How the COVID-19 Pandemic Has Affected the Anxiety Levels Among Various Specialty Physicians

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Abstract

Objective: This study examines the influence of the COVID-19 pandemic on anxiety levels across various medical disciplines and explores whether this effect varies according to certain characteristics.

Method: This research included only scientific studies that evaluated the anxiety levels of participating physicians using identical measures and were conducted in Türkiye during the COVID-19 pandemic for a credible comparison.

Results: It was determined that 43% of physicians had different levels of anxiety attributable to COVID-19 (20.6% mild, 12.1% moderate, and 10.3% severe anxiety). The predominant response in the Beck Anxiety Inventory was the fear of death, recorded at 38.9%. A notable disparity was seen among the specialty groups regarding anxiety levels. The internal medicine department had the highest mean Beck Anxiety score (13.43±13.344) (p=0.012). The mean anxiety ratings were elevated in females (12.655±11.372) (p=0.001). Assistant Professors (12.376±13.286) and Assistant Physicians (11.457±12.718) exhibited elevated anxiety levels when analyzed by academic status (p=0.033). The anxiety scores of experts who treated COVID-19 patients were considerably elevated (10.906±11.585) (p=0.002). The anxiety score of specialists treating COVID-19 patients was considerably elevated (11.309±11.591) (p=0.000).

Conclusion: During the COVID-19 pandemic, a significant prevalence of worry and dread of mortality was observed among physicians. The highest rate was observed among internal medicine physicians. Given that worry and fear of mortality impair physicians' capacity to adequately treat and monitor patients, it is imperative to conduct studies aimed at alleviating these concerns among physicians during the pandemic.

Keyword: COVID-19, physicians, anxiety, fear of death, Türkiye.

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INTRODUCTION

The APA Dictionary of Psychology defines anxiety as "an emotion characterized by apprehension and somatic symptoms of tension in which an individual anticipates impending danger, catastrophe, or misfortune" (1). Anxieties indeed serve a significant function in our lives. They inspire us, thus infusing our lives with vibrancy. However, upon reaching a specific intensity, it initially disrupts our comfort, subsequently evolves into a psychological issue, and ultimately serves as a catalyst for numerous diseases. The COVID-19 pandemic is a significant source of fear for both society and healthcare professionals. The COVID-19 pandemic has profoundly impacted the healthcare system and the mental well-being of healthcare workers in Türkiye and elsewhere (2).

The COVID-19 pandemic has arisen as a problem that has profoundly impacted healthcare systems globally. Throughout this process, healthcare professionals, particularly physicians, have encountered significant stress and worry. Since the onset of the pandemic, research has indicated that healthcare workers are significantly susceptible to mental health symptoms and disorders, with heightened prevalence of anxiety, depression, emotional distress, post-traumatic stress disorder, substance use disorders, and burnout syndrome compared to the general population (2). Research has demonstrated that healthcare professionals Research indicates that individuals undergo emotional distress during the epidemic (3), characterized by elevated fear, clinical anxiety symptoms, and burnout (4).

During the pandemic, characterized by significant uncertainties and bewilderment, it was noted that healthcare personnel faced numerous adverse impacts, both physically and emotionally (5). The prolonged duration of the pandemic, coupled with numerous uncertainties, daily media reports of cases and fatalities, and the frustration faced by physicians and healthcare professionals in managing the crisis, collectively induced anxiety among healthcare practitioners (6). Anxiety is manifested as a psychopathological condition that influences mental health issues (7).

Assessing the anxiety levels of physicians, who play a pivotal role among healthcare professionals during the ongoing epidemic, will facilitate an evaluation of the healthcare system's efficacy. This study aims to assess the impact of the COVID-19 pandemic on the anxiety levels of various medical professions

and to see whether this impact varies according to different variables.

METHODS

Literature review

The study's population was defined by research including exclusively specialist physicians to examine the anxiety levels experienced by healthcare professionals across different disciplines in Türkiye during the COVID-19 pandemic. Databases such as PubMed, Google Scholar, and TR Index were scrutinized for publications originating from Türkiye between March 2020 and June 2024. A computerized search was performed in these databases using the terms "COVID-19," "physicians," "anxiety," "fear of death," and "Türkiye."

