

Facing the Pandemic: Burnout in Physicians in Turkey

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Abstract

OBJECTIVE: During the COVID-19 pandemic, physicians have been working for long hours, with the fear of contracting the disease and infecting their families. Therefore, there are great concerns about the mental health of physicians. In this research, we aimed to reveal the factors that affect the burnout among physicians working during the pandemic.

MATERIAL AND METHODS: This is a cross-sectional study involving physicians working during the pandemic in health institutions that admit COVID-19 patients. A questionnaire form consisting of the “Sociodemographic Data Form” and the “Maslach Burnout Inventory (MBI)” was used. The questionnaire was sent to the contact numbers of physicians via the internet. The target population was reached through the communication groups of the Turkish Thoracic Society and other professional associations, the communication groups of health institutions, and also through personal correspondence. Burnout was evaluated with the scores of each participant from the 3 subscales of Emotional Exhaustion (EE), Depersonalization (DP), and Lack of Accomplishment (LA).

RESULTS: Of the 1177 physicians who participated in the survey, 893 answered the survey completely. Females comprised 56.70% ($n = 506$) of the respondents, and the mean age was 38.63 (± 11.65). The residents (41%, $n = 366$) and specialists (31%, $n = 277$) made up the majority of the physicians. Eighty-six percent ($n = 768$) of the physicians had difficulty in obtaining personal protective equipment (PPE). It was determined that 81.7% ($n = 730$) of the 893 physicians were actively working in pandemic units (outpatient clinics, emergencies, inpatient clinics, intensive care units), and burnout was significantly higher in these physicians ($P < .01$). After excluding other confounding factors by regression analysis, their Maslach total scores and EE scores were found to be significantly high ($P = .001$).

CONCLUSION: Working in pandemic units and facing difficulty in accessing PPE are identified as the most important risk factors for burnout. Hence, we can say that working with PPE, and with the managers' discretion and support, the physicians' burnout can be prevented.

KEYWORDS: Burnout, COVID-19, pandemic, physicians, PPE

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INTRODUCTION

The COVID-19 pandemic has caused a major health crisis worldwide, and Turkey has been one of the countries with the highest number of patients, facing the effects of the pandemic. Many hospitals were transformed into pandemic hospitals, and health services had to be restructured. The physicians were mobilized to provide treatment to all patients with and without COVID-19, in a generally uncertain environment, with tough and long working hours, and the intense fear of the possibility of getting infected and infecting their families. This situation is concerning, as the physical and mental health and the psychological adaptation of healthcare professionals are affected.

It is known that health professionals working during the pandemic have serious mental health problems.¹ During the previous epidemics of SARS, MERS, and H1N1, the mental health of the medical staff was shown to be seriously challenged. Being isolated, performing high-risk tasks, and coming into contact with infected people are the main factors of these traumas, and depression, psychosomatic symptoms, and post-traumatic stress disorders were seen in the later process.¹⁻³ During the COVID-19 pandemic, as during the previous outbreaks, the rapid spread of the disease, high mortality rates in the elderly patients, uncertainties in treatment, common quarantine measures, and intensive working conditions were predicted to lead to burnout syndrome.⁴⁻⁶ It is anticipated that the SARS-CoV-2 infection will lead to burnout syndrome in healthcare professionals, who have the highest contact with the patients and who are in the high-risk group for contracting the disease.⁷⁻⁹

Burnout syndrome has been evaluated in many studies among physicians and nurses in different specialties in the health-care sector. Although it varies according to countries and specialties, many previous studies have reported burnout rates as high as 24-60%. In burnout studies conducted with the Maslach Burnout Scale, emotional exhaustion (EE) scores are measured at high levels in a band ranging from 16 to 21 points. These studies have revealed that a sense of burnout is mostly associated with factors such as working hours, monthly income, a lack of appreciation from the superiors, and the status of support received from the family.¹⁰⁻¹⁶ In another study conducted among chest disease physicians in our country,

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it was stated that physicians were greatly affected by societal problems, and this situation was found to have a significant bearing on the dimension of emotional burnout.¹⁷

This current situation indicates that there is an urgent need to establish appropriate mental health services to address the risk of psychiatric morbidity among healthcare professionals. Therefore, in our article, we define the psychological burden created by the COVID-19 pandemic in a wide population of physicians, and discuss the potential triggers.

