	Suez	Assiut		
(n = 2622)	288	521	600	140	484	257	332
(%)	10.9	19.9	22.9	5.3	18.5	9.8	12.7
6. Relative financial burden of shisha cost: (%) (Q 63)							
Negligible	0	29.1	31.8	0	30	96.4	48
Small	100	50	54.6	100	60	1.8	36
Important	0	14.6	13.6	0	10	1.8	16
Very important	0	6.3	0	0	0	0	0
7. Desire to stop smoking shisha now: (%) (Q64)							
Very much	0	22.9	20.5	40	26.3	3.9	24
Somewhat	100	33.3	52.2	40	63.2	27.5	44
Not at all	0	43.8	27.3	20	10.5	68.6	32
8. Attempts to stop shisha in the past: (%) (Q65)							
Yes	0	21.3	38.6	20	52.6	13.2	48
No	100	76.7	61.4	80	47.4	86.8	52
Smoking shisha among family members: (Q66)							
9. Father smokes shisha: (%)							
Non smoker	85.7	89.9	90.3	88.4	87.6	80.3	88.9
Occasionally	3.6	4.6	3.3	4.1	5.8	15.5	5.2
Regularly	10.7	4.6	5	5.8	5.6	4.2	2.3
Not sure	0.0	0.9	1.4	1.7	1	0	3.6
10. Mother smokes shisha: (%)							
Non smoker	100	95.2	99.8	98.2	99.7	75	97.7
Occasionally	0	2.3	0	0.9	0.3	19.7	1
Regularly	0	0.5	0.2	0.9	0	5.3	1
Not sure	0	2	0	0	0	0	0.3
11. Older brother smokes shisha: (%)							
Non smoker	100	88.5	91.8	9.7	93.9	77.2	80.1
Occasionally	0	3.9	4.3	2.7	2.3	19.8	8.8
Regularly	0	3.7	2.7	2.7	2.8	3	5.4
Not sure	0	3.9	1.2	0.9	1	0	5.7
12. Older sister smokes shisha: (%)							
Non smoker	100	95.2	99.8	98.2	99.2	84.9	98.6
Occasionally	0	2.9	0.2	0	0.5	10.6	0.3
Regularly	0	0	0	0	0	3.9	0.3
Not sure	0	1.9	0	1.8	0.3	0.6	0.8

VARIABLES	EGYPT (n = 2033) (77.5%)					LEBANON	KUWAIT
	Cairo	Zagazig	Mansoura	Suez	Assiut		
(n = 2622)	288	521	600	140	484	257	332
(%)	10.9	19.9	22.9	5.3	18.5	9.8	12.7
13. Other adults in the household smoke shisha: (%)							
Non smoker	100	91.7	96.4	94.2	96	92.6	91.7
Occasionally	0	1.3	0.9	1.9	0.6	2.8	1.2
Regularly	0	1	1.6	2.9	1.9	4.6	3.3
Not sure	0	6	1.1	1	0.5	0	3.8
14. The family's attitude towards smoking shisha: (%) (Q67)							
Extremely positive	0	2.2	1.6	0.8	0.2	0.8	1.5
Positive	0	3.1	0.5	0	0.7	3.9	0.9
Indifferent	0	11.2	4.9	3.1	5.1	37.1	6.2
Negative	7.1	22.4	14.4	16.3	20.1	37.9	26.9
Extremely negative	92.9	61.1	78.6	79.8	73.9	20.3	64.5
15. Perceived harmful effects of smoking shisha in comparison to cigarettes: (%) (Q68)							
Not harmful at all	0	3.3	0.7	0.8	1.1	0.4	0.9
Less harmful than cigarettes	6.7	17.9	19.4	15.5	14.4	13.4	11.2
The same harmful effect as cigarettes	20	30.8	21.2	20.1	24.9	36.2	25.4
More harmful effects than cigarette	73.3	48	58	63.6	51.6	50	62.5

