

# Smoking Attitudes of Newly-Started Family Physicians

## Aile Hekimliğine Yeni Başlamış Hekimlerin Sigara İçme Davranışları

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**ABSTRACT Objective:** In this study, it was aimed to determine the smoking behavior and related factors of family physicians, working in seven different regions of Turkey. **Material and Methods:** The data of this descriptive and cross-sectional study were collected between 2015-2016. In the study, 724 family physicians were interviewed face to face and a questionnaire form was applied. No sample was selected in the study, and all family physicians participating in the Ministry of Health trainings were included in the survey. Inferential statistics were used in the research. **Results:** While 48.1% of family physicians never smoked, 10.4% quit smoking, and 41.6% are still smoking. Of the smokers, 15.0% are mildly smokers, 25.2% are moderate smokers, and 59.8% are heavy smokers. The mean duration of smoking was found to be 98.6 months. The age of starting smoking was 20.6. Difference in the average smoking duration of physicians were found to be statistically significant according to age, marital status, child ownership status, and working zone. In addition, a statistically significant difference was found between the smoking status of the physicians and age, gender, marital status, child ownership status and adequate sleep time. **Conclusion:** Today, fighting with smoking is an issue that should be prioritized for communities to live a healthy life. The development of policies to reach all segments of the society in this regard is important in terms of achieving the desired target in a shorter time. Results of the study emphasize the importance that studies about non-smoking are also necessary for physicians in addition to the studies that are carried out in the society as a whole to prevent smoking.

**Keywords:** Family physician; smoking; health; primary health care

**ÖZET Amaç:** Bu çalışmada, Türkiye'nin yedi farklı bölgesinde çalışan aile hekimlerinin sigara içme davranışı ve ilişkili faktörlerinin belirlenmesi amaçlanmıştır. **Gereç ve Yöntemler:** Tanımlayıcı ve kesitsel çalışmanın verileri 2015-2016 yılları arasında toplanmıştır. Araştırmada 724 aile hekimi ile yüz yüze görüşme yapılmış ve anket formu uygulanmıştır. Araştırmada örneklem seçilmemiş ve Sağlık Bakanlığı'nın aile hekimleri için düzenlediği eğitimlerine katılan tüm aile hekimleri çalışmaya dahil edilmiştir. Araştırma bulguları için betimsel istatistikler kullanılmıştır. **Bulgular:** Aile hekimlerinin %48,1'i hiç sigara içmemişken, %10,4'ü sigarayı bırakmış ve %41,6'sı hala sigara içmektedir. Sigara içenlerin %15,0'ı hafif içici, %25,2'si orta derecede ve %59,8'i aşırı derecede sigara içmektedir. Hekimlerin sigara içme süreleri ortalaması 98,6 aydır. Sigara içmeye başlama yaşı 20,6'dır. Hekimlerin ortalama sigara içme süreleri arasında fark yaş, medeni durum, çocuk sahibi olma ve çalışma bölgesine göre istatistiksel olarak anlamlı bulunmuştur. Ayrıca hekimlerin sigara içme durumu ile yaş, cinsiyet, medeni durum, çocuk sahibi olma durumu ve yeterli uyku zamanı arasında istatistiksel olarak anlamlı bir fark bulunmuştur. **Sonuç:** Bugün, sigarayla savaşmak, toplumların sağlıklı bir yaşam sürmeleri için önceliklendirilmesi gereken bir konudur. Bu bağlamda toplumun tüm kesimlerine ulaşacak politikaların geliştirilmesi, istenen hedefe daha kısa sürede ulaşılması açısından önemlidir. Araştırmada elde edilen bulgular, sigara içilmesini önlemek için toplumda yürütülen çalışmaların yanı sıra hekimler için de sigara içilmemesi ile ilgili çalışmaların gerekli olduğunu vurgulamaktadır.

**Anahtar Kelimeler:** Aile hekimi; sigara içimi; sağlık; birinci basamak sağlık hizmeti

The use of tobacco, which has been the cause of many health problems from past to present, is seen as an important problem that countries have to struggle in order for their communities to survive a healthier life. Tobacco use is often described as the risk factor for six of the eight causes of death in the world. The World Health Organization (WHO)

predicts that, by 2030, more than 8 million people will lose their lives each year and more than 80% of these deaths will be in developing countries, depending on the increase in tobacco use.<sup>1</sup> WHO has developed a number of applications for countries to prevent this apparent danger and to minimize its harm. One of them is the Tobacco Control Framework Convention.

