MCBU SBED
MANİSA CELAL BAYAR ÜNİVERSİTESİ SAĞLIK BİLİMLERİ ENSTİTÜSÜ DERGİSİ
MANISA CELAL BAYAR UNIVERSITY JOURNAL OF INSTITUTE OF HEALTH SCIENCE
ISSN: 2147-9607

ARAŞTIRMA MAKALESİ
RESEARCH ARTICLE
CBU-SBED, 2025, 12 (2): 246-255

Evaluation of Family Physicians' Concerns About Working Conditions, Transmission of the Disease and Transmission to Family Members in the COVID-19 Pandemic

Aile Hekimlerinin COVID-19 Pandemisinde Çalışma Koşulları, Hastalığın Bulaşması ve Aile Üyelerine Bulaşma Konusunda Kaygılarının Değerlendirilmes

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Gönderim Tarihi / Received:22.08.2024
Kabul Tarihi / Accepted:05.03.2025
DOI: 10.34087/cbusbed.1537441.

Öz

Giriş ve Amaç: Aile hekimleri (AH), son COVID-19 salgınının bir sonucu olarak yüksek düzeyde stres ve duygusal sıkıntı ile karşı karşıyadır. Ayrıca pandemiyle başa çıkmanın zorluğu nedeniyle "onları hayatta tutmak ya da hayatta kalmak" ikilemiyle karşı karşıyalar. Bu çalışmanın amacı, aile hekimlerinin COVID-19 salgını sırasındaki çalışma koşullarını, kendilerine ve ailelerine hastalık bulaşması konusundaki endişelerine odaklanarak değerlendirmektir.

Gereç ve Yöntemler: Bu kesitsel çalışma, belirli bir derneğe bağlı 2.200 aile hekiminden oluşan bir hedef kitle ile gerçekleştirilmiştir. 90 güven düzeyi ve %5 hata payı ile gerekli örneklem büyüklüğü 242 katılımcı olarak hesaplanmış ve toplam 255 aile hekimi katılmıştır. Veri toplama, Google Forms üzerinde oluşturulan ve sosyodemografik ayrıntıları, mesleki deneyimleri, çalışma koşullarını ve COVID-19 bulaşmasına ilişkin kendi bildirdikleri kaygı düzeylerini kapsayan çevrimiçi bir anket aracılığıyla gerçekleştirilmiştir. İstatistiksel analiz, tanımlayıcı istatistikleri, parametrik olmayan testleri ve anksiyete ile çeşitli bağımsız değişkenler arasındaki ilişkileri araştırmak için korelasyon analizlerini içermektedir. Çalışma, katılımcılardan alınan bilgilendirilmiş onam ve ilgili bir etik kuruldan alınan onay ile etik standartlara bağlı kalmıştır.

Bulgular: Katılımcıların %92,9'u COVID-19'a karşı aşılandıklarını belirtmiştir. Bulaşmayı önlemek için AH'lerin %22,7'si evlerinden başka bir yerde kalmak zorunda kalmış, %51,4'ü ise çalışma düzenlerini ayarlamak zorunda kalmıştır. %54,1'i bir pandemi hastanesinde çalışmış, %78,8'i ise şüpheli COVID-19 vakalarına bakım sağlamıştır. Tedavi edilen hasta sayısı arttıkça anksiyete seviyeleri artmıştır ($p < 0.05$). Hastalığa yakalanma ve aileyi enfekte etme endişeleri, günlük rutinde işlev görme zorluğuyla birlikte artmıştır ($p < 0.05$).

Sonuç: Aile hekimleri, COVID-19 hastalığını aile üyelerine bulaştırma konusunda kendilerinden daha fazla endişe duymuştur. COVID-19 hastalarına hizmet sunarken başa çıkma zorluğu ile hastalığın bulaşması konusundaki endişeler arasında bir ilişki vardır. Aile hekimlerine, sundukları sağlık hizmetleri için değil, aynı zamanda sosyal hakları için de destek sağlanmalıdır.

