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ORIGINAL RESEARCH

Compassion Fatigue and Coronavirus Burnout Level Among Nurses: Descriptive Study

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ABSTRACT

This research aimed to conduct a cross-sectional and descriptive analysis to analyze compassion fatigue, coronavirus burnout level, and the relationship between these two variables in nurses providing care for COVID-19 patients. The study sample consisted of 342 nurses employed in a Turkish public hospital. The "Introductory Information Form," "Coronavirus Burnout Scale (CBS)," and "Compassion Fatigue-Brief Scale (CF-SS)" were used to collect the study data. The mean total score of the nurses participating in the study was 28.55±7.87, and the mean score of the nurses in the IT sub-dimension of the MY-KÖ was 23.25±9.16, and compassion fatigue was determined at the level. As a result, the study findings revealed that nurses potentially displayed higher COVID-19 burnout and compassion fatigue levels during the pandemic. Although the consequences of the recent COVID-19 period on humans seem to have decreased, the various COVID-19 virus strains and even novel infectious agent-caused pandemics will anticipatingly continue to impact humans globally in the near future. It is recommended in this regard to broaden the scope of pandemic research, reorganize the work environment of the nurses, and implement more practices to protect the mental health of nurses.

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Introduction

As initially manifested in the city of Wuhan, Hubei province of China, in late 2019, the coronavirus pandemic continues to remain a critical public concern by ranking at the top of the global agenda (Choi et al., 2024; Yuan et al., 2023).

The severity of disease complications led to higher patient hospitalization and required more intensive care; hence, the consequential mortality rates resulted in significant social suffering (Liu et al., 2020). Epidemics damage many social institutions both materially and morally, and their long-term effects are still ongoing. Epidemics negatively affect people's mental health by creating fear, uncertainty and anxiety, as well as social ruptures caused by social isolation (Baysal et al., 2024). Nonetheless, healthcare workers had to experience one of the paradoxes of the recent pandemic. Although a sizable portion of society refrained from virus contamination by isolating themselves from social life, healthcare workers had to be directly in contact with it while providing patient care (Xiang et al., 2020). Therefore, healthcare professionals have been one of the primary groups affected by the pandemic since its beginning to the present day (Ruiz-Fernández et al., 2020).

From the beginning of the pandemic period, healthcare professionals had a persistent fear of spreading the virus to their surroundings (family, friends, and colleagues); thus, their anxiety levels dramatically increased due to the uncertainty they experienced. Moreover, society excluded (marginalized) them with the risk of being a source of contamination (Xiang et al., 2020).

Among healthcare professionals, nurses are the primary staff who interact with patients the most and provide care and treatment in contact (Karasu et al., 2020). While providing this care, they also display a compassionate and holistic approach (Perry, 2013) in addition to their existing knowledge and skills.

Witnessing the most vulnerable and traumatized states of patients and still providing care to enable them to regain their health is a challenging task for nurses (Gök, 2015). Such contexts explicitly develop an emotional burden on nurses (Gök, 2015). Compassion fatigue is one of the most critical emotional issues experienced by health professionals when their moral force to cope with the faced challenges declines (Fernandez-Parsons et al., 2013). Figley (2002) refers to compassion fatigue as the 'cost of nursing care.'