By 2015, the contract has been signed by 180 countries, covering 90% of the world population, and 80% of the parties have made efforts to improve their existing laws and regulations on tobacco use.<sup>2</sup> As support and guidance for countries' efforts, WHO has determined 6 policies in the name of MPOWER including monitoring tobacco use and protective policies, protecting people from tobacco smoke, helping to quit smoking, warning about harms of cigarette, ban of advertising and promotional sponsorship of tobacco products, and increasing tax on tobacco. These six policies aim to prevent the initiation of cigarette smoking, to encourage smokers to quit, and to prevent the exposure of non-smokers to cigarette smoke.<sup>1</sup> While the number of countries that have implemented at least one policy at the highest level of success within the scope of these policies of WHO was 42 in 2007, it became 121 in 2016, and the number of people covered reached 4.7 billion.<sup>3</sup> While Turkey, especially in the 1990s, was among the countries in which tobacco products, particularly cigarettes, were consumed in the high rate, when it came to the 2000s, it signed the Tobacco Control Framework Convention developed by member countries of WHO, together with programs globally implemented by WHO to combat tobacco and tobacco products on April 28, 2004.<sup>4</sup> In line with the policies implemented in Turkey and the studies carried out with the contract signed in 2004, although overall smoking has declined by 13.4% between the years of 2008 and 2012, according to the data of the year 2016, it is observed that the rate of daily using tobacco and tobacco products by people aged 15 years and over is higher than the average of OECD countries by 27%.<sup>5,6</sup> As of 2017, it was determined that the smoking rate for males aged 15 years and over was 39.5, while for females it was 12.4%.<sup>2</sup> Turkey,

giving great importance to fight with the use of tobacco and tobacco products, is among the countries that fully implement MPOWER policies of the WHO.<sup>5</sup>

In addition to the rate of smoking, the age of smoking, which is gradually falling continues to be a problem that needs to be intervened. While the factors including socioeconomic status, lifestyle, habits, peer influence, imitation, relaxation, etc. drives to smoking, educational status and business of the person also has an impact on smoking behavior.<sup>6-9</sup> Physicians can be considered to work with high stress level due to their intensive training program and the situations experienced with the patients because of the characteristics of the health services while performing their profession.

Physicians, also seen as role models for the society about the development and protection of health, play a key role in reducing smoking and harmful health effects of it.<sup>10</sup> In this context, the aim of this research is to identify the smoking behaviors and related factors of family physicians working in Turkey. This study includes the doctors who are new to family medicine. It is considered to be an important study as these physicians have recently completed their medical education and have an important knowledge about the negative effects of smoking and it investigates whether they reflect this on their lifestyles or not. It is also thought to be important as family physicians provide protective and preventive health care and many studies are not available which were conducted on physicians' smoking behaviors in recent years.

## MATERIAL AND METHODS

### POPULATION AND SAMPLING

In 2015, when the research was conducted, 21,696 family physicians were working in Turkey. No sampling was used. For this reason, generalization was not made for physicians. A total of 724 family physicians (3.3%) participated in the study. The research was carried out for physicians working in family medicine, especially beginner family physicians in Turkey, with physicians who participated in the trainings within the scope of adaptation to

family medicine practice in the province of Ankara City, between 2015-2016. In 2015-2016, 15 trainings were organized by the Ministry of Health. No sample was selected in the study, and all family physicians participating in the trainings were included in the survey. A total of 724 family physicians participated in the research. The family physicians participated in the study is comprised of physicians working in different provinces of Turkey.

#### DATA COLLECTION TOOL

A questionnaire developed specifically for this research was used in the study. The questionnaire was prepared in accordance with the literature. To begin with, 20 family physicians were interviewed face-to-face about smoking. Based on these interviews, a data collection tool was generated by the authors. Since the interviewees stated that number of questions should be kept minimum due to the heavy workload of family physicians, the questionnaire was limited to only 12 questions. Then the questionnaire was pilot tested and participants found the questions were understandable and feasible. In addition to the questions related to age, years of experience as a physician, smoking status, adequate duration of sleep, and region the following questions were also include. The questionnaire was applied by face-to-face interviews with participating family physicians. This study was performed according to the principles of the Declaration of Helsinki Approval and was granted by Public Health Institution Commission for Evaluating Permission Requests for Research in Primary Health Care (29.05.2013 date; 68375).