Anahtar kelimeler: aile hekimi, bulaş, COVID-19, iş-yaşam niteliği, anksiyete

Abstract

Aim; Family physicians (FPs) are facing high levels of stress and emotional distress as a result of the recent COVID-19 epidemic. They are also faced with the dilemma of "keep them alive or survive" due to the difficulty of handling the pandemic. The aim of this study was to evaluate the working conditions of family physicians during the COVID-19 pandemic, focusing on their concerns about disease transmission to themselves and their families**.**

Method; This cross-sectional study was conducted with a target population of 2,200 family physicians affiliated with a specific association. With a 90% confidence level and a 5% margin of error, the required sample size was calculated as 242 participants, and a total of 255 family physicians participated. Data collection was carried out through an online questionnaire created on Google Forms, encompassing sociodemographic details, professional experiences, working conditions, and self-reported anxiety levels related to COVID-19 transmission. Statistical analysis included descriptive statistics, non-parametric tests, and correlation analyses to explore relationships between anxiety and various independent variables. The study adhered to ethical standards, with informed consent obtained from participants and approval from a relevant ethics committee.

Results; 92.9% said they were vaccinated against COVID-19. To avoid transmission, 22.7% of FPs were compelled to remain somewhere other than their homes, while 51.4% had to adjust their working orders. 54.1% worked at a pandemic hospital, while 78.8% cared for suspected COVID-19 cases. Anxiety levels escalate with the number of patients treated ($p < 0.05$). Anxiety levels about contracting the sickness and infecting the family rose with the difficulty of functioning in daily routine ($p<0.05$).

Conclusion; Family physicians were more concerned about transferring the COVID-19 sickness to their family members than with themselves. There was a relationship between the difficulty of coping while providing services to COVID-19 patients and anxiety about disease transmission. Family physicians should get assistance not only for the health services they provide but also for their social rights.

Keywords: family physicians; COVID-19; work-life quality; contagious; anxiety

1. Introduction:

The coronavirus outbreak is rapidly changing the world we live in. The recent COVID-19 outbreak has caused significant anxiety and mental distress among healthcare professionals. This pandemic is causing fundamental changes, not only in primary health care, but throughout society. This pandemics has catalyzed significant changes across primary health care and society. These changes are reshaping healthcare delivery, enhancing public health awareness, altering work and education dynamics, and highlighting the need to address social inequities. As we move forward, it is essential to build on these changes to create more resilient, equitable, and efficient systems that can better withstand future public health crises [1]. Especially in crisis situations, it may pose a risk for Burnout Syndrome due to prolongation of working hours, excessive workload, dangerous working environment, social rights and other factors [2-4]. The greater the variety of emotions experienced, such as stress, burnout, and anxiety, the more difficult it is for physicians to control their own emotions, and the more emotional stress they face. Emotional conflict and social isolation can occur when there is a conflict between the emotions desired by the institution and those felt by the employee [5].The field of health differs from other professions due to the difficulty of dealing with patients, caregivers, relatives, etc who themselves are under intense stress and face problems, in addition to the stress of working with individual patients. Not only disruptions in the health-care system or the excessive demands of patients, but any form of stress can increase physicians' anxiety and burnout. Job satisfaction, as well as beliefs, and commitment to the unit's effectiveness, may suffer as stress levels rise [5]. According to studies, the high work stress of family physicians causes problems such as burnout, decreased job satisfaction, decreased service quality, and higher turnover. It has been demonstrated that physicians' working conditions, stress levels, and burnout are among the factors influencing their ability to cope with stress [6-9].When dealing with stress, it is critical to understand the responses to stress. Stress causes emotional, cognitive, behavioral, and physical responses. Cognitive aspects include restlessness, anger, sadness, tension, anxiety, hopelessness, and crying are examples of emotional reactions; difficulties in concentration, memory problems, instability, obsessions, and phobias occur in. Examples of behavioral responses are avoidance, aggression, alcohol consumption, binge eating, and preoccupation with problems [10,11]. It is believed that the number of mortalities, as well as ill health care workers, including physicians, is greater than is recognised throughout the world. In addition to the risk of transmission, health care workers could face stigma and social exclusion in the future [6].The purpose of this study was to evaluate the working conditions of family physicians during the COVID-

19 pandemic, as well as their concerns about disease transmission to them and their families.

