

Smoking in Syria: profile of a developing Arab country

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SUMMARY

One of the main obstacles to tobacco control in the Middle East lies in the shortage of reliable, standardised data on the spread and patterns of tobacco use in society. In Syria, a project aiming at drawing an epidemiological map of the tobacco epidemic in this country was started 4 years ago. Overall, nine studies have resulted, with a total of 6780 participants. The crude prevalence of current smoking among adults in Syria, based on combined information from all studies, is 48% and 9% for males and females, respectively. The prevalence of current smoking among high school adolescents is 16% and 7% for boys and girls, respectively, and was strongly associated with parental and sibling smoking. High school students from families with parents and/or siblings who smoked were 4.4 times more likely to be current smokers than those from non-smoking families. The biggest influx of new smokers among males in Syria is occurring in the early twenties, but an earlier pattern can occur

among youths with low academic performance or socio-economic status. Smoking in women, evaluated by data from physicians, tends to start later than in men and continues to increase with age. Women's smoking in Syria is related to their level of social liberalisation. Data show that active smoking is associated with an increased risk of respiratory diseases among smokers, and that exposure to environmental tobacco smoke (ETS) is associated with an increased risk of respiratory symptoms in children. Knowledge about the harmful effects of smoking and the desire to quit are disproportionate to the rate of successful cessation. The evidence collected indicates possible avenues for tobacco control in Syria, including price increases, smoking cessation programmes, restriction of adolescents' access to cigarettes, and intensive prevention work among women.

KEY WORDS: smoking; epidemiology; profile; Syria

FOUR YEARS AGO a project aiming at providing a descriptive picture of the spread, patterns and dynamics of tobacco smoking in Syria was started. Prior to that, there were no published data about smoking in Syria, other than the official figures for annual per capita cigarette consumption, which do not account for the huge illegal traffic of cigarettes in Syria.¹

The task, however, was troublesome. In order to obtain an overall estimate of the smoking prevalence of adults in Syria, we needed to assess smoking in a sample representative of this population, or at least of part of it, such as adults in a major city such as Aleppo. This proved either very difficult to do or required resources beyond our capacity. On the other hand, poor registries and demographic information hindered the application of standard, systematic sampling procedures. Furthermore, other survey options such as random telephone or mail surveys are not suitable for Syria because of the unequal levels of access to these means of communication in this country.^{2,3}

We therefore opted to look at smoking in sub-populations of the society, such as low-income women,

students and physicians. Nine studies resulted from this project, with a total of 6780 participants, looking at different aspects of the smoking problem in different groups of Syrian society (Table 1). All categories of smoking behaviour used in these studies were standardised according to World Health Organization (WHO) guidelines,¹² to allow for comparison between studies and with the international literature. Only cigarette smoking was investigated in these studies, as this constitutes the most common form of regular tobacco use in Syria.

This review summarises the results of these studies in order to provide an overall epidemiological map of the smoking epidemic in Syria. The information provided in this report represents an important documentation of various facets of the smoking problem in a developing country model. It can also be of value to other countries in the Middle East, which share many aspects of Syria's socio-demographic makeup. Furthermore, some of the populations studied in Syria and reported here are amongst those that are traditionally under studied in the Middle East, such

Table 1 The prevalence of smoking among Syrian males and females according to different studies

Population	Survey method/year	Sample size	Response rate (%)	Mean age	Smoking males (%)	Smoking females (%)
Adults in Aleppo ²	Mail survey/1997	313	39.0	39	45.2	—*
High school students, Aleppo ⁴	Self-administered questionnaire/1998	1587	96.6	15.9	15.9	6.6
Physicians in northern Syria ⁵	Self-administered questionnaire/1998	863	98.0	42	40.7	11.4
Schoolteachers in northern Syria ⁶	Self-administered questionnaire/1999	314	90.0	35	52.1	12.3
Patients of paediatric clinics in Aleppo ⁷	Physician-administered questionnaire/1998	1859	97.0	—	57.5	7.5
University students in Aleppo ^{8†}	Self-administered questionnaire/1999	576	93.0	20	23.3	—
Military recruits in northern Syria ^{9†}	Self-administered questionnaire/1999	596	98.0	20	46.1	—
Low-income women in Aleppo ¹⁰	Interviewer-administered questionnaire/2000	412	97.2	28	—	16.5
Low-income women in Aleppo ¹¹	Interviewer-administered questionnaire/2000	260	88.0	29	—	—

* Sample size too small.

† Only males were studied.

as low-income women, schoolteachers and military recruits, offering an important glimpse of the smoking problem in these populations.