#### DATA ANALYSIS

The Statistical Package for the Social Science for Windows (SPSS 20.0) was used to perform the analyses. Professional and demographic information of the family physicians in the research were analyzed using inferential statistics such as mean, standard deviation, frequency, and percentage. T-test, ANOVA, Chi-square and Tukey tests were applied to determine the level of statistical significance for the variables related to the smoking sta-

tus by carrying out descriptive analyzes on the data obtained in the research. In the study, the number of cigarettes smoked daily was grouped as 1-9 mildly smokers, 10-19 moderate smokers, and 20 or more as heavy smokers.<sup>10</sup>

## RESULTS

Family physicians working in various cities in seven different regions of Turkey participated in the study. The average age of the participants was found to be  $28.5 \pm 4.7$ . According to the average age of smoking status, the average age of non-smokers was  $27.9 \pm 4.1$ , the average age of ex-smokers was  $30.5 \pm 7.0$ , and the mean age of the smokers was  $28.7 \pm 4.5$ . The mean age to start smoking was found to be  $20.6 \pm 4.7$ . Smokers were detected to have been smoking for a mean period of  $8.6 \pm 4.9$  years. Of the subjects, 78.3% (567) were males, 21.7% (157) were females and 66.6% were single. While 31.8% (225) of the surveyed physicians were working in the Eastern Anatolia Region, 24.9% (176) were working in the Southeastern Anatolia Region. Ratio of the physicians who were working in the Aegean Region was the least 3.8% (n:27). Physicians stated that they had an average of  $38.2 \pm 22.1$  patients per day. The average number of cigarettes smoked per day for these physicians was 18. According to the number of cigarettes smoked daily by family physicians, 15.0% were mild smokers, 25.2% were moderate smokers, and 59.8% were heavy smokers. The mean duration of smoking of the surveyed physicians was found to be  $98.6 \pm 59.0$  months.

While 48.1% (348) of the surveyed physicians had never smoked, 10.4% (75) quit smoking, and 41.6% (301) were still smoking. Of the physicians, 46.7% (265) of men and 22.9% (36) of women stated that they smoke. In the study, there was a statistically significant difference between the smoking status of physicians and age, gender, marital status, child ownership status and adequate duration of sleep ( $p < 0.05$ ) (Table 1).

When the number of cigarettes consumed daily by physicians was analyzed, 35.4% of those who stated that they have no hobbies, 31.2% of

TABLE 1: Distribution of smoking status according to variables.

Variables	Never Smoking (n=348)		Smoking Status		Smoking (n=301)		Test Statistics		
	n	%	n	%	n	%	p	$\chi^2$	
Age	≤28	260	74.9	37	50.0	191	63.5	0.0001	21.331
	≥29	87	25.1	37	50.0	110	36.5		
Gender	Male	236	67.8	66	88.0	265	88.0	0.0001	43.492
	Female	112	32.2	9	12.0	36	12.0		
Marital Status	Married	120	34.7	36	48.6	84	28.1	0.003	11.779
	Single	226	65.3	38	51.4	215	71.9		
Child Ownership	Yes	50	14.4	16	22.2	33	11.0	0.042	6.325
	No	297	85.6	56	77.8	266	89.0		
Hobbies	Yes	319	93.0	70	95.9	273	92.9	0.634	0.912
	No	24	7.0	3	4.1	21	7.1		
Adequate Duration of Sleep	Yes	191	55.2	31	41.3	129	43.0	0.003	11.386
	No	155	44.8	44	58.7	171	57.0		
Number of Affiliated Population	≤1000	9	2.6	0	0.0	2	0.7		
	1001-2000	37	10.7	7	9.3	30	10.0		
	2001-3000	118	34.2	25	33.3	88	29.3	0.320	9.266
	3001-4000	161	46.7	38	50.7	154	51.3		
	≥4001	20	5.8	5	6.7	26	8.7		
	Daily Number of Outpatient Clinics	≤20	76	22.3	19	26.0	82	27.8	
21-40	139	40.8	28	38.4	109	36.9			
41-60	85	24.9	15	20.5	65	22.0	0.852	4.058	
61-80	27	7.9	7	9.6	27	9.2			
≥81	14	4.1	4	5.5	12	4.1			
Working Region	Aegean	12	3.5	2	2.8	13	4.4		
	Marmara	35	10.2	9	12.5	32	10.9		
	Black Sea	44	12.9	9	12.5	39	13.3		
	Central Anatolia	41	12.0	6	8.3	28	9.5		
	Eastern Anatolia	97	28.4	25	34.7	103	35.0	0.774	8.138
	Southeastern Anatolia	90	26.3	18	25.0	68	23.1		
	Mediterranean	23	6.2	3	8.1	11	29.7		

