



# **Determination of Fears of Burnout and Covid Employee in Primary Health Services in the Middle of the Pandemic**

Pandeminin Ortasında Temel Sağlık Hizmetlerinde Çalışanlarda Tükenmişlik ve Covid Korkularının Belirlenmesi

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## DETERMINATION OF FEARS OF BURNOUT AND COVID EMPLOYEE IN PRIMARY HEALTH SERVICES IN THE MIDDLE OF THE PANDEMIC

### ABSTRACT

**Aim:** This study aimed to assess healthcare workers' burnout levels and fear of COVID, along with the associated factors.

**Method:** This descriptive and cross-sectional study focuses on all healthcare workers employed in primary healthcare services within a province in Central Anatolia. Instead of using a sampling method, the study included primary healthcare workers who agreed to participate (n=500). In the study, data were collected from healthcare professionals using a sociodemographic questionnaire, COVID-19 Fear Scale and Maslach Burnout Inventory. Before the research began, study Ethics Committee approval was obtained from the Nevşehir Hacı Bektaş Veli University Non-invasive Research Ethics Committee (Approval No. 2021.07.214). Data were analyzed using one-way MANOVA, Duncan's test, and Pearson correlation.

**Results:** The study revealed that healthcare workers who had contracted COVID reported higher scores in the depersonalization burnout sub-dimension. Emotional burnout scores were significantly higher among those who experienced exclusionary behaviors from their immediate circle or neighbors, while personal achievement burnout scores were lower among those with lower income levels ( $p < 0.05$ ).

**Conclusions and Suggestions:** Fear of COVID was found to be significantly higher among female healthcare workers and those working at Family Health Centers. Increased exposure to written or spoken news about COVID was associated with heightened fear of the disease, which, in turn, correlated with higher occupational burnout scores. Interventions should be implemented to reduce occupational burnout among healthcare workers during the pandemic.

**Keywords:** COVID, Healthcare Workers, Burnout, Primary Health Services.



## PANDEMİNİN ORTASINDA TEMEL SAĞLIK HİZMETLERİNDE ÇALIŞANLARDA TÜKENMİŞLİK VE COVID KORKULARININ BELİRLENMESİ

### ÖZ

**Amaç:** Araştırmada sağlık çalışanlarında tükenmişlik ve COVID korku düzeyleri ve buna bağlı etkileyen faktörlerin belirlenmesi amaçlanmıştır.

**Yöntem:** Tanımlayıcı ve kesitsel tipteki bu araştırmanın evrenini, İç Anadolu'da bulunan bir ilde birinci basamak sağlık hizmetlerinde çalışan sağlık çalışanlarının tümü oluşturmaktadır. Araştırmada örneklem seçimine gidilmeyip, araştırmaya katılmayı kabul eden birinci basamak sağlık çalışanları (n=500) örnekleme dâhil edilmiştir. Araştırmada veriler araştırmacılar tarafından oluşturulan sosyodemografik soru formu, COVID Korku Ölçeği ve Maslach Tükenmişlik Envanteri ile sağlık çalışanlarından toplanmıştır. Verilerin değerlendirilmesinde tek yönlü MANOVA, Duncan testi ve Pearson korelasyonu kullanılmıştır. Araştırmaya başlamadan önce, Nevşehir Hacı Bektaş Veli Üniversitesinin girişimsel olmayan klinik araştırmalar yayın etik kurulundan izin alınmıştır (Sayı:2021.07.214). Veriler tek yönlü MANOVA, Duncan testi ve Pearson korelasyonu kullanılarak değerlendirilmiştir.

**Bulgular:** COVID geçiren sağlık çalışanlarında duyarsızlaşma tükenmişliği alt boyut puanlarının, yakın çevresinden ve mahalle sakinlerinden dışlayıcı davranışlar hissedenlerde duygusal tükenmişlik alt boyut puanları daha yüksek, gelir düzeyi düşük olanlarda ise kişisel başarı tükenmişliği alt boyut puanları daha düşük olduğu saptanmıştır ( $p<0.05$ ).

**Sonuçlar ve Öneriler:** Aile Sağlığı Merkezinde ve kadın sağlık çalışanlarında COVID korkusunun anlamlı düzeyde yüksek olduğu bulunmuştur. Sağlık çalışanlarının hastalık korkusunun, Kovid ile ilgili yazılı veya sözlü haberlere maruz kalma arttıkça arttığı, Kovid korkusu arttıkça mesleki tükenmişlik puanının da arttığı belirlendi. Salgın döneminde sağlık çalışanlarının mesleki tükenmişliğini azaltmak için harekete geçilmelidir.