Table 13. Reasons for which a smoker would want to quit smoking shisha

VARIABLES	EGYPT (n = 2033) (77.5%)					LEBANON	KUWAIT
	Cairo	Zagazig	Mansoura	Suez	Assiut		
(n = 2622)	288	521	600	140	484	257	332
(%)	10.9	19.9	22.9	5.3	18.5	9.8	12.7
1. To keep oneself healthy: (%) (Q 69)							
Not important at all	0	8.6	5.5	5	4.6	3.4	2.3
Somewhat important	4.5	8.1	8.8	3.3	5.6	9	4.8
Important	27.3	23.8	15.1	16.7	17	26.1	16
Very important	68.2	59.5	70.6	75	72.8	61.5	76.9
2. To save money: (%)							
Not important at all	0	8.7	7.5	6.7	5.4	38.4	15.4
Somewhat important	18.2	20.1	17.7	17.5	16.3	28.8	29.8
Important	40.9	37.5	32.6	23.5	43.3	21.6	26.9
Very important	40.9	33.7	42.2	43.3	45	11.2	27.9
3. Because the family does not favour smoking: (%)							
Not important at all	10	11.6	11.9	6.9	8.2	35.6	11.8
Somewhat important	40	19.9	18.7	10.3	12.4	34.3	16.4
Important	15	38.5	33.3	34.5	34.6	18.5	35.7
Very important	35	30	36.1	48.3	44.8	11.6	36.1
4. Because friends do not favour smoking: (%)							
Not important at all	45	22	27.4	13.5	15.9	48.1	24.5
Somewhat important	10	28.4	26.8	23.5	23.2	32.6	22.2
Important	20	29.8	22	29.7	32.7	12	30.4
Very important	25	19.8	23.8	33.3	28.2	7.3	22.9
5. Because the boyfriend/girlfriend does not favour smoking: (%)							
Not important at all	61.9	33.3	32.8	25	21.8	40.4	31.3
Somewhat important	9.6	21.1	25.4	20.3	22.9	27.9	18.9
Important	9.5	24.3	19.5	26.9	24.9	19.1	25.9
Very important	19	21.3	22.3	27.8	30.4	12.6	23.9
6. Because of a medical problem: (%)							
Not important at all	47.4	16.7	13.8	15.5	15.7	21	14.4
Somewhat important	5.2	19.1	20.2	15.8	17.8	12.6	14.7
Important	15.8	27.6	21.7	19	21.5	18.8	19.6
Very important	31.6	36.6	44.3	51.7	45	47.6	51.3

VARIABLES	EGYPT (n = 2033) (77.5%)					LEBANON	KUWAIT
	Cairo	Zagazig	Mansoura	Suez	Assiut		
(n = 2622)	288	521	600	140	484	257	332
(%)	10.9	19.9	22.9	5.3	18.5	9.8	12.7
7. Because it is against religious beliefs: (%)							
Not important at all	0	6.5	4.7	2.4	4.8	59.3	11.8
Somewhat important	21	12.8	9.5	4.5	8.3	17.2	13.1
Important	15.8	23	16.8	18.3	21.1	9.3	27.2
Very important	63.2	57.7	69	74.8	65.8	14.2	47.9
8. To set a good social example: (%)							
Not important at all	10.5	13.5	10.5	4.5	7.3	37.7	10.5
Somewhat important	26.3	16.2	15.5	14.4	12.6	26.3	16.8
Important	31.6	32.4	25.3	2.3	31.8	19.5	28
Very important	31.6	37.9	48.7	56.8	48.3	16.5	44.7
9. To avoid discomfort for people nearby: (%)							
Not important at all	10.5	14.3	9.2	7.9	7.3	16.9	10.2
Somewhat important	26.3	19.7	19.7	11.4	19.7	22.1	18.1
Important	42.1	34.8	29	28.9	32.1	39.4	30.3
Very important	21.1	26.2	42.1	51.8	40.9	21.6	41.4
10. To comply with professional or social pressures not to smoke: (%)							
Not important at all	40	19.9	21	17.9	16.5	34.6	18.2
Somewhat important	15	25.2	27	23.1	25.6	29.9	26.5
Important	30	33.8	26.4	29.5	29.1	23.4	28.8
Very important	15	21.1	25.6	29.5	28.8	12.1	26.5
11. Self-discipline: (%)							
Not important at all	0	9	8.3	6.1	5.5	17.1	5.9
Somewhat important	31.8	19.9	13.3	8.7	13.8	19.8	14.5
Important	31.6	28.9	26	25.2	29.2	27.6	29.3
Very important	31.6	42.2	52.4	60	51.5	35.5	50.3
12. To comply with the cultural norm that it is not acceptable for a woman to smoke shisha: (%)							
Not important at all	5.7	6.4	6.3	10.5	7.7	69.8	9
Somewhat important	11.9	19.1	13.2	4.4	10.5	18	13.1
Important	35.3	28.2	17.5	21.1	20.2	5.9	23.7
Very important	47.1	46.3	63	64	61.6	6.3	54.2

