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# Prevalence of Tobacco Use in University Public Employees and Evaluation of Their Knowledge, Attitudes and Behaviors on This Subject

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## ABSTRACT

**Objectives:** In this study, we aimed to investigate the factors related to tobacco and cigarette smoking status, knowledge, attitudes, and behaviors of public employees of the Selçuk University.

**Methods:** This study was planned to determine the frequency of use of tobacco and its products and the attitudes and behaviors of 458 public employees of the Selçuk University between 2017 and 2018. A questionnaire consisting of 39 questions including the factors affecting the use/cessation status of tobacco and its products and the knowledge, attitudes, and opinions of the public employees of the university was applied.

**Results:** The mean age of the 458 people studied was  $39.21 \pm 10.26$ ; of them, 64.6% were males and 35.4% were females. In general, the frequency of using tobacco and smoking was 32.1%. Among the university public employees, the frequency of tobacco and cigarette smoking status of medical faculty teaching staff and research staff was 23.2% and that of medical faculty nurses and other health staff was 38.0%. Tobacco and cigarette smoking in males (38.2%) was statistically significantly higher than in females (21.0%) ( $p=0.000$ ). The smoking rate was 26.6% and the smoking prevalence among medical faculty members (17.9%) was lower compared to those of other health professionals (35.4%) and academic staff (26.0%) ( $p=0.053$ ). Among the university employees, the smoking rate in males (33.1%) was statistically significantly higher than in females (14.8%) ( $p=0.000$ ). The frequency of narghile use was 11.1%, hand-rolled tobacco use 7.0%, cigar use 6.1%, pipe use 1.5%, and chewing tobacco use 0.4%.

**Conclusion:** The fact that the frequency of using tobacco and cigarette is 32.1% and the cigarette smoking rate is 26.6% among the university public employees in our study reveals that tobacco and cigarette use is still a great problem.

**Keywords:** Patient education as topic, physician's role, physician-patient relations, smoking cessation



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## INTRODUCTION

Tobacco use and smoking is one of the most important and preventable public health issues around the world. Smoking is the most common form of tobacco use (94.8% of all tobacco uses).<sup>[1]</sup> Passive and active smoking cause psychological and financial losses, morbidities, and mortalities. According to World Health Organization data, 1.3 billion people around the world use cigarettes. Around the world, 1.5 billion people (one out of every three adults) aged 15 and over are addicted to tobacco and 80% of them are in developing countries. Of these 1.1 billion people who smoke above the age of 15, about 800 million live in developing countries.<sup>[2]</sup> Six million people die annually due to tobacco-related diseases around the world and

tobacco use leads to more than half a trillion dollars of economic damage.<sup>[3]</sup> This means that in every 13 seconds, one person dies due to the use tobacco and its products across the world. WHO estimates that if the current situation is not changed, 20 million people would lose their lives in the early 2030s, 70% of which will be from developing countries.<sup>[2]</sup>

Turkey is one of the leading countries in tobacco production and consumption. Turkey is among the top 10 in the list of countries with high prevalence of tobacco consumption. According to 2001 data, tobacco consumption in Turkey constitutes 2% of the world tobacco consumption and 14% of the WHO European Region tobacco consumption.<sup>[4]</sup> As of 2008, approximately 16 million people in Turkey, 4 million women and 12 million men, are smokers and it is estimated that approximately 100 thousand people will die due to smoking each year and this number is expected to reach 240 thousand in 2030.<sup>[5]</sup> According to conclusions of the PIAR study in 1998, prevalence of smoking among adults in Turkey is 24.3% for women and 62.8% for men. In addition, according to the 2003 National Burden of Disease study, the prevalence of smoking among men over 18 years of age was 51%.<sup>[6]</sup>

According to the Global Adult Tobacco Survey (GATS) conducted in Turkey in 2008, 31.2% of adults aged 15 years and older use cigarettes or tobacco and this rate was 27.1% in 2012 (n=14.8).<sup>[7]</sup> According to WHO, smoking rates in Turkey are 22% in the adults in 2015.<sup>[8]</sup> According to OECD 2015 data, Turkey is the third among the European countries, and one among the top ten countries along with China, India, Indonesia, Russia, the US, Japan, Brazil, Bangladesh, and Germany in cigarette consumption (Greece 38%, France 24.1%, and 23.8% Turkey).<sup>[9]</sup>

The aim of this study was to investigate the factors related to cigarette smoking, nicotine addiction levels, knowledge, attitudes, and behaviors of the public employees of the Selçuk University.