Criteria for the selection of studies

This research included only scientific studies that evaluated the anxiety levels of participating physicians using identical measures and were conducted during the COVID-19 pandemic for a credible comparison. Studies evaluating anxiety levels with the esteemed and globally validated Beck Anxiety Scale were incorporated for this objective. Exclusions were applied to studies evaluating anxiety levels through instruments other than the Beck Anxiety Scale (n: 9), studies involving alternative healthcare practitioners such as non-specialists, nurses, dentists, and paramedics (n: 119), studies that encompassed both healthcare professionals and patients (n: 32), oral or poster presentations at scientific congresses (n: 21), and case reports (n: 1). As a result, five studies that met the criteria were included in the study (Figure 1) (8-12).

The five studies identified in this way are:

1. Kaya Y, Bostan S, Düğeroğlu H, Özbılen M, Keskın H (2020) The Effect Of The Covıd-19 Pandemic On The Anxiety Levels Of Internal Medicine Physicians And Practice Of Internal Medicine Clinics. Jihsam.

2. Kaya A, Bostan S, Dereli S, Bektaş O, Filiz M, Kılınçel O, Yenerçağ M (2021) The Effect Of Covıd-19 Pandemic On The Practices Of Cardiology Clinics And On The Anxiety Levels Of Cardiologists Turkiye Klinikleri J Cardiovasc Sci., 33(1):22-30

3. Yılmaz A, Karakoyun DO , Isık HS, Bostan S (2020) The Effect of the COVID-19 Pandemic on Functioning of Neurosurgery Clinics and the Anxiety Levels of Neurosurgeons in Turkey. Turk Neurosurg 30(6):944-951.

4. Erdem B, Gök M, Bostan S (2021). The evolution of the changes in the clinical course: a multicenter survey-related impression of the ophthalmologists at the peak of the COVID-19 pandemic in Turkey. International Ophthalmology 41; 1261–1269.

5. Altaş H, Bostan S (2021) The Effect Of COVID-19 Pandemic on The Anxiety Levels of Radiology Experts And Clinical Functioning.

Middle Black Sea Journal of Health Science, 7(1); 49–56.

The Beck Anxiety Inventory, together with demographic and descriptive information, was utilized as a data collection instrument in the study. The inventory was created by Beck et al. (13) to assess individuals' anxiety levels and was subsequently adapted to Turkish by Ulusoy et al. (14). The inventory utilized to evaluate the level of anxiety experienced by individuals for specific reasons is extensively employed across several samples in Türkiye (15). The Anxiety Inventory comprises 21 questions. The inquiries are addressed using a 4-point Likert scale, with values ranging from 0 to 3. The scores obtained from the responses to 21 questions are assessed based on the subsequent categories: Scores ranging from 0 to 7 denote normalcy (absence of anxiety), 8 to 15 signify mild anxiety, 16 to 25 reflect moderate anxiety, and 26 to 63 represent severe anxiety (16). Physicians were queried about anxiety with the COVID-19 process. Inquiries regarding the participants' personal attributes (specialty, gender, age, years of service, and title), the hospital of employment, and their experience with COVID-19 patients were incorporated into the inventory. The reliability analysis of the study yielded a Cronbach's alpha coefficient of 0.744.

Statistical Analysis

An examination of these five studies revealed that data were collected from physicians using convenience sampling from digital social media platforms and physician groups in April, May, and June 2020. Validity and reliability analyses were conducted for the scale used in each study. The data was analyzed using the SPSS software package (version 20). Parametric analyses were employed in the data examination as the kurtosis and skewness coefficients fell between -1 and 1. The data were examined using frequency, percentage, arithmetic mean, standard deviation, and differential analysis (independent t-test and Analysis of Variance— ANOVA). Tukey's-b test was employed to identify the source of differences among several groups with more than two variables.