VARIABLES	**EGYPT (n = 2033) (77.5%)**					**LEBANON**	**KUWAIT**
	Cairo	**Zagazig**	**Mansoura**	**Suez**	**Assiut**		
(n = 2622)	**288**	**521**	**600**	**140**	**484**	**257**	**332**
(%)	**10.9**	**19.9**	**22.9**	**5.3**	**18.5**	**9.8**	**12.7**
13. Does not like shisha's taste or smell: (%)							
Not important at all	31.6	15	15.3	18.7	15.8	29.3	12.7
Somewhat important	15.8	23.6	14.5	10.3	13.5	17	14.8
Important	15.8	26	18.7	1.8	19.5	20.5	20.3
Very important	36.8	34.4	51.5	54.2	51.2	33.2	52.2
14. Others: (%)							
Not important at all	0	0	0	0	11.1	100	33.3
Somewhat important	0	0	100	0	44.5	0	25
Important	0	25	0	0	22.2	0	41.7
Very important	0	75	0	0	22.2	0	0

Table 14. Alcohol use

VARIABLES	EGYPT (n = 2033) (77.5%)					LEBANON	KUWAIT
	Cairo	Zagazig	Mansoura	Suez	Assiut		
(n = 2622)	288	521	600	140	484	257	332
(%)	10.9	19.9	22.9	5.3	18.5	9.8	12.7
1. Ever tried alcoholic drink: (%) (Q70)							
Yes	29.8	7.4	5.8	4.3	2.7	74.1	5.8
No	82.2	86.6	86.2	84.7	97.3	25.9	94.2
2. Age when first tried alcoholic drink: (Q 71)							
Mean ± SD	17.38 ±4.75	18.1 ±2.2	17.5 ±3.1	16 ±1.6	15.6 ±4.25	14.11 ± 4.29	18.93 ±2.79
Median	17	18	18	16	16.6	15	19
Minimum	7	12	5	14	14	5	13
Maximum	25	21	23	18	20	23	21
3. Frequency of alcoholic drinking: (%) (Q 72)							
At least once per day	37.5	21.4	5.7	0	0	3.1	4.8
At least once per week	12.5	14.3	0	0	0	38.8	0
At least once per month	0	4.8	0	0	0	15.7	0
Occasionally	37.5	23.8	17.2	50	35.3	33.5	33.3
Do not drink	12.5	35.7	57.1	50	64.7	8.9	61.9
Sources for obtaining alcohol: (%) (Q 73)							
4. Stores or shops:							
Never	0	59.1	51.5	75	61.5	23.1	81
Sometimes	0	25	24.3	25	15.4	51.1	9.5
Always	100	15.9	24.2	0	23.1	25.8	9.5
5. Friends:							
Never	100	41.9	21.9	25	42.9	38.7	47.6
Sometimes	0	41.9	53.1	50	50	55.1	47.6
Always	0	16.2	25	25	7.1	6.2	4.8
6. Available at home:							
Never	100	60.5	90.6	75	92.3	32.2	90.5
Sometimes	0	27.9	9.4	25	7.7	48.1	9.5
Always	0	11.6	0	0	0	19.7	0