**Anahtar Kelimeler:** COVID, Sağlık Çalışanları, Tükenmişlik, Birinci Basamak Sağlık Hizmetleri.



## INTRODUCTION

The severe acute respiratory syndrome coronavirus (COVID) first emerged in Wuhan, China, in late 2019 (Van et al., 2020). Due to its rapid global spread and significant loss of life, the World Health Organization (WHO) quickly declared it a “pandemic” (Van et al., 2020). As of 2020, COVID-19 had infected 196,331,550 people worldwide and caused 4,197,958 deaths (World Health Organization, 2020). Turkey reported its first COVID case on March 11, 2020. By the end of the year, the number of confirmed cases had reached 6,311,637, with 55,713 deaths (World Health Organization, 2020). The pandemic spread swiftly, placing immense pressure on healthcare systems globally (Van et al., 2020). Healthcare workers, on the frontlines of the fight against the pandemic, were among the most affected groups (Yüncü & Yılan, 2020). This occupational group faces significant stress due to factors such as the responsibility of treating patients, the frustration of being unable to alter disease outcomes significantly, and the fear of contracting the virus themselves (Karahan, 2020). During the pandemic, additional stressors included prolonged working hours, increased patient loads, the risk of disease transmission, physical challenges posed by protective equipment, and the constant need to stay updated with the latest COVID information (Chen et al., 2021; Kang et al., 2020). Fear of COVID emerged as a major source of stress. Research highlights that the fear of contracting the virus is a significant risk factor for psychological issues among healthcare workers, who are in close and continuous contact with infected patients (Enli et al., 2020; Shaukat et al., 2020). Symptoms such as insomnia, post-traumatic stress disorder, depression, and generalized anxiety have been widely reported among healthcare workers during the pandemic (Lai et al., 2020; Lu et al., 2020). In addition to fears of contracting the virus, healthcare professionals faced concerns about transmitting it to their families and managing increased workloads, further contributing to burnout (Xiang et al., 2020). Studies confirm that the pandemic has exacerbated burnout among healthcare workers (Prasad et al., 2021; Hoşgör et al., 2021; Türkili et al., 2021; Sasangoha et al., 2020). Given the high risk of stress and burnout among healthcare professionals during the pandemic, safeguarding their mental health and enabling them to work effectively are critical priorities (Shaukat et al., 2020; Xiang et al., 2020).

The role of primary healthcare services in combating the pandemic varies across countries (Duplop et al., 2020). In Turkey, primary care services have implemented key measures such as COVID case and contact tracing, isolation protocols, widespread testing, case detection, and filiation strategies. Throughout the pandemic, primary healthcare workers have taken on numerous responsibilities, including early detection and monitoring of COVID patients, triage, administering child and adult vaccinations, and managing chronic patient follow-ups (Varol & Tokuç, 2020; Gürer & Gemlik, 2020). Additionally, during this period, health-

care workers had to cope with various challenges such as a high risk of infection, long working hours, physical fatigue, limited access to Personal Protective Equipment (PPE), separation from their families, and feelings of loneliness (Yılmaz et al., 2022). Increased interaction with patients during the provision of healthcare services, the use of protective clothing to prevent virus transmission, the experience of intense emotional states, uncertainties related to the virus, and the rising number of cases and deaths all contributed to heightened burnout levels among healthcare workers, leading to feelings of loneliness (Çalışkan & Metintaş, 2020; Göksu & Kumcağız, 2020). Moreover, researchers found that pandemic-related attitudes significantly influenced burnout and the intention to leave the job (Avan & Şantaş, 2024). The pandemic has underscored the critical need for healthcare workers to maintain both their physical and psychological well-being to perform their duties effectively. In light of these challenges, this study aims to assess the fear of COVID-19, burnout levels, and the factors influencing primary healthcare workers operating in high-risk environments.

## METHOD

### Study Design

This is a cross-sectional study descriptive study.

### Population and Sample of the Study

The population of the study consists of 650 healthcare workers employed in primary healthcare institutions in a province located in Central Anatolia. Instead of employing a sampling method, an attempt was made to reach the entire population. During the study period, 552 healthcare workers who were not on leave, agreed to participate, and provided informed consent were included in the sample. However, 52 healthcare workers who submitted incomplete or incorrectly filled questionnaires were excluded from the study, which was ultimately completed with 500 healthcare workers.

### Data Collection

The data for the study were collected using a sociodemographic questionnaire, the COVID Fear Scale, and the Maslach Burnout Inventory. The finalized Data Collection Form was pre-tested with 20 healthcare workers, and their responses were evaluated separately from the main study group. Following the pilot test, the researchers determined that no changes were needed to the form.