2. Methods

This cross-sectional study was conducted on T (T) members who work as family physicians. The study's universe consists of 2200 T-affiliated family physicians. T family physicians work not only in family health centers, but also in other institutions. The population was determined by accessing the number of family physicians from the association's management. The goal of this study was to reach the entire universe without using a sample. In total, 255 family physicians took part in our study. In this study, a questionnaire was sent to the entire population (N=2200), but 255 family physicians participated in the questionnaire. The participation rate in the survey was 11.6%. The data for this study were derived from the project titled "Adaptation of the Coping Self-Efficacy Scale into Turkish: Validity and Reliability Study.". Statistical analysis was conducted using the IBM Statistical Package of the Social Science for Windows 24.0 (IBM CORP.Armonk, NY,USA) statistics package software.).

2.1 Data collection tool

As a data collection tool, a Descriptive Data Registration Form with 26 questions was used. This form includes questions about the sociodemographic, individual and familial characteristics, and professional experiences of family physicians, their working conditions during the pandemic, and their fears about contracting the COVID-19 disease and infecting their families. The researchers created the form based on the literature and t wo experts in the field of family medicine were consulted to assess the questionnaire's validity. Ten randomly selected family physicians were involved the pilot application of the questionnaire, and the final version was created after evaluating the questionnaire's comprehensibility.

The anxiety level of family physicians was the study's dependent variable; it was determined based on a self-reported score of between 1 and 10 in order to determine the level of anxiety about the transmission of the COVID-19 disease to themselves and members of their households. Independent variables were age, gender, marital status, having a child, presence of chronic disease, general health perception, years of work in the profession, average weekly working time, number of patients cared for daily before and during the pandemic, the institution of employment, income-expenditure impact status, previous epidemic experience, history of COVID-19 and vaccination, PCR test status, and sheltering outside of their own home during the pandemic. Another independent variable was family physicians' daily routine work (daily examination, report, maternal and child health services and home care service, periodic examination, COVID-19 patient follow-up-vaccine-report works, prescribing, chronic patient follow-up, in-service training, Cancer Education and Early Detection Centers are the difficulty in dealing with (coping difficulty was determined based on self-report by giving a score between 1 and 10).

2.2 Data collection

Those who voluntarily agreed to participate in the study were included; those who refused to participate or did not complete all questionnaire questions were excluded. Due to the COVID-19 Pandemic, the research data was collected online from family physicians using only a Google Form. (https://docs.google.com/forms/d/1bH8jdEZHuktQhuOrh8OsbDo_xn-eQ9-o_gpfazDzHrk/edit). The questionnaire, which was created electronically, was distributed to family physician associations and WhatsApp groups. Following ethics committee approval, institutional permissions for the study were obtained, and data were collected between March and June 2021. The data was downloaded in CSV format, revised, and standardized before being analyzed.

2.3 Ethics

In order to complete the research, written permission was obtained from T leadership. This study was carried out in accordance with the principles of the World Medical Association's Helsinki Declaration. The Ethics Committee of E granted written permission for the study to be conducted (approval date: March/02/2021 approval number: B.30.2X0.05.05-20-111). The first page of the questionnaire included a consent form; before answering the questions, all participants provided written consent via the internet. Google Forms has privacy principles such as protecting data and not sharing it with anyone, and never selling personal information. The questionnaires in our study were filled out anonymously; no personal information about the participants was requested. The researcher provided assurance that all had the right to refuse participation in the study and that all information and identity information provided would be kept confidential. By checking the "I agree" box, family physicians indicated that they had read and understood the consent information and agreed to participate in this study on their own accord. Family physicians who checked the "I agree" box were granted access to the rest of the questionnaire.

2.4 Statistical analysis

Descriptive data consist of mean, standard deviation, minimum value (min), maximum value (max), number, and percentage. To determine whether the data had a normal distribution, the Kolmogorov-Smirnov normality tests were used. Non-parametric tests were used to compare groups because the data did not have a normal distribution ($p<0.05$). The Kruskal Wallis test, Mann-Whitney U test, and

Spearman Correlation Analysis were used in statistical analysis. SPSS 24.0 statistical package was used for the statistical analysis. The statistical significance level was set at $p<0.05$.

