

## JOB SATISFACTION AND FEAR OF COVID-19 AMONG EMERGENCY SERVICE PHYSICIANS IN PANDEMIC ERA

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### ABSTRACT

**Introduction:** An important part of the employees who are fighting against Covid-19 on the front line are emergency physicians (EP).

**Material and methods:** In our study, we evaluated the fear of Covid-19 and job satisfaction of adult and pediatric emergency physicians in the western part of Turkey from their perspective at the beginning and in the fourth month of the pandemic. It was observed that the satisfaction of the physicians with the working conditions in the 4th month of the pandemic was higher than it was before the pandemic.

**Results:** Physicians' scores regarding fear of Covid-19 at the beginning of the pandemic were higher than in the fourth month of the pandemic. Being female, having children, and age was determined as factors that increased the fear of Covid-19.

**Conclusions:** Despite the high fear of Covid-19, the reason for the high satisfaction because of the arrangements made at the beginning of the pandemic stemmed from the heavy workload normal conditions that before the pandemic. The high rate of emergency service use by patients who do not need emergency service resources is the most important reason for these heavy working conditions. We think that studies should be conducted to increase the awareness of patients on this issue, necessary sanctions should be imposed, working conditions of the emergency services should be improved, and working in these services should be made attractive. Arrangements to be made considering the data about the satisfaction of the physicians will help them feel safe and reduce their fear of Covid-19 and other diseases.

**Keywords:** COVID-19, Emergency medicine physicians, Personal satisfaction, Fear.

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### Introduction

Covid-19, which first started to spread in China in late December 2019, turned into a pandemic that spread worldwide<sup>(1,2)</sup>. A significant portion of the employees fighting on the front line is EPs. Some studies reported that healthcare professionals experienced high levels of anxiety, especially at the beginning of the pandemic, due to the high level of uncertainty about the characteristics of the virus, its transmission routes, and the treatment and follow-up of patients<sup>(3)</sup>. In addition to these, factors such as adaptation problems related to changes in the working conditions of physicians, the risk of being infected and infecting their families, separation from

their families, and the pain of losing their colleagues made the situation more even more difficult<sup>(4,5)</sup>.

Our country is one of the countries with the highest number of emergency presentations compared to its population<sup>(6)</sup>. Emergency specialists, general practitioners, and emergency assistants work in 24-hour shifts in adult emergency departments (ED), while pediatric emergency specialists, pediatricians, and pediatric residents work in 8- and 16-hour shifts in pediatric emergency departments. According to the laws of our country, they have to complete 40 hours of work per week. Emergency physicians (excluding assistants) are paid additional fees for the number of patients they give care to and for working over 40 hours a week.

Therefore, many physicians voluntarily work on more shifts than normal increase their income. At the beginning of the pandemic, some restrictions were put into practice throughout the country, and some arrangements were made in the above-mentioned working conditions in the ED. A flexible working practice was introduced. The working time of 40 hours per week was reduced, and a fixed payment system that is not based on the performance was put into practice. Thus, physicians did not need to work on shifts too long to earn additional income. After the emergence of the first Covid-19 case on March 11, 2020, in Turkey, the Ministry of Health started using social communication networks and the media to raise awareness of the society about the Covid-19 pandemic and encouraged isolation at home. Also, people were afraid of contracting Covid-19 of emergency services. Due to these reasons, unnecessary patient admissions to the ED decreased<sup>(7)</sup>. Thus, EPs began serving patients who actually needed the emergency resources.

Revealing the reflection of the new arrangements made due to the pandemic on EPs will help better understand these physicians who are already working under difficult conditions and even prevent possible disappointment due to new regulations in working life. For these reasons, we evaluated the working conditions and fear of Covid-19 in the first four months of the pandemic from the perspective of adult and pediatric EPs working in the western part of Turkey.

## Material and methods

### *Participants*

The participants consisted of physicians working in the adult and pediatric emergency services of five large public hospitals in İzmir, which is the third-largest city in the west of Turkey. The questionnaire, consisting of a total of 21 items, was sent to the physicians via Google Forms with a letter describing the purpose of the research. The participants were not asked to supply personal information while answering the questionnaire.