## METHOD

This study was planned to determine the frequency of tobacco use and the attitudes and behaviors of 37,168 people in Konya Province Public Employees between 2017 and 2018. This is a cross-sectional study. Using the formula,

$$n = \frac{N \times p \times q \times z_{\alpha}^2}{(N-1) \times d^2 + z_{\alpha}^2 \times p \times q}$$

37,168 public employees should be reached because the frequency of smoking is 27% according to the 2012 GATS results.<sup>[7,10]</sup> Of these public employees, 4,278 are public employees of the Selçuk University. The share of the sample was 430 people, thus 458 Selçuk University public employ-

ees are included in this study. With a stratified sample, 458 people were reached from 4278 people by applying rule 9 to 1. In the academic year 2017–2018, a questionnaire consisting of 39 questions including the factors affecting the use/cessation of tobacco and its products, knowledge, attitudes, and behaviors of the public employees of the Selçuk University was conducted.

Fagerström Test for Nicotine Dependence (FTND): The Turkish adaptation of the questions used in the United States for the classification of smoking status was used.<sup>[11]</sup> The smoking individuals were categorized as current smokers, former smokers, occasional smokers, and never smokers (current smokers—individuals who have smoked at least 100 cigarettes during their lives and currently have at least one cigarette per day; former smokers—those who have smoked at least 100 cigarettes during their lifetime and have quit; ever smokers—those who have smoked not more than 100 pcs in their lifetime; and never smokers—those who had never smoked in any way. In order to classify the smokers and the ex-smokers in terms of the gradual change process, the Turkish adaptation of the question team proposed by Prochaska et al.<sup>[12]</sup> was used. For addiction scoring and grading, the Turkish version of the Fagerström Nicotine Test questions was used.

The FTND is a test developed to determine the level of nicotine addiction and consists of six questions. Scores are given according to the response to each question. This test which was studied for Turkish validity and reliability gave five different results: 0–2 points is very low, 3–4 points is low, 5 points is moderate, 6–7 points is severe, and 8–10 points is very severe.<sup>[13,14]</sup>

## Statistical Analysis

Demographic data were analyzed using descriptive statistical methods by using SPSS (Statistical Package for Social Sciences for Windows) 22.0 version. Number, percentage, mean, standard deviation, and minimum and maximum values were used to evaluate the data. A chi-square test was used to examine the comparison of categorical data. A p value of <0.05 was considered statistically significant.

## RESULTS

The mean age of 458 (male: 64.6%, 296 individuals; female: 35.4%, 162 individuals) participants was 39.21±10.26 years.

The sociodemographic features and smoking-tobacco use characteristics of the university public employees are shown in Table 1.

The frequency of tobacco users or smokers among the university public employees was 147 (32.1%); of never smok-

**Table 1.** The sociodemographic features and characteristics of smoking-tobacco use of the university public employees (n=458)

Characteristic	n	%	Mean±SD	Characteristic	n	%	Mean±SD
Gender				Never smokers	229	50.0	
Female	162	35.4		Former smokers	82	17.9	
Male	296	64.6		Current smokers	147	32.1	
Age (years)				Statues of use of water pipe			
18–24	16	3.5		Never smokers	334	72.9	
25–44	308	67.3		Current smokers	2	0.4	
45–59	116	25.3		Occasional smokers	49	10.8	
60 and over	18	3.9		Former smokers	73	15.9	
Marital status				Statues of use of cigar			
Single	76	16.6		Never smokers	412	90.0	
Married	366	79.9		Current smokers	2	0.4	
Widow	16	3.5		Occasional smokers	26	5.7	
Duration of working (years)			14.37±9.7 (min:1-max:42)	Former smokers	18	3.9	
Distribution of duration of working (years)				Statues of use of wrapping tobacco			
1–10	200	43.7		Never smokers	403	88.0	
11-30	228	49.7		Current smokers	2	0.4	
30 and over	30	6.6		Occasional smokers	30	6.6	
Education				Former smokers	23	5.0	
Primary school	12	2.6		Statues of use of chewing tobacco			
High school	41	9.0		Never smokers	454	99.2	
Associate degree	29	6.3		Occasional smokers	2	0.4	
License	111	24.2		Former smokers	2	0.4	
Graduate	265	57.9		Statues of use of pipe			
Smoking and tobacco use				Never smokers	440	96.1	
Never smokers	177	38.6		Occasional smokers	7	1.5	
Try smokers	52	11.4		Former smokers	11	2.4	
Occasional smokers	46	10.0		Age of first smoking and tobacco			18.01±4.26 (min-max:7-32)
Former smokers	82	17.9					
Current smokers	101	22.1					