**Sociodemographic Questionnaire:** The study were collected using a sociodemographic questionnaire developed by researchers based on relevant literature-based questionnaire includes 15 questions covering the sociodemographic characteristics of healthcare workers (Arpacioğlu et al., 2021; Hoşgör et al., 2021; Karahan, 2020; Prasad et al., 2021; Türkili et al., 2021; Sasangoha et al., 2020). These questions cover aspects such as age, education level, gender, marital status, and the presence of chronic illnesses.

**The Fear of COVID Scale:** The Fear of COVID Scale, originally developed by Ahorsu et al. (2020), was adapted for the Turkish population by Satıcı et al. (2020) and Bakioğlu et al. (2021). This 5-point Likert-type scale consists of seven items, with no reverse-scored items (Ahorsu et al., 2020; Satıcı et al., 2020; Bakioğlu et al., 2021). The total score, ranging from 7 to 35, reflects an individual's fear of COVID, with higher scores indicating greater fear. The Cronbach's alpha for the Turkish adaptation of the scale is 0.84 in Satıcı's version (2020) and 0.88 in Bakioğlu's version (2021), demonstrating strong reliability. In this study, the scale's Cronbach's alpha was calculated as 0.909, further confirming its high reliability.

**Maslach Burnout Inventory:** To assess burnout levels, the Maslach Burnout Inventory (MBI) was utilized. Originally developed by Maslach et al. in 1981, its Turkish validity and reliability were established by Çam (1991) and Ergin (1993, 1996) (Maslach et al., 1981; Çam, 1991; Ergin, 1993; Ergin, 1996). The MBI is widely used to measure burnout among various professional groups in Turkey. This 5-point Likert-type inventory consists of 22 items divided into three burnout sub-dimensions: emotional exhaustion, depersonalization, and personal achievement. Items are rated from 1 (never) to 5 (always), with higher total scores indicating higher levels of burnout.

The reliability coefficients for the original scale developed by Maslach and Jackson were reported as 0.88 for emotional exhaustion, 0.83 for personal achievement, and 0.72 for depersonalization (Maslach et al., 2001). The Turkish version's reliability was examined by Çam (1991) in a sample of 276 nurses, yielding coefficients of 0.89 for emotional exhaustion, 0.71 for depersonalization, and 0.72 for personal achievement. Using the Spearman-Brown split-half technique, reliability coefficients were 0.84 for emotional exhaustion, 0.78 for depersonalization, and 0.72 for personal achievement (Çam, 1991).

In this study, the emotional exhaustion sub-dimension included 9 items, with a Cronbach's alpha of 0.916. The depersonalization sub-dimension had 5 items, with a Cronbach's alpha of 0.758, and the personal achievement sub-dimension comprised 8 items, with a Cronbach's alpha of 0.758. These alpha coefficients confirm that the scale is highly reliable.

## Data Collection Process

Data were collected between July and September 2021 using data collection tools distributed to healthcare workers in their respective units in sealed envelopes by the researchers. Informed consent was obtained from the healthcare workers, who were informed that they could withdraw from the study at any time and that their responses would remain anonymous and confidential.

## Statistical Analysis

The Shapiro-Wilk test was used to assess the normality assumption within groups when the sample size was  $n < 30$ , while the Kolmogorov-Smirnov test was applied when the sample size was  $n \geq 30$  (Demir et al., 2016). The differences in emotional burnout, depersonalization, low personal achievement, and fear of COVID scores based on factors such as gender, profession, marital status, educational background, institution, history of COVID infection, presence of chronic disease, and experiences of exclusion by friends and neighbors during the pandemic were analyzed using MANOVA. Multiple comparisons were conducted with the Duncan Test. To investigate relationships between normally distributed quantitative data, Pearson's correlation coefficient was employed. Results are presented as mean  $\pm$  standard deviation for quantitative data and as frequency and percentage for categorical data. A significance level of  $p < 0.05$  was accepted.

## Ethics Approval

Before the research began, study approval was obtained from the Nevşehir Hacı Bektaş Veli University Non-invasive Research Ethics Committee (Approval No. 2021.07.214). Written permission was also granted by the Ministry of Health's Scientific Research Platform (Decision No. 2100019877, dated May 7, 2021). Additionally, the researchers provided individuals with information about the purpose of the study, requested their voluntary participation, and obtained their informed consent.

# RESULTS

## Descriptive Characteristics of the Participants

The mean age of the healthcare employees was  $37.70 \pm 9.99$  years (range: 20.00-63.00). Of the participants, 62.2% were female, 20.5% were nurses, and nearly half had a bachelor's degree (46.1%). It was found that 29.5% of the participants were working at a Family Healthcare Center (FHC), 50.7% had an income lower than their expenses, and 20.9% had a chronic disease. A history of COVID was reported by 28.5% of the healthcare employees, and 42.8% felt they experienced "excluded behavior by their immediate circle of friends and neighborhood residents during the pandemic" (Table 1).

