

# The effect of the covid-19 pandemic on the psychological status of 112 emergency health services personnel

## Covid-19 pandemisinin 112 acil sağlık hizmetleri personellerinin psikolojik durumuna etkisi

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### ABSTRACT

**Introduction and Objectives:** The aim of this study is to examine the effects of the ongoing Covid-19 pandemic on the mental health of emergency health services personnel, as well as to determine the risk factors and protective factors associated with these effects. **Methods:** The research was planned as a descriptive and cross-sectional study. The population of the research consisted of 295 personnel working in Elazığ 112 Emergency Health Services. In the process of data collection, the data was collected with a questionnaire prepared by the researchers by scanning the literature, questioning the socio-demographic data of the participants and the Depression Anxiety Stress Scale-21(DASS-21). **Results:** When the distribution of the participants by gender is analyzed, the rate of women is 64.1% and the rate of men is 35.9%. 34.6% of the participants are single and 65.4% of them are married. When the relationship between the diagnosis of Covid-19 infection and anxiety is examined, the rate of those who are diagnosed with infection is 27.6% in those who do not have anxiety, and the rate of those who are diagnosed with Covid-19 in those with anxiety is 40.7%. **Conclusion:** In the present study on emergency health services personnel, one out of every three emergency health services personnel has different levels of depression, anxiety, and stress associated with the Covid-19 pandemic. The protection of the psychological state and mental health of emergency health services personnel who play an active role during the pandemic period is very important for the functioning of the health system. Health services personnel should be informed about the protection of mental health, and adequate support should be provided.

### ÖZ

**Giriş ve Amaç:** Bu çalışmanın amacı, devam eden Covid-19 pandemisinin acil sağlık hizmetleri çalışanlarının ruh sağlığı üzerine etkilerinin incelenmesinin yanı sıra bu etkilerle ilişkili olan risk etkenleri ve koruyucu etkenlerin belirlenmesidir. **Metot:** Araştırma, tanımlayıcı ve kesitsel bir çalışma olarak planlanmıştır. Araştırmanın evrenini, Elazığ 112 Acil Sağlık Hizmetlerinde görev yapan toplam 295 personel oluşturmuştur. Çalışmanın verilerinin toplanmasında araştırmacılar tarafından literatür taranarak hazırlanan, çalışanların sosyo-demografik verilerinin sorgulandığı soru formu ve Depresyon Anksiyete Stress-21 ölçeği ile veriler toplanmıştır. **Bulgular:** Katılımcıların cinsiyete göre dağılımı incelendiğinde; kadınların oranı %64,1, erkeklerin oranı %35,9'dur. Katılımcıların %34,6'sı bekâr, %65,4'ü ise evlidir. Covid-19 enfeksiyonu tanısı alma durumu ile anksiyete arasındaki ilişki incelendiğinde; anksiyetesi olmayanlarda enfeksiyon tanısı alanların oranı %27,6, anksiyetesi olanlarda Covid-19 tanısı alanların oranı %40,7'dir. **Sonuç:** Acil sağlık hizmetleri çalışanları üzerinde yapılan bu çalışmada; her üç acil sağlık hizmetleri çalışanından biri Covid-19 salgını ile ilişkili farklı seviyelerde depresyon, anksiyete ve strese sahiptir. Pandemi döneminde aktif rol oynayan acil sağlık hizmetleri çalışanlarının psikolojik durumlarının ve ruh sağlıklarının korunması, sağlık sisteminin işleyişi açısından oldukça önemlidir. Sağlık çalışanları ruh sağlığının korunması konusunda bilgilendirilmeli ve yeterli destek sağlanmalıdır.