VARIABLES	**EGYPT (n = 2033) (77.5%)**					**LEBANON**	**KUWAIT**
	Cairo	**Zagazig**	**Mansoura**	**Suez**	**Assiut**		
(n = 2622)	**288**	**521**	**600**	**140**	**484**	**257**	**332**
(%)	**10.9**	**19.9**	**22.9**	**5.3**	**18.5**	**9.8**	**12.7**
7. From a dealer:							
Never	100	60.5	84.4	75	92.3	72.7	71.4
Sometimes	0	32.5	9.3	25	7.7	25	28.6
Always	0	7	6.3	0	0	2.3	0
Place of drinking alcohol: (Q 74)							
8. At home/in private place (%)							
Never	0	65.8	79.8	75	69.2	22.7	85
Sometimes	0	23.7	10.4	25	23.1	62.2	15
Always	100	10.5	9.8	0	7.7	15.1	0
9. At friends'/relatives' houses (%)							
Never	100	37.2	21.9	25	33.3	16.8	60
Sometimes	0	55.8	62.5	50	60	71.8	40
Always	0	7	15.6	25	6.7	11.4	0
10. At social events (%)							
Never	100	48.8	33.3	25	53.8	5.9	70
Sometimes	0	39.6	45.5	75	30.8	58.1	15
Always	0	11.6	21.2	0	14.4	36	15
11. In public places such as cafes or restaurants (%)							
Never	100	41.9	62.5	100	53.8	16	75
Sometimes	0	48.8	25	0	38.5	59	20
Always	0	9.3	12.5	0	7.7	25	5
12. In parks or gardens (%)							
Never	100	53.1	81.1	75	50	72.3	90
Sometimes	0	36.7	15.1	25	45	26.1	5
Always	0	10.2	3.8	0	5	1.6	5
13. While driving (%)							
Never	100	55.1	84.2	75	55	91.8	90
Sometimes	0	32.7	9.5	25	45	8.2	10
Always	0	12.2	6.3	0	0	0	0

Table 15. Drug use

VARIABLES	EGYPT (n = 2033) (77.5%)					LEBANON	KUWAIT
	Cairo	Zagazig	Mansoura	Suez	Assiut		
(n = 2622)	288	521	600	140	484	257	332
(%)	10.9	19.9	22.9	5.3	18.5	9.8	12.7
Have used the following drugs: (%) (Q 75)							
1. Tranquillizers							
Yes	18.4	17.5	12.5	12.1	9.1	11.3	7.1
No	74.9	78.1	85.7	84.3	88.4	86.3	91
Not sure	6.7	4.4	1.8	3.6	2.5	2.4	1.9
2. Barbiturates							
Yes	17.7	25.3	23.2	24.3	15.9	1.2	10.8
No	74.3	70.9	75.3	70	80.6	95.9	84.6
Not sure	8	3.8	1.5	5.7	3.5	2.9	4.6
3. Morphine							
Yes	6.9	3.6	2.7	3.6	2.5	0.4	1.9
No	85.4	91	95.6	91.4	95	96.8	95.6
Not sure	7.7	5.4	1.7	5	2.5	2.8	2.5
4. Amphetamine (uppers)							
Yes	3.8	2.3	1	2.9	1.2	2.4	0.3
No	88.2	94.6	96.5	90	94	95.6	95.4
Not sure	8	3.1	2.5	7.1	4.8	2	4.3
5. Codeine							
Yes	4.9	1.9	2.3	1.4	0.8	9	1.9
No	90.9	97.3	95.5	95.7	97.5	88.6	95.6
Not sure	4.2	0.8	2.2	2.9	1.7	2.4	2.5
6. Cannabis (marijuana)							
Yes	5.9	2.1	1.7	1.4	1.2	12.1	0.9
No	91.7	96.4	97.1	96.5	95.9	87.5	98.5
Not sure	2.4	1.5	1.2	2.1	2.9	0.4	0.6
7. Heroine							
Yes	4.9	1.9	0.5	0.7	0.2	0.4	0.3
No	93.8	97.7	99	96.4	97.7	98.4	99.4
Not sure	0.7	0.4	0.5	2.9	2.1	1.2	0.3

