

ORIGINAL ARTICLE

Smoking Prevalence among Healthcare Workers and the Effects of the COVID-19 Pandemic Process on the Frequency of Smoking in Turkey

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Main Points

- Addiction is an excessive need for an object for which impulses cannot be controlled.
- Healthcare professionals have a professional responsibility to advise and encourage smoking cessation, as they know all the risks associated with active and passive smoking.
- The use of tobacco and tobacco products may increase the vulnerability and severity of COVID-19. This information may influence smoking cessation-related beliefs in smokers, especially in healthcare workers.

Abstract

This cross-sectional study aims to evaluate the prevalence of smoking among healthcare workers and to investigate the anxiety level of healthcare professionals who have knowledge of COVID-19-related mortality and morbidity and are burdened by the anxiety and stress caused by the pandemic, and its effect on their smoking habits.

An online questionnaire was used to facilitate the participation of busy healthcare workers. The survey was shared on all health platforms and various social network groups (Facebook, WhatsApp, etc.) for doctors (specialists, physicians, residents, dentists), nurses, and all other healthcare workers. This questionnaire consisted of two tests, namely the Beck Anxiety Scale (BAS) and the Fagerström Nicotine Dependence Test (FNDT), and sociodemographic questions.

A total of 806 healthcare workers, of whom 74.2% were physicians, 8.8% were midwives/nurses, and 15.1% were assistant health workers, participated in the study. Among all the participants, 501 (62.1%) were non-smokers, 305 (37.9%) were smokers, and 8(1%) resumed smoking during the pandemic. In terms of the smoking habits of the participants during the pandemic period, 34% of the women who smoked had increased their amount of smoking. With respect to the smoking cessation rates of the participants, the physicians had quit or reduced smoking more than the other participants. The rate of smoking cessation in our study was 2.23%. Among those who quit, 88.8% were doctors, and the rate of quitting among them was 7.8%.

Keywords: Anxiety, doctors, health employees, smoking, smoking addiction, stress

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Received: March 5, 2021

Revision: April 13, 2021

Accepted: May 30, 2021

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Introduction

COVID-19 initially emerged in China in December 2019, and it has turned into a pandemic that has spread rapidly around the world, negatively affecting social life and the healthcare system. One of the occupational groups most affected by this pandemic is healthcare workers. Healthcare professionals

have been at the forefront of the fight against COVID-19. As they are at high risk, they isolate themselves from people and their families as much as possible, and have spent this time psychologically more alone and vulnerable. These conditions could lead to higher stress and anxiety among healthcare workers, especially the doctors, during the pandemic, compared with the other occupational

Cite this article as: Botan Yıldırım, B., Torun, Ş., & Akçay, M. Ş. (2021). Smoking prevalence among healthcare workers and the effects of the COVID-19 pandemic process on the frequency of smoking in Turkey. *Addicta: The Turkish Journal on Addictions*, 8(2), 94-101.

groups (Wang et al., 2021). The prevalence of depression, anxiety, and stress-related symptoms among Chinese healthcare workers during the COVID-19 pandemic was found to be 50.7%, 44.7%, and 73.4%, respectively (Lai et al., 2020). In the study by Elbay et al., (2020) 64% of 442 participants were found to have depression, 51.6% had anxiety, and 41.2% had stress (Elbay et al., 2020).

Stress and anxiety are known to increase the amount of smoking. On the other hand, the fear caused by the pandemic could reduce the amount of smoking. Studies have shown that people with a smoking history are 8 – 14 times more likely to contract COVID-19 and undergo disease progression (including death) than non-smokers (Liu et al., 2020). As a matter of fact, in a community-based study by Tetik et al., it was observed that the smoking cessation rate was 23.8% at the end of the first year in the smoking cessation clinic, while this rate increased to 31.1% after the pandemic. Thus, this study aimed to investigate the prevalence of smoking among healthcare workers and to evaluate the effect of the pandemic on the smoking habits of healthcare workers, especially doctors, who have knowledge of the COVID-19-related morbidity and mortality, and are therefore under stress.

