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Research Article

DID THE BURNOUT LEVELS OF THE NURSES AFFECT THEIR PROFESSIONAL COMMITMENT DURING THE COVID-19 PANDEMIC PROCESS?

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Abstract: *This descriptive, cross-sectional, and correlational study investigated the effect of burnout on nurses' professional commitment during the COVID-19 pandemic. Nurses have been experiencing high levels of burnout since the onset of the COVID-19 pandemic. However, we know little about how burnout affects their professional commitment. The study was conducted between March 2021 and April 2021. The sample consisted of 671 nurses. Participation was voluntary. Data were collected online using a personal information form, the Maslach Burnout Inventory (MBI), and the Nursing Professional Commitment Scale (NPCS). The data were analyzed using the Statistical Package for Social Sciences (SPSS) at a significance level of 0.05. Half of the participants stated that the pandemic adversely affected their professional commitment (51.4%). More than a quarter of the participants noted that they considered quitting (36.4%). Participants had a mean MBI and NPCS score of 2.43±0.52 (above average) and 2.07±0.76 (average), respectively. Their MBI and NPCS scores were negatively correlated (r=-0.428; p=0.001). Burnout explained 18% of the total variance of professional commitment (p=0.000; R^2: 0.182). Nurses experience high levels of emotional exhaustion and depersonalization during the pandemic, resulting in reduced professional commitment. There is also a positive correlation between personal accomplishment and professional commitment.*

Keywords*: COVID-19, nurse, professional commitment, pandemic, burnout*

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1. Introduction

The novel coronavirus disease 2019 (COVID-19) that broke out in Wuhan/China at the end of 2019 has taken hold of the whole world. As of July 2022, it has affected approximately 562,672,324 people and killed 7,049,376 people [1]. Considering the speed, size, mortality, and morbidity rates of the pandemic, we can state that it has taken a tremendous toll on healthcare professionals [2-6].

Nurses are at high risk of exposure to COVID-19 patients because they are frontline healthcare professionals working tirelessly since the onset of the pandemic [7-11]. For various reasons, they have been under much stress since the pandemic. First, they must deal with more and more COVID cases, resulting in an increased workload. Second, they must work under tremendous pressure with inadequate protective equipment at their disposal. Third, they have been away from their families during this challenging time. Fourth, they have been worried about infecting their loved ones [12-21]. The pandemic has also taken an emotional toll on nurses for various reasons. First, they have been fighting against the coronavirus for a long time. Second, they are in constant contact with COVID-19 patients. Third, the pandemic was imbued with uncertainties. Consequently, they have been dealing with compassion fatigue [22,23], despair [24], stress [25], and even suicidal thoughts more than other healthcare

professionals [3,26-28]. The International Council of Nurses also states that the pandemic was an urgent matter that needs to be resolved because it is likely to cause nurses to experience serious health problems in the long term [29].

Research shows that nurses have been experiencing reduced levels of commitment and increased levels of burnout, resulting in a high rate of turnover since the pandemic began [17,30-38]. However, these researchers have focused on the psychological effects of the pandemic on nurses' work environment but have not determined its effect on professional commitment. Given the global nurse shortage, we think that we should take steps to improve nurses' professional commitment to keep them in the profession [18,39-41]. Therefore, this study aimed to determine whether burnout affected nurses' professional commitment during the COVID-19 pandemic. We think that our results will help authorities develop strategies to keep nurses in the profession.

2. Methods

2.1. Aim and Design

This descriptive, cross-sectional, and correlational study investigated the effect of burnout on nurses' professional commitment during the COVID-19 pandemic.

2.2. Population and Sample

The study population consisted of all nurses in Turkey. The sample consisted of 671 nurses recruited using simple random sampling. Participation was voluntary.

2.3. Data Collection Tools

The data were collected online using a personal information form, the Maslach Burnout Inventory (MBI), and the Nursing Professional Commitment Scale (NPCS).

Personal Information Form

This form prepared by the researchers, consists of 17 questions to determine the personal and professional characteristics of nurses and their situation during the pandemic process.

Nursing Professional Commitment Scale

The Nursing Professional Commitment Scale (NPCS) was developed by Lu et al. [42] and adapted into Turkish by Çetinkaya et al. [43]. The instrument consists of 26 items rated on a four-point Likert-type scale. The total score ranges from 26 to 104, with higher scores indicating higher levels of professional commitment [43]. The scale has three subscales: willingness to try (nine items; total score 13-52), maintaining membership (eight items; total score 8-32), and (3) belief in goals and values (six items; total score 5-20). Nine items (14, 15, 16, 17, 18, 19, 20, 21, and 25) are reverse scored. The original scale has a Cronbach's alpha of .94 [42]. The Turkish version has a Cronbach's alpha of .90 [43]. In the present study, the scale had a Cronbach's alpha of .92, while the "willingness to make an effort," "maintaining membership," and "belief in goals and values" subscales had a Cronbach's alpha of .88, .85, and .70, respectively.

Maslach Burnout Inventory

The Maslach Burnout Inventory (MBI) was developed by Maslach and Jackson [44] and adapted into Turkish by Ergin [45]. The instrument consists of 22 items rated on a five-point Likert-type scale. It has three subscales emotional exhaustion (nine items), personal accomplishment (eight items), and depersonalization (five items). The subscales are independent of each other, and therefore, there is no total score. The items (4, 7, 9, 12, 17, 18, 19, and 21) of the "personal accomplishment" subscale are

reverse scored. Higher scores on "emotional exhaustion" and "depersonalization" and low scores on "personal accomplishment" indicate high levels of burnout. The Turkish version has a Cronbach's alpha of .93 [45]. In the present study, the total scale had a Cronbach's alpha of .78, while the "emotional exhaustion," "personal accomplishment," and "depersonalization" subscales had a Cronbach's alpha of .90, .71, and .79, respectively.