VARIABLES	EGYPT (n = 2033) (77.5%)					LEBANON	KUWAIT
	Cairo	Zagazig	Mansoura	Suez	Assiut		
(n = 2622)	288	521	600	140	484	257	332
(%)	10.9	19.9	22.9	5.3	18.5	9.8	12.7
8. Hashish							
Yes	8	4.4	2.7	4.3	2.7	10.5	2.2
No	93.4	94.6	96.5	94.3	95.4	88.7	97.5
Not sure	0.7	1	0.8	1.4	1.9	0.8	0.3
9. Crack-cocaine							
Yes	5.6	2.1	1	0.7	0.2	2	0.6
No	94.5	96.9	98.3	97.2	97.7	96.4	99.1
Not sure	3.8	1	0.7	2.1	2.1	1.6	0.3
10. Ecstasy							
Yes	3.5	1.9	0.3	1.4	0.6	4	5.3
No	94.1	96.6	97	94.3	96.9	94.7	97.8
Not sure	4.5	1.5	2.7	4.3	2.5	1.3	1.9
11. Khat							
Yes	5.2	2.5	0.7	0.7	0.2	1.2	0.3
No	91	96.7	97.1	97.2	97.5	97.2	97.8
Not sure	3.5	0.8	2.2	2.1	2.3	1.6	1.9
12. Slash pills							
Yes	3.5	4.2	1.3	0.7	1.4	0.8	0.3
Nor	93	95.4	97.9	97.9	96.7	96.8	99.1
Not sure	3.5	0.4	0.8	1.4	1.9	2.4	1.6
13. Bango							
Yes	2.1	4.6	3.5	2.1	3.5	2.4	1.9
No	95.1	93.5	95.8	96.5	95.1	95.9	97.5
Not sure	2.8	1.9	0.7	1.4	1.4	1.7	0.6
14. Other drugs							
Yes	0	0	0	0	0	50	60.9
No	0	0	0	0	0	50	39.1
Not sure	0	0	0	0	0	0	0

VARIABLES	EGYPT (n = 2033) (77.5%)					LEBANON	KUWAIT
	Cairo	Zagazig	Mansoura	Suez	Assiut		
(n = 2622)	288	521	600	140	484	257	332
(%)	10.9	19.9	22.9	5.3	18.5	9.8	12.7
15. Age of first use of drugs: (Q 76)							
Mean ± SD	15 ±6.6	15.24 ±4.35	17.92 ±2.62	16.83 ±1.9	17.54 ±3.09	18.25 ± 4.07	17.8 ±2.53
Median	17	17	18.5	16	18	20	18
Minimum	8	5	10	14	6	4	10
Maximum	25	22	22	20	22	24	23
Source of drug: (%) (Q 77)							
17. From a dealer							
Never	56.4	92.6	86.7	84.6	87.5	74.2	90.9
Sometimes	30.8	4.9	8.3	15.4	2.5	16.7	9.1
Always	12.8	2.5	5	0	10	9.1	0
18. Friends:							
Never	67.6	52.9	53.8	78.6	55.6	54.8	58.8
Sometimes	24.3	32.9	32.4	14.3	17.7	27.4	26.5
Always	8.1	14.2	12.3	7.1	26.7	17.8	14.7
19. Available at home:							
Never	66.6	42.9	58.5	40	61.4	69.2	41.2
Sometimes	26.7	21.4	18.4	13.3	4.5	20	26.4
Always	6.7	35.7	23.1	46.7	34.1	10.8	32.4