MATERIAL AND METHODS

Design

This research was designed as a cross-sectional study that aimed to reveal the burnout of the physicians working during the pandemic in health institutions (university hospitals, training and research hospitals, state hospitals, and private hospitals) that admit or treat COVID 19 patients to emergency services and pandemic outpatient clinics, inpatient clinics, or intensive care units. After obtaining approval from Dokuz Eylül University School of Medicine Non-Interventional Ethics Committee (2020/09-09; May 11, 2020), the electronic questionnaire forms prepared on the SurveyMonkey online survey tool were sent to the target population. The questionnaire was distributed through the communication groups of the Turkish Thoracic Society which has 6481 members, and through other professional organizations and communication groups of health institutions, and also through personal correspondence. The survey responses were collected between May 17, 2020 and May 22, 2020. Reminders were sent to physicians, to increase the participation rate.

Data Collection

In the survey form, the Sociodemographic Data Form and the Maslach Burnout Inventory (MBI) were used together to determine burnout levels and to determine the variables that cause burnout. The MBI was developed by Maslach and Jackson and translated into Turkish by Canan Ergin^{18,19} (MBI questions are given in Table 1). Each subscale in the MBI is scored between 0 and 4, as “Never,” “Several times a year,” “Several times a month,” “Several times a week,” or “Every day.” Accordingly, the scores that can be obtained from the sub-dimensions of the scale are 0-36 for EE; and range between 0 and 20 for Depersonalization (DP), and 0 and 32 for Lack Of Accomplishment (LA). The Sociodemographic

Table 1. Maslach Burnout Inventory

1. I feel drained from my job.
2. I feel spiritually exhausted at the end of the workday.
3. I feel fatigued when I wake up in the morning and have to face a new workday.
4. I can immediately understand how my patients feel about many things.
5. I feel that I treat some of my patients as if they were an object devoid of personality.
6. Dealing with people all day is really a source of tension for me.
7. I deal with my patients’ problems effectively.
8. I feel my work is consuming me.
9. I feel that my job positively affects other people’s lives.
10. Ever since I started this business, I have been tough with people.
11. I am afraid this job will harden me.
12. I feel very energetic.
13. I think my job disappointed me.
14. I feel that I am working above my strength in my job.
15. I do not care what happens to the people I meet for my job.
16. Working directly with people causes me a lot of stress.
17. I can easily provide a comfortable atmosphere for my patients.
18. After working closely with my patients, I feel joyful.
19. I have done many valuable things in this profession.
20. I feel so helpless.
21. In my job, I deal with emotional problems very calmly.
22. I feel the patients behaving as if I had created some of their problems.

Data Form consisted of 37 questions, including gender, age, relationship status, the number of night shift duty, and salary. Burnout was not evaluated with a single score. The scores of each participant from 3 subscales were evaluated separately. The survey was answered by a small group of physicians as a pre-test, and the comprehensibility and applicability of the questionnaire were developed using the feedback. The questionnaires of those who answered all of the questions were evaluated. Physicians were evaluated in 2 groups, as those working in pandemic units and those who were not.

Statistical Analysis

Statistical analysis was performed using the IBM Statistical Package for Social Sciences software (IBM SPSS Statistics Corp, Armonk, NY, USA) for Windows, Version 24.0. Its compatibility with normal distribution was checked by the Kolmogorov–Smirnov and the Shapiro–Wilk tests. The Mann–Whitney *U*-test and Pearson’s chi-square test were used to compare the mean values of the numerical variables of binary groups, and the Bonferroni-corrected Kruskal–Wallis test was used to compare numerical variables of more than 2 groups. Covariance analysis was used to measure the effects

MAIN POINTS

- Feeling insecure during the pandemic increases burnout. Providing personal protective equipment (PPE) can make physicians feel safe and decrease the chances of burnout.
- Physicians clearly state that they are exhausted because they are not rewarded for their work, either financially or morally. The managers of health care institutions are expected to support physicians, be open to communication, and be problem solvers.
- prevention of violence toward healthcare professionals, and provide an effective, safe, and satisfactory working environment for the physicians.

of more than 1 independent variable on its dependent variables. Three models were created by adding the confounding factors that were statistically shown to cause burnout to the linear regression analysis; Model 1: The demographic data, Model 2: Model 1 + work-related factors, and Model 3: Model 2 + psychological support situation, major depressive disorder, and generalized anxiety disorder. Assuming a 0.05 margin of error and 0.9 power, and a possible drop-out rate of 10%, a P -value $< .05$ was considered statistically significant.