ers 229 (50.0%); and of former smokers 82 (17.9%). The frequency of water pipe use was 11.1%, of wrapping tobacco use 7.0%, of cigar use 6.1%, of pipe use 1.5%, and of chewing tobacco use 0.4% (Table 1).

Table 2 shows the distribution of tobacco use and smoking status according to gender, age, and department of university public employees (n=458).

Among university public employees in medicine faculty, the prevalence of tobacco use and smoking in academic staff (research assistant, assistant professor, associate professor, and professor) was 13 (23.2%) and that of other medical staff (nurse, etc.) was 30 (38.0%). Among the uni-

versity public employees, the prevalence of tobacco use and smoking was found to be 113 (38.2%) in males and 34 (21.0%) in females (p=0.000) (Table 2).

Table 3 shows the distribution of only cigarette smoking status according to gender, age, and institutions of the university public employees (n=458).

Among the university public employees, the prevalence of only cigarette smoking was 122 (26.6%) (98 (33.1%) for men and 26 (16.0%) for women, difference between genders was statistically significant; p=0.000) (Table 3). In addition, the rate of current smokers was found to be lower in academic staff (research assistant, assistant professor, as-

**Table 2.** The distribution of tobacco use and smoking status according to gender, age, and department of the university public employees (n=458)

	Smoking and tobacco uses								X <sup>2</sup>	p
	Never smokers		Former smokers		Current Smokers		Total			
	n	%	n	%	n	%	n	%		
Male										
Academical staff in medicine faculty	19	54.3	5	14.3	11	31.4	35	100.0	=6.78	=0.148
Nurse and other medical staff	13	33.3	7	18.0	19	48.7	39	100.0		
Academical staff in other faculty	81	36.5	58	26.1	83	37.4	222	100.0		
Total	113	38.2	70	23.6	113	38.2	296	100.0		
Female										
Academical staff in medicine faculty	15	71.4	4	19.1	2	9.5	21	100.0	=6.70	=0.152
Nurse and other medical staff	27	67.5	2	5.0	11	27.5	40	100.0		
Academical staff in other faculty	74	73.3	6	5.9	21	20.8	101	100.0		
Total	116	71.6	12	7.4	34	21.0	162	100.0		
Categorical age										
18-24	9	56.3	1	6.2	6	37.5	16	100.0	=33.33	=0.000
25-44	166	53.9	37	12.0	105	34.1	308	100.0		
45-59	49	42.2	35	30.2	32	27.6	116	100.0		
60 and over	5	27.8	9	50.0	4	22.2	18	100.0		
Department										
Academical staff in medicine faculty	34	60.7	9	16.1	13	23.2	56	100.0	=6.416	=0.170
Nurse and other medical staff	40	56.6	9	11.4	30	38.0	79	100.0		
Academical staff in other faculty	155	48.0	64	19.8	104	32.2	323	100.0		
Total	229	50.0	82	17.9	147	32.1	458	100.0		

sociate professor, and professor) with 10 (17.9%) compared to other medical staff (nurse, etc.) 28 (35.4%) and academic staff in faculties other than medical faculties 84 (26.0%) (p=0.053) (Table 3). In addition, the prevalence of only cigarette smoking in males of other medical staff (nurse, etc.) was statistically higher than the other male employees (p=0.042).

The smoking habits of the university public employees are shown in Table 4 (n=122).

When the distribution of university public employees according to FTND was evaluated, it was found that 44.4% (55 individuals) was in very low, 7% (32 individuals) in low, 2.6% (12 individuals) in moderate, 12.1% (15 individuals) in severe, and 8.1% (10 individuals) in very severe addiction group (Table 4). The mean of first smoking age was 18.01±4.26 and the duration of smoking was 18.52±10.33 years.

The smoking status of the family and friends of the university public employees is shown in Table 5.