Table 16. Caffeine consumption

VARIABLES	EGYPT (n = 2033) (77.5%)					LEBANON	KUWAIT
	Cairo	Zagazig	Mansoura	Suez	Assiut		
(n = 2622)	288	521	600	140	484	257	332
(%)	10.9	19.9	22.9	5.3	18.5	9.8	12.7
1. Daily consumption of coffee: (Q 78)							
Mean cups ± SD	0.86 ±0.92	1.04 ±1.79	0.68 ±1.06	0.84 ±0.76	0.81 ±1.05	1.27 ± 1.24	1.56 ±1.25
Median	1	1	0	1	1	1	1
Minimum	0	0	0	0	0	0	0
Maximum	4	20	7	3	10	6	10
2. Daily consumption of tea:							
Mean cups ± SD	1.6 ±1.1	1.98 ±1.66	2.36 ±1.83	1.95 ±1.24	2 ±1.6	0.71 ± 0.89	1.67 ±1.30
Median	1	2	2	2	1.7	1	1
Minimum	0	0	0	0	0	0	0
Maximum	3	12	17	8	14	5	7
3. Daily consumption of caffeinated pills:							
Mean ± SD	0.7 ±1.51	0.29 ±0.93	0.03 ±0.22	0.15 ±0.35	0.14 ±0.46	0.09 ± 0.43	0.81 ±1.52
Median	0	0	0	0	0	0	0
Minimum	0	0	0	0	0	0	0
Maximum	9	8	3	1	3	4	8
4. Daily consumption of caffeinated cold beverages:							
Mean cans ± SD	0.87 ±0.68	1.47 ±1.4	1.05 ±1.08	1.64 ±1.54	1.5 ±1.4	1.20 ± 0.96	1.67 ±1.07
Median	1	1	1	1	1.3	1	1
Minimum	0	0	0	0	0	0	0
Maximum	3	10	10	10	12	6	8
5. Daily consumption of energy drinks:							
Mean cans ± SD	0.84 ±1.11	0.21 ±0.74	0.06 ±0.4	0.14 ±0.53	0.25 ± 0.72	0.10 ± 0.40	0.67 ±0.68
Median	0	0	0	0	0	0	1
Minimum	0	0	0	0	0	0	0
Maximum	3	5	5	1	6	3	3

VARIABLES	**EGYPT (n = 2033) (77.5%)**					**LEBANON**	**KUWAIT**
	Cairo	**Zagazig**	**Mansoura**	**Suez**	**Assiut**		
(n = 2622)	**288**	**521**	**600**	**140**	**484**	**257**	**332**
(%)	**10.9**	**19.9**	**22.9**	**5.3**	**18.5**	**9.8**	**12.7**
6. Ability to go through a normal day without having caffeine: (%) (Q 79)							
Yes	61.9	63.4	64.4	59.5	63	69.6	73.3
No	17.9	25.4	23.8	20.7	23.5	26.4	19.1
Not sure	20.2	11.2	11.8	19.8	13.5	4	7.6
7. Beliefs about negative effects of daily caffeine use on health: (%) (Q 80)							
No negative impact at all	15	22.4	19.7	14.3	15	22.7	10.6
Probable impact	62.8	50.6	55.4	58.7	58.9	56.6	56.2
Important impact	11.1	22.4	19.1	17.5	15.2	14.7	27.8
Serious impact	11.1	4.6	5.8	9.5	10.9	6	5.4