**Key Words:**  
Pandemic, Covid-19, Emergency Health Services Workers, Depression, Anxiety, Stress.

**Anahtar Kelimeler:**  
Pandemi, Covid-19, Acil Servis Çalışanları, Depresyon, Anksiyete, Stres.

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### INTRODUCTION

Covid-19, which first appeared in Wuhan, China in December 2019, and then spread to more than 200 countries and was declared a pandemic by the World Health Organization on March 11, 2020, is an infection caused by a new type of Coronavirus named SARS-CoV-2 (1). The SARS-CoV-2 virus, which causes Covid-19 disease (New Coronavirus Disease), is defined as a

virus with a very high transmission rate. The virus is transmitted through the scattering of droplets and contact. One of the two criteria for the virus to be transmitted by contact and touch is the holding and touching time, and the other is the humidity. The currently monitored spread of the virus is person-to-person (2). In the literature, fever 85.6%, cough 65.7%, fatigue 42.4%, and shortness of breath 21.4% were given as the most common symptoms in the patients

with pneumonia caused by the virus, which has a very high rate of reproduction and transmission (3). This virus, which mainly causes respiratory tract infections, not only threatens the physical health of individuals but also can have both acute and long-term effects on mental health (4). Wide and long-term changes in daily life such as obscurity, information pollution, the rapid spread of the virus, high death rates in some groups, lack of effective treatments, social isolation, quarantine practices due to the newness of the Covid-19 disease have negative effects on the mental health of both the society and healthcare professionals (5).

Healthcare personnel working in the Emergency Health Services (EHS) primarily come into contact with people in need of healthcare from various aspects and are seen as an important part of the health system. In addition, they provide supportive and continuous service for emergencies such as natural disasters and epidemics. In order to provide timely and effective service to individuals in need of healthcare, it is necessary to meet the social, psychological, material, and moral needs of the emergency health services personnel and to provide support. It is obvious that this support is needed more in extraordinary situations such as pandemics and disasters. In addition, since they are the first responders to suspicious situations, they face the risk of illness, injury, and death (6).

For this reason, it is important to examine the degree of psychosocial impact in order to determine the psychological support and treatment needs of healthcare personnel, especially during disaster and pandemic periods. The aim of this study is to examine the effects of the ongoing Covid-19 pandemic on the mental health of emergency health services personnel, as well as to determine the risk factors and protective factors associated with these effects.

## **MATERIALS AND METHODS**

### **Purpose and Type of the Research**

The research was planned as a descriptive and cross-sectional study.

### **Research Population and Sample Selection**

The population of the research consisted of 296 personnel working in Elazığ 112 Emergency Health Services. Sample calculation was not used in the research, it was tried to reach the entire population, and data was collected from 295 individuals who voluntarily participated in the research (Response rate: 99,6%).

### **Data Collection Tools**

In the process of data collection, the data was collected with a questionnaire prepared by the researchers by scanning the literature, questioning the socio-demographic data of the participants and the Depression Anxiety Stress Scale-21(DASS-21).

Personal Information Form; This form consists of a total of 15 items which questions the age, gender, family type, and various demographic characteristics of the participants, and consists of questions such as whether Covid-19 patients have been served during the pandemic period, daily working hours during the pandemic period, whether training on the Covid-19 disease has been received.

The Depression Anxiety Stress Scale-21 (DASS-21); In the second part of the questionnaire, the Depression Anxiety Stress Scale-21 (DASS-21) was used to measure the depression, anxiety, and stress responses of 112 Emergency Health Services personnel (7). Turkish validity and reliability of the DASS-21 have been demonstrated in previous studies (8,9). The scale was prepared to measure depression, anxiety, and stress symptoms and consists of 21 items. The reliability coefficient of the scale was found between 0.755 and 0.822. In this study, Cronbach's Alpha coefficient was 0.79 for overall scale. The 0-9 point range in this scale is considered as normal depression, the 0-7 point range is accepted as normal anxiety, and the 0-14 point range is considered as normal stress. The scale is in the type of 4-point Likert and includes 7 questions each to measure the dimensions of depression, stress, and anxiety. In the scale, 0 was coded as "never", 1 "sometimes", 2 "quite often", and 3 "always".

### **Analysis of the Data**

Statistical Package for the Social Sciences-22 (SPSS-22) program was used for the analysis, error checks and tables were made through the program. Descriptive data were expressed as numbers and percentages, and  $p < 0.05$  was accepted as a statistical significance level.