**Table 1.** Distribution of the healthcare workers by sociodemographic characteristics

	Mean	SD	Minimum	Maximum
<b>Age</b>	37.70	9.99	20.00	63.00
	N			%
<b>Gender</b>				
Male	89			37.8
Female	311			62.2
<b>Institution</b>				
Family Health Center	148			29.5
Community Health Center	113			22.6
Province Integrated Hospital	139			22.7
Others*	101			20.2
<b>Profession</b>				
Nurse	104			20.5
Midwife	94			18.5
Health worker	99			19.5
Doctor	89			17.5
Others **	127			24.0
<b>School of Graduation</b>				
Vocational School of Health	63			12.5
Associate Degree	91			18.0
Bachelor	233			46.1
Postgrad	62			12.3
Others***	56			11.1
<b>People you Live With</b>				
Alone	59			11.6
Spouse and children	300			59.2
With spouse	52			10.3
Parents	67			13.2
Others	29			5.7
<b>Marital Status</b>				
Married	364			71.8
Single / Divorced	143			28.2
Income lower than expenses	241			50.7
Income equal to expenses	192			40.4
Income more than expenses	42			8.8
<b>COVID-19</b>				
Experienced	144			28.5
Not experienced	362			71.5
<b>Presence of a Chronic Disease</b>				
Yes	105			20.9
No	398			79.1
<b>Feeling Excluded Environment</b>	<b>By the Environment During The Pandemic Process</b>			
Feeling	154			31.7
Partially	208			42.8
Not feeling	124			25.5

\* 112, \*\* \* Psychologist, health technician, \*\*\*Doctorate



## Participant Characteristics Regarding Burnout and Fear of COVID

All assumptions of MANOVA were examined and met. Specifically, the homogeneity assumption of the covariance matrix was assessed using Box's M test, and the assumption of data independence was ensured by obtaining data from different individuals. Variance inflation factor (VIF) values were checked, revealing no multicollinearity issues, as all values were below 5. Additionally, the normality assumptions for the data were satisfied, and the MANOVA test was applied. The highest burnout level was observed in physicians, with a mean of  $3.48 \pm 0.73$  (range: 1.44-5.00), while the lowest was found in other professional groups, with a mean of  $2.59 \pm 0.85$  (range: 1.00-4.78). A statistically significant difference was found in mean burnout scores based on healthcare workers' profession, educational level, place of employment, and marital status ( $p < 0.05$ ; Tables 2 and 3).

We found that the depersonalization sub-dimension score was higher in healthcare workers who had experienced COVID and those with a chronic disease. The emotional burnout sub-dimension score was higher in those who felt excluded by their immediate circle of friends and neighborhood residents. Additionally, the personal achievement sub-dimension score was lower in healthcare workers with a low income ( $p < 0.05$ ; Tables 2 and 3).

Accordingly, the burnout level was significantly higher in physicians, single healthcare workers, healthcare workers with a postgraduate education, and healthcare workers working at the FHC (Table 3). The highest COVID fear score was found among healthcare workers at the Family Healthcare Center (FHC), with a mean of  $19.51 \pm 7.42$  (range: 7.00-35.00). A statistically significant difference was found in mean COVID-19 Fear Scores based on the place of employment ( $p = 0.027$ , Table 3).

This difference was due to higher mean scores among healthcare workers at the FHC and district integrated hospitals compared to those working at other institutions. Female healthcare workers had significantly higher COVID fear scores ( $19.21 \pm 7.40$ , range: 7.00-35.00) than their male counterparts ( $p < 0.05$ , Table 3).

**Table 2.** The Comparison of burnout and covid fear scale scores of the health-care employees according to their demographic characteristics

