

The Frequency of Smoking, Quitting and Socio-demographic Characteristics of Physicians of a Medical Faculty

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ABSTRACT

Background: The aim of this study was to determine the epidemiology of smoking among physicians and to describe their socio-demographic characteristics.

Subjects and Methods: All professors, associate professors, assistant professors, lecturers and research assistants working for the Faculty of Medicine of Meram, University of Selçuk, were included in the study. Of the 500 subjects, 363 (72.6%) completed the anonymous questionnaire of the survey satisfactorily. The smoking status, age at smoking initiation, daily cigarette consumption and association between current smoking and socio-demographic variables, family characteristics and body mass index were examined. The SPSS software was used to tabulate the data. The chi-square test was used for statistical analysis.

Results: The mean age was 34.2 ± 9.1 years. The rate of ever-smokers was 28.7% ($n = 104$). The rates of smoking in females and males were 13.4% ($n = 15$) and 35.6% ($n = 89$), respectively ($p = 0.000$). The rate of ex-smokers was 9.9% ($n = 36$). The rate of never-smokers was 61.4% ($n = 223$). The mean age at starting smoking was 21.7 ± 4.9 years. The quit ratio was 25.7% (36/140) [23.3% (27/116) for men and 37.5% (9/24) for women]. Fagerstrom score was averaged 2.8 ± 2.7 among all smokers. The rate of smoking in the families ($p = 0.003$) and among close friends ($p = 0.000$) of the smoker-group was higher than in non-smokers.

Conclusion: In Turkey, prevalence of tobacco smoking is high among physicians though lower than the general community. This may compromise their role in tobacco control unless they quit smoking.

Frecuencia del Hábito de Fumar, su Abandono, y las Características Socio-Demográficas de los Médicos de una Facultad de Medicina

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RESUMEN

Antecedentes: El objetivo de este estudio, fue determinar la epidemiología del hábito de fumar entre médicos y describir sus características socio-demográficas.

Sujetos y Métodos: Todos los profesores universitarios – titulares, auxiliares, asistentes, conferencistas – y los auxiliares de investigación, que trabajan para la Facultad de Medicina de Meram, Universidad de Selçuk, fueron incluidos en el estudio. De los 500 sujetos, 363 (72.6%) completaron el cuestionario anónimo de la encuesta satisfactoriamente. Se examinó el estatus del hábito de fumar; la edad de iniciación en el hábito, el consumo de cigarrillos por día, así como la asociación entre el hábito de fumar corriente y las variables sociodemográficas, las características familiares y el índice de masa corporal. Para la tabulación de los datos, se usó el software SPSS. Para el análisis estadístico, se empleo la prueba de chi-cuadrado.

Resultados: La media de la edad fue de 34.2 ± 9.1 años. La tasa de fumadores consuetudinarios fue 28.7% ($n = 104$). La tasa del hábito de fumar en mujeres y hombres fue 13.4% ($n = 15$) y 35.6% ($n = 89$), respectivamente ($p = 0.000$). La tasa de los ex-fumadores fue 9.9% ($n = 36$). La tasa de los no fumadores en lo absoluto fue 61.4% ($n = 223$). La edad media al comienzo del hábito de fumar fue 21.7 ± 4.9 años. La proporción de abandono del hábito fue 25.7% (36/140) [23.3% (27/116) para los hom-

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bres y 37.5% (9/24) para las mujeres]. La puntuación en el test de Fagerstrom promedió 2.8 ± 2.7 entre todos los fumadores. La tasa del hábito de fumar en las familias ($p = 0.003$) y entre los amigos íntimos ($p = 0.000$) del grupo de fumadores, fue más alta que la de los no fumadores.

Conclusión: En Turquía, la prevalencia del hábito tabáquico es alta entre los médicos, aunque más baja que en la comunidad en general. Esto puede comprometer su papel en el control del tabaco, a menos que abandonen el hábito de fumar.

West Indian Med J 2006; 55 (3): 161

INTRODUCTION

Tobacco use, particularly cigarette smoking, is widely recognized by the medical community and the general public as a major public health problem. Physicians and medical organizations share a public health duty to address this problem. Physicians and their professional organizations must contribute effectively to measures undertaken to deal with cigarette smoking (1).

Worldwide, cigarette smoking kills four million people each year and the figure is increasing. In most countries, the worst is yet to come, for by the time present young smokers reach middle or old age there will be about 10 million deaths from tobacco per year. Approximately 500 million individuals alive today can expect to be killed by tobacco; 250 million of these deaths will occur in the middle age (2, 3).