3. Results and Discussion

3.1 Results

The average age of the family physicians who took part in the study was 38.5±10.1. 72.2 % of those polled were married, 59.6% had children, 30.6 % had chronic diseases, and 82.7 % rated their overall health as "poor-very bad".

The physicians' average work experience was 13.7±10.2 years, their average weekly working hours were 42.1±7.6, and the number of patients seen per day before the pandemic was 43.9±29.6, falling to 36.8±28.4. during the pandemic. A family health center employed 39.2 % of the family physicians, a university hospital employed 38.0 %, and a state hospital employed 16.5 %. 51.4 % physicians said they had never seen an epidemic before, and 54.9 % said their expenses increased during the pandemic (Table 1).

Table 1. Sociodemographic characteristics of the Family Physicians (n=255)

Characteristics		**n**	**%**
Sex	Woman	151	59.2
	Man	104	40.8
Age	Median±SD: 38.5±10.1	Min: 25	Max: 68
Marital Status	Married	184	72.2
	Single	61	23.9
	Divorced/Widow	10	3.9
Having Children	Yes	152	59.6
	No	103	40.4
Chronic diseases	Yes	78	30.6
	No	177	69.4
General Health Perception	Very well-well	7	2.8
	So-so	37	14.5
	Poor-very bad	211	82.7

25.5 % physicians reported having COVID-19, 92.9 % had COVID-19 vaccine, 76.9 % had a PCR test once, and 21.6 %, twice. During the pandemic, 22.7 % of physicians were required to stay somewhere other than at home to reduce the risk of transmission. During the pandemic, 51.4 % of physicians' working orders changed. 54.1 % worked in a pandemic hospital, and 78.8 % provided care to a suspected COVID-19 patient. 14.9 % of the doctors said there were people over the age of 65 in their house during the pandemic, and 56.1 % of them said were children (Table 2).

Table 2. Characteristics of family physicians in terms of their professional lives

Characteristics	**Mean±SD:**	**Min**	**Max**
Total amount of time spent working in the profession (years)	13.7±10.2	1	42
Weekly working time average (hours)	42.1±7.6	25	94
Number of patients cared for on a daily basis prior to the pandemic	43.9±29.6	0	200
The number of patients who were cared for on a daily basis during the pandemic.	36.8±28.4	0	210
		Number	**%**
Workplace	Family Healthcare Center	100	39.2
	Public Healthcare Center	5	2.0
	State Hospital	42	16.5
	University Hospital	97	38.0
	Other centers	11	4.3
How were your income and expenses affected by the pandemic?	Expenses have increased.	140	54.9
	Nothing changed	66	25.9
	Expenses have decreased.	49	19.2
Have you experienced an epidemic before?	Yes	124	48.6
	No	131	51.4

The average anxiety level of family physicians about contracting the COVID-19 disease is 5.82±2.43, while the average anxiety level about infecting their household members is 7.98±2.53. There was no relationship between the anxiety about infecting their household members with gender, marital status, being a parent, presence of chronic disease, general health perception, institution where they worked, being diagnosed with COVID-19, having a PCR diagnosis, working in a pandemic hospital, and having an elderly person and child in their home ($p>0.05$). Family physicians who had received the COVID-19 vaccine and cared for patients with suspected COVID-19 were found to be significantly more concerned about infecting their family members ($p<0.05$), (Table 3).