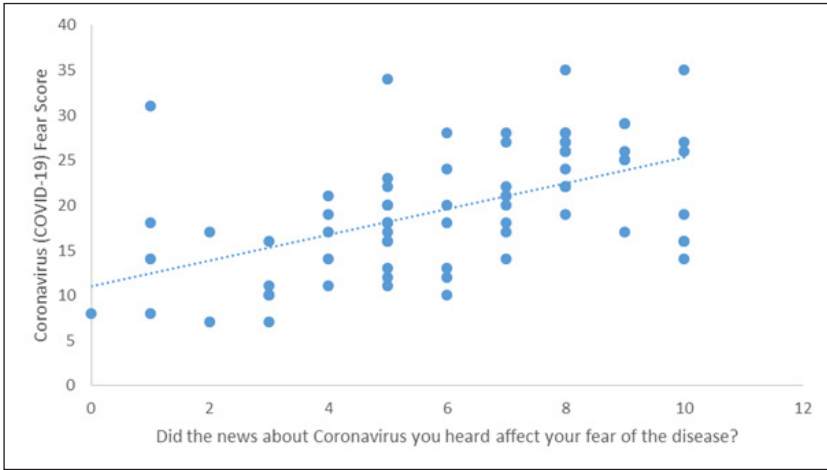
	Dependent Variable	F	p	Partial Eta Square
<b>Gender</b>	Emotional burnout <sup>1</sup>	1.255	0.263	0.003
	Depersonalization <sup>2</sup>	4.876	<b>0.028</b>	0.012
	Low personal achievement <sup>3</sup>	7.433	<b>0.007</b>	0.018
	Coronavirus (COVID) Fear score <sup>4</sup>	4.610	<b>0.032</b>	0.011
<b>Profession</b>	Emotional burnout	2.437	<b>0.047</b>	0.024
	Depersonalization	0.989	0.413	0.010
	Low personal achievement	1.802	0.128	0.018
	Coronavirus (COVID) Fear score	0.080	0.988	0.001
<b>Marital Status</b>	Emotional burnout	1.518	0.219	0.004
	Depersonalization	4.132	<b>0.043</b>	0.010
	Low personal achievement	1.345	0.247	0.003
	Coronavirus (COVID) Fear score	1.548	0.214	0.004
<b>School of Graduation</b>	Emotional burnout	3.792	<b>0.005</b>	0.036
	Depersonalization	2.827	<b>0.025</b>	0.027
	Low personal achievement	1.377	0.241	0.014
	Coronavirus (COVID) Fear score	0.230	0.921	0.002
<b>Institution</b>	Emotional burnout	3.638	<b>0.013</b>	0.026
	Depersonalization	3.329	<b>0.020</b>	0.024
	Low personal achievement	0.568	0.637	0.004
	Coronavirus (COVID) Fear score	3.093	<b>0.027</b>	0.023
<b>Having COVID-19</b>	Emotional burnout	0.578	0.447	0.001
	Depersonalization	7.470	<b>0.007</b>	0.018
	Low personal achievement	0.002	0.963	0.000
	Coronavirus (COVID) Fear score	0.000	0.999	0.000
<b>Presence of a Chronic Disease</b>	Emotional burnout	1.209	0.272	0.003
	Depersonalization	4.977	<b>0.026</b>	0.012
	Low personal achievement	0.115	0.734	0.000
	Coronavirus (COVID) Fear score	0.650	0.421	0.002
<b>State of Feeling Exclusionary Behavior By the Immediate Circle of Friends And Neighborhood Residents During the Pandemic Process</b>	Emotional burnout	18.079	<b>&lt;0.001</b>	0.083
	Depersonalization	9.492	<b>&lt;0.001</b>	0.045
	Low personal achievement	0.007	0.993	0.000
	Coronavirus (COVID) Fear score	5.550	<b>0.004</b>	0.027

1R2=0.261, 1 Corrected R2=0.219; 2R2=0.182, 2Corrected R2=0.135; 3R2=0.132, 3Corrected R2=0.083; 4R2=0.091, 4Corrected R2=0.039, F: Variance analysis test statistics

**Table 3.** Distribution of healthcare employees according to the demographic characteristics and the covid fear and burnout scale scores