physicians over the age of 28, and 31.1% of physicians working in the Eastern Anatolia Region are the most smoker groups with more than 20 cigarettes per day (Table 2).

It was determined that the daily smoking cigarette numbers of those who stated that they still smoke did not show any statistically significant difference according to the variables ( $p>0.05$ ) (Table 3).

When the relationship between the smoking duration of those who stated that they still smoke and some variables was analyzed, a statistically

significant difference was detected according to age, marital status, child ownership and working area ( $p<0.005$ ). The mean duration of smoking among smokers aged 29 years and over was found to be significantly higher than those aged 28 years or less. In addition, the average duration of smoking of married physicians was found higher than that of single persons. Moreover, it was found that the average duration of smoking of physicians with one or more children is higher than those who does not have children, and the difference was statistically significant. Another variable in which the difference in the mean of

**TABLE 2:** Distribution of cigarettes per day according to the characteristics of the participants (%).

Characteristics	The number of participants (%)	Non-smokers	Mild Smokers	Moderate Smokers	Heavy Smokers	
			(1-9)	(10-19)	(20+)	
Age	≤28	488 (67.6)	60.9	6.8	10.5	21.9
	≥29	234 (32.4)	53.0	5.1	10.7	31.2
Gender	Male	567 (78.3)	53.2	7.4	10.8	28.6
	Female	157 (21.7)	77.0	1.9	9.6	11.5
Marital Status	Married	240 (33.4)	65.0	4.2	8.3	22.5
	Single	479 (66.6)	55.1	7.1	11.7	26.1
Child Ownership	Yes	99 (13.8)	66.7	5.1	8.1	20.2
	No	619 (86.2)	57.0	6.5	11.0	25.5
Hobbies	Yes	662 (93.2)	58.8	6.8	10.6	23.9
	No	48 (6.8)	56.2	0.0	8.3	35.4
Adequate Duration of Sleep	Yes	351 (48.7)	63.2	7.1	8.5	21.1
	No	370 (51.3)	53.8	5.1	12.4	28.6
Number of Affiliated Population	≤ 1000	11 (1.5)	81.8	0.0	9.1	9.1
	1001-2000	74 (10.3)	59.5	8.1	12.2	20.3
	2001-3000	231 (32.1)	61.9	6.9	9.1	22.1
	3001-4000	353 (49.0)	56.4	5.4	10.8	27.5
	≥ 4001	51 (7.1)	49.0	7.8	13.7	29.4
Daily Number of Outpatient Clinics	≤ 20	177 (25.0)	53.6	9.0	8.5	28.8
	21-40	276 (38.9)	60.5	7.2	9.8	22.5
	41-60	165 (23.3)	60.6	1.8	13.9	23.6
	61-80	61 (8.6)	55.8	6.6	13.1	24.5
	≥ 81	30 (4.2)	60.0	6.7	6.7	26.7
Working Region	Aegean	27 (3.8)	52.1	14.8	7.4	25.9
	Marmara	76 (10.7)	57.9	7.9	10.5	23.7
	Black Sea	92 (13.0)	57.6	5.4	15.2	21.7
	Central Anatolia	75 (10.6)	62.7	1.3	14.7	21.3
	Eastern Anatolia	225 (31.8)	54.2	6.2	8.4	31.1
	Southeastern Anatolia	176 (24.9)	61.3	5.1	8.5	25.0
	Mediterranean	37 (5.2)	70.3	13.5	10.8	5.4