Table 3. Family physician characteristics in regard to the COVID-19 process

Characteristics		Numbers	%
Have you been diagnosed with COVID-19?	Yes	65	25.5
	No	190	74.5
Have you been vaccinated against COVID-19?	Yes	237	92.9
	No	18	7.1
Have you had a PCR test for COVID-19?	Yes	196	76.9
	No	59	23.1
The total number of PCR tests performed (n=196)	Once	54	21.2
	Twice	55	21.6
	Three times	38	14.9
	Four times	20	7.8
	≥5 times	29	11.4
Have you had to live away from home during the pandemic to reduce the risk of transmission?	Yes	58	22.7
	No	197	77.3
Has your working order at work changed as a result of the pandemic?	No	124	48.6
	Yes (contact tracing team)	27	10.6
	Yes (inpatient care service for pandemics)	50	19.6
	Yes (policlinic for pandemic patients)	54	21.2
Do you have any experience working in a pandemic hospital?	Yes	138	54.1
	No	117	45.9
Did you deliver care to a COVID-19 suspect?	Yes	201	78.8
	No	54	21.2
Was there anyone over the age of 65 in your home during the pandemic?	Yes	38	14.9
	No	217	85.1
Were there any children in your home during the pandemic?	Yes	143	56.1
	No	112	43.9

Table 4 shows the correlation analysis of the relationship between family physicians' difficulty coping with daily routine tasks and their level of anxiety about being infected with the COVID-19 disease and infecting their family. Age and physicians their fear of transmitting the disease to their family were found to have a negative and weak correlation. The level of anxiety decreases with age ($p<0.01$). These indicate a negative and weak correlation between age and the anxiety levels of family physicians regarding the transmission of COVID-19 to themselves and their families. This suggests that as age increases, anxiety levels decrease. Several factors could explain why anxiety tends to decrease with age among family physicians during the pandemic.:

Experience and Coping Mechanisms: Older family physicians generally have more years of experience in the medical field. With this experience comes a greater familiarity with handling stressful and high-pressure situations. They may have developed more effective coping mechanisms and resilience over the years, enabling them to manage anxiety more efficiently than their younger counterparts.

Perspective and Prior Exposure: Older physicians may have a broader perspective on medical crises, having potentially experienced other significant health challenges or epidemics in the past. This historical perspective can help them contextualize the current pandemic, reducing their anxiety. Our study noted that 51.4% of physicians had never seen an epidemic before, implying that older physicians with prior exposure might be less anxious due to their previous experiences.

Professional Stability: With age often comes professional stability and security. Older physicians are likely to have more established practices, positions, and support systems within their workplaces. This stability can mitigate anxiety by providing a sense of control and predictability, which are crucial factors in managing stress and anxiety.

Family and Social Support: Older physicians may have more robust family and social support networks. Strong support systems can provide emotional and practical assistance, alleviating anxiety. Additionally, older physicians might have adult children who are less dependent on them, reducing their concerns about infecting vulnerable household members.

Health Risk Perception: The perception of health risks may also differ with age. Older physicians might have a more realistic or accepting attitude towards health risks, including the possibility of contracting COVID-19. They may prioritize their professional duty and have a more measured response to the risks involved, which can result in lower anxiety levels.

The daily number of patients in their care during the pandemic and the fear of transmitting the COVID-19 disease to themselves and their family were found to have a positive and weak correlation. The level of anxiety rises with the number of patients treated

(p<0.05). When family physicians were asked about their difficulties in coping with daily tasks during the pandemic, a positive and weak correlation (p<0.05) was found between the level of difficulty in coping during daily examination work and home care services, and the anxiety caused by the threat of being infected.

There is a positive correlation between the anxiety over possibly infecting themselves and their family with the COVID-19 disease, and the level of difficulty in coping during daily work activities, consisting of paperwork, periodic examination, COVID-19 patient follow-up, COVID-19 vaccine administration, COVID-19 patient report procedures, prescribing, and chronic patient follow-up. A weak correlation was discovered; it was determined that as the difficulty in coping while performing daily routine tasks increased, so did the level of anxiety over infection of self and family. (p<0.05), (Tablo 5).