Cigarette smoking can kill in many different ways. In developed countries as a whole, tobacco is responsible for 24% of all male deaths and 7% of all female deaths. The average loss of life expectancy of smokers is eight years; however, for those who die in middle age (35–69), this is as much as 22 years (4).

Physicians play several critical roles in society, such as role models, providers of information, identifiers/modifiers of risky behaviour, lobbyists and researchers. The studies indicate a rate of smoking between 20.5%–42.3% for women, 39.4%–52.8% for men among Turkish physicians (5–10). The present study was designed to elicit information on these physicians' knowledge and attitudes to smoking, as well as their own smoking habits.

The purpose of this study is to describe the prevalence of smoking among the university physicians and to analyze the relationship between ever-smoking experience and various risk factors, including demographic factors, knowledge, attitudes, smoking in family members and close friends.

SUBJECTS AND METHODS

All professors, associate professors, assistant professors, lecturers and research assistants working for the Faculty of Medicine of Meram, University of Selçuk, were included in the study. Of the 500 subjects, 363 (72.6%) completed the anonymous questionnaire of the survey satisfactorily. During this study, the number of the participants decreased as some of them were appointed to other universities, joined the army, were at meetings, or were on academic holiday. All individuals in the sample were asked to respond to a series of questions in a face-to-face interview. Standard questions were

used in the classification of smoking status in the United States of America (USA) (11), questions recommended by Prochaska and colleagues to identify stages of change (12, 13), and Fagerstrom nicotine dependence test questions (14) were used. The survey comprised four parts. The first part was designed to elicit socio-demographic variables. The second was related to smoking behaviour. The third part was designed to determine a Fagerstrom score for nicotine addiction, and the fourth part was related to smoking behaviour of family and close friends. Statistical analysis included the chi-square test for nominal variables. A significance level of $p < 0.05$ was used.

RESULTS

The sample included 500 individuals, 363 of whom agreed to be surveyed (72.6% response rate). The mean age was 34.2 ± 9.1 years (median = 30.0 years and min: 23 years; max: 65 years). The rate of ever-smokers was 28.7% ($n = 104$). The proportions of ever-smokers in females and males were 13.4% ($n = 15$) and 35.6% ($n = 89$) respectively ($p = 0.000$). The rate of former smokers was 9.9% ($n = 36$). The rate of never-smokers was 61.4% ($n = 223$). The socio-demographic characteristics of the physicians surveyed are presented on Table 1.

Table 1: Socio-demographic characteristics

Characteristics	(n)	(%)
Gender		
Female	112	30.9
Male	251	69.1
Marital status		
Single	95	26.2
Married	268	73.8
Age (years)		
23–29	148	40.8
30–40	135	37.2
41–50	43	11.8
51 and over	37	10.2
Participation in sports activities		
One day in a week	75	20.6
Two-three days in a week	50	13.8
One day in two weeks	51	14.1
Never	187	51.5

The smoking prevalence among the physician respondents of this study was 13.4% for women and 35.6% for men. The mean age at starting smoking was 21.7 ± 4.9 years (median = 20.0 years and min: 11 years; max: 38 years);

79.8% (n = 83) had started before age 25 years. The per cent of the subjects who smoked 31 and more cigarettes/day was 1.9% (n = 2), 21–30 cigarettes/day was 15.4% (n = 16), 11–20 cigarettes/day was 35.6% (n = 37), 10 and fewer cigarettes/day was 47.1% (n = 49). Physicians smoking-related habits were shown in Table 2. The rate of smoking in the par-

Table 2: Smoking-related habits

Habits	(n)	(%)
Smoking status (n = 363)		
Ever-smoker	104	28.7
Former smoker	36	9.9
Never-smoker	223	61.4
Daily cigarette consumption (number) (n = 104)		
0–10	49	47.1
11–20	37	35.6
21–30	16	15.4
31 and over	2	1.9
Age of starting smoking (years) (n = 104)		
11–18	27	26.0
19–25	56	53.8
26 and over	21	20.2
Duration of smoking (years) (n = 93)*		
0 – < 2	2	2.2
2 – < 5	12	13.0
5 – < 10	26	27.9
10 and more	53	56.9
The reason to start smoking (n = 104)		
Social factors		
(Environment, friends, etc)	46	44.2
Emulation and enthusiasm	4	3.8
Distress and anxiety	25	24.1
Pleasure and fun	29	27.9
Brand preferences (n = 72) **		
Marlboro	26	36.1
Winston	11	15.3
Tekel 2001	8	11.1
Tekel 2000	6	8.3
LM	3	4.2
Salem	2	2.8
Another	16	22.2

Note: * 11 persons did not answer this question

** 32 persons did not answer this question

ents, spouses and sister and/or brother ($p = 0.003$) and among close friends ($p = 0.000$) of the smoker group was higher than the non-smokers (Table 3, 4).