Table 17. Variables specific to medical students' life and choices

VARIABLES	EGYPT (n = 2033) (77.5%)					LEBANON	KUWAIT
	Cairo	Zagazig	Mansoura	Suez	Assiut		
(n = 2622)	288	521	600	140	484	257	332
(%)	10.9	19.9	22.9	5.3	18.5	9.8	12.7
1.Choosing medical school again given the chance: (%) (Q 81)							
Certainly not	22.5	13.9	22.3	17.9	17.2	5.2	14.5
Probably not	14.3	19.2	14.6	12.1	15.8	12.3	19
Probably yes	13.2	27.5	26.3	22.8	23.9	37.7	20
Certainly yes	50	39.4	36.8	47.2	43.1	44.8	46.5
Daily hours devoted to: (Q 82)							
2. Study on campus: (%)							
Mean ± SD	4.4 ±2.7	4.05 ±2.17	3.73 ±2.47	4.53 ±2.33	4.8 ±2	2.16 ± 2.72	4 ±3.12
Median	5	4	4	5	5	2	4
Minimum	0	0	0	0	0	0	0
Maximum	8	9	10	8	9	12	15
3. Study at home: (%)							
Mean ± SD	4.3 ±2	3.9 ±1.8	3.54 ±2.18	4.13 ±1.86	3.9 ±1.9	2.94 ± 1.86	3.90 ±2.27
Median	4	4	3	4	4	3	4
Minimum	0	0	0	1	0	0	0
Maximum	10	14	24	12	12	12	12
4. Non-academic reading: (%)							
Mean ± SD	1.1 ±1.3	1.5 ±1.5	1.43 ±1.40	1.32 ±0.89	1.5 ±1.6	0.96 ± 1.08	1.25 ±1.20
Median	1	1	1	1	1	1	1
Minimum	0	0	0	0	0	0	0
Maximum	5	15	12	5	24	12	12
5. Rest and recreation: (%)							
Mean ± SD	3.2 ±2	4.1 ±2.7	4.25 ±2.64	3.82 ±3.20	3.5 ±2.6	3.1 ± 1.92	3.22 ±2.28
Median	3	3	4	3	3	3	3
Minimum	0	0	0	0.5	0	0	0
Maximum	8	15	24	20	20	13	24

VARIABLES	EGYPT (n = 2033) (77.5%)					LEBANON	KUWAIT
	Cairo	Zagazig	Mansoura	Suez	Assiut		
(n = 2622)	288	521	600	140	484	257	332
(%)	10.9	19.9	22.9	5.3	18.5	9.8	12.7
6. Sleep: (%)							
Mean ± SD	7 ±2.2	7.4 ±2.3	8.04 ±1.6	7.8 ±2.2	7.9 ±2	6.86 ± 1.43	6.99 ±1.62
Median	7	8	8	8	8	7	7
Minimum	0	0	0	3	1	0	0
Maximum	14	18	14	20	20	10	12
Impact of medical studies on: (Q 83)							
7. Physical health: (%)							
Not important at all	5.7	13.5	10.1	5.7	5.2	9.3	4.9
Somewhat important	32	26	25.8	24.3	23.7	34.2	22.7
Important	28.6	33.1	32.2	29.3	38.5	34.1	37.1
Very important	33.7	27.4	31.9	40.7	32.6	22.4	35.3
8. Mental health: (%)							
Not important at all	8.8	14.4	11.8	4.8	7	9.3	4
Somewhat important	27.1	22.4	22.3	2.3	22.1	27.7	17.8
Important	25.4	28.2	30.1	28.7	35.1	38.6	32.8
Very important	38.7	35	36.8	35.2	35.8	24.4	45.4
9. Spiritual well-being: (%)							
Not important at all	28.3	17.2	16.3	11.6	28.3	13.9	10.4
Somewhat important	15	24.6	20.6	24.7	15	24.1	22.1
Important	26.7	30.6	28.1	33.1	26.7	39.6	32.2
Very important	30	26.6	35	30.6	30	22.4	35.3
10. Social well-being: (%)							
Not important at all	20.4	14	11.8	5.8	8.7	10.2	7.4
Somewhat important	18.2	24.8	20.7	18	17.5	19.4	18.7
Important	27.1	26.8	33.3	30.3	36	41.9	35.4
Very important	34.3	34.4	34.2	45.9	37.8	28.5	38.5
11. Belief about the role of medical students for a healthier community: (%) (Q 84)							
Not their role	2	5.2	3.7	2.6	3.3	2.8	1.8
Partly their role	43.1	24.1	30.4	28.2	28.4	33.1	36.8
Very much their role	54.9	70.7	65.9	96.2	68.3	64.1	61.4