## **RESULTS**

When the distribution of the participants by gender is analyzed, the rate of women is 64.1% and the rate of men is 35.9%. 34.6% of the participants are single and 65.4% of them are married. When the distribution by educational level is examined, the rate of high school graduates is 17.6%, the rate of university graduates is 78.3% and the rate of postgraduates is 1.4%. When the distribution according to the length of service is analyzed, the rate of those with 0-5 years of service is 26.4%, the rate of those with 6-10 years of service is

28.5%, and the rate of those with 20+ years of service is 18.3%. When the distribution according to titles is examined, the rate of emergency medical technicians is 28.8%, the rate of doctors is 5.4%, the rate of nurses is 2.4%, the rate of paramedics is 35.9%, the rate of health officers is 5.8% and the rate of drivers is 20.3%. The sociodemographic characteristics of the participants are presented in Table 1.

**Table 1.** Socio-demographic characteristics of the participants (N=295)

Characteristics		Number	%
Gender	Male	189	64,1
	Female	106	35,9
	Total	295	100,0
Age	20-25	43	14,6
	26-35	151	51,2
	35+	101	34,2
	Total	295	100,0
Educational Level	Primary education	8	2,7
	High school	52	17,6
	University	231	78,3
	Postgraduate	4	1,4
	Total	295	100,0
Length of Service	1-5 year/years	78	26,4
	6-10 years	84	28,5
	11-15 years	51	17,3
	16-20 years	28	9,5
	20+ years	54	18,3
	Total	295	100,0
Marital Status	Single	102	34,6
	Married	193	65,4
	Total	295	100,0
Number of Children If Married	1	54	30,2
	2	81	45,3
	3 or more	44	24,6
	Total	179	100,0
Location of Residence	Village-Town	4	1,4
	District	40	13,6
	Province	251	85,1
	Total	295	100,0
Title	Doctor	16	5,4
	Nurse	7	2,4
	Health Officer	17	5,8
	Emergency Medical Technician	85	28,8
	Paramedic	106	35,9
	Data Entry	2	0,6
	Driver	60	20,3
	Other	2	0,7
	Total	295	100,0

When the relationship between the depression group and demographic information is examined, there is a significant relationship between age, length of service, title, and having the Covid-19 diagnosis ( $p<0.05$ ). When the relationship between having the diagnosis of Covid-19 and depression is examined, 27.2% of the depressed group and 37.4% of the non-depressed group are diagnosed with Covid-19 (Table 2).

When the relationship between anxiety and demographic information is examined, there is a statistically significant relationship between age, educational level, length of service, marital status, title, the average number of shifts per month, choosing the profession willingly, daily working hours during the pandemic period, receiving special training on healthcare for Covid-19 patients, and having the diagnosis of Covid-19 (Table 3). When the relationship between the diagnosis of Covid-19 infection and anxiety is examined, the rate of those who are diagnosed with infection is 27.6% in those who do not have anxiety, and the rate of those who are diagnosed with Covid-19 in those with anxiety is 40.7%.

When the relationship between the stress group and demographic information is examined, there is a significant relationship between the stress situation and educational level, number of children, title, and the average number of shifts per month ( $p<0.05$ ). When the relationship between the status of being diagnosed with Covid-19 infection and stress is examined, the rate of those who are diagnosed with infection is 29.8% in those who do not have a stress situation, and the rate of those who are diagnosed with Covid-19 in those with stress is 35.1% (Table 4).

## DISCUSSION

Epidemics can cause various psychological problems in society, and healthcare personnel constitute the riskiest group in this sense. With the transformation of Covid-19 into a large-scale pandemic, it has become inevitable for its psychological effects to come to the fore (10). Starting from here, this study was conducted to examine the effects of the ongoing Covid-19 pandemic on the mental health of emergency health services personnel, as well as to determine the risk factors and protective factors associated with these effects.