Table 5. The relationship between family physicians' difficulty in coping with daily routine tasks and the level of anxiety about the transmission of COVID-19 disease to themselves and their family

N=255		**Worry about contagion**	**Worry about infecting one's family**
Age	r	-.019	-.153*
	p	0.760	**0.014**
The number of patients treated on a daily basis during the pandemic.	r	.139*	.187**
	p	**0.026**	**0.003**
Difficulty coping with daily tasks #			
Daily examination	r	.169**	.121
	p	**0.007**	0.054
Daily report process	r	.174**	.153*
	p	**0.005**	**0.015**
Daily mother-children care facilities	r	.094	.098
	p	0.135	0.118
Homecare services	r	.140*	.108
	p	**0.025**	0.085
Periodic examinations	r	.166**	.143*
	p	**0.008**	**0.022**
Follow-up of COVID-19 diagnosed patients	r	.161*	.163**
	p	**0.010**	**0.009**
	r	.146*	.144*
COVID-19 vaccination facilities	p	**0.020**	**0.021**
Reports for COVID-19 diagnosed patients	r	.162**	.197**
	p	**0.010**	**0.002**
Paperwork for recipes	r	.193**	.173**
	p	**0.002**	**0.006**
Follow-up of patients with chronic diseases	r	.181**	.146*
	p	**0.004**	**0.019**
In-service training	r	.027	.039
	p	0.662	0.539
Cancer Early Diagnose and Education Services	r	.098	.112
	p	0.12	0.074

 # Based on self-report, the coping difficulties encountered by family physicians while performing these tasks were scored on a scale between 1 and 10.
*** p<0.01, * p<0.05 (Two-Way Analyzed), Spearman Correlation Analysis*

3.1.1 Discussion

The demographic characteristics of the family physicians (FPs) in our study reveal an average age of 38.5 years, with a significant majority being married and having children. These findings align with previous research indicating that middle-aged, married individuals with families constitute a substantial proportion of the healthcare workforce, potentially influencing their work-life balance and stress levels [7].

The study highlights the substantial impact of the COVID-19 pandemic on FPs' professional and personal lives. The average weekly working hours and the number of patients seen per day decreased during the pandemic, reflecting the broader disruptions in healthcare delivery systems noted globally [8]. Notably, a significant proportion of FPs were employed in family health centers and university hospitals, emphasizing the role of these institutions in primary healthcare during the crisis.

Our findings show that more than half of the physicians experienced changes in their work orders, and a considerable number had to work in pandemic hospitals or provide care to suspected COVID-19 patients. This aligns with studies documenting the reallocation of healthcare resources and personnel to manage the pandemic effectively [9,10]. The necessity for some physicians to stay away from home to reduce transmission risk further underscores the personal sacrifices made by healthcare workers during the pandemic.

The high rate of COVID-19 vaccination among the FPs (92.9%) indicates a positive response to public health recommendations, mirroring trends observed in similar studies [11]. However, the substantial percentage of physicians contracting COVID-19 (25.5%) highlights the ongoing risks and exposure faced by frontline workers.

A significant aspect of our study is the analysis of anxiety levels among FPs regarding contracting COVID-19 and infecting their household members. The average anxiety levels were notably higher for infecting family members compared to self-infection. This heightened anxiety, particularly among those vaccinated and those providing care to suspected COVID-19 patients, suggests a complex interplay between perceived risk and protective behaviors [12,13]. Contrary to some studies, our data did not show a significant relationship between anxiety levels and variables such as gender, marital status, or presence of chronic disease, indicating that other factors may play a more critical role in influencing anxiety [14].

The correlation analysis highlights key relationships between anxiety and daily routine task performance. A weak negative correlation between age and anxiety about transmitting the disease suggests younger physicians experience higher stress levels. Additionally, a positive correlation between the number of patients treated and anxiety indicates that increased workloads during the pandemic amplify stress, aligning with similar findings in the literature. [15-17].

The difficulties FPs faced in coping with daily tasks during the pandemic, as correlated with anxiety levels, reflect the broader challenges of managing increased workloads and maintaining quality care under stressful conditions. This correlation underscores the need for targeted interventions to support healthcare workers' mental health and well-being, particularly during public health crises [18].
During the COVID-19 pandemic, we evaluated the association between family physicians' working conditions and their concerns about contaminating the disease and infecting their families. The level of anxiety about infecting self was higher than the level of anxiety about infecting family members with whom he lived. Türkili et al. published similar concerns (the highest rate of anxiety was reported as transmitting the virus to family or friends (74%), followed by dying as a result of the virus) (73.2%) [19]. A similar result was reported in the Saruç and Kızıltaş study, in which 411 participants' data were analysed [20].