RESULTS

Table 1 displays the psychometric values of the 21 items in the Beck Anxiety Inventory utilized in the study. Given that each statement might yield a score between 0 and 3, the cumulative score will fall within the range of 0 to 63. In this study, the participants' anxiety mean score was established as 10.003 ± 11.206. This signifies a moderate degree of anxiousness. The Cronbach's alpha coefficient of the scale was determined to be 0.951, indicating strong reliability.

The scores derived from the Beck Anxiety Inventory, ranging from 0 to 63, are classified into four groups (0-7, 8-15, 16-25, 26-63) to assess anxiety levels. The anxiety levels of 778 physicians are presented in Table 2, categorized by the specified cut-off criteria. It was

determined that 57.0% (n=437) of the physicians exhibited an anxiety score ranging from 0 to 7, indicating the absence of anxiety or dread related to COVID-19. 20.6% (n=158) of physicians experienced mild anxiety, 12.1% (n=93) experienced moderate anxiety, and 10.3% (n=79) experienced severe anxiety as a result of COVID-19. It was determined that 43% of physicians experienced differing levels of anxiety attributable to COVID-19 (Table 2).

Table 3 presents the frequency and percentages of the Anxiety Inventory based on the responses provided, together with the distributions of the arithmetic mean and standard deviation. Upon analyzing Table 3 regarding the inquiries, the questions exhibiting the highest percentage of responses rated at the normal level are "Shaky / unsteady" at 87.6%, "Hands trembling" at 84.6%, and "Faint / lightheaded" at 84%. Conversely, the inquiries with the lowest percentages are "Nervous" at 32.4% and "Unable to relax" at 34.4%. It was concluded that individuals exhibiting the highest proportions of responses indicating a modest level of distress were "unable to relax" at 36.4%, "scared" at 35.3%, and "nervous" at 34.7%. It was ascertained that among the questions rated at a moderate level, the biggest percentages were attributed to "Nervous" at 23.8%, "Unable to relax" at 19.4%, and "Fear of worst happening" at 18.8%. It has been established that those exhibiting the largest percentage of severely graded questions are

"Unable to relax" at 9.8%, "Nervous" at 9.0%, and "Fear of worst happening" at 7.5%.

Table 4 presents the findings of the independent t-test and ANOVA about the distribution of physicians in relation to various parameters and the comparison of anxiety scores based on these factors. An examination of the data in Table 4 reveals that the anxiety scores related to COVID-19 do not vary based on the physicians' age, years of service, type of hospital, or whether the hospital is designated as a pandemic facility (p > 0.05). Furthermore, a comparison of anxiety scores across different medical specialties revealed a statistically significant difference among the groups (F = 3.239, p = 0.012). The Tukey's-b test indicated that the disparity was attributable to the elevated anxiety scores of internal medicine practitioners relative to those in cardiology and ophthalmology. The gender comparison reveals that female physicians exhibit greater COVID-19-related anxiety levels than their male counterparts (t = 3.265, p < 0.001). Comparison of anxiety scores among physicians based on their titles revealed that assistant professors exhibited higher anxiety levels than professors (F = 2.638, p = 0.033). Physicians who treated COVID-19 patients had elevated anxiety scores compared to those who did not (t = 3.612, p = 0.002) and those who did not attend to COVID-19 patients (t = 4.443, p = 0.000)..

Table 1. Psychometric Values Related to Beck Anxiety Inventory

Scale	Max-Min score	Items	Mean score	Standard Deviation	Cronbach Alpha
Anxiety Inventory	0-63	21	**10,003**	**11,206**	**0.951**

Table 2. Distribution of Physicians by Level of Anxiety

Anxiety Level	Frequency	Percent (%)
Normal (0-7 score)	437	57, 0
Mild (8-15 score)	158	20.6
Moderate (16-25 score)	93	12.1
Severe (26-63 score)	79	10, 3

