

Short communication

Prevalence of cigarette smoking in the Rafsanjan urban population

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معدلات انتشار تدخين السجائر بين سكان الحضرة في رفسنجان
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الخلاصة: تعرّف الباحثون في هذه الدراسة على معدّل انتشار التدخين بين الريفيين في رفسنجان في جمهورية إيران الإسلامية، من خلال عينة مجتمعية عشوائية تألفت من 491 من البالغين (247 من الذكور و244 من الإناث) ممن تزيد أعمارهم عن 20 عاماً. وقد بلغ المعدّل الإجمالي الحالي لتدخين سيجارة أو أكثر يومياً 24.2٪، يواقع 38.5٪ لدى الذكور و9.8٪ لدى الإناث. كما بلغ العدد الوسطي للسجائر المستهلكة يومياً عند الجميع 12.1 بانحراف معياري قدره 8.6، ولكنه كان 13.6 عند الذكور بانحراف معياري قدره 8.9 وكان 6.5 عند الإناث بانحراف معياري قدره 4.5. ويزداد معدّل انتشار التدخين والعدد الوسطي للسجائر التي يتم تدخينها كل يوم بشكل يُعتدُّ به إحصائياً في مجموعات الأعمار المتقدمة.

ABSTRACT This study determined the smoking rate in the urban population of Rafsanjan, Islamic Republic of Iran, in a random community sample of 491 adults (247 males and 244 females) aged > 20 years. The overall prevalence of current smoking (1+ cigarettes per day) was 24.2%; 38.5% in males and 9.8% in females. The mean number of cigarettes consumed per day was 12.1 [standard deviation (SD 8.6)]; 13.6 (SD 8.9) in men and 6.5 (SD 4.5) in women. The prevalence and mean number of cigarettes smoked per day increased significantly in older age groups.

Prévalence de la consommation de cigarettes dans la population urbaine de Rafsanjan

RÉSUMÉ Cette étude a déterminé le taux de tabagisme dans la population urbaine de Rafsanjan (République islamique d'Iran), sur la base d'un échantillon aléatoire de la population composé de 491 adultes (247 hommes et 244 femmes) âgés de plus de 20 ans. La prévalence globale de tabagisme au moment de l'étude (1 cigarette au moins par jour) était de 24,2 % ; 38,5 % chez les hommes et 9,8 % chez les femmes. Le nombre moyen de cigarettes consommées par jour était de 12,1 [écart type (E.T. 8,6)], 13,6 (E.T. 8,9) chez les hommes et 6,5 (E.T. 4,5) chez les femmes. La prévalence et le nombre moyen de cigarettes fumées par jour augmentaient significativement dans les groupes plus âgés.

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Introduction

Cigarette smoking is the leading preventable cause of death and morbidity worldwide [1]. In the United States of America (USA), as elsewhere in the developed world, the estimated rate of smoking in men has been falling: from 55% in 1955 to about 25% in 2001 [2,3]. In developing countries, however, the rate of smoking continues to rise [4]. More alarming is the evidence that smoking rates are increasing among children and women and, unless effective comprehensive and sustained initiatives are implemented to reduce smoking, the prevalence of smoking in women in developed and developing countries has been predicted to rise to 20% by 2025 [5].

Smoking rates vary across the Asian parts of the Eastern Mediterranean Region. For example, in Oman the overall prevalence of smoking in 2000 was 7% (13.4% in men and 0.5% in women) [6], while a survey in 2002 recorded the overall prevalence of current smoking in adult males in Karachi, Pakistan as 34% [7]. Some data are available about the prevalence of smoking in the Islamic Republic of Iran. In the Tehran Lipid and Glucose Study, for example, the global smoking rate in the urban population was 10.6% (22% in men and 2.1% in women) [8]. In Shiraz the prevalence of smoking was reported as 26% in men and 3.6% in women [9]. Because this type of research has not been done in the Rafsanjan area the present study was designed to describe the prevalence of smoking in the urban population of this south-east area of the Islamic Republic of Iran.

Methods

This cross-sectional community study in 2004 was performed on 491 participants over 20 years old in Rafsanjan (247 men and

244 women). The population of the urban area of Rafsanjan was about 112 000. The expected prevalence of smoking according to a pilot study was about 30%, so with desired precision 5% and with confidence interval 95% the sample size was estimated to be 322 participants. For a safety margin due to the type of sampling and design effect, a final sample of about 500 participants was enrolled.