The COVID-19 pandemic is a global threat and healthcare professionals constitute the riskiest group against this threat. In addition to preventing the spread of infection and treating patients, it is very important for healthcare professionals to maintain a healthy physical and psychological condition. Many psychological problems such as depression, anxiety, stress, and post-traumatic stress disorder have been reported in

**Table 2.** Comparison of the demographic data between depressed and non-depressed groups.

	Depressed		Depression Non-Depressed		Total		p
	n	%	n	%	n	%	
	1-) Gender						
Male	117	65,0%	72	62,6%	189	64,1%	0,384
Female	63	35,0%	43	37,4%	106	35,9%	
2-) Age							
20-25	31	17,2%	12	10,4%	43	14,6%	0,014*
26-35	80	44,4%	71	61,7%	151	51,2%	
35+	69	38,3%	32	27,8%	101	34,2%	
3-) Educational Status							
Primary Education	6	3,3%	2	1,7%	8	2,7%	0,098
High School	39	21,7%	13	11,3%	52	17,6%	
University	133	73,9%	98	85,2%	231	78,3%	
Postgraduate	2	1,1%	2	1,7%	4	1,4%	
4-) Length of Service							
1-5 year/years	46	25,6%	32	27,8%	78	26,4%	0,038*
6-10 years	47	26,1%	37	32,2%	84	28,5%	
11-15 years	26	14,4%	25	21,7%	51	17,3%	
16-20 years	19	10,6%	9	7,8%	28	9,5%	
20+ years	42	23,3%	12	10,4%	54	18,3%	
5-) Marital Status							
Single	60	33,3%	42	36,5%	102	34,6%	0,331
Married	120	66,7%	73	63,5%	193	65,4%	
6-) If You Are Married, the Number of Children? (If you are not married: Write Zero "0" with the number)							
1	36	31,0%	18	28,6%	54	30,2%	0,303
2	48	41,4%	33	52,4%	81	45,3%	
3 or more	32	27,6%	12	19,0%	44	24,6%	
7-) Location of Residence							
Village-Town	3	1,7%	1	,9%	4	1,4%	0,548
District	27	15,0%	13	11,3%	40	13,6%	
Province	150	83,3%	101	87,8%	251	85,1%	
8-) Title							
Doctor	8	4,4%	8	7,0%	16	5,4%	0,002*
Nurse	2	1,1%	5	4,3%	7	2,4%	
Health Officer	9	5,0%	8	7,0%	17	5,8%	
Emergency Health Technician	44	24,4%	41	35,7%	85	28,8%	
Paramedic	62	34,4%	44	38,3%	106	35,9%	
Data Entry	2	1,1%	0	0,0%	2	0,7%	
Driver	51	28,3%	9	7,8%	60	20,3%	
Other	2	1,1%	0	0,0%	2	0,7%	
9-) The average number of shifts per month							
0-10	175	97,2%	107	93,0%	282	95,6%	0,080
11-20	5	2,8%	8	7,0%	13	4,4%	
20+	0	0,0%	0	0,0%	0	0,0%	
10-) Did you choose this profession willingly?							
Yes	160	88,9%	96	83,5%	256	86,8%	0,123
No	20	11,1%	19	16,5%	39	13,2%	
11-) Have you worked in the department that provides health services to COVID-19 patients during the pandemic period?							
Yes	170	94,4%	111	96,5%	281	95,3%	0,301
No	10	5,6%	4	3,5%	14	4,7%	
12-) What are your daily working hours during the pandemic period?							
8	12	6,7%	4	3,5%	16	5,4%	0,408
10	5	2,8%	1	,9%	6	2,0%	
12	4	2,2%	2	1,7%	6	2,0%	
24	159	88,3%	108	93,9%	267	90,5%	
13-) Have you received any special training on healthcare for COVID-19 patients?							
Yes	27	15,0%	21	18,3%	48	16,3%	0,280
No	153	85,0%	94	81,7%	247	83,7%	
14-) Have you been diagnosed with COVID-19 infection?							
Yes	49	27,2%	43	37,4%	92	31,2%	0,044*
No	131	72,8%	72	62,6%	203	68,8%	
15-) Have you received psychological support during the COVID-19 pandemic?							
Yes	6	3,3%	4	3,5%	10	3,4%	0,594
No	174	96,7%	111	96,5%	285	96,6%	