Table 3: Distribution of the Answers to the Beck Anxiety Inventory

Items	Not at all (0)		Mildly – it didn't bother me much (1)		Moderately – it wasn't pleasant at times (2)		Severely – it bothered me a lot (3)		Mean	SD
	n	%	n	%	n	%	n	%		
1. Numbness or tingling	589	**75,8**	101	**13,0**	67	**8,6**	20	**2,6**	0, 379	0, 750
2. Feeling hot	567	**73,0**	140	**18,0**	56	**7,2**	14	**1,8**	0, 378	0, 698
3. Wobbliness in legs	589	**75,9**	120	**15,5**	51	**6,6**	16	**2,1**	0, 347	0, 694
4. Unable to relax	267	**34,4**	283	**36,4**	151	**19,4**	76	**9,8**	1, 046	0, 963
5. Fear of worst happening	310	**39,9**	263	**33,8**	146	**18,8**	58	**7,5**	0, 938	0,9 39
6. Dizzy or lightheaded	569	**73,3**	142	**18,3**	51	**6,6**	14	**1,8**	0,368	0,687
7. Heart pounding / racing	562	**72,3**	134	**17,2**	64	**8,2**	17	**2,2**	0,402	0,732
8. Unsteady	635	**81,7**	85	**10,9**	44	**5,7**	13	**1,7**	0,272	0,642
9. Terrified or afraid	561	**72,3**	139	**17,9**	61	**7,9**	15	**1,9**	0,394	0,716
10. Nervous	252	**32,4**	270	**34,7**	185	**23,8**	70	**9,0**	1,094	0,956
11. Feeling of choking.	580	**74,7**	117	**15,1**	53	**6,8**	26	**3,3**	0,387	0,758
12. Hands trembling	655	**84,6**	78	**10,1**	31	**4,0**	10	**1,3**	0,219	0,573
13. Shaky / unsteady	679	**87,6**	66	**8,5**	24	**3,1**	6	**0,8**	0,170	0,500
14. Fear of losing control	553	**71,2**	144	**18,5**	60	**7,7**	20	**2,6**	0,417	0,743
15. Difficulty in breathing	569	**73,2**	138	**17,8**	56	**7,2**	14	**1,8**	0,375	0,698
16. Fear of dying	475	**61,1**	179	**23,0**	93	**12,0**	30	**3,9**	0,585	0,845
17. Scared	345	**44,4**	274	**35,3**	118	**15,2**	40	**5,1**	0,810	0,875
18. Indigestion	479	**61,7**	176	**22,7**	85	**11,0**	36	**4,6**	0,585	0,860
19. Faint / lightheaded	653	**84,0**	86	**11,1**	31	**4,0**	7	**0,9**	0,217	0,551
20. Face flushed	633	**81,5**	95	**12,2**	40	**5,1**	9	**1,2**	0,260	0,604
21. Hot / cold sweats	623	**80,2**	97	**12,5**	41	**5,3**	16	**2,1**	0,292	0,660

Table 4. Distribution of Physicians According to Various Variables and Comparison of Anxiety Scores

Variables	N	%	Beck anxiety inventory mean	SD.	Test Values	Difference
Physicians' Specialist						
1. Cardiology	238	30,6	8,806	10,034		
2. Internal Medicine	93	12,0	13,430	13,344		
3. Ophthalmology	121	15,6	9,090	11,814	F=3,239, p=0,012	2>1, 3
4. Neurosurgery	240	30,8	9,995	11,541		
5. Radiology	86	11,1	10,951	9,121		
Gender						
1. Female	153	19,7	12,655	11,372	t=3,265	
2. Male	625	80,3	9,353	11,077	p=0,001	1>2
Age (Year)						
1. <39	409	52,6	10,130	11,477		
2. 39-49	259	33,3	10,628	11,162	F=2,109 p=0,122	no difference
3. 50+	778	14,1	8,009	10,081		
Working Year						
1. 1-5	214	27,5	10,981	11,487		
2. 6-10	207	26,6	10,038	12,270	F=1,325	
3. 11-15	150	19,3	10,189	10,176	p=0,265	no difference
4. 15>	207	26,6	8,801	10,431		
Hospital Type						
1. Ministry of Health	373	47,9	10,202	10,890		
2. University Hospital	265	34,1	10,328	12,031	F=0,887 p=0,412	no difference
3. Private Hospital	140	18,0	8,854	10,413		
Physicians' Title						
1. Assistant Physician	106	13,6	11,457	12,718		
2. Specialist Physician	407	52,3	9,826	10,920		
3. Assistant Professor	88	11,3	12,376	13,286	F=2,638 p=0,033	3>5
4. Associated Professor	103	13,2	9,137	9,881		
5. Professor	74	9,5	7,305	8,743		
Is Your Hospital Pandemic Hospital?						
1. Yes	572	73,5	10,123	11,492		
2. No	66	8,5	8,523	9,202	F=0,623 p=0,537	no difference
3. Not a pandemic hospital, but there is a coronavirus patient	140	18,0	10,211	10,889		
Have You Ever Encountered With Covid-19 Patients?						
1. Yes	560	72,0	10,906	11,585	t=3,612	
2. No	218	28,0	7,672	9,808	p=0,002	1>2
Have You Served the COVID-19 Patient?						
1. Yes	503	64,7	11,309	11,591	t=4,443	
2. No	275	35,3	7,587	10,036	p=0,000	1>2
Total	**778**	**100,00**	**10,003**	**11,206**		