RESULTS

The survey results of 893 physicians who fully answered the questionnaire, among the 1177 physicians who participated in the survey, were evaluated. The response rate was 76%. The demographic characteristics of the physicians are summarized in Table 2, and the demographic characteristics, work-related factors, and psychological factors among physicians who work in pandemic units and those who do not, are summarized in Table 3.

EE was more common in the women, the married, and those who had children ($P < .01$). Physicians who did not choose their profession willingly had higher levels of EE and DP ($P < .01$). Besides, the number of physicians who stated that they would

not choose the same profession again was quite high, at 33.2%, and EE and D were also higher ($P < .01$). Insufficient monthly income increased the burnout ($P < .01$), but aging, advancement in professional years, and having an academic title, reduced EE ($P < .01$). Not having enough time with the family, not being appreciated by the superiors, and lack of clarity in the job description, in addition to difficulty in the access and use of PPE and the high-risk contact with the COVID-19 patients, increased EE ($P < .01$). EE and DP were found to be significantly increased with the increase in the number of working hours and night shift duties per week ($P < .01$).

We found that burnout was significantly higher in physicians working in the pandemic units (outpatient clinics, emergencies, inpatient clinics, intensive care units) ($P < .01$), as shown in Figure 1. The confounding factors that were statistically shown to cause burnout were added into the linear regression analysis. As shown in Table 4, the Maslach total score was significantly higher in people working in the pandemic units when compared to those that were not, in all models ($\beta = 2.080$, 95% CI, 0.562-3.598, $P = .007$), and the EE score was also significantly higher ($\beta = 1.871$, 95% CI, 0.737-0.004, $P = .001$). However, we did not find any associations between playing an active role in the pandemic and the Maslach DP and LA scores in all models.

DISCUSSION

The healthcare professionals in our country worked for long and difficult hours, and were worried about failing to heal their patients. They were also afraid of being infected, and of infecting their families, since the beginning of the COVID-19 pandemic, as in the rest of the world.¹⁸ This research reveals the burnout in physicians caused by the COVID-19 pandemic in Turkey.

The physicians experienced intense stress due to the rapid spread of COVID-19, the lack of information about the disease, rapidly changing recommendations, uncertainties in treatment, and, unfortunately, deaths among healthcare professionals. Also, significant changes in daily social and family life, insufficient support, concerns about their health, fear of infecting family members, isolation, overwhelming workload, and insufficient payment for their work were the important risk factors found to increase the sense of burnout. During the pandemic, many physicians suffered from a decrease in monthly income despite their busy working hours. Similarly, in our study, EE was more common among the physicians with a greater number of working hours and those who thought that their monthly income was not sufficient. Moreover, the burnout dimension was found to be higher among physicians who were not appreciated by their superiors, and physicians whose job description was not clear. In previous studies among physicians in Turkey, the profession has been shown to be highly emotionally exhausting. We have observed that the effect of the COVID pandemic on this situation is to increase burnout.^{15,17}

In the COVID-19 pandemic, we observed that factors such as intense working conditions, difficulties in the use and access to PPE, and having to work in high-risk conditions without PPE, lead to EE in the physicians. Regardless of the field of

Table 2. General Demographic Features

Female, 56.70% ($n = 506$)
Age, mean (SD) 38.63 (± 11.65)
Married, 59.70% ($n = 533$)
Having at least one child, 49.9% ($n = 446$)
No support for childcare during the pandemic, 41% ($n = 183$)
Residents, 41% ($n = 366$)
Specialists, 31% ($n = 277$)
Using antidepressants, 14.67% ($n = 132$)
Smokers, 18.33% ($n = 165$)
At least one chronic disease, 42.3% ($n = 377$)
Hypertension, 13.89% ($n = 125$)
Those who did not choose the profession willingly, 95.11% ($n = 856$)
Those who will not choose the same profession again, 33.22% ($n = 299$)
Those who think their monthly income is low, 66.11% ($n = 595$)
Had difficulty in the usability to access PPE, 86.00% ($n = 768$)
Had to work without PPE, 16.78% ($n = 151$)
Had high-risk contact, 8.40% ($n = 75$)
Did not spend enough time with family, 53.33% ($n = 476$)
Away from: parents 64.56% ($n = 581$); children 17.78% ($n = 160$); spouses 11.67% ($n = 105$)
Those who had risk factors for COVID 19 in the family, 28.33 ($n = 255$)