Studies reported that nurses potentially experienced psychological burnout due to role conflict, loss of control, and underappreciation of working conditions as working days got longer and workload and stress intensified in the fight against the COVID-19 pandemic (Türkiye Psikiyatri Derneği, 2020; Tükel, 2020). Burnout refers to a psychological syndrome induced by a protracted response to interpersonal stressors, particularly at work (Maslach and Leiter, 2016). A study on healthcare professionals revealed a significantly positive relationship between stress and burnout (Morgantini et al., 2020). Another study focusing on the relationship between burnout, anxiety, and stress disorders during the COVID-19 pandemic indicated that, in addition to burnout, doctors and nurses experienced high levels of mental health issues (Sung et al., 2020). Hence, Bradley and Chahar (2020) underlined the significance of strengthening mental health among healthcare professionals to improve their productivity during the pandemic and minimize their burnout cases arising from pandemic-related stress and uncertainty factors. The literature review on past pandemics (Brooks et al., 2018) also revealed that healthcare professionals substantially suffered from pandemic experiences physiologically and psychologically, leading to burnout syndrome (Brooks et al., 2018). As a result, this burnout factor potentially caused new psychiatric symptoms among healthcare professionals with no mental issues while worsening the conditions of those professionals who already had a history of mental illness (Kelvin and Rubino, 2020). Some studies even asserted a conceivable increase in suicide rates in 2020 due to the rising fear, anxiety, and feelings of helplessness of contamination by virus or death (Montemurro, 2020). Indeed, studies documented more suicide cases in India during the COVID-19 pandemic (Goyal et al., 2020). The majority of medical personnel working in hospitals and isolation units where mental health issues were prevalent failed to receive any psychological support during the pandemic period (Lima et al., 2020). Yet, watching and protecting the mental health of the nurses must be the priority for them to provide optimal health care (Okechukwu et al., 2020).

This study aimed to analyze the levels of compassion fatigue and coronavirus burnout—as well as the relationship between these two variables experienced by nurses who bear a significant portion of the role and burden in the fight against the pandemic while providing care for individuals diagnosed with COVID-19. It also considered that identifying the opinions and suggestions of nurses about the pandemic and analyzing the relationship between compassion fatigue and burnout levels was crucial in adapting nurses to their work environment, increasing their occupational motivation, and determining the safety protocols and rules for their workplace. The subject-related literature review identified few studies focusing on COVID-19 burnout and compassion fatigue (Lluch et al., 2022; Ruiz-Fernández et al., 2020). Therefore, it is necessary to continue researching the psychological effects of COVID-19 on healthcare professionals, as each study attempt will help manage the present and future pandemic processes.

Within this framework, the current research aimed to provide answers to the following questions:

1. What are the compassion fatigue levels of nurses providing care to individuals diagnosed with COVID-19?
2. What are the coronavirus burnout levels of nurses caring for individuals diagnosed with COVID-19?
3. Considering their descriptive features, is there a difference between the average coronavirus burnout scores of nurses providing care to individuals diagnosed with COVID-19?

4. Considering their descriptive features, is there a difference between the average compassion fatigue score of nurses caring for individuals diagnosed with COVID-19?
5. What is the relationship between compassion fatigue and coronavirus burnout levels of nurses caring for individuals diagnosed with COVID-19?
6. Do the COVID-19 burnout levels of nurses caring for individuals diagnosed with COVID-19 affect their compassion fatigue level?

Material and Methods

Research Design and Setting

This study performed relational descriptive and cross-sectional type analyses.

Sampling Procedure

The study population consisted of 464 nurses employed at Turkey Hospital. The research involved nurses employed in intensive care units (n = 132), pandemic services (n = 204), emergency services (n = 104) and pandemic outpatient clinics (n = 24). The nurses for the study sample were invited based on the following inclusion criteria: working as a nurse at Turkey

Hospital, volunteering to participate in the study, and providing care to patients diagnosed with COVID-19. Although the study strived to include the entire population as a study sample, it successfully reached 342 nurses, and the remaining nurses had either busy schedules (110), were on leave (10), or refused to participate in the research (2). Therefore, the participation rate in the research was 73.7%.

Data Collection Tools

The study used the 'Introductory Information Form,' 'COVID-19 Burnout Scale (CBS),' and 'Compassion Fatigue-Brief Scale (CF-SS)' as data collection tools.

Introductory Information Form

As developed in line with the literature (Güven., 2022; Çınarlı., 2019; Pehlivan and Güner, 2018; Polat and Erdem, 2017), this form comprised a total of nine questions about the socio-demographic and professional experience-related features of the participant nurses (age, gender, marital status, family type, economic condition, health status, employment duration in the profession, and work style).

COVID-19 Burnout Scale (CBS)

As designed by Yıldırım and Solmaz (2020) to quantify coronavirus-led burnout levels, CBS is a data collection tool that retains validity-reliability study, consisting of 10 items, being one-dimensional and a 5-point Likert type, with each item scored between 1 and 5. While 'score 1' refers to “Never” in scale item evaluation, 'score 5' denotes “Always.” The overall score, which may range from 10 to 50, is calculated by summing up each of the ten items. A higher score indicates higher levels of COVID-19-related burnout. The study Cronbach’s Alpha reliability coefficient was 0.92. The scale Cronbach’s alpha value for the internal consistency coefficient was 0.95.