\*p<0,05

**Table 3.** Comparison of the demographic data between groups with and without anxiety

	Not Present		Anxiety Present		Total		p
	n	%	n	%	n	%	
1-) Gender							
Male	140	65,4%	49	60,5%	189	64,1%	0,256
Female	74	34,6%	32	39,5%	106	35,9%	
2-) Age							
20-25	30	14,0%	13	16,0%	43	14,6%	0,002*
26-35	98	45,8%	53	65,4%	151	51,2%	
35+	86	40,2%	15	18,5%	101	34,2%	
3-) Educational Status							
Primary Education	8	3,7%	0	0,0%	8	2,7%	0,028*
High School	44	20,6%	8	9,9%	52	17,6%	
University	160	74,8%	71	87,7%	231	78,3%	
Postgraduate	2	0,9%	2	2,5%	4	1,4%	
4-) Length of Service							
1-5 year/years	48	22,4%	30	37,0%	78	26,4%	0,000*
6-10 years	64	29,9%	20	24,7%	84	28,5%	
11-15 years	27	12,6%	24	29,6%	51	17,3%	
16-20 years	25	11,7%	3	3,7%	28	9,5%	
20+ years	50	23,4%	4	4,9%	54	18,3%	
5-) Marital Status							
Single	63	29,4%	39	48,1%	102	34,6%	0,002*
Married	151	70,6%	42	51,9%	193	65,4%	
6-) If You Are Married, the Number of Children? (If you are not married: Write Zero "0" with the number)							
1	41	28,7%	13	36,1%	54	30,2%	0,110
2	62	43,4%	19	52,8%	81	45,3%	
3 or more	40	28,0%	4	11,1%	44	24,6%	
7-) Location of Residence							
Village-Town	4	1,9%	0	0,0%	4	1,4%	0,464
District	29	13,6%	11	13,6%	40	13,6%	
Province	181	84,6%	70	86,4%	251	85,1%	
8-) Title							
Doctor	7	3,3%	9	11,1%	16	5,4%	0,000*
Nurse	4	1,9%	3	3,7%	7	2,4%	
Health Officer	13	6,1%	4	4,9%	17	5,8%	
Emergency Health Technician	57	26,6%	28	34,6%	85	28,8%	
Paramedic	72	33,6%	34	42,0%	106	35,9%	
Data Entry	0	0,0%	2	2,5%	2	0,7%	
Driver	58	27,1%	2	2,5%	60	20,3%	
Other	2	0,9%	0	0,0%	2	0,7%	
9-) The average number of shifts per month							
0-10	211	98,6%	71	87,7%	282	95,6%	0,000*
11-20	3	1,4%	10	12,3%	13	4,4%	
20+	0	0,0%	0	0,0%	0	0,0%	
10-) Did you choose this profession willingly?							
Yes	193	90,2%	63	77,8%	256	86,8%	0,006*
No	21	9,8%	18	22,2%	39	13,2%	
11-) Have you worked in the department that provides health services to COVID-19 patients during the pandemic period?							
Yes	206	96,3%	75	92,6%	281	95,3%	0,154
No	8	3,7%	6	7,4%	14	4,7%	
12-) What are your daily working hours during the pandemic period?							
8	9	4,2%	7	8,6%	16	5,4%	0,029*
10	3	1,4%	3	3,7%	6	2,0%	
12	2	0,9%	4	4,9%	6	2,0%	
24	200	93,5%	67	82,7%	267	90,5%	
13-) Have you received any special training on healthcare for COVID-19 patients?							
Yes	26	12,1%	22	27,2%	48	16,3%	0,002*
No	188	87,9%	59	72,8%	247	83,7%	
14-) Have you been diagnosed with COVID-19 infection?							
Yes	59	27,6%	33	40,7%	92	31,2%	0,022*
No	155	72,4%	48	59,3%	203	68,8%	
15-) Have you received psychological support during the COVID-19 pandemic?							
Yes	5	2,3%	5	6,2%	10	3,4%	0,106
No	209	97,7%	76	93,8%	285	96,6%	