Before moving to a description of smoking profiles in Syria, I would like to point out some of the limitations of the current review. First, the overall prevalence rates of adult smoking in Syria were arrived at by calculating the unweighted means of different prevalence estimates for the different populations studied. This does not necessarily reflect the smoking prevalence of adults in Syria, as the populations studied are not representative of the Syrian society as a whole. Second, all studies were cross-sectional surveys, and as such should be interpreted within the context of this design, especially when comparing different age groups or assessing correlates of smoking. The term *current smoking* used in this review is defined as smoking at the time of the survey, either daily or occasionally.¹² Finally, because Syria has implemented a ban on tobacco advertising, the influence of tobacco companies' marketing strategies has not been studied in Syria. We believe, however, that such an influence exists through printed and televised media from adjacent Arab countries, and that it warrants evaluation.

PREVALENCE AND PATTERNS OF SMOKING IN SYRIA

Generally, smoking is more prevalent among males than females in Syria. Adult male smoking levels exceed those of females in all studied groups (Table 1).⁵⁻⁷ The recently published Country Profile Project puts the level of adult smoking in Syria, based on our data, at 53% for males and 9% for females.¹³ However, these estimates are calculated without including the figures for males aged 19–23 years. Including these figures lowers the overall smoking prevalence among adult males (aged over 18 years) to 48%. The prevalence of current smoking among high school students in Syria is 16% and 7% for males and females, respectively.⁴

A note of caution should be mentioned here regarding the overall estimate of smoking among women. The biggest sample of women that was included in the calculation of this estimate comes from the study on the effects of environmental tobacco smoke (ETS) on the health of children.⁷ The information about parental smoking in this study, which included 1859 families, was collected by physician-administered questionnaires (Table 1), mainly from mothers who accompanied their children. As women are less likely to report their smoking behaviour when presenting to the physician with a sick child, it is likely that the low prevalence of women's smoking reported in this study (7.5%) was an underestimate that subsequently considerably reduced the overall prevalence figure due to the large sample size of this study. Moreover, women's smoking in the upper social strata, where smoking is likely to be more prevalent, based on our finding that smoking among women follows a social pattern, has not been studied. Therefore, the prevalence of women's smoking in the general population is likely to be higher than the 9% estimate.

Our estimate of adult male smoking in Syria is comparable to that of the WHO for developing countries, put at 48%.¹ In comparison, the prevalence of current smoking among adult males in a country with a successful anti-tobacco policy, like the US, is 28%.¹⁴ Males in Syria not only smoke more than females, but they also consume more cigarettes daily.^{5,6} For example, daily smokers among male schoolteachers and physicians consume about one pack a day compared to about half a pack a day for females in the corresponding populations.^{5,6} Accordingly, male smokers in Syria are more likely to show signs of addiction and nicotine dependence. Nicotine dependence, judged by the time the first cigarette is smoked in the morning, was related to both the duration of smoking and the number of cigarettes smoked daily among male physicians (Figure 1). It was found that more than half of daily smokers among high school students, schoolteachers

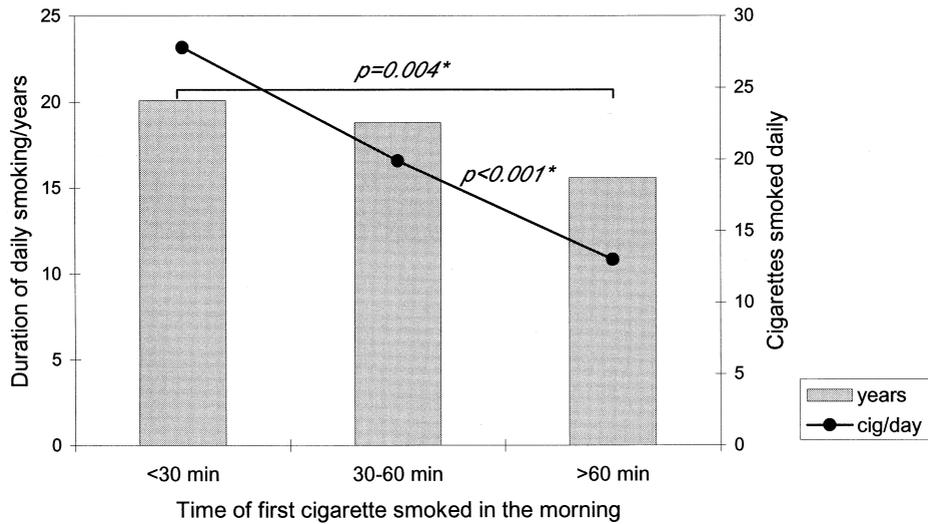


Figure 1 The relation between the time the first cigarette was smoked in the morning and duration of daily smoking together with the number of cigarettes smoked per day, for male doctors who were daily smokers.

and physicians smoke their first cigarette within 1 hour of waking up.⁴⁻⁶

We also noticed a difference in the relation between age and smoking between the sexes. This is best illustrated by the study on smoking among physicians, where female doctors tended to acquire the habit later than male doctors, and their smoking rates continued to increase with age (Figure 2).⁵ This age-smoking relation found in women physicians in Syria is likely to be due to the relatively delayed social independence of money-earning women in the Syrian society. It is interesting to note, also, that experimenting with smoking as well as regular smoking was occurring de novo even at the age of 40 or later among these women.⁵