No smoking was reported in houses of 141 (30.8%) of university public employees. In the house of 299 (65.3%), smoking was allowed only at balcony, and in the house of 18 (3.9%), smoking was reported. In addition, 263 (57.4%) have no smokers in the house. Parents of 42 (9.2%), spouse of 52 (11.4%), sibling of 42 (9.2%), and son of 8 (1.7%) were smokers. Of the guests who visited the house, 165 (36.0%) never smoked; 211 (46.1%) of them claim permission to smoke, 66 (14.4%) of them smoke at balcony, and 16 (3.5%) of them smoke at house without permission. In addition, it was detected that 342 (74.7%) of the employees did not smoke in closed areas, 55 (12%) smoke in the smoking room, and 33 (7.2%) smoke everywhere.

The knowledge and attitudes of the university public employees and their relatives regarding their smoking behaviors, attempts for smoking cessation, and prohibitions are shown in Table 6.

Although 149 (32.5%) of the university public employees surveyed answered 'no' in terms of being a role model for

**Table 3.** The distribution of only cigarette smoking status according to gender, age, and institutions of the university public employees (n=458)

	Never smokers		Former smokers		Current Smokers		Total		X <sup>2</sup>	p
	n	%	n	%	n	%	n	%		
Male										
Academical staff in medicine faculty	19	54.3	7	20.0	9	25.7	35	100.00	=9.92	=0.042
Nurse and other medical staff	12	30.8	8	20.5	19	48.7	39	100.0		
Academical staff in other faculty	79	35.6	73	32.9	70	31.5	222	100.0		
Total	110	37.2	88	29.7	98	33.1	296	100.0		
Female										
Academical staff in medicine faculty	15	71.4	5	23.8	1	4.8	21	100.0	=5.25	=0.262
Nurse and other medical staff	27	67.5	4	10.0	9	22.5	40	100.0		
Academical staff in other faculty	74	78.7	6	6.4	14	14.9	94	100.0		
Total	116	76.3	12	7.9	24	15.8	152	100.0		
Categorical age										
18–24	9	56.3	2	12.5	5	31.2	16	100.0	=18.71	=0.005
25–44	164	53.3	61	19.8	83	26.9	308	100.0		
45–59	48	41.4	37	31.9	31	26.7	116	100.0		
60 and over	5	27.8	10	55.5	3	16.7	18	100.0		
Department										
Academical staff in medicine faculty	34	60.7	12	21.4	10	17.9	56	100.0	=9.32	=0.053
Nurse and other medical staff	39	49.4	12	15.2	28	35.4	79	100.0		
Academical staff in other faculty	153	47.4	86	26.6	84	26.0	323	100.0		
Total	226	49.4	110	24.0	122	26.6	458	100.0		

smoking in society, 309 (67.5%) answered yes. Of the participants, 298 (65.1%) gave the correct answer (171) to the question of "what is the number of smoking cessation line of TR ministry of health?" Of the participants, 440 (96.1%) support smoking ban in closed areas. Although 248 (54.1%) of the participants supported the ban on smoking in closed areas, 179 (39.2%) believe that the scope should be expanded. Of the respondents, 130 (28.4%) answered correctly the question for the start date of the tobacco control law (07-19-2009), which prohibits smoking in public places (Table 6).

## DISCUSSION

In our country and in many countries around the world, various studies have been carried out on the smoking status and affecting factors among the academic staff and university students. The main reason for these studies on university academic staff is that they are role models for the big part of the society.

When the results of the GATS study, which was conducted for the first time in 2008, included information on the use of tobacco and its products, exposure to cigarette smoke,

the tendency to quit tobacco and tobacco use, attitudes and perceptions of the public on media and health warnings compared to the 2012 GATS results, comprehensive tobacco control studies in Turkey have achieved significant success over four years. The comparison results show us that the frequency of tobacco use decreased from 31.2% to 27.1% in the population over 15 years of age, from 47.9% to 41.5% in males, and from 15.2% to 13.1% in females. The percentage of daily cigarette smokers decreased from 27.4% in 2008 to 23.8% in 2012 and the percentage of occasional smokers decreased from 3.8% to 3.3%. In our country, tobacco and its products are the most common among 25–34 and 35–44 age groups. The frequency of tobacco use was higher in males (41.5%) than in females (13.1%). Of the tobacco users, 23.8% use tobacco every day (37.3% of males and 10.7% of females). The largest share of tobacco users (94.8%) use cigarette and only 0.8% use hookahs.<sup>[1,7]</sup> In our study, the prevalence of tobacco and cigarette use in university public employees was 32.1% and the cigarette use frequency was 26.6% (33.1% in males, 14.8% in females), suggesting that tobacco and cigarette use is still a major problem in our country. In addition, dependence