The sample was chosen using a randomized cluster method. Clusters were defined previously by the local health organization; 28 clusters were selected, each cluster containing 58 families. Families were randomly selected from the clusters, but if there were any problems contacting a family or a member refused to participate, the next neighbours on the right side of that family were selected and if that was unsuccessful the family on the left side was selected. About 9 family members refused to participate and were replaced with another family as described above.

Participants were requested to complete a questionnaire about demographic data, the number of cigarettes smoked and the duration of cigarette smoking. Those who smoked 7+ cigarettes per week were considered current smokers. The interviews were carried out by 2 general physicians and filled questionnaires were randomly checked by the author.

For data analysis *SPSS*, version 11 was used. For nominal variables the chi-squared and Fisher exact tests and for continuous variables the independent *t*-test and 1-way ANOVA were used.

Results

The mean age of participants was 38.4 (13.1) years; 50.3% male and 49.7% female. The overall rate of smoking was 24.2% [95%

confidence interval (CI) 20.6%–28.3%]. The rate was 38.5% (32.4%–44.9%) and 9.8% (6.5%–14.5%) for men and women respectively and the sex difference in smoking prevalence was significant (relative risk = 2.46, $P = 0.001$).

The mean number of cigarettes consumed per day by smokers was 12.1 [standard deviation (SD 8.6)], greater in men 13.6 (SD 8.9) than women 6.5 (SD 4.5). The difference between the 2 sexes in the mean number of cigarettes smoked per day was significant ($P = 0.001$).

The mean duration of smoking was 14.2 (SD 9.2) years for men and 14.6 (SD 9.2) years for women. The proportion of heavy smokers (> 20 cigarettes per day) was 1.2% of the total sample and about 5% of current smokers. No woman reported being a heavy smoker. The prevalence of smoking in the sample increased with increasing age from 19.3% in the age group 20–29 years to 32.0% at ages 40–49 years before declining to 19.0% at age ≥ 60 years ($P = 0.001$) (Table 1). The mean number of cigarettes smoked rose with age from 9.6 per day in age group 20–29 years to 15.3 in the age group ≥ 60 years ($P = 0.001$).

Discussion

Cigarette smoking is an important social problem. Although the role of smoking as a

risk factor in many diseases has been clearly established, the smoking rate in developing countries continues to rise. In the USA the smoking rate in 1955 was about 55% in men and 34% in women and currently this rate is about 25% and 21% respectively [1,3]. In China it was reported in 1995 that 63% of men and 3.8% of women were current smokers [10].

In the Eastern Mediterranean Region the prevalence of cigarette smoking varies among different countries. For example in a 2004 report from Kuwait, the rate of smoking was 37% among married men and 0.5% among married women [6]. In Saudi Arabia, the 1994 smoking rate was 40.0% for males and 8.2% for women [7]. In the Islamic Republic of Iran previous studies in Tehran found the smoking rate was 22% in men and 2.1% in women [8] and in Shiraz these values were 26% and 3.6% respectively [9]. Rafsanjan is an urban area of the south-east of the Islamic Republic of Iran, and the generalization of our data to other parts of the country is uncertain. However our data showed an overall self-reported smoking rate of 24.2% (38.5% in men and 9.8% in women).

This study shows that despite the increasing awareness of the health problems due to tobacco use, smoking is still common and the prevalence of smoking in women was higher than previous studies in the

Table 1 Smoking prevalence by sex and age

Age (years)	Total			Males			Females		
	No. sampled	No. of smokers	%	No. sampled	No. of smokers	%	No. sampled	No. of smokers	%
20–29	140	27	19.3	69	21	30.4	71	6	8.5
30–39	157	39	24.8	78	34	43.6	79	5	6.3
40–49	100	32	32.0	49	25	51.0	51	7	13.7
50–59	52	13	25.0	29	9	31.0	23	4	17.4
≥ 60	42	8	19.0	22	6	27.3	20	2	10.0
Total	491	119	24.2	247	95	38.5	244	24	9.8

Islamic Republic of Iran. The health effects of smoking for women are more serious than for men because exposure to smoking had additional hazards in pregnancy and sex-specific cancers such as cancer of the cervix [6]. Anti-tobacco strategies should

be vigorously implemented to prevent the health consequences of smoking, and the motivations for smoking cessation should be taken into consideration in planning a health education strategy.

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