DISCUSSION

Numerous research studies indicate that COVID-19 elevates anxiety levels within society (17,18). The psychological well-being of healthcare professionals has been the subject of numerous research studies throughout the pandemic. A study by Atkaya et al. in 2023 studied the anxiety and depression levels of healthcare professionals (19). The study involved doctors and nurses employed at hospitals treating COVID-19 patients, revealing that 60.5% of participants had clinically significant anxiety levels. This situation demonstrates that the mental health of healthcare professionals is significantly jeopardized by the effects of the epidemic (19). Erdur et al. (20) discovered that 14.6% of physicians experience moderate to severe anxiety in their study. A study by Indacochea-Cáceda et al. involving 219 physicians from Peru, Mexico, Argentina, Colombia, and Bolivia revealed a prevalence of "High Anxiety" of 80.8% (21). This study revealed that 43% of physicians experienced varied levels of anxiety attributable to COVID-19. 20.6% (n=158) of physicians experienced mild anxiety, 12.1% (n=93) experienced moderate anxiety, and 10.3% (n=79) experienced severe anxiety attributable to COVID-19. Elevated anxiety levels have been observed among healthcare professionals confronted with the imminent death of their patients and the potential danger of COVID-19 infection,

corroborating findings from prior investigations. The findings from studies conducted in various regions (Türkiye, Peru, Mexico, Argentina, Colombia, Bolivia) and among diverse professional groups (doctors, nurses) indicating similarly elevated anxiety levels imply that the issue is not localized or cultural but rather a worldwide crisis arising from the characteristics of the pandemic. The 80.8% "High Anxiety" percentage may signify a significant deficiency in healthcare systems' ability to safeguard the mental well-being of their personnel in certain places. This indicates that healthcare companies must promptly establish comprehensive mental health support programs.

Healthcare workers in direct touch with COVID-19 patients constitute a high-risk population for exposure (22), and reports indicate elevated rates of COVID-19 infection and mortality among these professionals (23). The death rate for healthcare professionals with COVID-19 has been documented at 1.5% (24). This was publicly announced simultaneously. As of November 9, 2021, the Turkish Medical Association stated that 497 healthcare workers in Türkiye had died, with 35.2% being physicians and 6.7% being nurses and midwives (25). A study involving physicians and healthcare professionals in Türkiye revealed that 56.7% experienced moderate to high emotional exhaustion, 35.8% exhibited moderate to high depersonalization, 34.9%

suffered from high depression, 31.9% reported high anxiety, 15.4% faced high stress, and 33.3% experienced moderate to severe hopelessness (7). Taken together, these findings suggest that the burden encountered by healthcare personnel during the pandemic is not only an increased workload but also an ethical, emotional, and physical war for life and death. These numbers serve as a crucial call to action, emphasizing the structural instability and human cost that healthcare personnel bear, rather than glorifying them as heroes. These statistics show how important it is to make investments in staff physical safety, long-term mental health support systems, and medical equipment in order to be ready for future emergencies.