Compassion Fatigue-Short Scale) (CF-SS)

Adams, Boscarino, and Figley developed the CF-SS in 2006 as a self-report evaluation that asks participants to indicate the extent to which each scale item reflects their experiences. Dinç and Ekinci (2019) also studied the validity and reliability of the scale in Türkiye. As in the original scale, its Turkish version also retains two sub-dimensions, secondary trauma (ST) and occupational burnout (OB), with 13 items. The scale has a 10-point Likert-type score ranging from seldom/never (1) to very often (10). The scale items "c, e, h, j, l" and "a, b, d, f, g, i, k, m" measure the ST and OB sub-dimensions, respectively. The scale specifies no scoring algorithm or cut-off point. The lowest and highest scores on the scale are 13 and 130, respectively. As the scale scores increase, the level of compassion fatigue experienced by nurses correspondingly increases. The internal consistency coefficient of the sub-dimensions in the original scale form ranges from 0.80 to 0.90, indicating satisfactory internal reliability (Adams et al., 2006). In the validity and reliability studies in the Turkish version, the internal consistency coefficient was 0.87. This value was 0.74 and 0.85 for the ST and OB sub-dimensions, respectively (Dinç and Ekinci, 2019). The current study, however, identified the internal consistency coefficient of the scale as 0.97, calculating 0.92 and 0.95 for ST and OB sub-dimensions, respectively.

Research Plan and Application Method

The researchers collected the study data between December 2021 and March 2022, with an online survey form provided as a link—via Google Form through messaging programs such as WhatsApp Messenger and BİP—to nurses at the research center and satisfied the inclusion criteria. The initial section of the online survey form informed the participant nurses about the purpose and content of the research, requesting their online consent for participation.

Data Analysis

The study operated the TURCOSA (Turcosa Analytics Ltd Co, Turkey, www.turcosa.com.tr) statistical software to analyze the collected data. It also used the number and frequency distribution of the descriptive features (age, gender, marital status, family type, economic condition, employment duration in the profession, working style, and chronic physical-psychological disease status) of the participant nurses via using descriptive statistics tests on the data collected by the Introductory Information Form. Additionally, the study calculated minimum and maximum mean and standard deviation values. It also employed a histogram, q-q graph, and Shapiro-Wilk's test statistic to analyze the normal distribution of the study data. The mean score, standard deviation, median, range, minimum, and maximum scale values were calculated

based on the outcomes. The Cronbach's alpha coefficient of the scales was determined using reliability analysis. The study employed an independent group's t-test for two groups and an ANOVA analysis of variance for more than two groups for data conforming to normal distribution while comparing whether there is a difference between the independent groups' averages. The Tukey Post Hoc test identified the between-groups difference in variance analysis, and the Levene Test analyzed the homogeneity of the groups. The study also applied Pearson Correlation Coefficient analysis to variables that comply with normal distribution to identify the relationship between variables. It also used Linear Regression analysis to determine whether nurses' COVID-19 burnout levels affected their compassion fatigue and its sub-dimensions. The threshold used for statistical significance in the data analysis process was $p<0.05$ for both directions.

Ethical Dimension of Research

The researchers notified nurses—in an effort to uphold their rights—before the data collection process that they could opt out of the study at their convenience and that the study would keep their personal data confidential if they participated. The study followed the Declaration of Helsinki's guiding principles while conducting the research. Researchers applied to the University Non-Interventional Clinical Research Ethics Committee and received Ethics Committee Approval dated October 20, 2021, numbered 2021-10/15. Additionally, in the Turkey Hospital granted an official approval dated October 12, 2021, numbered E-76728045-806.01.03 for the research. Before commencing the study, the Ministry of Health also granted permission for the scientific research.

This study was produced from the master's thesis conducted at Sivas Cumhuriyet University Health Sciences Institute.