**TABLE 3:** Distribution of number of cigarettes smoked daily and smoking durations according to variables.

		Number	Number of Cigarettes Smoked Daily X±SS	Test Statistics	Smoking Duration (months) X±SS	Test Statistics
Age	≤ 28	191	18.6±16.1	p=0.599	81.1±43.4	p=0.0001
	≥ 29	110	19.5±10.2	t=0.526	129.1±69.6	t=-7.367
Gender	Male	265	19.2±14.9	p=0.335	100.1±59.6	p=0.232
	Female	36	16.8±7.0	t=0.965	87.6±54.5	t=1.198
Marital Status	Married	84	20.8±19.9	p=0.159	123.7±68.7	p=0.0001
	Single	215	18.2±11.2	t=-1.413	88.6±52.0	t=-4.767
Child Ownership	Yes	33	19.4±11.8	p=0.829	167.5±85.7	p=0.0001
	No	266	18.8±14.5	t=-0.216	89.7±48.7	t=-7.810
Hobbies	Yes	273	18.6±14.6	p=0.197	97.3±59.1	p=0.318
	No	21	22.8±10.9	t=-1.293	110.8±65.0	t=-0.999
Adequate Duration of Sleep	Yes	129	18.2±10.7	p=0.435	98.3±63.2	p=0.911
	No	171	19.5±16.4	t=-0.781	99.1±56.0	t=-0.111
Number of Affiliated Population	≤ 1000	2	18.5±2.1	p=0.458	90.0±8.4	
	1001-2000	30	15.4±6.5	f=0.911	78.5±45.5	
	2001-3000	88	17.7±9.8		105.6±62.2	p=0.180
	3001-4000	154	20.1±17.5		96.7±59.5	f=1.578
	≥ 4001	26	19.8±12.0		112.1±57.4	
Daily Number of Outpatient Clinics	≤ 20	82	18.0±9.6		94.7±60.3	
	21-40	109	19.0±19.6	p=0.664	97.8±55.1	p=0.500
	41-60	65	19.4±8.2	f=0.599	98.0±52.3	f=0.842
	61-80	27	17.7±10.9		89.7±56.0	
	≥ 81	12	24.5±18.0		124.6±85.7	
Working Region	Aegean	13	18.6±14.9		138.0±89.4	
	Marmara	32	16.9±6.8		127.6±70.8	
	Black Sea	39	16.6±8.5		84.9±51.1	
	Central Anatolia	28	18.8±7.2		106.3±52.2	
	Eastern Anatolia	103	20.6±13.7	p=0.302	93.6±59.2	p=0.006
	Southeastern Anatolia	68	20.2±21.4	f=1.207	93.1±48.2	f=3.112
	Mediterranean	11	10.8±6.2		82.9±59.6	

smoking durations was significant was the region in which they work. There was a statistically significant difference between the smoking periods of the physicians and the working regions and this difference was seen to originate from the Black Sea Region and the Marmara Region by multiple comparative analysis ( $p < 0.05$ ). On the other hand, no statistically significant difference was found between sufficient sleeping time, number of affiliated population, daily number of outpatient clinics and average smoking durations ( $p > 0.05$ ) (Table 3).

## DISCUSSION

Family physicians have great importance because they serve as the first contact for the patients who need health care services and they are the first service providers to provide information about preventive health services. Physicians who have the best knowledge about the sources of health problems and preventive health services are the specific groups of the society that are seen as role models for patients. In this research, it is thought that physicians who know the harmfulness of the ciga-



rette to health should be assessed about how they behave in their own life, and the smoking status of the physicians is investigated.

The average age of participating family physicians in the survey was found to be 28.5. It is seen that the average age of the physicians obtained in the research is low. The reason for this is the fact that the research covers the young physicians who participated in the orientation trainings given by the Ministry of Health for the physicians who newly started profession in the first years of their jobs. For this reason, the research findings are also important in terms of determining the smoking behaviors of young physicians.