Table 3: Family smoking status

Family	Ever-smoker		Ex-smokers		Never-smoker		Total	
	(n)	(%)	(n)	(%)	(n)	(%)	(n)	(%)
Mother and/or father	41	40.2	7	19.4	49	22.5	97	27.2
Spouses	14	13.8	6	16.7	22	10.1	42	11.8
Sister and/or brother	18	17.6	6	16.7	32	14.7	56	15.7
None	29	28.4	17	47.2	115	52.7	161	42.3
Total	102	100.0	36	100.0	218	100.0	356	100.0

$\chi^2 = 20.17$ SD = 6 $p = 0.003$

Note: 7 persons did not answer this question

Table 4: Close friend smoking status

Family	Ever-smoker		Ex-smokers		Never-smoker		Total	
	(n)	(%)	(n)	(%)	(n)	(%)	(n)	(%)
Mostly	46	44.6	11	30.6	31	14.2	88	24.5
Some	54	52.4	23	63.8	152	69.4	229	64.0
None	3	3.0	2	5.6	36	16.4	41	11.5
Total	103	100.0	36	100.0	219	100.0	358	100.0

$\chi^2 = 43.68$ SD = 4 $p = 0.000$

Note: 5 persons did not answer this question

Using the Fagerstrom scoring, the level of nicotine addiction score was averaged 2.8 ± 2.7 (median = 2.0 and min: 0, max: 9) among all smokers, with 51.9% scoring 0–2 (n = 54), 16.3% scoring 3–4 (17), 13.5% scoring 5 (n = 14), 12.5% scoring 6–7 (n = 13), 5.8% scoring 8–10 (n = 6). There was no significant difference between the average score for males and females ($p = 0.033$). The Fagerstrom score did not correlate with age.

The quit ratio was 25.7% (36/140) [23.3% (27/116) for men and 37.5% (9/24) for women]. It means that females were 1.6 times more likely to quit than males; 82.1% of smokers consumed less than a pack. When the smokers were classified according to Prochaska and Goldstein's staged changing period model of quitting, 58.7% (n = 61) did not plan to quit (pre-contemplators), 8.7% (n = 9) planned to quit (contemplators), and 32.7% (n = 34) were preparing to quit (preparators). The quitters were classified as: 19.4% (n = 7) were in the trial period (less than six months since quitting) 80.6% (n = 29) were in the maintenance period (more than six months since quitting). The reason for smoking cessation: was 25% (n = 9) health problems, 11.1% (n = 4) social pressure (from family or companionship), 63.9% (n = 23) knowledge of harmful effects of smoking. The differences among weight categories with regard to giving-up smoking and never smoking were not significant ($p > 0.05$).

DISCUSSION

In this study, the smoking rate among physicians was 13.4% for women and 35.6% for men about half that of the general population in Turkey (females, 24.3%; males, 62.8%) (15). In previous studies, conducted on physicians between 1991–2000, this rate was between 20.5–42.3% for women, 39.4–52.9% for men (5–10). At present, the smoking prevalence among physicians is lower than in the previous reports. The smoking rate among male physicians is higher than that in the USA (females, 3%; males, 10%) (16–18) the United Kingdom (females, 4%; males, 5%) (19–20), Australia (females, 1.6%; males, 4.2%) (21), and New Zealand (5%) (22), but similar to that in some other developed countries, such as France (females, 24%; males, 33%) (23), Italy (females, 29%; males, 34%) (24), Japan (females, 6.8%; males, 27.1%) (25) and the Netherlands (females, 24%; males, 41%) (26).

The mean age at initiation of smoking was 21.7 years, with 79.8% of smokers starting to smoke before the age of 25 years. These are consistent with data from similar studies (27). In Western countries, the age at starting to smoke is between 11 and 15 years. This was found to be unexpectedly lower (29, 30).

Having close friends and family members who smoked were strong factors for smoking (31, 32). The risk was highest when the father was a smoker. Parental smoking may cause children to view smoking as an acceptable adult behaviour that is engaged in by those they most admire (31). Similarly, higher smoking rates were found in the family members of smoking subjects compared to those of never smokers and ex-smokers ($p = 0.003$). In this study, the rate of smoking in the families and among close friends of the smoker-group was significantly higher than the non-smokers ($p = 0.000$).