Methods

Participants and Procedures

A cross-sectional study was designed to assess the anxiety level of all healthcare workers and its effects on smoking frequency during the COVID-19 outbreak. The term “all healthcare workers” includes all doctors, residents, dentists, midwives, nurses, health technicians, and cleaning staff. An online questionnaire was used to facilitate the participation of busy healthcare workers during this emergency period. A convenience sample population of healthcare professionals was invited to participate in this study. The survey was shared on all health platforms and various social network groups (Facebook, WhatsApp, etc). All the participants gave their informed consent at the beginning of the study, by answering a yes/no question confirming their willingness to participate in the study. Data were collected from May 28, 2020 to June 5, 2020. During this period, 806 healthcare workers participated in this study online. The data collection for this study began after approval by the Scientific Research Board of the Ministry of Health and the Başkent University Medical and Health Research Board (project number: KA20/172).

Survey Tools

Sociodemographic Data Form

The sociodemographic data on age, gender, marital status, unit of work and working conditions in the hospital, physicians’ specialization, and smoking status were collected using the online questionnaire. The participants were asked whether they had been diagnosed with COVID-19. With the onset of the pandemic, the frequency and amount of smoking among healthcare workers, especially physicians who smoke, were questioned. To determine the causes of anxiety and stress, four- and eight-item options were presented to the participants, for choice-based responses.

Beck Anxiety Scale (BAS)

This self-assessment scale is used to determine the frequency of anxiety symptoms experienced by individuals. It provides Likert-type (sum of degrees) measurement, with four options in each of

the 21 symptom categories. Each item gets a score between 0 and 3. If no option is chosen, the score is 0 points, a “light” option scores 1 point, a “medium” option scores 2 points, and a “serious” option scores 3 points. The scores are added up at the end of the test. A high score obtained from the scale indicates the severity of the anxiety experienced by the individual. Scores of 8 – 15 points are categorized as indicating mild anxiety, 16 – 25 points indicating moderate anxiety, and 26 – 63 points indicating severe anxiety (Beck et al., 1988).

Fagerström Nicotine Dependence Test (FNNDT)

This test consists of six questions. The lowest score that can be obtained from the FNNDT is 0, and the highest score is 10. The higher the score, the higher the addiction level. The degrees of dependency of the participants according to their FNNDT scores are very low (0 – 2 points), low (3 – 4 points), medium (5 – 6 points), high (7 – 8 points), and very high (9 – 10 points) (Heatherton et al., 1991).

Statistical Analysis

The categorical variables were presented as numbers and percentages (%), and the continuous variables were presented as the mean with standard deviation. The chi-square tests were used to search for associations between categorical crosstabs by the variables. For normal continuous variables, the distribution assumptions were checked by the Kolmogorov – Smirnov test. The appropriate statistical tests were used for the comparison of independent groups. The Cronbach’s alpha values were .750 for the six-item FNNDT and .922 for the 21-item BAS. A p value $<.05$ was considered statistically significant. The statistical analyses of the data were performed using the Statistical Package for Social Sciences, version 15.0 software (SPSS Inc., Chicago, IL, USA).

Results

A total of 806 healthcare workers, with 583 (72.3%) women and 223 (27.7%) men, participated in the survey. Among them, 73% were in the 30 – 49 age range, 74.2% were physicians, 8.8% were midwives/nurses, and 15.1% were assistant health workers. Among the physicians, 37% were in the surgical branch, 55.2% were internal physicians, and 7.8% were in basic medical sciences. Among the participants, 501 (62.1%) were non-smokers, 305 (37.9%) were smokers, and 8 (1%) resumed smoking during the pandemic period (Table 1).