In the research, the rate of smokers among physicians was found as 41.6%. These ratios were 32% in France, 38.6% in Greece and 40% in Bosnia and Herzegovina.<sup>11</sup>

While 41,6% of physicians were still smoking, 48,1% have never smoked and 10,4% quit smoking. In a research, conducted by Cirit et al., the ratio of smokers, non-smokers, and quitters were found to be 45.8%, 36.9% and 14.5%, respectively, in the physicians and similarly to our study.<sup>12</sup> In a research, conducted with more than 6,000 health care workers in Turkey, in 2011, the rate of smoking was found as 12.7% in specialist physicians and 23.9% in general practitioners.<sup>13</sup> In the study, it appears that the rate of smoking in the physicians is higher than that of Turkey's general population. The rate of smoking in physicians was also found to be higher than that of the country's general population in Egypt, Greece and Italy.<sup>14</sup> It is thought that the smoking rate of physicians is higher than the general population because of the fact that they have a difficult and stressful period during medical education and that the working conditions of the medical profession are also stressful and intense, and this plays a role in the high smoking rates. In addition, levels of satisfaction with work life, work effort and reward or encouragement imbalance can also affect smoking status.<sup>15</sup>

When the smoking rates of men and women in the general populations of different countries were analyzed, it is seen that the smoking rate of

males is mostly higher than that of females. This situation is similar for the physicians. In the present study, 46.7% of males and 22.9% of females stated that they smoke. In a research conducted by Yıldız et al. it was also found that the rate of smoking among male physicians (34.4%) was higher than that of female physicians (23.3%).<sup>16</sup> In a study conducted in Estonia, 24.9% of male physicians and 10.8% of female physicians were found to smoke.<sup>17</sup>

In the WHO's 2017 report on health statistics, it was determined in 2015, that while the smoking rate of 15 years and older men was 39.5%, it was 12.4% in women. While these ratios appear as 19.5%, 15.0% in America, 19.9%, 18.4% in England, 59.0%, 22.8% in Russia, and 32.4%, 28.3% in Germany in developed countries<sup>2</sup>; in many studies conducted in developing countries, the rate of male smoking was found to be higher than that of women.<sup>9,17-21</sup> In addition, in terms of smoking habits, different results were obtained in different occupational groups in the health sector. In studies 49.8% of the nurses, 19.0% of the medical faculty students, 19.2% of the students of the health school; in a study with hospital staff, 29.4% of the employees, and also in a study with nurses, 43.0% were found to be smokers.<sup>22-26</sup>

In the study, smokers were classified according to the number of cigarettes smoked daily as mildly smokers (1-9), moderate smokers (10-19), and as heavy smokers (20 or more).<sup>10</sup> In the study, average of daily cigarette of smokers were found to be 18, and the majority of physicians (59.8%) were found to be heavy smokers. The number of cigarettes smoked per day was found similar in terms of characteristics such as age, sex, marital status, sleeping status, working area, and the difference between the groups was not significant ( $p>0.05$ ). In a survey conducted by Turkish public health institution on the overall population in 2012, average of number of cigarettes smoked daily was found as 19.2, and the number of cigarettes smoked per day was found similar in different age groups, education levels, urban or rural settlements, and the difference was not significant.<sup>13</sup> In a study conducted with physicians in China, the average number of cigarettes smoked per day was found to be 10.<sup>27</sup> In a study

conducted with physicians in Dakar, it was reported that the physicians smoked more than 15 cigarettes a day.<sup>28</sup> The number of cigarettes smoked daily in the general population in the USA was 14.1 in 2016 and 25.0%, 39.0%, 28.4%, and 7.5% of the smokers indicated that they were smoking 1-9, 10-19, 20-29, and more than 30 cigarettes per day, respectively.<sup>29</sup>

The average age to start smoking of the surveyed physicians was found to be 20.6. In a study conducted in the general population in Turkey, the age to start smoking was found to be 17.1.<sup>13</sup> In a study conducted with 773 physicians by Yıldız et al. the average age of starting smoking was found to be 20.<sup>16</sup> In a study conducted in India, the age at which physicians start smoking was found to be 18.5.<sup>30</sup> It was pointed out that it is below 20 in Brazil, and 22.9 in Jordan.<sup>19,21</sup>

#### STUDY LIMITATION

The study results are limited to the evaluations of the participating family physicians. Since this study was carried out face to face, the number of questions were kept low and several socio-demographic characteristics of the participants were not asked. Future studies with more questions, including location of the physicians, may be conducted by other survey methods to gain more insight. In-depth interviews may be conducted with fewer physicians to be identified by stratified sampling according to geographical distribution.