Smoking cessation in females was 1.6 times more than in males. This might be due to differences in motivation and support and to fewer males smoking less than one pack per day. Social pressure is one of the reasons for quitting smoking and is an area that can be used to achieve better results in smoking cessation. Physicians already have a better knowledge of the adverse health effects of smoking. There needs to be more social pressure in public and more institutional policy on smoking. A national action plan against smoking is mandatory (33).

Collection of accurate information on smoking among doctors is important for several reasons. Doctor's tobacco use both reflects and influences their attitudes to tobacco. As well as endangering their own health, doctors who smoke may send a misleading message to their patients and to the public. Doctors who do not smoke are more likely to help their patients to quit. Changes in doctors smoking habits can indicate future trends in the population (11).

The majority of smokers who quit smoking gain weight. Most will gain fewer than 10 pounds, but there is a broad range of weight gain, with as many as 10 per cent of quitters gaining as much as 30 pounds (34–36). However, weight gain that follows smoking cessation is a negligible health threat compared with the risks of continued smoking (37). In this study, the differences among weight categories with regard to smokers, quitters and never-smoked were not significant ($p > 0.05$).

In summary, smoking cessation programmes should be introduced among Turkish medical doctors to reduce the number of those who smoke. Also, a continuing education programme should be instituted to instruct doctors about their role in society. Physicians are in a position to lead their country in combating the smoking epidemic and preventing serious morbidity and mortality in the population from smok-

ing. The prevalence of smoking in Turkey is expected to decrease as that in health workers decrease.

REFERENCES

- Hughes PH, Conard SE, Baldwin DC Jr, Storr CL, Sheehan DV. Resident physician substance use in the United States. *JAMA* 1991; **265**: 2069–8.
- Peto R. Smoking and death: the past 40 years and the next 40. *Brit Med J* 1994; **309**: 937–9.
- Peto R, Lopez AD, Boreham J, Thun M, Heath Jr C. Mortality from smoking in developed countries 1950–2000. Oxford, UK: Oxford University Press, 1994: A22.
- Perry CL. The tobacco industry and underage youth smoking: Tobacco industry documents from the Minnesota litigation. *Arch Pediatr Adolesc Med* 1999; **153**: 935–41.
- Ertuđrul E, Erkan F, Çuhadarođlu Ç. [Smoking behaviour and attitudes of doctors in a university hospital in Istanbul]. *J Smoking-related Dis* 1994; **5**: 177–81. Turkish.
- Dedeođlu N, Dönmez L, Aktekin M. [Tobacco use in health workers in Antalya]. *Sađlyk için Sigara Alarmy*, 1994; **1**: 7–11. Turkish.
- Öztürk M, Önder Y, Gür R, Sevgi H. [Smoking in physicians who are at military duty: 1995 Nov-Samsun]. *Sađlyk için Sigara Alarmy* 1996; **3**: 25–8. Turkish.
- Bilir N, Dođan BG, Yđldız AN. [Behaviours and attitudes about smoking]. *Hacettepe Halk SađlygyVakfyYayyn* No: 7, Ankara, 1997. Turkish.
- Güne° G, Pehlivan E, Eđri M, Genç M. [Smoking prevalence in Turgut Özal Medical Center physicians, nurses and students]. *Journal of Turgut Özal Medical Center*, 1997; **4**: 407–11. Turkish.
- Sezer RE, Marakođlu K, Sezer H, Marakođlu Y [Smoking among faculty of schools of Medicine and Dentistry of the Cumhuriyet University, 2000 Sivas-Turkey]. *CÜ Týp Fakóltesi Dergisi*, 2001; **23**: 25–36. Turkish.
- US Department of Health and Human Services. The health benefits of smoking cessation. A report of the Surgeon General, 1990. Rockville, Maryland: Public Health Service, Centers for Disease Control, Office on Smoking and Health, 1990.
- Prochaska JO, Goldstein MG. Process of smoking cessation. Implications for physicians. *Clin Chest Med* 1991; **12**: 727–35.
- Prochaska JO, DiClemente CC. Stages and process of self change of smoking: toward an integrated model of change. *J Consult Clin Psychol* 1983; **51**: 390–5.
- Fagerstrom KO, Heatherton TE, Kozlowski LT. Nicotine addiction and its assesment. *Ear Nose Throat J* 1992; **69**: 763–7.
- PIAR research carried out by the Ministry of Health, smoking prevalence among people over. 1998.
- Corroa MA, Guindon GE, Sharma N, Shokoohi (eds). Tobacco Control Country Profiles. American Cancer Society, Atlanta; GA, 2000.
- Nelson DN, Giovino GA, Emont SL, Brackbill R, Cameron LL, Peddicard I et al. Trends in cigarette smoking among US physicians and nurses. *JAMA* 1994; **271**: 1273–5.
- Hensrud DD, Sprafka JM. The smoking habits of Minnesota physicians. *Am J Public Health* 1993; **83**: 415–7.
- Fowler G, Mant D, Fuller A, Jones L. The “Help Your Patient Stop” initiative. Evaluation of smoking prevalence and dissemination of WHO/UICC guideline in UK general practice. *Lancet* 1989; **1**: 1253–5.
- Hussain SF, Tjeder-Burton S, Campbell IA, Davies PD. Attitudes to smoking and smoking habits among hospital staff. *Thorax* 1993; **48**: 174–5.
- Young JM, Ward JE. Declining rates of smoking among medical practitioners. *Med J Aust* 1997; **167**: 232.
- Hay DR. Cigarette smoking by New Zealand doctors and nurses: result from the 1996 population census. *N Z Med J* 1998; **111**: 102–4.