No significant difference was found in the frequency of smoking between age groups. Men (48.6%) ($p < .001$) smoked more than women. The smoking frequency among physicians was 33.4%. A significant difference was observed between the physicians of the internal medicine and surgical branches in terms of smoking frequency, and surgeons were found to smoke more (44%) ($p = .003$). Seven of the eight healthcare workers who resumed smoking during the pandemic period worked in the pandemic hospital, and four were doctors (Table 2).

In terms of change in smoking habits during the pandemic period, 34% ($p = .004$) of the women who smoked increased their amount of smoking. Considering the smoking cessation rates of the participants, it can be seen that the physicians either quit or reduced smoking (Table 3).

Table 1.
Distribution of the Participants

Group	N	%
Age		
20 – 29	138	17.1
30 – 39	273	33.9
40 – 49	315	39.1
50 – 59	74	9.2
>59	6	0.7
Gender		
Male	223	27.7
Female	583	72.3
Profession		
Specialists	469	58.2
Physicians	89	11.0
Residency	40	5.0
Dentists	15	1.9
Nurses	71	8.8
OHW	122	15.1
Operative unit		
Surgical department	176	37
Medical department	261	55.2
Others	37	7.8
Institution		
Pandemic hospitals	486	60.3
Branch hospitals	131	16.3
Health centers (private health centers, FHC, FDHC, etc.)	113	14.0
Level 1 health centers (PHC, CHC, etc.)	29	3.6
Others	47	5.8
Smoking		
No	501	62.1
Yes	297	36.9
Resumed during the COVID-19 pandemic	8	1.0
Average daily number of cigarettes smoked		
<11	139	45.7
11 – 20	119	39.1
21 – 30	41	13.2
>30	6	2.0
Change in smoking habits		
Stopped	18	5.9
Reduced	61	19.9
No change	136	44.8
Increased	82	26.8
Resumed	8	2.6

Note: OHW = Other healthcare workers; FHC = family health centers; FDCH = family dental health centers; PHC = provincial health centers; CHC = community health centers.

In terms of their greatest concerns during the pandemic period, the fear of infecting their families or loved ones ranked first (56.2%), followed by the fear of being sick or dying and the fear of losing their job or income (40.3 – 2.7%). Among the eight reasons that could increase the stress of healthcare professionals, not knowing whether the patient was COVID-19-positive (31.8%) ranked first, followed by the idea that the pandemic would not end or would recur.

Regarding the addiction and anxiety levels of the participants, women ($p < .001$) had higher anxiety levels than men. The average BAS score was 10.26 ± 9.44 , indicating mild anxiety. The FNDT scores were directly proportional to the number of cigarettes smoked. Working in a pandemic hospital was affect anxiety levels. Surgeons had twice the level of anxiety compared to other specialists, but this was not statistically significant (Table 4).

In terms of smoking levels according to the branch of medicine, evaluations were made in the branches of chest diseases, infectious diseases, internal medicine, and cardiology, which were the most active during the pandemic. The overall smoking rate was 27.8%. The highest smoking rate was observed among physicians in internal medicine (34.5%) and the lowest rate among physicians dealing with infectious diseases (10.3%). During the pandemic period, 75% of those working in chest diseases and 35 – 50% of those from the three other branches changed their attitude toward smoking. Although the BAS scores were lower than those in the chest (9.40) and internal medicine (9.41) branches, they were twice as much as in the branches of cardiology (4.66) and infectious diseases (5.58). The lowest BAS score was observed in the cardiology branch (Table 5).