\*p&lt;0,05

**Table 4.** Comparison of the demographic data between stressed and non-stressed groups

	Stress Groups						P
	Stressed		Non-Stressed		Total		
	n	%	n	%	n	%	
1-) Gender							
Male	141	64,7%	48	62,3%	189	64,1%	0,407
Female	77	35,3%	29	37,7%	106	35,9%	
2-) Age							
20-25	34	15,6%	9	11,7%	43	14,6%	0,074
26-35	103	47,2%	48	62,3%	151	51,2%	
35+	81	37,2%	20	26,0%	101	34,2%	
3-) Educational Status							
Primary Education	8	3,7%	0	0,0%	8	2,7%	0,001*
High School	47	21,6%	5	6,5%	52	17,6%	
University	162	74,3%	69	89,6%	231	78,3%	
Postgraduate	1	0,5%	3	3,9%	4	1,4%	
4-) Length of Service							
1-5 year/years	55	25,2%	23	29,9%	78	26,4%	0,121
6-10 years	61	28,0%	23	29,9%	84	28,5%	
11-15 years	33	15,1%	18	23,4%	51	17,3%	
16-20 years	24	11,0%	4	5,2%	28	9,5%	
20+ years	45	20,6%	9	11,7%	54	18,3%	
5-) Marital Status							
Single	75	34,4%	27	35,1%	102	34,6%	0,511
Married	143	65,6%	50	64,9%	193	65,4%	
6-) If You Are Married, the Number of Children? (If you are not married: Write Zero "0" with the number)							
1	38	27,9%	16	37,2%	54	30,2%	0,002*
2	56	41,2%	25	58,1%	81	45,3%	
3 or more	42	30,9%	2	4,7%	44	24,6%	
7-) Location of Residence							
Village-Town	4	1,8%	0	0,0%	4	1,4%	0,186
District	33	15,1%	7	9,1%	40	13,6%	
Province	181	83,0%	70	90,9%	251	85,1%	
8-) Title							
Doctor	9	4,1%	7	9,1%	16	5,4%	0,000*
Nurse	2	0,9%	5	6,5%	7	2,4%	
Health Officer	9	4,1%	8	10,4%	17	5,8%	
Emergency Health Technician	57	26,1%	28	36,4%	85	28,8%	
Paramedic	78	35,8%	28	36,4%	106	35,9%	
Data Entry	2	0,9%	0	0,0%	2	0,7%	
Driver	59	27,1%	1	1,3%	60	20,3%	
Other	2	0,9%	0	0,0%	2	0,7%	
9-) The average number of shifts per month							
0-10	212	97,2%	70	90,9%	282	95,6%	0,028*
11-20	6	2,8%	7	9,1%	13	4,4%	
20+	0	0,0%	0	0,0%	0	0,0%	
10-) Did you choose this profession willingly?							
Yes	193	88,5%	63	81,8%	256	86,8%	0,099
No	25	11,5%	14	18,2%	39	13,2%	
11-) Have you worked in the department that provides health services to COVID-19 patients during the pandemic period?							
Yes	208	95,4%	73	94,8%	281	95,3%	0,520
No	10	4,6%	4	5,2%	14	4,7%	
12-) What are your daily working hours during the pandemic period?							
8	12	5,5%	4	5,2%	16	5,4%	0,272
10	3	1,4%	3	3,9%	6	2,0%	
12	6	2,8%	0	0,0%	6	2,0%	
24	197	90,4%	70	90,9%	267	90,5%	
13-) Have you received any special training on healthcare for COVID-19 patients?							
Yes	28	12,8%	20	26,0%	48	16,3%	0,008*
No	190	87,2%	57	74,0%	247	83,7%	
14-) Have you been diagnosed with COVID-19 infection?							
Yes	65	29,8%	27	35,1%	92	31,2%	0,237
No	153	70,2%	50	64,9%	203	68,8%	
15-) Have you received psychological support during the COVID-19 pandemic?							
Yes	5	2,3%	5	6,5%	10	3,4%	0,088
No	213	97,7%	72	93,5%	285	96,6%	

\*p<0,05

healthcare professionals in the studies conducted in previous outbreaks such as SARS and H1N1. 34.6% of the participants are single and 65.4% are married. When the relationship between the depressed group and demographic information is examined, there is a significant relationship between age, length of service, title, and having the Covid-19 diagnosis ( $p<0.05$ ). In a study using the DASS-21 on the general population during the Covid-19 pandemic in China, female gender, being a student, and specific physical symptoms were associated with higher depression scores (11). In a study conducted on physicians in Turkey, female gender, being younger, history of psychiatric illness, and working in the front-line were found to be independent risk factors for depression (12).