Results

The average age of the participant nurses was 30.02±6.03 years old. Approximately 58.8% of the participants were women, 60.2% were married, 91.5% had a nuclear family, and 72.2% had an income equal to their expenses. About 95.6% and 98.8% of the participants also declared that they had no chronic physical disease and no chronic psychiatric disease, respectively. Participants further indicated that 52.6% had been in the profession for 2-5 years, and 80.7% had worked in shift patterns (Table 1).

The average CBS total score of the participant nurses was 28.55±7.87, indicating a high level of experienced COVID-19 burnout. Analyses also revealed that the average CF-SS ST sub-dimension score, CF-SS OB sub-dimension score, and total average score of the nurses were 23.25±9.16, 37.22±14.69, and 60.47±23.47, respectively. These findings also indicated that participant nurses experienced considerably high compassion fatigue (Table 2).

There was also a highly positive, strong, and statistically significant relationship between the CF-SS ST sub-dimension, the OB sub-dimension ($r=0.93$, $p<0.001$), and CF-SS total variables ($r=0.97$, $p<0.001$). In addition, the study identified a highly positive, strong, and statistically significant relationship between CF-SS OB sub-dimension and CF-SS total variables ($r=0.99$, $p<0.001$). As a result, these findings proved that as the COVID-19 burnout level of nurses increased, their compassion fatigue concomitantly increased (Table 3).

Table 1. Socio-demographic and Professional Experience Features of Nurses (n=342)

Socio-demographic Characteristics	Number(n)	Percentage (%)
Age [Ort.±SS (min- maks)]= [30.02±6.03]		
20-25 years old	89	26.0
26-29 years old	114	33.3
30-34 years old	58	17.0
35-39 years old	43	12.6
≥40 years old	38	11.2
Sex		
Women	201	58.8
Men	141	41.2
Marital Status		
Married	206	60.02
Single	136	39.8
Family Type		
Nuclear family	313	91.5
Extended family	18	5.3
Broken family	11	3.2
Family İncome Status		
Income less than expenses	73	21.3
Income equal to expenses	247	72.2
Income more than expenses	22	6.4
Presence of a chronic illness		
Yes	15	4.4
No	327	95.6
Presence of a chronic psychiatric illness		
Yes	4	1.2
No	338	98.8
Length of service in nursing (years)		
First	26	7.6
2-5 years	180	52.6
6-10 years	73	21.3
≥10 years	63	18.4
Type of Work Schedule		
Shifts	276	80.7
Daytime	66	19.3
Total	**342**	**100.0**

Table 2. Distribution of nurses' mean scale scores on the COVID-19 burnout scale and compassion fatigue-short scale and its sub-dimensions

Scales / Sub-Dimensions	Mean±S.S	Hydrangea	Min.	Max
COVID-19 Burnout Scale Total Score Average	28.55±7.87	30	10	50
Compassion Fatigue-Brief Scale/Secondary Trauma Sub-Dimension Mean Score	23.25±9.16	25	5	50
Compassion Fatigue-Brief Scale/Occupational Burnout Sub-Dimension Mean Score	37.22±14.69	40	8	78
Compassion Fatigue-Brief Scale/ Total Score Average	60.47±23.47	65	13	125

Table 3. Nurses' COVID-19 burnout scale total average scores, the relationship between compassion fatigue-short scale total

	Scales / Sub-Dimensions			
Variables	**COVID-19 Burnout Scale Total Score Average**	**Compassion Fatigue-Brief Scale/Secondary Trauma Sub-Dimension Mean Score**	**Compassion Fatigue-Brief Scale/Occupational Burnout Sub-Dimension Mean Score**	**Compassion Fatigue-Brief Scale/ Total Score Average**
COVID-19 Burnout Scale Total Score Average	1	0.65	0.71	0.69
Compassion Fatigue-Brief Scale/Secondary Trauma Sub-Dimension Mean Score	<0.001	1	0.93	0.97
Compassion Fatigue-Brief Scale/Occupational Burnout Sub-Dimension Mean Score	<0.001	<0.001	1	0.99
Compassion Fatigue-Brief Scale/ Total Score Average	<0.001	<0.001	<0.001	1

The upper part of the matrix was expressed as the pearson correlation coefficient (p) and the lower part was expressed as the p value. Correlation coefficient values were expressed as 0.0-0.20 (very weak), 0.21-0.40 (poor), 0.41-0.60 (medium), 0.61-0.80 (good), 0.81 and above as excellent correlation.