Discussion

COVID-19 is a respiratory disease characterized by the severe acute respiratory syndrome caused by the severe acute respiratory syndrome coronavirus-2. The main entry route of the virus is through the nose, mouth, upper respiratory tract, and less commonly the conjunctival mucosa. Tobacco and tobacco products are a well-known cause of cancer, cardiovascular disease, and chronic obstructive pulmonary disease-related premature deaths. They are also important risk factors that increase susceptibility to systemic infections and many respiratory tract infections. The use of tobacco and tobacco products increases the severity of respiratory tract diseases by causing mucosal inflammation in the upper airways and lungs, expressing inflammatory cytokines and tumor necrosis factor α , increasing the permeability of epithelial cells, mucus overproduction, and impairing mucociliary clearance (Brake et al., 2020). Many epidemiological studies have shown that active smoking and passive cigarette smoke exposure increase the risk of viral infection (Blake et al., 1988). According to studies on COVID-19, the virus enters the cell using angiotensin-converting enzyme receptors; and the levels of these receptor proteins increase in smokers, facilitating the entry of the virus into the cell (Brake et al., 2020). Although there are studies reporting that smoking is associated with the frequency and severity of the clinical condition in COVID-19 (Reddy et al., 2020; Zhang et al., 2020), or vice versa (Lippi & Henry, 2020; Rosatto et al., 2020), smoking is also associated with non-infectious diseases such as cardiovascular disease, cancer, chronic lung diseases, and diabetes. It should be considered that smoking may cause more risk on exposure.

Table 2.
Smoking and Related Parameters

Group	Smoking			Total	p (Did Not Resume During COVID-19 Pandemic)
	No N (%)	Yes N (%)	Resumed During the COVID-19 Pandemic N (%)		
Age					
20 – 29	86 (62.3)	49 (35.5)	3 (2.2)	138	.402
30 – 39	168 (61.5)	101 (37.0)	4 (1.5)	273	
40 – 49	193 (61.5)	120 (38.2)	1 (0.3)	314	
50 – 59	48 (64.9)	26 (35.1)	0 (0.0)	74	
>59	6 (100.0)	0 (0.0)	0 (0.0)	6	
Gender					
Male	114 (51.4)	104 (46.8)	4 (1.8)	222	<.001
Female	386 (66.2)	193 (33.1)	4 (0.7)	583	
Profession					
Doctors	408 (66.7)	200 (32.7)	4 (0.7)	612	<.001
Nurses	35 (49.3)	35 (49.3)	1 (1.4)	71	
OHW	57 (46.7)	62 (50.8)	3 (2.5)	122	
Operative unit					
Surgical department	99 (56.1)	75 (42.8)	2 (1.2)	176	.003
Medical department	188 (71.8)	72 (27.5)	2 (0.8)	262	
Others	30 (83.3)	6 (16.7)	0 (0.0)	36	
Institution					
Pandemic hospitals	299 (61.6)	179 (36.9)	7 (1.4)	485	.534
Branch hospitals	84 (64.1)	47 (35.9)	0 (0.0)	131	
Health centers (private health centers, FHC, FDHC, etc.)	69 (61.1)	44 (38.9)	0 (0.0)	113	
Level 1 health centers (PHC, CHC, etc.)	22 (75.9)	7 (24.1)	0 (0.0)	29	
Others	26 (55.3)	20 (42.6)	1 (2.1)	47	

OHW = Other healthcare workers; FHC = family health centers; FDHC = family dental health centers; PHC = provincial health centers; CHC = community health centers.

Table 3.
Gender and Position Distribution of the Participants' Change in Smoking Frequency

	Change in Smoking Frequency					Total	p
	Stopped, N (R%) (C%)	Reduced, N (R%) (C%)	No change, N (R%) (C%)	Increased, N (R%) (C%)	Resumed, N (R%) (C%)		
Gender							
Male	7 (6.4) (38.9)	24 (22.0) (39.3)	59 (54.1) (43.1)	15 (13.8) (18.3)	4 (3.7) (50.0)	109	.004
Female	11 (5.6) (61.1)	37 (18.8) (60.7)	78 (39.6) (56.9)	67 (34.0) (81.7)	4 (2.0) (50.0)	197	
Profession							
Doctors	16 (7.8) (88.8)	42 (20.5) (68.8)	87 (42.4) (31.75)	56 (27.3) (63.50)	4 (2.0) (50.0)	204	.039
Nurses	2 (5.6) (11.1)	11 (30.6) (18.0)	11 (30.6) (8.0)	11 (30.6) (13.4)	1 (2.8) (12.5)	36	
OHW	0 (0.0) (0.0)	8 (12.3) (13.1)	39 (60.0) (28.5)	15 (23.1) (18.3)	3 (2.6) (37.5)	65	

Note: R = row; C = column; OHW = other healthcare workers.