The COVID-19 pandemic has resulted in the deaths of thousands, leading to the emergence of death anxiety in individuals or exacerbating pre-existing anxiety (26). The pandemic has perpetually highlighted mortality, evidenced by the daily updates of the rising death toll and the ubiquitous presence of protective measures like face masks and antibacterial sprays and wipes, which serve as persistent reminders of the sickness. Moreover, media debates regarding apocalyptic scenarios, panic, mortality, and case statistics have persistently underscored the concept of death. Death fear has notably escalated, particularly as a result of the experiences during the COVID-19 pandemic(27). The study by Turhan revealed

that the COVID-19 pandemic induced death anxiety (26). Çağlar and Kaçer also discovered that the levels of death fear in patients with COVID-19 pneumonia were comparable to those in patients with myocardial infarction (MI). This was attributed to elevated global mortality rates, quarantine protocols, alterations in individual lifestyles, and the absence of a targeted therapeutic intervention for the disease (28). These findings suggest that the COVID-19 pandemic is a threat to public health in addition to physical health, and future public health interventions should focus on long-term, comprehensive psychosocial support mechanisms for public mental health in addition to biological prevention, given the high levels of death anxiety during the pandemic.

Additionally, the research conducted by Enea and colleagues has shown that COVID-19 fixation and coronaphobia are connected to death fear and burnout. In addition, the majority of the people who took part in the research study reported having higher levels of death fear in comparison to the general population. Furthermore, medical professionals reported having lower levels of death anxiety than nurses. They found that 20 of the participants (18.2%) had low levels of dread of death, whereas 90 of the participants (81.2%) had high levels of fear of death (29). The individuals who participated in the study were health workers. Indacochea-Cáceda and colleagues conducted a

study on 219 medical professionals from Peru, Mexico, Argentina, Colombia, and Bolivia. The researchers discovered that the percentage of doctors who were afraid of death ranged from 56.2% to 90%. They demonstrated that there was a correlation that was statistically significant between fear and the age of the individual as well as the time of graduation. According to what they found, there was no difference between the applicants based on gender or the country in which they applied (20). High mortality rates have contributed to an increase in death anxiety, which has been triggered by COVID-19. The individuals who were considered to be in the risk group, such as medical professionals, reported the highest levels of worry when they considered the prospect of being ill and/or passing away (30). A total of 38.9% of the experts who participated in this study admitted that they were terrified of dying. There is a high level of belief in God and the afterlife in Türkiye (31), which may be the reason why the fear of death among medical professionals is reduced. Although these results demonstrate that a high fear of death is a common occurrence among healthcare workers, factors like the anxiety levels of doctors and nurses and the possible protective influence of cultural beliefs imply that psychosocial support techniques ought to be customized for each professional role and cultural setting.

Both the percentage of grief and the rate of anxiety were found to be fifty percent and forty-five percent, respectively, among nurses and physicians in the city of Wuhan, which was the location where the pandemic originally began. This was the city where the pandemic emerged. On the other hand, it was alleged that this rate stayed at 7.2% in regions of China that were less affected by the disaster (32). Erdoğan and his colleagues conducted a study in which they revealed that the average anxiety scores of physicians working in pandemic clinics were greater than the average anxiety scores of physicians working in clinics that were not affected by the epidemic. As an additional finding, they discovered that the average anxiety scores of female physicians who worked in pandemic services were greater than those of male physicians (33). It has been observed that individuals who were providing care to COVID-19 patients experienced a significant rate of anxiety. This conclusion is in line with the findings of an earlier study. In a manner that is comparable to the research carried out by Erdoğan and his colleagues, it was shown that the rate of anxiety was higher in females (34). Psychological burden rises proportionately to geographic proximity and occupational exposure, as evidenced by the fact that rates of anxiety and distress among medical personnel directly involved in COVID-19 patient care at the outbreak's Wuhan origins were substantially higher than those in the

general population (45% and 50%, respectively). Future mental health interventions should be sensitive to the severity of exposure and the additional stressors caused by gender, as it is evident from the higher anxiety scores among female physicians working in pandemic clinics that there is an unequal emotional burden in crisis settings based on gender.