Analyses revealed a positive, strong, and statistically significant relationship between CBS and CF-SS ST sub-dimension (r=0.65, p<0.001), CF-SS OB sub-dimension (r=0.70, p<0.001), and CF-SS total scores (r=0.69, p<0.001) of the nurses (Table 4). Analyses revealed a statistically significant relationship between the nurses' CBS scores and the CF-SS total and sub-dimensions scores (p<0.001, Table 3). Nurses' COVID-19 burnout explained 48% of the total variance of compassion fatigue. Furthermore, COVID-19 burnout level increased compassion fatigue by 0.693 times (p<0.005, Table 4).

The current study identified no statistically significant difference in participant nurses' COVID-19 burnout score averages within the 20-25 age group, whose members were female, married, had large families, earned a higher income than their expenses, had a chronic physical disease but had no psychiatric disease, and were in their first year in the profession and working in shift patterns (p>0.05, Table 5); however, it was relatively higher.

Considering the participant nurses' total compassion fatigue average score in the 20-25 age group, whose members were female, married, living in a broken family, earning a higher income than their expenses, having a chronic psychiatric disease but no physical disease, having professional experience of 2-5 years and working only during the day, the current study analysis revealed no statistically significant difference (p>0.05, Table 5); however, it was relatively higher.

Table 4. Effect of Nurses' COVID-19 burnout levels on compassion fatigue

Variables		B	Standard error	Beta	t	p	R2
Compassion Fatigue -Brief Scale/ Secondary Trauma	Constant	15.539	0.884	0.651	17.582	<0.001	0.424
	Coefficient	0.560	0.035		15.820	<0.001	
Compassion Fatigue-Brief Scale/Occupational Burnout	Constant	14.567	0.829	0.701	17.563	<0.001	0.491
	Coefficient	0.376	0.021		18.121	<0.001	
Compassion Fatigue-Brief Scale/Total	Constant	14.483	0.851	0.693	17.023	<0.001	0.480
	Coefficient	0.233	0.013		17.733	<0.001	

Table 5. Distribution of COVID-19 burnout scale, compassion fatigue-short scale, and sub-dimensions average scores based on nurses' socio-demographic and professional experience-related features