THE DYNAMICS OF SMOKING AMONG MALES IN SYRIA

The huge discrepancy between the rates of smoking among male adolescents (16%) and adults (48%) in Syria reflects a different pattern from that in industrialised countries, where most regular smoking occurs before the age of 20.¹⁵ This prompted us to try to look at the evolution of smoking among males by comparing the smoking habits of male youths at different age points. We looked at the smoking habits of first and third year university students and compared it with those of tenth and twelfth grade high school (aged 15 and 17) students, creating four age groups, with 2-year intervals in between.⁸ Keeping in mind the lim-

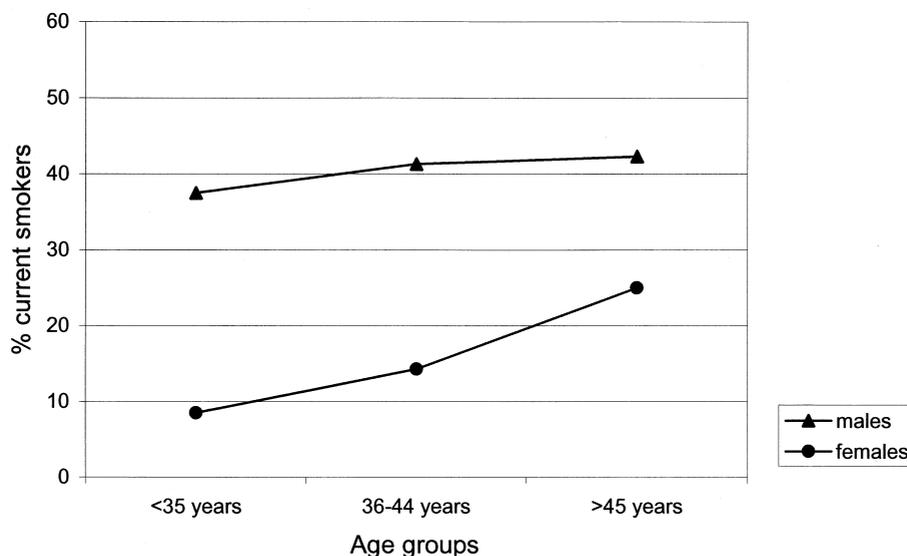


Figure 2 Age-related prevalence of current smoking among male and female physicians.

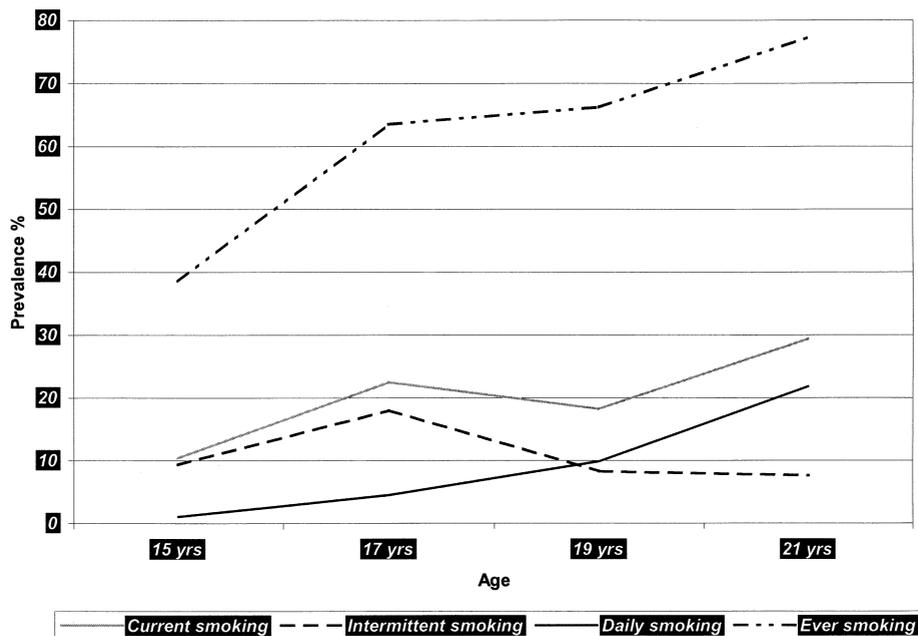


Figure 3 The dynamics of smoking take-up among high school and university students in Aleppo, Syria.