Family physicians who were fully vaccinated against COVID-19 and cared for patients with suspected COVID-19 were more concerned about infecting their living relatives. According to Nguyen et al's study of 2,135,190 people, the risk of being positive for healthcare workers working with COVID-19 is at least three times higher than the general population [21]. Furthermore, ostracism due to anxiety over contagion was found to increase anxiety in a study conducted by Saruç and Kızıltaş (20). The main concern for family physicians in the study was the risk of transmitting COVID-19 to their family members. By September 12, 2020, 85 healthcare workers in Turkey had died from COVID-19, including 41 physicians (48.2%). Despite this, COVID-19 is not classified as an occupational disease, meaning family physicians who fall ill face pay deductions. The pandemic, now considered a syndrome influenced by economic factors, has led to rising expenditures alongside ongoing income losses [22].

In their study of 255 healthcare workers, Sakaoğlu et al. revealed that women had higher levels of state anxiety [23]. The level of anxiety was found to be higher through female employees in the Saruç and Kızıltaş study [20]. There was no relationship found in our study between the gender factor and anxiety about infecting self or household members. The study found a connection between family physicians' difficulty managing routine tasks during the COVID-19 pandemic and their anxiety about transmitting the virus to themselves or their families. Higher difficulty coping with COVID-19 patients correlated with increased fear of contagion. Treating all non-tested patients as potential risks heightened anxiety, exacerbated by limited rapid antigen tests, their accuracy issues, and cost concerns. In contrast, access to protective equipment improved their sense of well-being [20]. Family physicians in the study reported changes in their workplaces and living arrangements due to quarantine conditions during the pandemic. These changes negatively impacted occupational health and safety, challenging physicians' ability to cope with difficult working conditions and potentially hindering the health system's efforts to improve these conditions. Employers are required to provide a Nursing Room and Nursery in their workplaces, according to the Official Gazette dated 16 August 2013, issued based on Article 30 of the Occupational Health and Safety Law No. 6331, with the "Article 13 of the Regulation on Working Conditions of Pregnant or Nursing Women, Breastfeeding Rooms, and Child Care Dormitories." Physicians, midwives, nurses, and secretaries working in primary health care centers, on the other hand, do not have access to such a service [17]. The same issue exists in many secondary and tertiary health care facilities.

One of the most striking findings of our study is that 82.7% of family physicians rated their overall health as "poor-very bad." This figure is alarmingly high

and warrants a detailed discussion to understand the underlying factors contributing to this perception:

Possible Contributing Factors

Work-Related Stress and Burnout: Family physicians faced heightened work-related stress and burnout during the COVID-19 pandemic due to increased workloads, prolonged hours, and the emotional strain of managing critically ill patients and high mortality rates. These factors likely affected their health perceptions. Research indicates that frontline healthcare workers are particularly vulnerable to stress-related disorders and burnout [24].

Exposure to COVID-19: Family physicians' increased exposure to COVID-19 significantly contributed to their stress. In the study, 25.5% of physicians reported contracting COVID-19, and 78.8% cared for suspected COVID-19 patients. Fear of infection and concerns about long-term health impacts, such as long COVID, likely influenced their negative health perceptions [25].

Mental Health Challenges: The pandemic severely impacted healthcare workers' mental health, with an average anxiety level of 7.98 out of 10 about infecting household members, highlighting significant distress. Mental health is a key factor in overall health perception, and high anxiety levels are associated with poorer self-assessed health [26].

Chronic Diseases: The study revealed that 30.6% of family physicians had chronic diseases, which likely worsened their perception of health, particularly under the physical and emotional strain of the pandemic. Balancing chronic conditions with high-stress work may have contributed to the high rate of negative health self-ratings. This issue presents an opportunity for further research and improvement.

4. Conclusion

The finding that a significant majority of family physicians perceive their health as "poor-very bad" has critical implications for the healthcare system. Physician well-being is crucial for maintaining a functional and effective healthcare workforce. Poor health among physicians can lead to decreased job performance, higher absenteeism, and ultimately, a decline in the quality of patient care.