**Table 4.** The smoking habits of the university public employees (n=122)

Characteristic	n	%
Fagerström test for nicotine dependence		
Very low	55	44.4
Low	32	25.8
Moderate	12	9.6
Severe	15	12.1
Very severe	10	8.1
Where do you mostly smoke?		
At home	30	24.6
In workplace	50	41.0
In car	08	6.6
Outdoor	16	13.1
Anywhere	18	14.7
Which brand does your smoking?		
Domestic brand	23	19.7
Foreign brand	76	62.3
Both of them	23	18.0
Have you thought about quitting smoking?		
No, I didn't think	25	20.5
I didn't make any attempts	32	26.2
I thought, I made an attempt	65	53.3
Have you tried to quitting smoking?		
No	39	32.0
Yes I tried once	25	20.5
Yes I tried so many times	58	47.5
Did you use a method to quit smoking?		
No	103	84.4
I only used nicotine replacement therapy	2	1.6
I used nicotine replacement therapy and smoking cessation medications	7	5.7
Others	10	8.2
How did the smoking prohibition in closed areas and campaigns implemented in Turkey affect your smoking habit?		
Never affected	62	50.8
Significantly reduced	54	44.2
I stopped smoking at home	3	2.5
Significantly increased	3	2.5

and dependence level are the most important obstacles in the discontinuation of tobacco use. In a study conducted by Altın et al.<sup>[15]</sup> in 2004, the high dependence level was found to be 25%. In our study, according to FNAT, 70.2% of the public employees in the university are in very low and low dependency group and 20.2% in high and very high

**Table 5.** The smoking status of the family and friends of the university public employees (n=458)

Characteristic	n	%
Smoking status at home		
It is not smoked in house	141	30.8
It is smoked only in balcony	299	65.3
It is smoked in the house	18	3.9
Person smoking at home		
No	263	57.4
Mother	4	0.9
Father	38	8.3
Spouse	52	11.4
Brother	42	9.2
Son	8	1.7
More than one member of family	51	11.1
Smoking status of guests coming home		
No smoking	165	36.0
smoking with permission	211	46.1
Smoking on the balcony	66	14.4
Smoking without permission	16	3.5
Smoking policy in the workplace		
No smoking in closed areas	342	74.7
Smoking in the smoking room	55	12.0
In personal rooms	23	5.0
Smoking everywhere	33	7.2
I dont know	5	1.1

dependency group, suggesting that they can quit smoking with an effective smoking counseling service.

The prevalence of smoking was reported to be 7%–21% in students of the dentistry, medicine, pharmacy, and nursing departments according to the study conducted in 2005 by the World Health Organization and the Center for Disease Control and Prevention in 20 European countries.<sup>[16]</sup> In the study conducted by the Association of Public Health Specialists in cooperation with WHO, US Disease Control and Protection Center, and Ministry of Health in 2008, the prevalence of smoking in general practitioners was found to be 30.5%; in specialist doctors 22.5%; in nurses and midwives 29.5%; and in health technicians 33.8%.<sup>[17]</sup> Again, in the study conducted by Association of Public Health Specialists in 2012 in cooperation with WHO, US Centers for Disease Control and Protection Center, and Ministry of Health, smoking prevalence was detected as 23.9% in general practitioners; 12.7% in specialist doctors; 21.9% in nurses and midwives; and 23.5% in health technicians.<sup>[18]</sup> When the 2012 data were compared with the 2008 data, it was observed that the prevalence of smoking among health-

**Table 6.** The knowledge and attitudes of the university public employees and their relatives regarding their smoking behaviors, attempts for smoking cessation, and prohibitions (n=458)