itations of the cross-sectional design, the steepest rise in smoking rates among educated male youths was found in the ages of 19–21 years, where experimental and intermittent patterns of smoking are replaced by daily smoking (Figure 3). After finishing high school, male youths in Syria either go to university or do their mandatory military service. Thus, the next step was to study the smoking habits of military recruits at different stages of their service.⁹ Current smoking was found among 46% of military recruits compared to 23% of age-matched university students (Table 1). Then we moved on to compare the dynamics of current smoking between military recruits and age-matched university students at 2-year intervals. We found that while daily cigarette consumption showed a greater increase among recruits than students during this period, the increase in smoking prevalence did not vary much between recruits (11.9%) and students (11.2%) (Table 2).⁹ These findings do not imply that the military is creating smokers, but they high-

light its role in intensifying cigarette consumption among smokers compared to civil life. In addition, the difference in the prevalence of cigarette smoking at entry between university students and recruits suggests that low academic performance or unfavourable socio-economic background may be associated with an earlier take-up of smoking. Students in Syria leave school and join the military either because they have not achieved high enough grades to enter university, or because they need to work and earn money at an early age. Preliminary data from US Marine recruits show similar trends, where entering recruits had higher smoking prevalence figures than age-matched civilians.¹⁶

SMOKING AND ADOLESCENTS IN SYRIA

As we have already mentioned, the prevalence of current smoking among high school students (mean age 16 years) is 16% and 7% for males and females, respectively, according to a large survey that included

Table 2 Comparison between the smoking characteristics of new and second-year recruits (Military 1 & 2) with first and third-year university students (University 1 & 2)

Smoking status	Military 1 (age 19.8 ± 0.02 years)	University 1 (age 19.1 ± 0.02 years)	Military 2 (age 21 ± 0.02 years)	University 2 (age 21.3 ± 0.02 years)
Regular smoking	45.9*	21.3	57.3*	29
Smokers (total)	43.2*	18.2	55.1*	29.4
Current smoking				
Daily	30.4*	9.9	43.8*	21.8
Intermittent	12.8	8.3	11.3	7.6
Cigarettes/day	15	14.1	23.8*	17

* $P < 0.001$ compared with corresponding university figures.

1587 high school students from 16 schools in Aleppo.⁴ In this population, male daily smokers smoked on average nine cigarettes per day, while female daily smokers smoked two cigarettes per day.

While quitting is important for the study of smoking in older groups, factors associated with initiation are more relevant in adolescents. The most important factors associated with smoking among high school adolescents were smoking in parents (odds ratio [OR] 1.7) and siblings (OR 2.7).⁴ When both parent and sibling smoking were combined, high school students with smoking parents/siblings were 4.4 times more likely to be current smokers than students from non-smoking families (Figure 4).⁴ The association was even more pronounced for girls, where girls with smoking parents/siblings were 12.7 times more likely to be smokers than girls from non-smoking families (Figure 4). It seems that in a society where female smoking is stigmatised, having family members who smoke can provide the necessary support and encouragement for girls to defy social pressure.

A friend was the introducer to, or motivator of smoking in about half of high school male smokers. Moreover, in males, a friend was the supplier of cigarettes in about a third of smokers. Boredom was identified as the reason behind smoking in more than 40% of smoking adolescents.⁴ Parents' level of education and family income did not appear to be related to the smoking status of high school students in Syria.⁴ This differs from patterns noticed in some industrialised countries, where both lower income and parents' level of education were associated with smoking among high school students.^{17,18} Studies from other industrialised countries revealed a gender difference in the relationship between peer group structure and smoking, where in contrast to boys, girls at the top of the social pecking order were more likely to smoke than those with lower self-esteem and social skills.¹⁹

In Syria there are bans on smoking in educational facilities and on cigarette sales to minors.¹³ A disturbing finding was that 40% of male adolescent smokers reported buying their own cigarettes and that the majority of smokers among schoolteachers smoked openly on school premises.^{4,6}

SMOKING AND WOMEN IN SYRIA

Because smoking is mostly a male problem in the Middle East, women's smoking has received little attention so far. Women's smoking is, however, increasing in most developing countries, casting an unfavourable shadow on the future health of these population groups.²⁰ We performed two studies to look at the issue of smoking among women in Syria.^{10,11} In the first study we assessed the spread and socio-demographic determinants of smoking among women in a sample of 412 women visiting primary health centres in Aleppo. These centres are free, and are usually attended by low-income groups. Current smoking was reported by 16.5% of women in this population, and was generally associated with less traditional social profiles (Table 3).¹⁰ Non-Arabs, urban women, women from smaller households, and women married to a non-relative were more likely to be smokers in this population compared to their counterparts (Table 3). Also, Christian women were more likely to be smokers than Muslims.¹⁰ Women's paid work, in particular, which can be regarded as an indicator of liberalisation in Syrian society, was associated with smoking among women in the two studies that addressed this issue.^{10,11} Judging by what is known about the international patterns of the tobacco epidemic among women,²¹ our studies allow us to predict that we are seeing the first signs of the tobacco epidemic among women in Syria, where smoking is spreading to poorer levels of society.