SD, standart deviation; PPE, personal protective equipment; COVID-19, Coronavirus Disease 2019.

Table 3. Demographic Characteristics, Work-Related and Psychological Factors in Physicians Working and Not Working in Pandemic Units

	Physicians Working in Pandemic Units	Physicians Not Working in Pandemic Units	P
Age (years), mean (SD)	37.05 (10.75)	45.17 (12.80)	<.001
Female, n (%)	429 (58.8)	77 (47.2)	.007
Married, n (%)	416 (57.0)	117 (71.8)	<.001
Years in the profession, mean (SD)	15.64 (8.98)	21.85 (10.94)	<.001
Night-duty numbers per month, mean (SD)	4.98 (3.93)	2.34 (3.54)	<.001
Working hours per week, mean (SD)	38.36 (18.91)	33.68 (17.18)	.004
Those who thought their monthly income was low, n (%)	673 (92.2)	139 (85.3)	.005
Those who did not choose profession willingly, n (%)	38 (5.2)	6 (3.7)	.416
Those who would not choose the same profession again, n (%)	255 (34.9)	41 (25.2)	.016
Comorbidities, n (%)	286 (39.2)	92 (56.4)	<.001
Those who had difficulty in the usability to access PPE, n (%)	644 (88.2)	124 (76.1)	<.001
Those who had to work without PPE, n (%)	117 (16.0)	34 (20.9)	.137
Those who had high-risk contact with the patients diagnosed with COVID-19, n (%)	59 (8.1)	16 (9.8)	.471
Those who felt that PPE was not enough, n (%)	301 (41.2)	81 (49.7)	.048
Those who felt that they were not appreciated by their superiors, n (%)	297 (40.7)	59 (36.2)	.290
Those who felt that the job description was unclear, n (%)	382 (52.3)	66 (40.5)	.006
Those who had no “buddy” at work, n (%)	505 (69.2)	124 (76.1)	.081
Those who had problems with patients’ relatives, n (%)	331 (45.3)	48 (29.4)	<.001
Those who did not spend enough time with the family, n (%)	411 (56.3)	65 (39.9)	<.001
Those who were without spiritual support, n (%)	416 (57.0)	97 (59.5)	.556
Those who were without childcare support, n (%)	144 (42.6)	39 (35,5)	.185
Those who did not feel safe, n (%)	588 (80.5)	132 (81.0)	.895
Those who did not feel their families were safe, n (%)	550 (75.3)	121 (74.2)	.767
Those who had to be far away from their families, n (%)	479 (65.6)	77 (47.2)	<.001
Those who had risk factors for COVID 19 in the family, n (%)	195 (26.7)	59 (36.2)	.015
Those who were diagnosed with COVID-19, n (%)	316 (43.3)	69 (42.3)	.824

Physicians working in pandemic units: Pandemic outpatient clinics and emergency units, pandemic inpatient clinics, pandemic intensive care units, screening for COVID-19 contacts.

Physicians not working in pandemic units: Those who were working in their own departments, or continued administrative duties.