Table 4.
Addiction and Anxiety-Related Factors

Group	N	Addiction			N	Anxiety		
		Mean	±	SD		p	Mean	±
Age								
20 – 29	59	3.43	2.77	.895	138	11.90	10.56	.131
30 – 39	99	3.28	2.71		272	10.40	9.21	
40 – 49	118	3.52	2.89		314	9.39	9.09	
50 – 59	29	3.56	2.06		76	10.51	9.32	
>59	0	0			6	8.67	10.01	
Gender								
Male	111	3.41	2.68	.998	225	7.03	7.73	.001
Female	194	3.43	2.78		581	11.50	9.74	
Position								
Specialist	144	3.39	2.77	.446	468	9.30	8.50 (a)	.045
General practitioner	34	4.17	3.11		89	10.81	9.44 (a,b)	
Assistant doctor	19	2.38	2.02		40	9.90	9.22 (a,b)	
Dentist	9	2.50	2.95		15	9.07	8.00 (a,b)	
Nurse	33	3.36	2.58		72	13.14	10.89 (a,b)	
Other healthcare workers	66	3.55	2.69		121	12.16	11.52 (b)	
Operative Unit								
Surgery	74	3.67	2.83	.387	176	15.70	11.84	.717
Internal medicine	69	3.36	2.67		262	8.91	8.29	
Preclinic	7	4.00	2.30		37	7.73	7.15	
Institution								
Pandemic hospitals	178	3.44	2.66	.361	484	9.19	8.55 (a)	.008
Branch hospitals	45	3.04	2.88		133	12.57	11.66 (b)	
Health centers (private health centers, FHC, FDHC, etc.)	40	3.53	2.92		113	11.96	9.50 (b)	
Level 1 health centers (PHC, CHC, etc.)	7	2.43	2.63		29	11.66	11.50 (a,b)	
Others	21	4.29	2.79		47	9.89	8.22 (a,b)	
Smoking								
No	0			.134	501	9.78	9.01	.115
Yes	297	3.46	2.76		297	11.17	10.19	
Resumed during the COVID-19 pandemic	8	1.88	1.55		8	6.63	3.73	
Average daily number of cigarettes smoked								
<11	126	1.24	1.51 (a)	<.001	138	11.33	10.35	.805
11 – 20	119	4.38	1.92 (b)		122	10.24	8.64	
21 – 30	40	6.88	2.00 (c)		39	12.56	13.14	
>30	6	7.50	1.76 (c)		6	8.67	9.15	
Overall	305	3.43	2.74		806	10.26	9.44	

OHW = Other healthcare workers; FHC = family health centers; FDHC = family dental health centers; PHC = provincial health centers; CHC = community health centers.

Smoking continues to be one of the most important health problems in the world. According to the World Health Organization, smoking addiction is a situation that needs to be fought globally, and is one of the leading causes of preventable death.

Healthcare professionals have a professional responsibility to advise and encourage smoking cessation, as they know all the risks associated with active and passive smoking. As they are seen as role models, they need to set an example in quitting smoking,

Table 5.
Smoking Status and Anxiety Levels According to Branch

Branch	Frequency	Smokers and Their Rate, <i>n</i> (%)	Anxiety Level
Chest diseases	50	8 (27.6)	9.4 ± 10.07
Infectious diseases	12	3 (10.3)	5.58 ± 5.38
Internal medicine	24	10 (34.5)	9.41 ± 9.41
Cardiology	18	8 (27.6)	4.66 ± 4.89
Total	104	29 (27.8)	8.14 ± 8.89

supporting patients, and struggling with them to achieve this goal. However, despite accepting their roles, healthcare professionals continue to smoke.