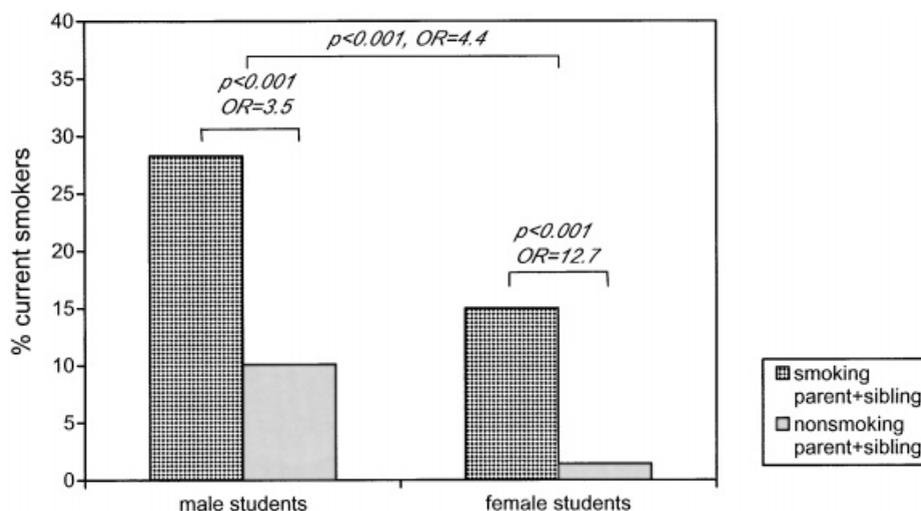


Figure 4 The prevalence of current smokers among high school students according to the smoking status of their parents and siblings.

Table 3 Correlates of current smoking among low-income women in Aleppo, Syria, by logistic regression analysis

Variable	Odds ratio	(95% confidence interval)	P
Age	1.05	(1.01–1.1)	0.009
Race (Arab)	0.4	(0.2–0.8)	0.007
Residence (city)	16.3	(2.2–123.8)	0.007
Household*	0.8	(0.7–0.9)	0.004
Work (workers)	2.5	(1.04–5.9)	0.04
Consanguinity†	0.5	(0.3–1.0)	0.06
Physical abuse	1.7	(0.9–3.0)	0.07
Mental morbidity	2.3	(1.2–4.6)	0.01

* Total number of people living in the same house as the respondent.

† Analysis of a subgroup of married women with relevant variables entered in the model.

As women non-smokers constitute the largest proportion of non-smokers in Syria and other Middle East countries, they represent an attractive target for the tobacco industry. In order to confront this foreseeable threat, we need a proper understanding of their smoking behaviour. Within this context, we performed a study to explore women's motivations for not smoking.¹¹ Interestingly, tradition, followed by health, were the most salient motives identified by respondents as the reasons behind not smoking, while family values, religion, personal conviction and economic reasons were reported less often (Table 4).¹¹ Also, educated women were more driven by health motivations for opting not to smoke (Table 4). The implication of these findings for tobacco control are clear: public health efforts should aim at replacing the passive barrier of tradition with an active one based on proper knowledge about the harmful effects of smoking at all levels.

Spouse's influence was particularly important for women's smoking. For example, we found that about a third of women non-smokers in Aleppo were influenced by their husbands in their option not to smoke.¹¹ We also reported previously that the prevalence of smoking among women was 8% when the husband was a smoker compared to only 1% when the husband was a non-smoker.⁷ As is the case with parental

influence on girls' smoking, the husband's attitude or smoking habit can balance the less supportive attitude towards women's smoking in this society.

NEGATIVE EFFECTS OF SMOKING AND KNOWLEDGE ABOUT THEM

In 1998 we conducted a study to look at some of the effects of exposure to ETS on children aged under 12 years.⁷ This study, which included more than 1800 families, yielded some important results. We were able to link parental and household smoking to the development of respiratory illnesses as well as chronic respiratory symptoms in exposed children.⁷ The number of smokers within the household strongly correlated with the number of respiratory tract illnesses in children in the year prior to the survey. Furthermore, infants of smoking parent/s were 2.6 times more likely to die from sudden infant death syndrome (SIDS) compared to those of non-smoking parents. Other studies have reported similar findings, but of lesser magnitude regarding the association between exposure to ETS and SIDS.²² Overcrowded housing conditions, where numerous smokers may live and smoke in the same house as the child, may underlie the higher risk of SIDS found in Syrian society compared to industrialised countries. We also found an inverse correlation between the number of smokers within the household and children's weight for city residents. Some health effects of active smoking were also assessed among schoolteachers, where smokers reported on average twice the number of respiratory illnesses compared to non-smokers.⁶

Knowledge about the health effects of smoking was evaluated in physicians and schoolteachers. As expected, physicians were more knowledgeable than teachers about the deleterious health effects of smoking.^{5,6} Teachers had little awareness of the negative effects of smoking on the cardiovascular system, as less than 10% of them could identify this risk. Cancer was the most commonly recognised danger associated with smoking in both groups. Smokers in both popu-