Socio-Demographic And Professional Experience Characteristics	Scales / Sub-Dimensions			
	COVID-19 Burnout Scale Total Score Average	Compassion Fatigue-Brief Scale/Secondary Trauma Sub-Dimension Mean Score	Compassion Fatigue-Brief Scale/Occupational Burnout Sub-Dimension Mean Score	Compassion Fatigue-Brief Scale/ Total Score Average
Age				
20-25 years old	30.37±7.22	23.91±8.69	38.94±14.02	62.85±22.06
26-29 years old	28.01±7.62	23.70±7.77	37.28±12.68	60.98±20.10
30-34 years old	27.90±7.70	22.26±9.31	36.12±14.83	58.38±23.79
35-39 years old	27.93±9.29	23.21±10.77	37.09±17.47	60.30±28.11
≥40 years old	27.61±8.36	21.95±11.81	34.79±18.18	56.74±29.66
aF	1.639	0.543	0.646	0.596
p	0.164	0.704	0.630	0.666
Sex				
Women	29.05±7.60	23.49±9.75	38.00±15.61	61.49±24.91
Men	27.83±8.22	22.91±8.29	36.09±13.24	59.01±21.24
bt	1.418	0.573	1.178	0.961
p	0.157	0.567	0.240	0.337
Marital Status				
Married	28.96±7.53	23.67±8.68	37.84±13.84	61.51±22.09
Single	27.94±8.37	22.62±9.85	36.26±15.90	58.88±25.41
bt	1.176	1.044	0.973	1.017
p	0.241	0.297	0.331	0.310
Family Type				
Nuclear Family	28.64±7.88	23.22±9.21	37.13±14.66	60.35±23.47
Extended family	29.00±7.14	23.06±6.30	36.89±12.10	59.94±18.15
Broken family	25.27±8.62	24.45±12.19	40.09±19.99	64.55±31.83
bt	-0.190	0.076	0.070	0.073
p	0.368	0.905	0.804	0.841
Family İncome Status				
Income less than expenses	27.98±8.25	23.45±10.69	38.60±16.96	62.09±27.29
Income equal to expenses	28.57±7.85	23.17±8.79	36.67±14.11	59.85±22.21
Income more than expenses	30.23±6.80	24.36±8.16	38.68±13.11	63.04±20.89
aF	0.685	0.036	0.600	0.310
p	0.505	0.965	0.549	0.734
Presence of a chronic illness				
Yes	30.53±8.90	22.07±8.88	37.53±11.81	59.6±20.40
No	28.46±7.83	23.31±9.19	37.20±14.83	60.51±23.63
bt	0.998	-0.513	0.085	-0.147
p	0.319	0.609	0.950	0.883
Presence of a chronic psychiatric illness				
Yes	28.00±1.83	24.75±11.56	40.50±22.04	65.25±33.58
No	28.55±7.92	23.23±9.15	37.18±14.62	60.41±23.38
bt	-0.140	0.328	0.449	0.409
p	0.889	0.743	0.654	0.683
Length of service in nursing (years)				
First	29.42±7.11	22.35±9.24	36.35±15.21	58.69±23.96
2-5 years	29.19±7.61	24.20±7.99	38.67±12.97	62.87±20.46
6-10 years	27.16±8.13	22.33±9.27	35.25±15.09	57.58±23.99
≥10 years	27.97±8.52	22.00±11.74	35.69±18.18	57.68±29.74
aF	1.374	1.369	1.293	1.352
p	0.251	0.252	0.277	0.257
Type of Work Schedule				
Shifts	28.76±7.71	23.14±9.23	36.97±14.94	60.11±23.78
Daytime	27.57±8.53	23.74±8.96	38.22±13.63	61.97±22.22
bt	1.014	-0.481	-0.622	-0.577
p	0.311	0.631	0.535	0.564

[a]ANOVA Analysis of Variance ,b analyzed with t test in independent groups

Discussion

The nurses who participated in this study had greater levels of COVID-19 burnout, compassion fatigue, professional burnout, and secondary trauma (Table 3). The nature of the nursing profession necessitates undergoing traumatic and challenging medical situations; hence, it may lead nurses to experience higher burnout and compassion fatigue. In this sense, it is reasonable to state that during the COVID-19 pandemic, the levels of burnout and compassion fatigue among nurses advanced in response to additional factors, such as role conflict and difficulties in working conditions, fear of death, a lack of social support due to being isolated from surroundings to avoid contaminating to loved ones, exclusion from society due to the risk of spreading the virus, challenges in meeting basic living needs due to unstable environmental conditions for personal protective equipment and nutrition, an extension of the pandemic period, and a substantial increase in workload due to contact with infected patients. Consistent with the current study findings, Lluch et al. (2022) reported that burnout and compassion fatigue among nurses advanced after a systematic review analysis of 76 papers released in the first year of the pandemic. They also indicated that the COVID-19 pandemic increased the vulnerability of healthcare professionals to processes such as burnout and compassion fatigue. In a study involving 185 nurses, Güven (2022) analyzed nurses' compassion satisfaction, compassion fatigue, burnout levels, and the relationships between these variables and concluded that nurses experienced low levels of compassion satisfaction, high levels of compassion fatigue, and moderate levels of burnout.