#### CONCLUSION

While there is a downward trend in smoking rates in developed countries, significant progress has also been made in developing countries towards policies to reduce smoking and protection from its harmful effects.<sup>3</sup> While cigarette consumption in-

creased 43% during the period of 1990-2002 in Turkey, in accordance with the policies developed since the early 2000s significant progress has been recorded and a decrease in the rate of smoking has been recorded.<sup>31</sup> In developed countries, where the smoking rate is low, the rate of smoking among physicians is also low. The behaviors towards non-smoking of physicians who play an important role in the fight against smoking in the society, will play a supporting role in influencing the society in the positive direction and the policies in this direction. In addition to the efforts to prevent the use of tobacco and tobacco products for the public, the practice of preventing the use of tobacco and tobacco products for the physicians and other health professionals who can be ignored due to the fact that they have sufficient knowledge about the harms of smoking will strengthen the fight against smoking.

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#### Conflict of Interest

*No conflicts of interest between the authors and / or family members of the scientific and medical committee members or members of the potential conflicts of interest, counseling, expertise, working conditions, share holding and similar situations in any firm.*

#### Authorship Contributions

*All authors contributed equally while this study preparing.*



## REFERENCES

- World Health Organization (WHO). WHO Report on the Global Tobacco Epidemic. Geneva: WHO Press; 2008. p.328. (Accessed April 25, 2018). [Crossref]
- World Health Organization (WHO). World Health Statistics 2017: Monitoring health for the SDGs. Geneva: WHO; 2017. p.103. (Accessed April 15, 2018). [Crossref]
- World Health Organization (WHO). WHO Report on the Global Tobacco Epidemic, 2017 Monitoring Tobacco Use and Prevention Policies. Geneva: WHO; 2017. p.263. (Accessed April 15, 2018). [Crossref]
- Ergüder T. Tütün Kontrolü Çerçeve Sözleşmesi. Küresel Sağlık İçin, Küresel Eylem. Sağlık Bakanlığı Yayın No: 731. 1. Baskı. Ankara, Turkey: Klasmat Matbaacılık; 2008. p.16.
- Jakab M, Hawkins L, Loring B, Tello T, Ergüder T, Kontas M. Better non-communicable disease outcomes: challenges and opportunities for health systems. No. 2. Turkey Country Assessment. Denmark: WHO Regional Office for Europe; 2014. p.51. (Accessed March 20, 2018). [Crossref]
- T.C. Sağlık Bakanlığı. Sağlık İstatistikleri Yıllığı 2016. Sağlık Bakanlığı Yayın No: 1083. Ankara: 2017. p.50. (Accessed November 23, 2019). [Crossref]
- Huisman M, Kunst AE, Mackenbach JP. Inequalities in the prevalence of smoking in the European Union: comparing education and income. *Prev Med.* 2005;40(6):756-64. [Crossref] [PubMed]
- Wang Q, Shen JJ, Sotero M, Li CA, Hou Z. Income, occupation and education: are they related to smoking behaviors in China? *PLoS One.* 2018;13(2):e0192571. [Crossref] [PubMed] [PMC]
- Pärna K, Rahu K, Rahu M. Smoking habits and attitudes towards smoking among Estonian physicians. *Public Health.* 2005;119(5):390-9. [Crossref] [PubMed]
- Abdullah AS, Stillman FA, Yang L, Luo H, Zhang Z, Samet JM. Tobacco use and smoking cessation practices among physicians in developing countries: a literature review (1987-2010). *Int J Environ Res Public Health.* 2014;11(1):429-55. [Crossref] [PubMed] [PMC]
- Üçer H, Keten HS, Ersoy Ö, Çelik M, Sucaklı MH, Kahraman H. [Knowledge, attitudes and practices of family physicians about smoking cessation]. *Türk Aile Hek Derg.* 2014;18(2):58-62. [Crossref]