Table 4 Main reasons Syrian women cite for not smoking according to their educational status

Reasons for not smoking	Educational status			All non-smokers n (%)
	Illiterate n (%)	≤9 years n (%)	>9 years n (%)	
Traditions and norms	41 (54)	52 (58)	5 (45)	99 (56)
Health	31 (41)	42 (47)	9 (82)*	83 (47)
Family values†	11 (14)	17 (19)	2 (18)	30 (17)
Personal conviction	11 (14)	18 (20)	1 (9)	30 (17)
Religious	4 (5)	6 (7)	3 (27)*	13 (7)
Economic	6 (8)	5 (6)	3 (27)*	15 (8)
Other	28 (37)	39 (43)	4 (36)	71 (40)

* $P < 0.05$ for the difference between subgroups in each category.

† Where they were brought up.

lations were more likely to deny the deleterious health effects of smoking than non-smokers.^{5,6} This is in accordance with published evidence about the denial and self-exempting beliefs of smokers regarding the negative health effects of smoking.²³

The question about whether buying cigarettes constitutes a material burden for smokers was asked of university students and military recruits. Seventy-nine per cent of daily smokers among servicemen compared to 65% of students indicated that buying cigarettes is a material burden for them, at comparably similar levels of consumption ($P = 0.1$).⁹ In addition, more than a fifth of smokers among schoolteachers identified the material impact of smoking as a major threat to smokers.⁶ Surprisingly, schoolteachers who smoked foreign brands spent on average 22% of their total monthly income on their habit.

BRAND PREFERENCE

Brand preference was assessed among high school students and schoolteachers. Data from these two studies suggest that smokers evolve from brand switchers in the early stages of their smoking to one-brand smokers later on.^{4,6} For example, data on schoolteachers show that the mean number of cigarettes consumed daily differed between one-brand smokers (20 cigarettes/day) and brand-switchers (14 cigarettes/day).⁶ Brand selection in this population mainly depended on economic factors. The price of one pack of foreign cigarettes in Syria is approximately US\$1 compared to US\$0.50 for local brands. Male schoolteachers, who are generally heavy smokers with minimum wages, mostly smoke local brands.⁶ By comparison, over 90% of smokers among high school students, who consumed fewer cigarettes on average, smoked foreign brands.⁴ This information, together with the data on the material burden of smoking described earlier, highlights the relevance of price modification as a potentially effective policy for tobacco control in Syria. It is important to note that in Syria there is a ban on importing foreign tobacco brands, so most of the foreign cigarettes smoked locally are smuggled in. However, because of the huge difference in the prices of local and foreign smuggled brands in Syria, I anticipate that a price increase of local brands would affect mostly low-income consumers and would not lead to a substantial increase in smuggling, as is the case in Europe, for example. A recent World Bank report suggests that a 10% additional tax on tobacco could cut consumption by 5% while generating an additional 4.5% increase in revenue.²⁴

Other than price, a large proportion of foreign-brand smokers among schoolteachers and high school students chose these brands because they thought they were light, less harmful, or tasted better.^{4,6} This is probably more directly related to advertising of foreign brands than to real differences between local and

foreign brands in taste or nicotine/tar content. Most foreign brands consumed in Syria have no labels indicating their tar and nicotine content. As for taste, one can reflect on one of the early recommendations of a market motivation researcher to the tobacco industry in order to create a positive image of cigarettes: "the differences between the taste of different brands are much more imagined than real."²⁵

QUITTING

Interest in quitting was assessed by asking smokers if they wished to stop smoking, and whether they had stopped smoking for at least one day during the previous year in an attempt to quit smoking. About two thirds of smokers among schoolteachers wanted to quit smoking, and 62% of them had tried to quit smoking at least once in the year preceding the survey.⁶ In comparison, 59% of smokers among physicians said they had stopped smoking for at least one day in the year preceding the survey in an attempt to quit.⁵ The number of attempting quitters in both studies is about twice that noticed among smokers in the US.²⁶ In comparison, the prevalence of ex-smokers among males in these populations was 12% and 15%, for teachers and physicians, respectively, compared to 23% for American adults in 1997.²⁷ These figures show that smokers in Syrian society apparently have little success in their quitting efforts compared to adults in an industrialised country. It is known from the medical literature that less than 5% of self-quitters maintain abstinence.²⁸ Therefore, even with such a high rate of desire to quit smoking in Syria, success rates are expected to be minimal in the absence of specialised smoking cessation support.

REMARKS AND CONCLUSIONS

Smoking is a serious problem in Syria, where almost half of adult males currently smoke, and where smoking is starting to gain ground in the female population. Smoking among males follows a different dynamic from that noticed in industrialised countries. The biggest influx of new smokers among males in Syria is likely to occur in the early twenties age group. Smoking among women in Syria is likely to have an even later pattern and to be dependent on their level of social liberalisation.