In the current study, 37.9% of healthcare workers smoked. According to a meta-analysis that included 457,415 healthcare workers and 229 studies representing 63 countries, the prevalence of tobacco use among healthcare workers was 21%, and the gender distribution was 31% men and 17% women (Nilan et al., 2019). In our study, men (48.6%) smoked more than women (33.8%).

Among the participants, 33.4% of physicians, 50.7% of nurses, and 53.3% of assistant health personnel were smokers. This rate is similar to those in many studies conducted in Turkey (Altın et al., 2004; Koç et al., 2015; Yıldız et al., 2010). In a cross-sectional study conducted in Italy, 44% of 1082 Italian healthcare workers were smokers, with 33.9% of them being doctors, 49.8% nurses, 41.1% technicians, and 50.4% assistants (Ficarra et al., 2020). Similar results were obtained in our study: the smoking rates of assistant healthcare personnel and nurses were higher than those of physicians (Nilan et al., 2019). The main potential cause of the high prevalence of smoking among healthcare workers may be occupational stress, which is considered a key factor in addition to addiction, enjoyment, and peer influence.

In terms of the smoking habits of the participants during the pandemic period, women increased smoking (34%) ($p = .004$). Given the smoking cessation rates of the participants, physicians quit or reduced smoking more than the other participants. The rate of smoking cessation in our study was 2.23%. Among those who quit, 88.8% were doctors, and the rate of quitting among them was 7.8%, ($p = 0.0039$). The reason for the highest smoking cessation rate in the pandemic period may be that physicians have the highest awareness of COVID-19 disease among healthcare professionals. Conversely, no significant anxiety was observed in healthcare workers who did not make any changes in the number of cigarettes smoked. Considering the institutions where this group works, most of them work outside of the pandemic hospitals and work as assistant healthcare workers.

The anxiety level of healthcare workers who reduced or increased their smoking was greater than 10, which indicates mild anxiety. Among those who quit smoking ($n = 18$), a moderate level of anxiety was detected, and they were all pandemic hospital employees.

Among the participants, eight (1%) had quit smoking earlier and resumed during the pandemic period. Seven worked in a pandemic hospital, and four were doctors. Interestingly, these people were not in a state of anxiety. In a community-based study of 357 individuals by Tetik et al., the rate of smoking resumption in the pandemic period was found to be 12.8% (Tetik et al., 2020). In our study, the resumption rate was 1%. The reason for this lower rate compared with that of the community is that the anxiety that arose as a result of the high exposure of healthcare professionals working in pandemic hospitals among patients infected with COVID-19 and the experiences of these patients led to them quitting smoking.

Addiction is an excessive need for an object for which impulses cannot be controlled. Addiction to smoking has two factors: physical and psychological. Physical dependence is a physiological desire for the presence of a substance due to an adaptation to the substance used. Conversely, psychological addiction is the addiction of individuals to a substance to satisfy their needs because of their emotional or personality structure. The level of nicotine addiction is determined by the Fagerström Nicotine Addiction Test (FNNDT). In our study, all smokers were low-level dependents (mean FNNDT score: 3.43 ± 2.74). The number of cigarettes smoked and the FNNDT levels were directly proportional. A low FNNDT score can give healthcare workers a false sense of trust. Even if the addiction level is low, smoking cessation is important for future generations.