### *Instrumentation*

The questionnaire consisted of questions about socio-demographic characteristics, job satisfaction, social life, and the fear of the Covid-19 scale.

The first part of the questionnaire consisted of socio-demographic questions. The second part consisted of the working conditions of EPs, such as

working on shifts, the patient intensity on shifts, the suitability of the patients for treatment in the ED, general satisfaction with working conditions, and sparing time for themselves and their families. The physicians were asked to rate the questions in the second part on a five-point Likert-type scale (1 min; 5 max). The last part of the questionnaire included the fear of the Covid-19 scale. This scale, which was developed by Ahorsu et al. (2020) (Cronbach's alpha 0.82) and it was adapted to Turkish by Satici et al. (2020) (Cronbach alpha 0.85), consisted of a total of 7 items. The scores that can be obtained from the scale range between 7 and 35. Higher total scores from the scale show higher fear of Covid-19. In this study, Cronbach's alpha value of the scale was found to be 0.923. Physicians were asked to answer questions about working life and social life separately for the beginning of the Covid-19 pandemic (March 2020 in Turkey) and for the fourth month (July 2020).

### *Statistical analyses*

Descriptive statistics were used for the participant's socio-demographic characteristics, satisfaction scores, and the fear of Covid-19 scale scores. Chi-square test and Paired-sample t-test were used for the difference between the scores obtained at the beginning and in the 4th month of the pandemic. The study data were analyzed on the IBM SPSS Statistics 24 software package.

### *Ethical approval*

This study was approved by Dokuz Eylul University Faculty of Medicine Ethics Committee of Clinical Research (Approval number and ID: 2020/24-26-5603-GOA). The study protocol was implemented according to the Declaration of Helsinki.

## Results

The distribution of socio-demographic and other descriptive variables: There was no significant difference between gender and participation in the survey ( $\chi^2 = 2.27$ ,  $p = 0.142$ ). It was observed that 58.4% of the physicians were married and that 45.6% had one or more children. Among the sources of information about Covid-19, the website of the Ministry of Health and official articles were used most frequently, which was followed by PubMed and Up-to-date databases, and the physicians' WhatsApp and Telegram groups. All the physicians stated that they used more than one source of information.

The main characteristics of the participants are presented in Table 1.

		% (n)
Gender	Female	51.2 (64)
	Male	48.8 (61)
Field	Adult emergency physician (assistant)	31.2 (39)
	Adult emergency specialist	22.4 (28)
	Pediatrician	19.2 (24)
	Pediatric emergency specialist	10.4 (13)
	Pediatric assistant	9.6 (12)
	General practitioner	7.2 (9)
Marital status	Married	58.4 (73)
	Other (single + divorced)	41.6 (52)
Experience of a pandemic	Yes	15.2 (19)
	No	84.8 (106)

**Table 1:** The main characteristics of 125 participants.

*Change and satisfaction with working conditions:* In all topics, it was observed that the satisfaction of the physicians in the 4th month of the pandemic was higher than it was before the pandemic (paired sample t-test) (Table 2). No significant difference was found between satisfaction scores of the physicians in terms of gender (independent sample t-test).

Satisfaction	Observed Mean (sSD Deviation)			t	p <sup>r</sup>
	Pandemic beginning (mean±SD)	Pandemic 4th month (mean±SD)			
Patient density					
Female	(4.50 ±0.56)	(2.88 ±0.77)	13.667	0.0001	
Male	(4.30 ±0.76)	(2.92 ±1.04)	7.595	0.0001	
Total	(4.40 ±0.67)	(2.90 ±0.90)	13.986	0.0001	
Patients suitable for emergency service					
Female	2.36 (±1.21)	3.58 (±0.73)	-5.851	0.0001	
Male	2.26 (±1.08)	3.30 (±0.98)	-5.036	0.0001	
Total	2.31 (±1.15)	3.44 (±0.87)	-7.731	0.0001	
Frequency of shifts					
Female	3.66 (±1.16)	3.03 (±0.87)	4.115	0.0001	
Male	3.90 (±0.94)	2.84 (±0.99)	7.720	0.0001	
Total	3.78 (±0.06)	2.94 (±0.93)	8.049	0.0001	
Satisfaction with working conditions in general					
Female	2.42 (±1.11)	2.92 (±0.76)	-3.113	0.003	
Male	2.10 (±1.01)	3.11 (±1.07)	-6.244	0.0001	
Total	2.26 (±1.07)	3.02 (±0.92)	-6.471	0.0001	
Sparing time for the family and themselves					
Female	2.36 (±0.43)	2.94 (±0.99)	-4.064	0.0001	
Male	2.41 (±1.10)	3.03 (±1.13)	-3.074	0.003	
Total	2.38 (±0.97)	2.98 (±1.06)	-4.904	0.0001	