Owing to the price-sensitiveness of most regular smokers in Syria, and the high level of interest in quitting amongst them, one can argue that price increases as well as smoking cessation programmes and clinics seem promising starting strategies to combat the smoking epidemic in Syria. Also, the data from youths imply that current legislation limiting youth exposure to smokers in educational facilities and their access to cigarettes needs to be evaluated and enforced.

Women non-smokers constitute the largest non-

smoking population in Syria as well as in other Middle Eastern societies, so the gains from keeping them from starting smoking are huge. The situation with women smoking is likely to change in the Middle East along with the process of liberalisation and empowerment of this sector of society. Therefore, intensive work is needed in order to increase women's awareness of the damaging effects of smoking and to dissociate the positive values of liberalisation and economic participation from the negative values of smoking. It will be absolutely necessary to include a clear anti-smoking component in all programmes, national or international, aiming at improving women's health and equity in this region.

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References

- World Health Organization. Tobacco or Health, A Global Status Report. Geneva: WHO, 1997.
- Maziak W, Mzayek F. Evaluation of mail survey for the assessment of tobacco use among adults in Aleppo, Syria. *Saud Med J* 1999; 20: 224–227.
- Syrian Arab Republic Data Profile. World Development Indicators Database. Washington, DC: The World Bank, 2000
- Maziak W, Mzayek F. Characterization of the smoking habits among high school students in Syria. *Eur J Epidemiol* 2000; 17: 1169–1176.
- Maziak W, Mzayek F, Asfar T, Hassig S E. Smoking among physicians in Syria: do as I say, not as I do. *Ann Saud Med* 1999; 19: 253–256.
- Maziak W, Mzayek F, Al Moushareff M. Smoking behavior among schoolteachers in the north of the Syrian Arab Republic. *East Mediterr Health J* 2001; 6: 352–358.
- Maziak W, Mzayek F, Al Moushareff M. The effects of environmental tobacco smoke on the health of children in the Syrian Arab Republic. *East Mediterr Health J* 1999; 5: 690–697.
- Maziak W, Mzayek F. The dynamics of tobacco smoking among educated youths in Aleppo-Syria. *Eur J Epidemiol* 2000; 16: 769–772.
- Maziak W, Mzayek F, Devereaux AV. The dynamics of cigarette smoking during the military service in Syria. *Int J Tuberc Lung Dis* 2001; 5: 292–296.
- Maziak W, Asfar T, Mzayek F. Socio-demographic determinants of smoking among low-income women in Aleppo, Syria. *Int J Tuberc Lung Dis* 2001; 5: 307–312.
- Maziak W, Asfar T, Paknawin-Mock J [Abstract]. Motivations for not smoking among poor women in Aleppo, Syria. *Epidemiology* 2001; 12: S72–S72.
- World Health Organization Tobacco or Health Program. Guidelines for controlling and monitoring the tobacco epidemic. Geneva: WHO, 1998.
- Syrian Arab Republic. In: Corrao M A, Guindon G E, Sharma N, Shokoohi D F, eds. Tobacco control country profile. 11th World Conference on Tobacco or Health. Atlanta, GA: American Cancer Society 2000: 246–247.
- Tobacco Use—United States, 1900–1999. *MMWR Morb Mortal Wkly Rep* 1999; 48: 986–993.
- Giovino G A, Henningfield J E, Tomar S L, Escobedo L G, Slade J. Epidemiology of tobacco use and dependence. *Epidemiol Rev* 1995; 17: 48–65.
- Devereaux A V, Almonte A, Stephens M, Vaughan J, Burns D. Tobacco use in Marine recruits [Abstract]. *Am J Respir Crit Care Med* 1999; 159: A487.
- Semmer N K, Lippert P, Fuchs R, Cleary P D, Schindler A. Adolescent smoking from a functional perspective: the Berlin-Bremen study. *Eur J Psychol* 1987; 2: 387–401.
- Waldron I, Lye D. Relationships of teenage smoking to educational aspiration and parents' education. *J Subst Abuse* 1990; 2: 201–215.
- Michell L, Amos A. Girls, pecking order and smoking. *Soc Sci Med* 1997; 44: 1861–1869.
- Ernster V, Kaufman N, Nichter M, Samet J, Yoon S. Women and tobacco: moving from policy to action. *Bull World Health Organ* 2000; 78: 891–901.
- Amos A. Women and smoking. *Br Med Bull* 1996; 52: 74–89.
- Malloy M H, Kleinman J C, Land G H, Schramm W F. The association of maternal smoking with age and cause of infant death. *Am J Epidemiol* 1988; 128: 46–54.
- Chapman S, Wong W L, Smith W. Self-exempting beliefs about smoking and health: differences between smokers and ex-smokers. *Am J Public Health* 1993; 83: 215–219.
- The World Bank. Curbing the epidemic: governments and the economics of tobacco control. Washington, DC: The World Bank, 1999.
- Dichter E. Handbook of consumer motivations: the psychology of the world of objects. New York: McGraw-Hill, 1964.
- Smoking cessation during previous year among adults—United States, 1990 and 1991. *MMWR Morb Mortal Wkly Rep* 1993; 42: 504–507.
- Cigarette smoking among adults—United States, 1997. *MMWR Morb Mortal Wkly Rep* 1999; 48: 993–996.
- Hughes J R. Tobacco withdrawal in self-quitters. *J Consult Clin Psychol* 1992; 60: 689–697.