23. Tessier JF, Rene L, Najjari C, Belougne J. Attitudes and opinions of French general practitioners towards tobacco. *Tob Control* 1993; **2**: 226–30.
24. Zanetti F, Gambi A, Bergamaschi A, Gentilini F, De Luca G, Monti C et al. Smoking habits, exposure to passive smoking and attitudes to a non-smoking policy among hospital staff. *Public Health* 1998; **112**: 57–62.
25. Ohida T, Sakurai H, Mochizuki Y, Kamal AM, Takemura S, Minowa M et al. Smoking prevalence and attitudes toward smoking among Japanese physicians. *JAMA* 2001; **285**: 2643–8.
26. Dekker HM, Looman CW, Adriaanse HP, van der Maas PJ. Prevalence of smoking in physicians and medical students, and the generation effect in the Netherlands. *Soc Sci Med* 1993; **36**: 817–22.
27. Memon A, Moody PM, Sugathan TN, el-Gerges N, al-Bustan M, al-Shatti A et al. Epidemiology of smoking among Kuwaiti adults: prevalence, characteristics, and attitudes. *Bull World Health Organ* 2000; **78**: 1306–15.
28. Pierce JP, Gilpin E, Burns DM, Whalen E, Rosbrook B, Shopland D et al. Does tobacco advertising target young people to start smoking? Evidence from California. *JAMA* 1991; **266**: 3185–6.
29. Flay BR, Ockene JK, Tager IB. Smoking: epidemiology, cessation and prevention. Task Force on Research and Education for the Prevention and Control of Respiratory Diseases. *Chest* 1992; **102**: 277S–301S.
30. Pierrot J, ed. *Tabacologue*, 2ème ed. Paris, Masson, 1995; 55–63.
31. Stein RJ, Haddock CK, O’Byrne KK, Hymowitz N, Schwab J. The pediatrician’s role in reducing tobacco exposure in children. *Pediatrics* 2000; **106**: E66.
32. Lam TH, Chung SF, Betson CL, Wong CM, Hedley AJ. Tobacco advertisements: one of the strongest risk factors for smoking in Hong Kong students. *Am J Prev Med* 1998; **14**: 217–23.
33. The Framework Convention on Tobacco Control, FCTC in Turkey. <http://www.fctc.org/countrydata/contact2.php?countryID=175>
34. Froom P, Melamed S, Benbassat J. Smoking cessation and weight gain. *J Fam Pract* 1998; **46**: 460–4.
35. Klesges RC, Winders SE, Meyers AW, Eck LH, Ward KD, Hultquist CM et al. How much weight gain occurs following smoking cessation? A comparison of weight gain using both continuous and point prevalence abstinence. *J Consult Clin Psychol* 1997; **65**: 286–91.
36. Williamson DF, Madans J, Anda RF, Kleinman JC, Giovino GA, Byers T. Smoking cessation and severity of weight gain in a national cohort. *N Engl J Med* 1991; **324**: 739–45.
37. Burnette MM, Meilahn E, Wing RR, Kuller LH. Smoking cessation, weight gain, and changes in cardiovascular risk factors during menopause: the Healthy Women Study. *Am J Public Health* 1998; **88**: 93–6.