**Table 2:** Comparison of satisfaction with working conditions before and in the fourth month of the pandemic (1 min; 5 max).

*The Fear of Covid-19:* When we compared the beginning of the pandemic with the fourth month in terms of physicians' fears, it was found that these fears decreased over time (paired sample t-test: Pandemic March 2020 =19.18±7.17; Pandemic July 2020=15.88±6.78; t: 5.897; p<0.0001). Additionally, when the total scores obtained from the fear of Covid-19 scale were compared, the total score of the females at the beginning of the pandemic (21.39±7.03) was significantly higher than the score of the males (16.85±6.61) (Independent sample t-test; t: 3.71; p: 0.0001). At the end of the fourth month, this difference between the total scores of females (16.95±6.02) and males (14.75±7.38) from

the Covid-19 scale was closed (Independent sample t-test; t: 1.83; p: 0.070).

The rate of those who changed their place of stay to avoid infecting their families with Covid-19 during the pandemic was 22.4%.

There was no significant relationship between marital status and the fear of Covid-19 both at the beginning and at the end of the fourth month (tMarch 20: -0.374; pMarch 20: 0.709; tJuly 20: -0.849; pJuly20: 0.398). When the fear of Covid-19 was examined between those with and without children, there was no difference between the two groups at the beginning, but at the end of the fourth month, it was seen that the fear of those with children was higher (tMarch 20: 1.432; pMarch 20: 0.155; tJuly 20: 3.040; pJuly 20: 0.003).

While there was no significant correlation between the fear of Covid-19 scores and age at the beginning of the pandemic, the fear score in July showed a weak positive correlation with age (rMarch 20: 0.116; pMarch 20: 0.199; rJuly 20: 0.600; pMarch20: 0.0001). Additionally, it was observed that those who had high fear scores before the pandemic also had high scores in the 4th month of the pandemic.

## Discussion

The study focused on both the psychology of EPs in terms of fear of Covid-19 and their satisfaction with changes in working conditions in five public hospitals. It included the data of 125 physicians. Our response rate was 85.0% (125/147).

Emergency physicians need to prepare themselves so that the pandemic can be taken under control. We determined that they used the website of the Ministry of Health and articles more frequently. In similar studies, it was found that in-service training was used most frequently as an information source, which was followed by WHO and the Ministry of Health guidelines<sup>(8,9)</sup>.

*Satisfaction:* Our study found that EPs' satisfaction with their working conditions increased in the 4th month of the pandemic compared to the pre-Covid-19 period. This may be due to the decrease in working hours and patient density. In the study of Tuna and Özdin, which included 406 physicians from various health institutions in Turkey in 2021, the physicians reported that their working hours decreased by 67% (due to flexible working hours<sup>(10)</sup>). Some studies reported the following issues as the reasons for the decrease in patient density:

presentation of patients who truly needed emergency resources, and decreased ED applications due to the fear of Covid-19 transmission even though patients needed emergency care. For example, some studies conducted in the USA during the early pandemic period reported that the total number of adult and pediatric emergency visits was 42-50% lower than it was in the same period of the previous year<sup>(11-14)</sup>. In a study examining the presentations to a university emergency service in Istanbul simultaneously, it was reported that they decreased at a similar rate<sup>(7)</sup>. Additionally, physicians from other branches supported the EPs in this period. This support may have been due to both faster consultations and the fact that physicians from other branches provided care to outpatients who presented to the ED due to Covid-19. One of the factors affecting satisfaction is the reduction in the number of shifts for various reasons and physicians' devotion of more time to themselves.