RÉSUMÉ

Un des obstacles majeurs à la lutte contre le tabagisme au Moyen-Orient réside dans l'absence de données fiables et standardisées au sujet de la dispersion et des types d'utilisation du tabac dans la société. En Syrie, nous avons commencé il y a 4 ans un projet visant à dresser une carte épidémiologique de l'épidémie du tabac dans ce pays. Dans l'ensemble, il en est résulté neuf études comportant au total 6780 participants. La prévalence brute du tabagisme actuel parmi les adultes en Syrie, basée sur les informations combinées provenant de l'ensemble des études, est de 48% et 9% respectivement chez les hommes et les femmes. La prévalence du

tabagisme actuel parmi les adolescents au lycée est de 16% et 7% respectivement chez les garçons et les filles et est associée étroitement au tabagisme des parents et des frères et sœurs. Les étudiants du lycée provenant de familles avec parents ou frères et sœurs fumeurs sont 4,4 fois plus susceptibles de devenir des fumeurs habituels que ceux provenant de familles de non-fumeurs. L'afflux le plus important de nouveaux fumeurs chez les hommes en Syrie survient dans le groupe d'âge du début de la vingtaine, mais un type plus précoce peut survenir parmi les jeunes dont les performances académiques ou le statut socio-économique sont faibles. Selon des données

provenant de médecins, chez les femmes le tabagisme a tendance à démarrer plus tard que chez les hommes et à continuer à augmenter avec l'âge. Le tabagisme des femmes en Syrie est en relation avec leur degré de libération sociale. Les données montrent que le tabagisme actif est associé à un risque accru de maladies respiratoires parmi les fumeurs et que l'exposition au tabagisme environnemental est associée à un risque accru de symptômes respiratoires chez les enfants. Les connaissances au sujet

des effets néfastes du tabagisme et concernant le désir d'arrêter sont sans relation avec les taux de succès de l'arrêt. Les observations réunies font ressortir un certain nombre de perspectives possibles pour la lutte contre le tabagisme en Syrie, incluant : augmentation des prix, programme d'arrêt du tabagisme, restriction de l'accès des adolescents aux ci-garetttes et travail intensif de prévention chez les femmes.

RESUMEN

Uno de los mayores obstáculos para el control del tabaquismo en el Medio Oriente reside en la ausencia de datos fiables y estandarizados con respecto a la amplitud y a los tipos de utilización del tabaco en la sociedad. Hace 4 años hemos comenzado en Siria un proyecto que tiene como objetivo el establecimiento de un mapa epidemiológico de la epidemia de tabaquismo en el país. En total, resultaron nueve estudios, con 6 780 participantes. La prevalencia bruta del tabaquismo actual entre los adultos en Siria, basada sobre las informaciones combinadas provenientes de todos los estudios, es de 48% para los hombres y de 9% para las mujeres. La prevalencia del tabaquismo actual entre los adolescentes de la enseñanza secundaria es de 16% para el sexo masculino y de 7% para el femenino y está asociada estrechamente al tabaquismo de los padres y de los hermanos. Los liceanos provenientes de familias con padres o hermanos fumadores tienen 4,4 veces más probabilidades de ser fumadores habituales que aquellos que provienen de familias de no fumadores. El mayor flujo de nuevos fumadores en los hombres de Siria viene del grupo de

edad próximo de los 20 años, pero se puede observar un grupo de menor edad entre los jóvenes de estatuto académico o condición social más bajos. Según datos provenientes de médicos, el tabaquismo femenino tiene tendencia a comenzar más tarde que en los hombres y a continuar aumentando con la edad. El tabaquismo femenino en Siria está en relación con el grado de liberación social. Los datos muestran que el tabaquismo activo está asociado a un aumento del riesgo de enfermedades respiratorias en los fumadores y que la exposición al tabaquismo ambiental está asociada a un aumento de síntomas respiratorios en los niños. Los conocimientos con respecto a los efectos nocivos del tabaquismo y con respecto al deseo de dejar de fumar no tienen correlación con las tasas de éxito de la cesación. Los datos recolectados ponen en evidencia ciertas perspectivas para abordar el control del tabaquismo en Siria, incluyendo : aumento de precios, programas de cesación del tabaquismo, restricciones para el acceso de los adolescentes a los cigarrillos y trabajo intensivo de prevención en las mujeres.