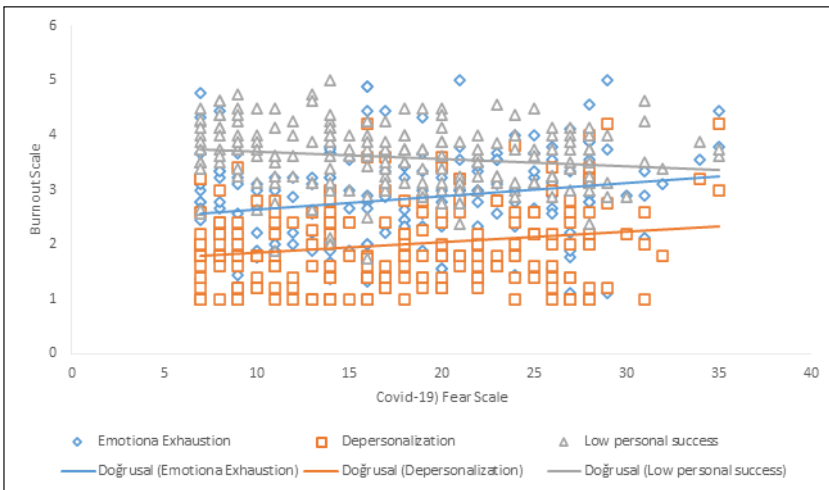
	Emotional Burnout X+SD	Depersonalization X+SD	Low Personal Achievement X+SD	Coronavirus (COVID) Fear Score X+SD
<b>Gender</b>				
Male	2.84±1.00 (1.00-5.00)	2.12±0.87 (1.00-5.00)	3.65±0.65 (1.88-5.00)	17.49±7.10(7.00-35.00)
Female	2.97±0.84 (1.00-5.00)	1.95±0.76 (1.00-5.00)	3.56±0.57 (1.75-5.00)	19.21±7.40(7.00-35.00)
<b>Profession</b>				
Nurse	2.90±0.79 (1.11-5.00)b	1.98±0.86 (1.00-5.00)	3.70±0.57(1.75-5.00)	18.07±6.65(7.00-32.00)
Midwife	3.06±0.92 (1.00-5.00)b	1.92±0.79 (1.00-4.20)	3.53±0.58(2.00-4.75)	19.67±7.97(7.00-35.00)
Healthcare Worker	2.68±0.95 (1.00-4.89)a	1.90±0.79(1.00-4.00)	3.59±0.60(2.00-4.75)	18.29±7.65(7.00-35.00)
Physician	3.48±0.73(1.44-5.00)c	2.40±0.78(1.00-4.60)	3.38±0.55(1.88-4.88)	19.03±6.86(7.00-35.00)
Other	2.59±0.85(1.00-4.78)a	1.92±0.72(1.00-4.20)	3.67±0.68(2.00-5.00)	17.84±7.49(7.00-35.00)
<b>Marital Status</b>				
Married	2.91±0.91(1.00-5.00)	1.96±0.78(1.00-4.60)	3.60±0.60(1.88-5.00)	18.70±7.52(7.00-35.00)
Single / Divorced / Separated / Widowed	2.92±0.89(1.00-5.00)	2.16±0.85(1.00-5.00)	3.54±0.62(1.75-5.00)	18.18±6.93(7.00-32.00)
<b>Institution</b>				
Family Health Center	3.25±0.88(1.11-5.00)c	2.25±0.84(1.00-5.00)a	3.52±0.61(2.00-5.00)	19.51±7.42(7.00-35.00)a
Community Health Center	2.88±0.76(1.00-4.78)b	1.93±0.80(1.00-4.00)b	3.48±0.60(2.13-4.88)	17.74±6.58(7.00-31.00)b
District Integrated Hospital	2.88±0.96(1.00-5.00)b	1.99±0.75(1.00-4.20)b	3.67±0.64(1.75-5.00)	19.28±7.63(7.00-35.00)a
Other	2.54±0.82(1.00-4.33)a	1.81±0.75(1.00-4.00)b	3.66±0.57(2.00-4.75)	1685±7.43(7.00-35.00)b
<b>What do you think about your income level?</b>				
Lower than my expenses	2.92±0.94(1.00-5.00)	2.00±0.81(1.00-5.00)	3.69±0.62(2.00-5.00)b	18.79±7.37(7.00-35.00)
Equal to my expenses	2.97±0.88(1.00-5.00)	2.07±0.84(1.00-4.60)	3.44±0.61(1.75-4.75)a	18.94±7.14(7.00-35.00)
Higher than my expenses	2.81±0.88(1.00-4.78)	2.03±0.66(1.00-3.60)	3.58±0.52(2.50-4.75)ab	17.52±7.68(7.00-35.00)
<b>Have you had COVID?</b>				
Yes	2.98±0.86(1.00-5.00)	2.13±0.82(1.00-4.20)	3.59±0.59(1.75-4.88)	19.06±7.27(7.00-35.00)
No	2.89±0.93(1.00-5.00)	1.96±0.79(1.00-5.00)	3.59±0.62(1.88-5.00)	18.32±7.36(7.00-35.00)
<b>Do you have a chronic disease?</b>				
Yes	2.91±0.86(1.00-5.00)	1.89±0.80(1.00-4.60)	3.65±0.61(1.88-5.00)	19.38±6.70(7.00-35.00)
No	2.92±0.92(1.00-5.00)	2.03±0.80(1.00-5.00)	3.57±0.61(1.75-5.00)	18.34±7.50(7.00-35.00)
<b>Have you experienced things like being excluded (avoiding speaking, judging, accusing, approaching with fear and suspicion, etc.) by your immediate circle of friends and neighborhood residents during the pandemic?</b>				
Yes	3.07±0.90(1.00-5.00)a	2.17±0.83(1.00-4.20)a	3.62±0.60(2.00-5.00)	20.17±7.64(7.00-35.00)a
Partially	3.04±0.86(1.11-5.00)a	2.03±0.82(1.00-5.00)a	3.56±0.63(1.75-5.00)	18.85±7.11(7.00-35.00)a
No	2.53±0.87(1.00-4.89)b	1.74±0.63(1.00-3.60)b	3.58±0.59(1.88-5.00)	16.52±6.76(7.00-33.00)b

a-c: There is no difference between the groups with the same letter, mean±SD (minimum-maximum)



**Figure 1.** Scatterplot of the Relationship between Scores of COVID-19 Fear and COVID-19 News Effects

Additionally, the COVID fear level of healthcare workers increased as the amount of news they heard about the disease increased (Figure 1).