This study found that COVID-19 burnout level and compassion fatigue are interrelated ($r=0.69$, $p<0.001$, Table 3), and the burnout level amplified compassion fatigue by 0.693 times ($p<0.005$, Table 3). The literature also corroborated these findings by stating that burnout and compassion fatigue develop concurrently (Lluch et al., 2022; Güven, 2022). In line with the study findings and related literature, nurses who experience higher levels of COVID-19 burnout and compassion fatigue may fail to provide care to their patients with empathy. As a result, the professional image of nursing—as a competent occupation—may suffer from this occasion, and the long-standing shortage of nurses, which has already been the case for years, may reach an irreparable level. This context, however, leads to problems in accessing the available healthcare services. Supporting this interpretation, a study scrutinizing the effect of compassion fatigue on care satisfaction in surgical nurses revealed that surgical nurses had high levels of compassion fatigue and that the quality of nursing care was directly affected by this situation, emphasizing that immediate action is required to eliminate compassion fatigue, which is considered a critical factor among nurses becoming unsympathetic towards their patients and leaving their institution and profession (Bülbüloğlu and Çınar, 2021). Furthermore, while the insufficient number of nurses causes a decline in care quality, the excessive workload placed on existing nurses ultimately leads to burnout (Kowalczuk et al., 2020). As a result, the issue escalates in a vicious circle.

Considering the research findings, the COVID-19 burnout total average score of the nurses with chronic physical diseases/aliments and the compassion fatigue total and subscale average score of nurses with chronic psychiatric diseases/disorders were found to be statistically and significantly higher ($p>0.05$) (Table 5). In supporting this result, the literature correspondingly indicated an increasing risk of compassion fatigue among nurses who had health problems, retained ineffective coping strategies and low resilience levels, had self-confidence problems, potentially failed to cope with their emotions, and displayed hypersensitivity and negative feelings (Gustafsson and Hemberg, 2022).

The current study identified no statistically significant difference between the average scores of compassion fatigue and COVID-19 burnout based on socio-demographic and occupational experience-related features ($p>0.005$, Table 5). This data indicates that nurses' working conditions changed significantly during the pandemic, and they continued to provide substantial front-line care, especially in hospital treatment services. Therefore, it is reasonable to state that physical and mental tiredness brought by intense work pace increased compassion fatigue and COVID-19 burnout in all healthcare workers, regardless of their socio-demographic profile and professional experience.

Conclusion

The study concluded that nurses displayed higher compassion fatigue and burnout levels and that these two variables were positively interrelated. These findings are significant because they underline the necessity for regulations and improvements to the working environment for nurses. While the COVID-19 pandemic appears to be lessening in its effects on humanity, its several strains will anticipatingly continue to impact the entire world, and even new outbreaks by distinct infectious agents will likely arise soon. Therefore, it ought to be quite feasible and recommended to provide psychological support for nurses who deliver care services under difficult working situations in hospitals and improve their working environments and conditions.

Declarations

Acknowledgments

Not applicable.

Conflict of Interest

Authors disclose no potential conflicts of interest.

Ethics Statement

This study was conducted in accordance with the principles of the Declaration of Helsinki. Ethical approval was obtained from Sivas Cumhuriyet Üniversitesi Non-Interventional Clinical Research Ethics Committee (Approval Number: 2021-10/15, Date: 20.10.2021).

Informed Consent

Written informed consent was obtained from all participants prior to participation in the study.

Author Contributions

Conceptualization: AUH, ŞK / Methodology: AUH, ŞK / Software: AUH, ŞK / Validation: AUH, ŞK / Formal Analysis: AUH, ŞK / Investigation: AUH, ŞK / Data Curation: AUH, ŞK / Writing – Original Draft: AUH, ŞK / Writing – Review & Editing: ŞK / Visualization: Not applicable. / Supervision: ŞK / Project Administration: AUH, ŞK / Funding Acquisition: AUH, ŞK.

Funding

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Data Availability

The data used to support the findings of this study can be made available upon request to the corresponding author.

Consent to Participate

Informed consent was obtained from all individual participants included in the study.

Consent to Publish

All participants in the article gave permission to publish. Our study does not include individual details. Produced from Master's thesis

Limitation of the Study

This research has several limitations. The study was conducted at a single center, and data were collected from participants working at a specific institution. This limits the generalizability of the findings to different institutions or larger populations.

Furthermore, the study was designed as a descriptive study, and data were collected through self-reporting. This data collection method, which relies on participant self-reporting, may contain various biases, such as social desirability bias or recall bias. Despite these limitations, the study is important in terms of revealing the current situation and laying the groundwork for future analytical research.

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