When the relationship between having the diagnosis of Covid-19 and depression was examined, 27.2% of the depressed group and 37.4% of the non-depressed group were diagnosed with Covid-19. It has been reported that Covid-19 is seen in thousands of healthcare personnel (13). Being infected with Covid-19 is also one of the factors affecting the psychology of healthcare personnel. In a study conducted among 906 hospital personnel in Singapore and India, the rate of depression was found to be 10.6% during the pandemic (14). In a study conducted on healthcare personnel in China during the early period of the Covid-19 pandemic, depression was found at a rate of 50.4% (15).

When the relationship between anxiety and demographic information is examined, there is a statistically significant relationship between age, educational level, length of service, marital status, title, the average number of shifts per month, choosing the profession willingly, daily working hours during the pandemic period, receiving special training on healthcare for Covid-19 patients, and having the diagnosis of Covid-19 ( $p<0.05$ ). In a study using DASS-21 on the public in Italy during the Covid-19 pandemic, the female gender was found to be associated with high levels of depression, anxiety, and stress (16). In another study conducted on the general population in Turkey to determine the psychological effect of Covid-19, female gender, a previous diagnosis of psychiatric disease, and the presence of chronic comorbidity were associated with the presence of depression and anxiety (17).

When the relationship between having the diagnosis of Covid-19 infection and anxiety is examined, the rate of those who are diagnosed with infection is 27.6% in those who do not have anxiety, and the rate of those who are diagnosed with Covid-19 in those with anxiety is 40.7%. Many healthcare personnel have also been infected in previous epidemics. Since healthcare personnel come into frequent contact with infected

individuals, they may be quarantined after risky contacts and in case of infection. More anxiety symptoms were found in quarantined healthcare personnel compared to the general population (18). In a study evaluating the psychological state of healthcare workers during the H1N1 pandemic, more anxiety was found in healthcare personnel working in high-risk areas (19).

When the relationship between the stress group and demographic information is examined, there is a significant relationship between the stress situation and educational level, number of children, title, and the average number of shifts per month ( $p<0.05$ ). In a study conducted on emergency health services personnel during the SARS epidemic, stress levels were found to be high in all groups, although there was a significant difference between occupations (20). When the relationship between having the diagnosis of Covid-19 infection and stress is examined, the rate of those diagnosed with the infection in those who do not have a stress situation is 29.8%, and the rate of those diagnosed with Covid-19 in those with stress is 35.1%. Healthcare personnel are among the groups most affected by epidemic diseases. In a study conducted during the SARS epidemic, it was observed that the psychological stress levels of the infected healthcare personnel after one year were still very high and increased, while the stress levels of the non-healthcare personnel who had SARS did not increase (21).

## **CONCLUSION**

In the present study on emergency health services personnel, one out of every three emergency health services personnel has different levels of depression, anxiety, and stress associated with the Covid-19 pandemic. When the distribution of the participants by gender is analyzed, the rate of women is 64.1% and the rate of men is 35.9%. 34.6% of the participants are single and 65.4% of them are married. When the relationship between the diagnosis of Covid-19 infection and anxiety is examined, the rate of those who are diagnosed with infection is 27.6% in those who do not have anxiety, and the rate of those who are diagnosed with Covid-19 in those with anxiety is 40.7%. Health services personnel should be informed about the protection of mental health, and adequate support should be provided. Preventive psychological interventions to be made for vulnerable risk groups, where psychological problems detected in our study and previous studies are more common, will reduce the negative psychological consequences of health services personnel in the continuation of the pandemic and in similar situations to be encountered in the future.

As a result, the protection of the psychological state and mental health of emergency health services personnel

who play an active role during the pandemic period is very important for the functioning of the health system. This situation should be carefully evaluated by the hospital and health managers, necessary precautions should be taken, and appropriate interventions should not be delayed in order to minimize the possible negative effects.

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