Characteristic	n	%
Are you a role model in the community for smoking?		
No	149	32.5
Yes	309	67.5
What is the number of smoking cessation line of TR ministry of health?		
112	2	0.4
155	2	0.4
171	298	65.1
181	40	8.7
184	51	11.1
I dont know	65	14.3
Do you support smoking prohibition in closed areas?		
No	18	3.9
Yes	440	96.1
What do you think about the continuation of the smoking prohibition in closed areas implemented in Turkey?		
Should be removed	2	0.4
Should be loosened	29	6.3
Should be continued	248	54.1
Should be expanded	179	39.2
When did the tobacco control law which prohibits smoking in public places start?		
January 3, 2006	57	12.4
May 19, 2008	131	28.6
May 1, 2008	54	11.8
July 19, 2009	130	28.4
I dont know	86	18.8

care workers of TR Ministry of Health decreased significantly. However, in our study, it was found that smoking and tobacco use rates in academic staff (research assistant, assistant professor, associate professor, and professor) were 23.2% and those of nurses and other health workers were 38%. In our study, when the use of cigarette was evaluated separately, the prevalence of cigarette use was found to be 17.9% in the academic staff of the faculty of medicine and 35.4% in the nurses and other health workers, suggesting that the frequency of cigarette use in health workers does not decrease and continues as an important problem. Although the Prime Ministry Circular in 2006 had set targets for health personnel and academic staff, there are very few published research articles on this subject. For this reason,

we believe that our study will lead to more comprehensive studies in university academic employees.

In 1998, Tezcan et al.,<sup>[19]</sup> in their study of "Investigation of the Personal Health Behaviors of Academic Staff at Hacettepe University Faculty of Medicine," found that 38% of the academic staff had never smoked, 15.8% were former smokers, and 37.2% were still smokers (37.9% in males, 36.3% in females). The prevalence of smoking was found to be significantly higher in males. In a study conducted by Özkurt et al.<sup>[20]</sup> in 1996, at the Faculty of Medicine of the Pamukkale University, it was found that 48% (6.9% occasionally, 41.1% every day) of the medical faculty employees were smokers and 14.3% were former smokers. Tezcan et al.,<sup>[21]</sup> in their review of 22 studies, reported the prevalence of smoking to be 32.6%–66.2% in doctors, 40.3%–68.6% in nurses, and 15.1–36.6% in medical school students in Turkey.

Sezer et al.,<sup>[22]</sup> in their study in 2001 including academic staff of Sivas Cumhuriyet University Faculty of Medicine and Dentistry, detected that the frequency of smokers was 47.4% in males and 33.3% in females. The frequency of everyday smokers was found to be 36.3% in males and 24.4% in females. Marakoğlu et al.<sup>[23]</sup> reported the frequency of smokers was 28.7 (35.6% in males and 13.4% in females) in their study including the Selçuk University Faculty of Medicine academic staff. In a study conducted by Karatay et al.<sup>[24]</sup> (2017) in a public university in Tunceli, 16.5% of the participants stated that they occasionally smoke and 30.4% regularly smoke; 10.4% were found to be exposed to passive smoking at home and 23.9% at work; 37.6% of participants were in middle and 16.8% were in high level of nicotine addiction, and finally, 42.4% were found to be in the precontemplation stage for smoking cessation and 32.7% were in the contemplation phase. In addition, it was determined that 10.8% of the smokers used wrapping tobacco and 89.2% used package. The results of our study revealed different or similar results with some of the previous studies on tobacco use and smoking frequency. These results suggest that the results are subject to change according to years, sample size, and participation in the study.

According to GATS studies, the use of water pipe decreased (from 2.3% in 2008 to 0.8% in 2012).<sup>[1,7]</sup> In 2010, 645 medical students were included in the study and the prevalence of the use of water pipe was 32.7%.<sup>[25]</sup> In our study, the frequency of continuous use of water pipe was 0.4% and the frequency of occasional use was 10.7%. One of the most important reasons for this is that academic staff members are mostly middle-aged and therefore less likely to go to water pipe cafeterias. In this respect, it is important for

health workers not to limit tobacco dependence to cigarette smoking and to explain the harms of water pipe use especially for young people.

According to the literature, studies on the use of tobacco other than package use are limited. In a 1993 study, the prevalence of smoking among clinicians in Minnesota was 4.9% (5.1% of clinicians use pipe; 2.1% uses cigars).<sup>[26]</sup> In a study conducted on 821 health workers in the Izmir province, the frequency of cigar use was found to be 1.3%, of pipe, use 0.5%, and both of cigar and pipe use 0.2%.<sup>[27]</sup> In our study, the frequency of continuous cigar users was 0.4%, of occasional cigar users 5.7, and of occasional pipe users 1.5% (our results were lower than those of previous studies).