**Figure 2.** Scatterplot of the relationship between the COVID-19 Fear Scores and Burnout Scores

As the Fear of Coronavirus (COVID) Score increased among healthcare workers, the emotional burnout and depersonalization sub-dimension scores showed a weak positive correlation ( $r = 0.178$ ,  $p < 0.001$ ;  $r = 0.133$ ,  $p = 0.003$ ), while the personal achievement burnout score showed a weak negative correlation ( $r = -0.106$ ,  $p = 0.018$ , Figure 2).

## DISCUSSION

Our study investigated the burnout and COVID fear levels of primary healthcare workers who operated under high risk during the pandemic, along with the factors contributing to these outcomes. The mean emotional burnout scores of physicians working in primary healthcare were found to be significantly higher than those of other occupational groups. This finding is consistent with Karahan's study, which identified physicians as the most affected by burnout among all emergency service workers (Karahan, 2020). In a study conducted with healthcare employees in the USA, half of the participants were found to experience burnout syndrome (Enli et al., 2020). Similarly, our study found higher burnout levels among physicians working in primary healthcare, in line with findings from other research (Türkili et al., 2021; Stanetić et al., 2019). Additionally, the stress factors experienced by healthcare workers during the pandemic have been reported to increase in previous studies (Lu et al., 2020; Enli et al., 2020).

Our results indicate that physicians working in family health centers require additional support to manage the stress factors created by the pandemic. The relationship between burnout and factors such as gender, age, job type, experience, and having children varies in studies conducted with healthcare employees during the pandemic (Karahan, 2020; Ergin, 1992; Türkili et al., 2021). In our study, burnout levels were found to be higher among healthcare employees with a postgraduate education. Similarly, other studies have reported an increase in burnout as educational level rises (Hoşgör et al., 2021; Çevik and Özbalcı, 2020). This may be due to the increased responsibilities and career expectations placed on healthcare workers as their education level increases, contributing to burnout in our study. A significant difference was observed in the depersonalization mean scores between single healthcare employees in our study. Some studies have also found marital status to influence burnout levels, consistent with our results (Çevik and Özbalcı, 2020; Arpacioğlu et al., 2021), while others have reported no such effect (Yüncü and Yılan, 2020; Türkili et al., 2021; Hoşgör et al., 2021; Çevik and Özbalcı, 2020). The lower levels of emotional burnout in married healthcare employees may be attributed to the social support they receive from their families.

In the current study, the depersonalization scores of male healthcare employees were significantly higher, while the personal achievement score was lower for healthcare employees with low income. Similar to our findings, other studies have

reported higher emotional burnout levels among male healthcare employees (Purvanova and Muros, 2010; Karahan, 2020). Conversely, a study of healthcare employees in the USA found a higher burnout rate among female employees than their male counterparts (Akbolat and Işık, 2008; LaFaver et al., 2018). Other studies, however, have found no gender-related differences in burnout levels (Çevik and Özbalcı, 2020; Arpacıoğlu et al., 2021). These discrepancies may be attributed to differences in the occupational and cultural contexts of the study populations. Research on the relationship between income and burnout among healthcare employees is limited. One study found that monthly income affected the mental and emotional burnout levels of employees in public hospitals, similar to our findings (Akbolat and Işık, 2008).

The fear of exposure to and transmission of the SARS-CoV-2 virus has been reported to increase burnout rates among healthcare employees (Enli et al., 2020). In line with this, our study found that healthcare employees diagnosed with COVID and those with chronic diseases had higher depersonalization and burnout sub-dimension scores. However, in contrast to our findings, Hoşgör et al. (2021) reported that being diagnosed with COVID did not affect the level of burnout in healthcare workers. Other studies have suggested that living with family members who have chronic diseases leads to emotional burnout, and that both depersonalization and emotional burnout increase as contact with COVID patients becomes more frequent (Türkili et al., 2021). A study from China identified factors such as respiratory and digestive symptoms, undergoing specific tests related to COVID, and caring for a family member with COVID as risk factors for burnout among healthcare workers (Chen et al., 2021; Enli et al., 2020). In our study, the presence of chronic disease and COVID diagnosis may have contributed to depersonalization in these healthcare employees, as the disease is associated with higher mortality risk.