- Cirit M, Orman A, Ünlü M. [Smoking habits among physicians in Afyon]. *Turk Thorax J.* 2002;3(3):253-6.
- T.C. Sağlık Bakanlığı Türkiye Halk Sağlığı Kurumu. Küresel Yetişkin Tütün Araştırması Türkiye 2012. Tütün kullanımı. Tütün ürünü kullanım sıklığı. Günde içilen sigara sayısı ve sigara içmeye başlama. Sağlık Bakanlığı Yayın No: 948. Ankara, Türkiye: Anıl Matbaa Ltd Şti; 2014. p.30-45.
- Tessier JF, Nejari C, Bennani-Othmani M. Smoking in Mediterranean countries: Europe, North Africa and the Middle East. Result From a co-operative study. *Int J Tuberc Lung Dis.* 1999;3(10):927-37.
- Kouvonen A, Kivimäki M, Virtanen M, Pentti J, Vahtera J. Work stress, smoking status, and smoking intensity: an observational study of 46,190 employees. *J Epidemiol Community Health.* 2005;59(1):63-9. [Crossref] [PubMed] [PMC]
- Yıldız F, Başığit İ, Boyacı H, Barış SA. [Evaluation of smoking prevalence among physicians in Kocaeli]. *Respiratory Diseases.* 2010;21(3):83-6.
- Varona P, Bonet M, Fernandez N, Canizares M, Roche RG, Ibarra AM, et al. Use of medical counseling for the prevention and control of smoking in the municipality of old Havana. *J Urban Health.* 2005;82(1):71-5. [Crossref] [PMC]
- Didilescu C, Munteanu I. [The prevalence of smoking in physicians in Romania]. *Pneumologia.* 2000;49(2):91-4.
- Viegas CA, de Andrade AP, Silvestre Rda S. Characteristics of smoking among physicians in the Federal District of Brazil. *J Bras Pneumol.* 2007;33(1):76-80. [Crossref] [PubMed]
- Bello S, Soto M, Michalland S, Salinas J. [A national survey on smoking habit among health care workers in Chile]. *Rev Med Chil.* 2004;132(2):223-32. [Crossref] [PubMed]
- Perrin PC, Merrill RM, Lindsay GB. Patterns of smoking behavior among physicians in Yerevan, Armenia. *BMC Public Health.* 2006;6:139. [Crossref] [PubMed] [PMC]
- Sayan İ, Tekbaş ÖF, Göçgeldi E, Paslı E, Babayigit M. [Determination of smoking profiles in nurses who are working in a training hospital]. *Genel Tıp Derg.* 2009;19(1):9-15.
- Kutlu R, Çivi S, Şahinli AS. [The frequency of depression and smoking habit among the medical students]. *TAF Prev Med Bull.* 2009;8(6):489-96.
- Çilingir D, Hintistan S, Öztürk H. [Smoking habits and affecting factors of students of health school]. *Gümüşhane University Journal of Health Sciences.* 2012;1(2):69-85.
- Koç EM, Başer DA, Döner P, Yılmaz TE, Yılmaz T, Alsancak AD, et al. [Determining smoking level of hospital employees and the evaluation of the smoke-free air zone applications]. *JCEI.* 2005;6(1):33-9.
- Kesgin MT, Kublay G. [The evaluation of healthy problems caused from working conditions and life habits of nurses that working in a private hospital]. *Hacettepe University Faculty of Health Sciences Nursing Journal.* 2011;18(1):41-9.
- Li HZ, Fish D, Zhou X. Increase in cigarette smoking and decline of anti-smoking counseling among Chinese physicians: 1987-1996. *Health Promot Int.* 1999;14(2):123-31. [Crossref]
- Ndiaye M, Hane AA, Ndir M, Ba O, Diop-Dia D, Kandji M, et al. Smoking habits among physicians in Dakar. *Rev Pneumol Clin.* 2001;57(1 Pt 1):7-11.
- Jamal A, Phillips E, Gentzke AS, Homa DM, Babb SD, King BA, et al. Current cigarette smoking among adults-United States, 2016. *MMWR Morb Mortal Wkly Rep.* 2018;67(2):53-9. [Crossref] [PMC]
- Mohan S, Pradeepkumar AS, Thresia CU, Thankappan KR, Poston WS, Haddock CK, et al. Tobacco use among medical professionals in Kerala, India: the need for enhanced tobacco cessation and control efforts. *Addict Behav.* 2006;31(12):2313-8. [Crossref] [PubMed]
- Temiz D. [Factors affecting cigarette consumption on an application: the case of Turkey]. *Ekonomi Bilimleri Dergisi.* 2010;2(1).