In a study conducted in the medical faculty in 2000, the frequency of current daily cigarette smokers was 45.6% in the young population aged 20–24 and 45% in the 25–44 age group.<sup>[20]</sup> In a prevalence study of 6,000 people in the Eastern Black Sea region, the prevalence of current daily cigarette smokers was found to be 51.4% in the young population aged 20–29 and 41.1% in the 30–49 age group.<sup>[28]</sup> In our study, the frequency of current daily cigarette smokers among the young population aged 18–24 years was found to be 31.3%, and it was 26.9% in the 25–44 age group, 26.7% in the 45–59 age group, and 16.7% in the group older than 60 years. The prevalence of smoking in the young age group is high and it is important to give smoking quitting supports for these groups.

According to GATS 2012 data, six out of 10 (55.1%) smokers thought to quit smoking, but only 12.9% thought they would quit in the next 30 days. Approximately 23% of smokers thought to quit smoking within the next 12 months, whereas 19.7% of smokers thought to quit but did not say a specific date.<sup>[11]</sup> In our study, 53.3% of the smokers who smoked from the university public employees considered smoking cessation and made any attempt. In addition, 68% of smokers have tried to quit smoking once or more in their lives but they have failed; we believe that this failure is associated with their psychological states. The most important support in the fight against tobacco should be given to the academic staff who smoke at this point. Having information about the quit smoking process in the period of quit smoking, getting support from health personnel, and eliminating the reasons for restart will result in success. Although measures are taken with “tobacco control programs” in developed countries about the smoking, known to have carcinogenic effects, it is not acceptable for health workers and academic staff who have educative and protective roles in society. The fact that 53.3% of the

health care workers who are still smoking have tried to leave in the past suggests that these people can easily enter the quitting process with the support of behavior and/or medical treatment.

In a study conducted by Eroğlu in a public hospital in Istanbul in 2013, 13% of 164 participants had no family members who smoke, and 87% had at least one person who smokes in their families.<sup>[29]</sup> In a study conducted in the Izmir province with 821 people who are medical staff in 2004, it was found that 27.5% had no family members who smoke, and 72.5% had at least one person smoking in their families.<sup>[27]</sup> In our study, it was determined that 42.6% of the smokers had at least one family member who smoke, and 57.4% did not have a smoker in their families.

In addition, 62.3% of the participants were found to use foreign brand cigarettes. These results are similar to the results of the study performed with 1309 individuals between 2009 and 2010 in Suleyman Demirel University in which frequency of use of foreign brand smoking was determined as 63.3%.<sup>[30]</sup>

Although 74.7% of the academic staff participating in the study supported smoking ban in closed areas, we determined that ban on smoking in closed areas and anti-smoking campaigns in Turkey do not affect 50.8% of the participants. This shows that smoking ban is not fully implemented in public institutions, especially in hospitals. Moreover, it can be seen obviously that all public institutions, especially hospitals, and managers should make more efforts in this regard. People who work in a health institution and who form a role model for the community should not draw the image of a person who smokes in a building that provides health services to people. Administrators should ensure smoke-free airspace, prevent passive exposure, especially in closed areas, as it is intended by law, and thus protect other people from passive smoking.

It is a correct approach to see academicians and academic staff at universities as role models in tobacco control. However, the results of our study showed that 32.5% of the employees did not consider themselves to be a role model for smoking and only 65.1% of respondents answered the phone number of the Ministry of Health cigarette quitline (171) correctly. It is also surprising that only 28.4% of the participants know that the tobacco control law, which prohibits smoking in public closed areas in Turkey, has been implemented on July 19, 2009. This may be because public employees other than managers and administrators do not know these announcements and the relevant legislation.



## CONCLUSION

Studies on smoking and tobacco use, which were first conducted in 1998, showed that tobacco and cigarette use continued to be a significant public health problem in university public personnel, health workers, and the general public even though tobacco and cigarette use decreased over the years. We believe that physicians, especially academic staff, have major responsibilities in the fight against tobacco and its products.

## Disclosures

**Peer-review:** Externally peer-reviewed.

**Conflict of Interest:** None declared.

**Ethics Committee Approval:** The study was approved by the Local Ethics Committee.

**Authorship Contributions:** Concept – K.M.; Design – K.M.; Supervision – K.M.; Materials – K.M.; Data collection &/or processing – K.M., G.Ü.Ü.; Analysis and/or interpretation – K.M.; Literature search – K.M., G.Ü.Ü.; Writing – K.M., G.Ü.Ü.; Critical review – K.M.

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