Our result regarding the increase in the level of satisfaction is different from the results of the studies on the working conditions of the physicians working on the front lines during the pandemic period in various countries of the world because more patients are treated in EDs in our country every year<sup>(6,15,16)</sup>. Additionally, the rates of patients who do not actually need emergency service resources are high. Moreover, the working hours of healthcare professionals in our country are above the world average<sup>(17)</sup>. Despite the high levels of fear and anxiety, the regulations made during the pandemic period provided partial relief in the working conditions of EPs. However, the continuation of this flexibility in economic and working conditions could not be achieved in the following months. Both the continuation of routine patient care and the demand for the diagnosis, follow-up and treatment of Covid-19 patients, in addition to the decrease in the fear of Covid-19 and the adoption of the pandemic, increased the patient density.

**Fear:** The mean score from the overall fear of the Covid-19 scale in the study group was 19.18 at the beginning of March 2020 and 15.88 in the fourth month. It was found to be 19.44 in the study conducted by Bakioglu in public in Turkey in March<sup>(18)</sup>. It was reported as 19.92<sup>(19)</sup> in a study conducted by nurses at the beginning of the pandemic in the Philippines.

In the study group, it was observed that the fear of Covid-19 decreased over time compared to the onset of the pandemic. The fear was higher at the beginning of the pandemic, and this may be due to

reasons such as the high risk of transmission while performing emergency medical procedures, the lack of personal protective equipment, problems related to triage and clean-dirty area organization in the ED, and uncertainties about diagnosis and treatment<sup>(20,21)</sup>. Increased experience in diagnosis and treatment of this disease may explain the decrease in the fear of Covid-19<sup>(19)</sup>. In a cohort study of nurses in Portugal, it was determined that depression, anxiety, and stress decreased over time. It was emphasized that variables such as having enough personal protective equipment, time, and expertise are decisive in this decrease<sup>(22)</sup>. It was determined that the fear of Covid-19 was higher in women, elderly people, and in the presence of children. Being a female is known as a factor that increases the level of fear. For example, in a study conducted in Cuba, it was shown that females felt more fear than males in the pandemic<sup>(23)</sup>. In another study conducted in Peru, the fear of Covid-19 score was found to be higher in females and the elderly compared to others<sup>(24)</sup>.

Healthcare workers had to be isolated from their families in order not to transmit the virus to their loved ones. Ehrlich et al. mentioned a similar situation in their study, emphasizing that the participants isolated themselves so that they would not infect their families with Covid-19 and feel guilty about it<sup>(25)</sup>. In a mixed-method study among physicians in Pakistan, the participants stated that they most frequently experienced "fear of infecting their families" with Covid-19<sup>(26)</sup>.

### ***Limitation of the study***

Due to the nature of survey studies, the memory factor constitutes a limitation. Another limitation of the study is that only the onset of the pandemic was compared with the situation in the fourth month of the pandemic. Longitudinal studies should be planned to determine how the prolongation of the process and the changing conditions affect the study group.

It is predicted that pandemics will recur in our world in the future. In disaster situations such as pandemics, the organization of the entire hospital, especially the emergency services, and the cooperation of the ED with other clinics are critical for public health. During this organization, taking the necessary measures to make the physicians feel safe and secure, sharing the workload, arranging the working hours, and providing appropriate financial support are vital arrangements in terms of work motivation and reducing hospital and domestic stress. Considering our country in particular, the



overtime hours of physicians in emergency services and the number of patients per physician during this period are high. Despite the high fear of Covid-19, the reason for the high satisfaction because of the arrangements made at the beginning of the pandemic stemmed from the heavy workload normal conditions that before the pandemic. The high rate of emergency service use by patients who do not need emergency service resources is the most important reason for these heavy working conditions. We think that studies should be conducted to increase the awareness of patients about this issue, necessary sanctions should be imposed, the working conditions of the emergency services should be improved, and conditions in these services should be made attractive.

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