One of the factors contributing to burnout among healthcare employees during pandemics is the feeling of exclusion and stigmatization by their social environment. Healthcare workers are classified as having “very high” or “high” risk levels of exposure to SARS-CoV-2 during the pandemic (Yüncü and Yılan, 2020), which can lead to social exclusion and stigmatization. In our study, healthcare workers who reported feeling excluded by their immediate circle of friends and neighbors during the pandemic exhibited higher levels of emotional burnout and depersonalization, while their personal achievement was lower. Similarly, healthcare workers in other studies have reported that their social environments distanced themselves during the pandemic (Çevik and Özbalcı, 2020). Additionally, healthcare workers who lived away from their families and lacked adequate social support during the pandemic have been found to be at higher risk for developing psychosocial issues (Lai et al., 2019; Enli et al., 2020; Türkili et al., 2021). The combination of stress from challenging working conditions and the absence of social support likely contributed to the burnout observed in the healthcare workers in our study.

The ability of social media to induce negative emotions, such as fear and anxiety, about the pandemic has been observed in previous pandemics (Huang et al., 2020). In our study, the level of COVID fear among healthcare workers was found to increase as they consumed more news about the pandemic. Türkili et al. (2021) reported that excessive use of television and social media for pandemic-related information led to emotional burnout, depersonalization, and a reduced sense of personal achievement among family physicians. A high level of COVID fear has also been observed in healthcare workers exposed to the virus (Mora-Moganna et al., 2020), with female healthcare workers experiencing higher levels of fear (Satici et al., 2020; Purvanova and Muros, 2010; Dagne et al., 2021). Factors contributing to the anxiety experienced by primary healthcare workers during the pandemic include the prolonged nature of the crisis, the fear of transmitting the virus to their families, and the fear of becoming ill themselves (Dagne et al., 2021). Our study also found a higher level of COVID fear among female healthcare workers and those working at family healthcare centers. This highlights the importance of supporting the mental health of healthcare workers to ensure their well-being and maintain their effectiveness and efficiency.

Anxiety and fear related to a pandemic are known to motivate individuals to take protective measures against COVID (Nabi and Myrick, 2019). However, pandemic-related fears such as the fear of contracting SARS-CoV-2, the fear of the unknown, and the fear of death can lead to psychological issues within the population. Several studies have highlighted that pandemic-related fear can contribute to stress, anxiety, depression, and burnout (Dyer and Harris, 2020; Barbosa-Camacho et al., 2021). In our study, higher COVID fear scores were weakly associated with increased emotional and depersonalization burnout sub-dimension scores and decreased personal achievement burnout scores ( $r = -0.106$ ;  $p = 0.018$ ). The literature includes studies similar to our research, indicating that as COVID fear levels increase, emotional exhaustion rises while the sense of personal accomplishment decreases. However, unlike these findings, some studies have reported a decrease in depersonalization (Hoşgör & Yaman, 2021; Arpacioğlu et al., 2021; Abdelghani et al., 2020). Additionally, Bulut et al. (2024) reported in their study that COVID fear was not associated with burnout scores. The observed differences in these studies likely stem from the emotional turmoil healthcare workers experience due to the positive and/or negative burdens of the pandemic period.

## CONCLUSION AND SUGGESTIONS

In our study, higher burnout levels were observed in single physicians, those with postgraduate education, and those working at Family Healthcare Centers (FHCs). It is crucial to conduct further studies aimed at reducing burnout and protecting the personal rights of healthcare employees, particularly those with

chronic diseases, those who feel excluded by their immediate circle of friends and neighbors, and those with low income levels. Additionally, it is recommended to regulate media coverage that exacerbates fear of COVID, especially among female healthcare workers.

### Limitations

One of the limitations of this study is that the data were collected from healthcare workers in primary care settings within a province in the Cappadocia region, which limits the ability to generalize the results to the entire country. However, this study serves as a preliminary effort to assess the burnout levels and COVID fear in primary care employees since the onset of the pandemic, with the aim of protecting their mental health. Another limitation is the use of the Fear of COVID scale, as the data were gathered from a non-clinical sample. Consequently, the findings may not be applicable to clinical populations. However, the scale was chosen because it has been shown to be suitable for various groups, including professionals working in mental health and community settings. To gain a deeper understanding of burnout and COVID fear levels in healthcare employees, future studies should include diverse groups from different cities and settings, both during and after the pandemic.

### Conflict of Interest

No conflict of interest has been declared by the authors.

### Author Contributions

Design of Study: AÖA(70%), HL(30%)

Data Acquisition: AÖA(10%), HL(90%)

Data Analysis: AÖA(50%), HL(50%)

Writing Up: AÖA(60%), HL(40%)

Submission and Revision: AÖA(80%), HL(20%)



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