Besides the psychological effects of the pandemic on society, healthcare workers are exposed to additional stress due to their direct participation in the treatment of infected patients and the increased risk of transmission, the fear of infecting their families, and the concerns about their own health and the health of their loved ones. The increasing number of cases and deaths due to the disease, long-term heavy workload, and depletion of personal protection equipment cause emotional and physical wear over time. The most important stress factor encountered in our study was the uncertainty of whether the patient being examined was COVID-19-positive. In terms of the healthcare workers' greatest concern during the pandemic period, the fear of infecting their families or loved ones ranked first, followed by fear of getting sick or dying and fear of losing their job or income.

In the evaluation of the smoking rates among chest disease, cardiology, infectious disease, and internal medicine specialists, who play a more active role in the pandemic, the general smoking rate was found to be 27.8%, in these four branches alone. The highest proportion of smokers was found in the internal medicine branch (34.5%) and the lowest in the infectious diseases branch. During the pandemic period, 75% of those working in the chest diseases branch, and 35 – 50% of those in the other three branches changed their attitude toward smoking. The Beck Anxiety Scale (BAS) score was twice as high among respondents in the chest (9.40) and internal medicine (9.41) branches than in the cardiology (4.66) and infectious disease (5.58) branches, although it was lower than that in the general evaluation. Physicians working in the surgical branch generally experience more occupational stress. Accordingly, in our study, surgeons smoked more than the internal medicine physicians (44%) ($p = .003$).

The prevalence of depression, anxiety, and stress-related symptoms among Chinese healthcare workers during the COVID-19 pandemic was 50.7%, 44.7%, and 73.4%, respectively (Lai et al., 2020). In our study, anxiety was detected in 50.4% of healthcare workers, and the average BAS score was 10.26 ± 9.44 , indicating mild anxiety ($p = .045$). Nurses had the highest anxiety score, which was statistically significant ($p = .039$). Surgeons were more anxious than other physicians, though no statistical significance was found in this group. This may be due to the fact that nurses are in close contact with patients, and surgeons have less knowledge about the disease and its treatment.

Limitations

In interpreting the results, the limitations of the study should be considered. As the smoking status is self-reported, and as the respondents might have had difficulty declaring that they are smokers, our results may be subject to underreporting and recall bias. Thus, to reduce information bias, the questionnaire was conducted in a way that minimized the possibility of misclassification of most variables.

Directions/Suggestions for Future Research

Consequently, it is important to recommend and undertake effective interventions for the implementation of an adequate smoking cessation culture among healthcare professionals who are role models for patients and the community, given the high prevalence of smokers among healthcare professionals. The anxiety caused by the COVID-19 pandemic or other possible outbreaks may increase the rate of smoking, especially in healthcare workers working in pandemic hospitals. A number of studies should be carried out to reduce the anxiety of all healthcare professionals, especially physicians, working in these centers. The smoking rate among healthcare workers, who are considered role models should be decreased, to protect their health. Crisis can be turned into an opportunity, and the current time of crisis could be the perfect opportunity to quit smoking.

Further studies should analyze the methods to cope with the anxiety of healthcare workers in COVID-19 pandemic hospitals and during epidemics, and to prevent tobacco use.

Ethics Committee Approval: This study was approved by the Scientific Research Board of the Ministry of Health and the Başkent University Medical and Health Research Board (Project no. KA20/172).

Informed Consent: An informed consent was obtained from all participants prior to their inclusion in the study.

Peer Review: Externally peer-reviewed.

Authors Contribution: Research Study Design and Implementation - B.B.Y., S.T.; Data Collection and Analysis, Drafting the manuscript - B.B.Y., S.T., S.A.; Critical Review for Intellectual Content and Approval of the Final Version of the Manuscript - All authors.

Acknowledgments: We would like to thank all our colleagues for helping us in this work. We are grateful to all the members of the field medical staff for their selfless and heroic dedication to fight this pandemic despite the potential threat to their own lives and the lives of their families. The

authors would like to thank Scribendi (www.scribendi.com) for English language review.

Conflict of Interest: The authors have no conflicts of interest to declare.

Financial Disclosure: The authors declared that this study has received no financial support.

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