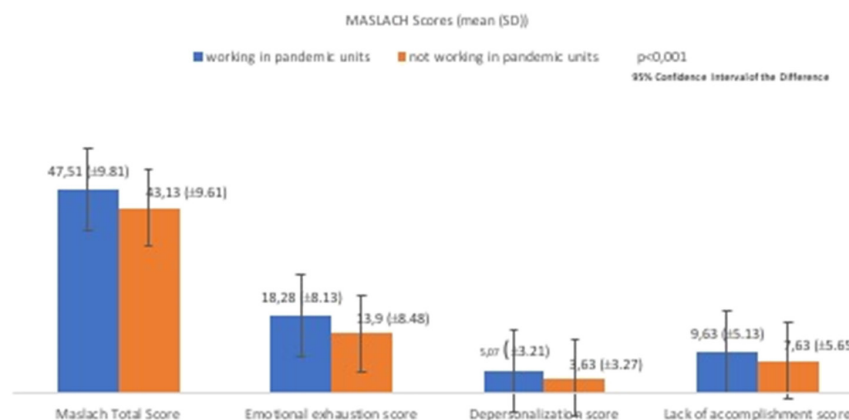


Figure 1. Maslach scores by status of active role in pandemic units.

Table 4. Linear Regression Analysis Between Status of Active Roles in Pandemic Units and Maslach Scores

Maslach Scores	Model 1			Model 2			Model 3					
	B	95.0% CI for B	P	B	95.0% CI for B	P	B	95.0% CI for B	P			
Total score	2.451	.844	4.057	.003	2.266	.724	3.809	.004	2.158	.619	3.697	.006
EE score	1.971	.736	3.205	.002	2.007	.833	3.181	.001	1.912	.752	3.071	.001
DP score	0.546	.028	1.064	.039	0.472	-.034	.978	.067	0.505	-.007	1.017	.053
LA score	0.270	-.547	1.087	.517	0.367	-.466	1.199	.388	0.427	-.405	1.258	.314

B, burnout; EE, emotional exhaustion; DP, depersonalization; LA, lack of accomplishment.

Model 1: Demographic data: Age, gender, marital status, willing choice of profession, re-choosing the profession.

Model 2: Model 1 + work-related data: Appreciation by supervisors, clarity in job definition, monthly income adequacy, weekly working hours, number of night shifts, difficulty in the usability to access PPE, high-risk contact with COVID-19 patients, having to work without PPE, PPE sufficiency, living with people with risk factors in terms of COVID-19, working with a “buddy” (matching an experienced worker with an inexperienced employee), problems in communication with patients’ relatives.

Model 3: Model 2 + psychological data: Psychological support, a person in the close environment who is diagnosed with COVID-19, feeling unsafe, feeling the family is unsafe, having to be far away from family, spending time with the family, presence of a complaint although there is no diagnosis of COVID-19, presence of comorbidity, major depressive disorder, generalized anxiety disorder.

the pandemic, we have seen that the most important factor in exhaustion is the lack of access to personal protective equipment (PPE). We observed from our research that physicians who were able to obtain PPE more easily during the pandemic had less burnout.

The pandemic conditions necessitated all the physicians to take an active role. In Turkey, many physicians, including a greater number of residents and specialists from internal medicine and the basic sciences, including surgeons, worked at the forefront of the pandemic. The stress caused by concerns about the risk of infection also affects many healthcare professionals who do not have expertise in infectious diseases. Although healthcare professionals who have professional knowledge of infectious diseases know that the risk of transmission of the disease is low as long as they are careful in their contact with body fluids, they appear to have serious concerns during the pandemic. Although many people infected with COVID-19 disease are infectious at an early stage, they show mild or no symptoms.¹⁹ When the patients attend hospital for their various diseases, the disease creates a significant risk of exposure for healthcare professionals through droplets or surfaces. During the SARS outbreak, depression, anxiety, fear, and frustration have been reported in those working in the SARS units and hospitals. Healthcare professionals who were quarantined at a hospital in Beijing, working in high-risk clinical settings such as SARS units, or whose families or friends were infected with SARS, had significantly more post-traumatic stress symptoms than those without this experience.^{5,20} In our study, we found that physicians working in the field during the pandemic experienced more burnout, and even among the physicians who posed a risk for COVID-19 in the person they lived with, and those who were diagnosed with COVID-19.