The persistent state of stress and anxiety experienced daily throughout the pandemic adversely impacted physicians' mental health, resulting in a rise in practice errors and thus heightening risks to patient safety (6). Research indicates that death anxiety can lead medical professionals to disengage from patients, thus compromising the quality of care provided. Research indicates that death anxiety may elevate occupational burnout and diminish understanding and empathy for those in distress (35). As a result, it is recognized that the pandemic's effects of chronic stress, anxiety, and death anxiety present a systemic risk by causing healthcare workers to become more burned out and weakened in their emotional ties to patients, which in turn increases practical errors and patient safety risks.

Research has been performed on many specialized physicians throughout multiple publications in the literature. Yazıcıoglu et al. assessed family physicians (36), Ayed et al. investigated resident physicians (37), Frajerman et al. reviewed primary care physicians (38), and Enea et al. interviewed intensive care unit specialists (29) about anxiety and depression. Appiani et al. discovered elevated levels of anxiety and sadness among residents and emergency physicians working 24-hour shifts in their study involving clinical specialists, surgeons, emergency physicians, and individuals without direct patient contact. The authors determined that this outcome may be associated with increased workload and diminished experience (39). There are no studies comparing professionals' experiences of anxiety and depression during the COVID-19 pandemic in the literature. This study examined specialty specialists (cardiology, internal medicine, ophthalmology, neurosurgery, and radiology) on anxiety and depression during the COVID-19 pandemic. The internal medicine experts exhibited the greatest mean Beck Anxiety score (13.43±13.344), while the cardiology specialists demonstrated the lowest mean Beck Anxiety score (8.806±10.034) (p=0.012). This outcome may have occurred because internal medicine experts are predominantly responsible for COVID-19 patients in our nation. In summary, these comparative findings illustrate that psychological risk fluctuates considerably based on the specialty's degree of direct patient exposure and primary responsibility. This leads to the conclusion that pandemic support strategies should be directed

towards the most impacted specialty groups (e.g., internal medicine).

CONCLUSION

Numerous clinical and psychological data obtained during the COVID-19 pandemic unequivocally indicate that the elevated levels of anxiety, burnout, and death anxiety among healthcare workers are predominantly concentrated in their respective specialties, particularly internal medicine. This situation shows that the healthcare system has weaknesses that aren't obvious.

Physical and Logistical Safety: Meeting the basic needs of healthcare workers is the first step in easing their fear of death and anxiety. This means giving frontline workers enough training on time, making sure there is always a supply of personal protective equipment (PPE), and making workspaces safe to lower the risk of exposure. Doctors can focus on their patients instead of their own safety when they have reliable logistical support.

Targeted Psychological Support: Efforts to alleviate anxiety and fear of death should be prioritized and continuously provided not only to all healthcare professionals but also to specialists who are primarily in charge of treating COVID-19 patients (e.g., internal medicine specialists, emergency room physicians, and intensive care physicians), as research indicates that psychological burden is not distributed evenly.

Resilience and Coping Programs: Regularly available psychological training and support programs (like online therapies and peer support groups) should be made required before and during the crisis to address anxiety and death anxiety, emotional regulation, and burnout prevention. This will allow doctors to offer more beneficial crisis management services.

In conclusion, safeguarding the mental health of doctors is not an extravagance; rather, it is a vital component of maintaining patient safety and the public health system's viability. According to the data, future pandemics will require investments in healthcare workers' mental and emotional fortitude in addition to disease prevention strategies.

Limitation

Data collection was conducted only using online tools due to social isolation, precluding face-to-face assessment. Due to the epidemic, clinicians from all specializations were inaccessible for the study. This constitutes a significant limitation of the study.

Ethics Committee Approval: Approval for this study was obtained from the Ordu University Non-Interventional Research Ethics Committee (Date: 25/04/2025 Number: 159).

We state that the parents have given their written informed consent to be involved in the

study, in accordance with the Declaration of Helsinki.

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