According to Penwel et al's research, the curriculum in medical education should be adjusted to emphasize protection and improvement in the well-being of physicians. It has been stated that developing structured competencies at the individual and system levels can provide resilience during challenging times [28]. Improving working conditions is critical for both health workers and the public. Applications such as appointment scheduling and ventilation of the workplace will reduce risks, reducing insomnia, fatigue, anxiety disorders, and other similar issues [23]. The pandemic underscored the need for reforms in traditional primary healthcare practices. Effective planning for societal health, informed by epidemiological data, requires assessing regional needs while addressing the constraints of limited resources [29]. This can only be accomplished if family physicians in the field are able to actively participate in planning.

The study's primary limitation is its cross-sectional design, which prevents establishing a cause-effect relationship between anxiety levels and difficulties in routine work during the COVID-19 pandemic. Self-reported data via questionnaires reflect emotional states like anxiety and coping challenges, which can vary over time and conditions, limiting the findings to the data collection period. However, conducted during the pandemic's third wave, about a year in, the study is "state-of-the-art" and provides valuable insights for addressing challenges in family physicians' work processes.

In conclusion, our study provides a comprehensive understanding of the demographic, professional, and psychological impacts of the COVID-19 pandemic on family physicians. The findings emphasize the need for robust support systems and interventions to mitigate anxiety and enhance coping mechanisms among healthcare workers, ensuring sustained quality care and personal well-being.

Characteristics		Worries about contagion Median±SD	p	Worries about infecting one's family Median±SD	p
Sex	Woman	5.78±2.40	0.799†	7.92±2.26	0.746†
	Man	5.85±2.45		8.02±5.07	
Marital Status	Married	6.00±2.28	0.230#	8.10±2.12	0.581#
	Single	5.41±2.78		7.72±2.51	
	Divorced/Widow	5.00±2.53		7.40±2.95	
Having Children	Yes	6.03±2.31	0.145†	7.96±2.21	0.528†
	No	5.50±2.56		8.01±2.32	
Chronic diseases	Yes	6.19±2.32	0.210†	7.91±2.30	0.855†
	No	5.69±2.47		8.01±2.23	
General Health Perception	Very well-well	6.29±2.56	0.914#	8.14±1.34	0.665#
	So-so	5.73±2.49		7.70±2.45	
	Poor-very bad	5.82±2.42		8.02±2.24	
Workplace	Family Healthcare Center	6.06±2.45	0.453#	8.21±2.10	0.150#
	Public Healthcare Center	5.60±3.91		7.40±3.28	
	State Hospital	5.98±2.29		8.52±1.85	
	University Hospital	5.64±2.83		7.68±2.24	
	Other centers	4.73±3.22		6.73±3.74	
Have you been diagnosed with COVID-19?	Yes	5.63±2.58	0.608†	7.91±2.34	0.752†
	No	5.88±2.37		8.01±2.22	
Have you been vaccinated against COVID-19?	Yes	5.89±2.23	0.114†	8.12±2.10	**0.011**†
	No	4.89±2.92		6.17±3.25	
Have you had a PCR test for COVID-19?	Yes	5.86±2.40	0.627†	8.06±2.20	0.451†
	No	5.68±2.51		7.73±2.40	
Do you have any experience working in a pandemic hospital?	Yes	5.86±2.30	0.949†	8.12±2.00	0.693†
	No	5.78±2.58		7.81±2.50	
Did you deliver care to a COVID-19 suspect?	Yes	5.93±2.37	0.191†	8.25±1.98	**0.003**†
	No	5.43±2.59		6.98±2.86	
Was there anyone over the age of 65 in your home during the pandemic?	Yes	6.39±2.37	0.136†	8.34±1.99	0.359†
	No	5.72±2.43		7.92±2.29	
Were there any children in your home during the pandemic?	Yes	6.08±2.40	0.069†	8.08±2.20	0.459†
	No	5.49±2.42		7.86±2.31	

Table 4. **Anxiety level of family physicians about infecting himself/herself and infecting his/her family with COVID-19 disease varies according to sociodemographic and working life characteristics***

** Family physicians assigned a score between 1 and 10 to anxiety levels based on self-report.*
#Kruskal Wallis Test, †Mann-Whitney U Test

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