It was also observed that the greatest concern of the physicians working in the pandemic units was to avoid spreading the disease to their families, and therefore remained away from their families. It was also shown in previous studies that spending time with the family decreased the sense of burnout.^{16,21} This compulsory separation during the COVID-19 pandemic has increased physicians’ sense of burnout, in their effort to keep their families safe. The physicians working in hospitals

treating patients diagnosed with COVID-19 pneumonia have had the fear of contracting the disease themselves and transmitting it to their families. In our study, it was found that physicians who were themselves diagnosed with COVID-19 had a family member or colleague diagnosed with COVID-19 had higher EE scores. In our research, it was observed that the sense of burnout during the COVID-19 outbreak was higher in women, but their DP scores were lower. Besides, it was observed that the perception of personal success in women is higher than in men. The younger professionals experienced more EE. We also observed that individuals working in an academic institution or having an academic title had reduced chances of emotional exhaustion and burnout.²² A survey conducted with 994 doctors and nurses in Wuhan between January 2020 and February 4, 2020 revealed severe psychological symptoms, especially among young female employees who were more psychologically affected in the pandemic. The results revealed that 18-57% of healthcare professionals experience emotional distress during the pandemic, similar to previous epidemic studies.²³⁻²⁵

In a meta-analysis reviewing 59 viral outbreak studies such as the SARS outbreak and the COVID-19 outbreak, multiple risk factors were identified, as well as factors that could protect healthcare professionals from facing psychiatric problems.²⁶ The most consistent risk factor was the increased contact with infected patients. Other predictors have been previously mentioned, such as psychiatric symptoms/disorders and/or general medical illness history, a long time in quarantine, the lack of organizational support, and the perceived social stigma towards healthcare professionals.

A WHO report stated that in the long term, it is necessary to significantly increase our knowledge of mental health risk factors among healthcare professionals and to plan preventive strategies for such risks in the future, to protect doctors from fatigue.²⁷ In addition, the “Guide to Protect Healthcare Professionals from Burnout in COVID-19 Outbreak” was prepared by the “Turkey Psychiatric Association for Psychological Trauma and Disaster Studies Unit.” According to these recommendations, awareness should be raised at the personal and institutional level to protect healthcare professionals from burnout; measures should be organized to facilitate access

to PPE, and infection control should be ensured. Healthcare professionals should be motivated, so that they can perform their duties as they go through this process, without any damage to their mental health.²⁸

CONCLUSION

Among the protective factors for psychiatric problems in healthcare professionals, accessing PPE is the most consistent factor that reduces the risk of negative psychological consequences. The other consistent protective factors include having supportive peers, having access to psychiatric interventions, and trusting the institution's infection control measures, as well as open communication with the supervisors, and the ability to devote enough time to themselves. The fact is that physicians work more confidently when they can easily access PPE, and achieve a better quality and volume of their duties. The physicians who were appreciated by their superiors worked with less burnout in the pandemic.

In this research, evaluations were made between physicians working in pandemic units and those who were not. It was observed from the results that working in pandemic units increased burnout. As it was shown in our analyses, the mental health status of participants did not have an effect on burnout. Thus, the results of this study make it possible to define working in the pandemic units as the most important risk factor for burnout among physicians.

Therefore, we need immediate implementation of interventions to protect mental health in physicians exposed to SARS-CoV-2, and to strengthen preventive measures and response strategies by training in mental aid and crisis management. Health officials should take measures to prevent burnout and protect the mental health of healthcare professionals, and physicians should not be given opportunity to regret their choice of job.

In this research, we chose the Maslach Burnout Scale to assess burnout. This scale evaluates emotional exhaustion (EE), depersonalization (D), and the perception of personal success. There were no valid and reliable limit values in the Turkish translation of the Maslach burnout survey. Therefore, burnout levels could not be grouped as "low," "medium," or "high" in our study, and the absence of a clear comment on the burnout level of the attending physicians is one of the biggest limitations of this study. Despite this, we can say that there is more EE among physicians who worked in the pandemic units, and also, despite the high level of EE, it was observed that DP did not develop. It shows that physicians continue to treat their patients with compassion, despite all the risks, fear, and EE. Unfortunately, we know that long-term exposures have more impact on the mental health of healthcare professionals than short-term exposures. As long as the pandemic continues, and unless measures are taken to prevent burnout, burnout will continue to increase among physicians.

Ethics Committee Approval: The study protocol was approved by Dokuz Eylül University School of Medicine Non-Interventional Ethics Committee (2020/09-09; May 11, 2020).

Informed Consent: Verbal and Written informed consent was obtained from the patients who agreed to take part in the study.

Peer Review: Externally peer-reviewed.

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