2.4. Data Collection

The study was conducted between March 2021 and April 2021. The data were collected online due to the pandemic. Nurses were invited to participate in the study through a link to the online survey sent to their groups on social media platforms.

2.5. Data Analysis

The data were analyzed using the Statistical Package for Social Sciences (SPSS) at significance levels of 0.01 and 0.05. "Professional commitment" was the dependent variable, while "burnout" was the independent variable. Frequency and percentage were used for descriptive statistics. Normality was tested using skewness and kurtosis values. The data were analyzed using the student's t-test, Pearson's correlation coefficient, and linear regression.

2.6. Ethical Consideration

The study was approved by the Health Sciences Non-Interventional Research Ethics Committee of Bandırma Onyedi Eylül University (Date: 12.03.2021 & No: 2021-14). Nurses were informed about the research purpose and procedure. Informed consent was obtained from those who agreed to participate in the study.

3. Results

Most participants were women (n=581; 86.6%). More than half the participants were younger than 35 (n= 358; 53.4%) married (n= 422; 62.9%) and had bachelor's degrees (n= 450; 67.1%). Almost half the participants worked for tertiary healthcare institutions (n= 322; 48.0%). Half the participants worked in intensive care, operating rooms, or emergency departments (n= 339; 50.5%). More than half the participants were service nurses (n= 429; 63.9%). More than half the participants had more than 15 years of work experience (n= 444; 66.2%) and worked in shifts (n= 406; 60.5%). More than half the participants worked 161-200 hours a month (n= 349; 52.0%) caring for COVID patients (n=450; 67.1%). Those participants cared for 0 to 20 COVID patients every week (n=277; 61.5%). More than a quarter of the participants had tested positive for COVID-19 before (n=213; 31.7%). More than half the participants had family members or relatives who had tested positive for COVID-19 before (n= 474; 70.6%). Half the participants stated that the pandemic negatively affected their professional commitment (n=345; 51.4%). More than a quarter of the participants noted that they considered leaving the profession (n= 244; 36.4%). A quarter of the participants remarked that they sometimes thought about leaving the profession (n= 167; 24.9%) (Table 1.)

Table 1. Distribution of demographic characteristics of nurses participating in the study (N: 671)

Variables		N	%
Gender	Woman	581	86.6
Age	≤35	358	53.4
	41≥	174	25.9
Marital status	Married	422	62.9

Table 1. Continued

Variables		N	%
Educational background	Bachelor's degree	450	67.1
Type of health care worked	3. Step-by-step health care	322	48.0
Unit worked	Intensive Care/Operating Room/Emergency Room	339	50.5
Professional position	Service nurse	429	63.9
Years of work in the profession	>15 Years	444	66.2
How it works	Seizure (day and night)	406	60.5
Monthly working hours during the Covid-19 pandemic	161-200 hours	349	52.0
The status of caring for a Covid-19 patient in the unit you work in	Yes	450	67.1
Average weekly number of Covid-19 patients cared for	0-20 patients	277	61.5
Contracting Covid-19 disease	Yes	213	31.7
Covid-19 infection from family or relatives	Yes	474	70.6
The negative impact of the pandemic process on the commitment to the nursing profession	Yes	345	51.4
Thinking about leaving the profession during the pandemic	Yes	244	36.4
	Sometimes	167	24.9

Participants had a mean MBI mean total score of 53.43±0.52. They had a mean MBI "emotional exhaustion," "personal accomplishment," and "depersonalization" subscale score of 22.95±0.95, 24.08±0.63, and 6.4±0.97, respectively. They had a mean total NPCS score of 53.69±0.76. They had mean NPCS "willingness to make an effort," "maintaining membership," and "belief in goals and values" subscale scores of 24.31±0.84, 16.88±0.98, and 12.5±0.73, respectively (Table 2).

Table 2. Distribution of nurses' mean scores from MBI and NPCS

Scales	Subdimensions	Min-Max (Median)	M±SD
Maslach Burnout Scale	Emotional exhaustion	0-4 (2.67)	22.95±0.95
	Personal success	0.38-4 (3)	24.08±0.63
	Depersonalization	0-4 (1)	6.4±0.97
	Total	1.18-4 (2.41)	53.43±0.52
Nursing Commitment Scale	Willingness to make an effort	0-4 (1.85)	24.31±0.84
	Maintaining professional membership	0-4 (2)	16.88±0.98
	Belief in goals values	0-4 (2713.60)	12.5±0.73
	Total	0.08-3.92 (2.04)	53.69±0.76

M: Mean, SD: Standart Deviation, Min: Minimum, Max: Maximum.

Based on the Pearson correlation results (see Table 3), participants' MBI "emotional exhaustion" subscale scores were negatively correlated with their NPCS total (r=-0.605; p=0.001) and "willingness to make an effort" (r=-0.531; p=0.001) "maintaining membership" (r=-0.643; p=0.001), and "belief in goals and values" subscale scores (r=-0.297; p=0.001). Their MBI "personal accomplishment" subscale scores were positively correlated with their NPCS total (r=0.456; p=0.001) and "willingness to make an effort" (r=0.447; p=0.001), "maintaining membership" (r=0.351; p=0.001), and "belief in goals and values" (r=0.371; p=0.001) subscale scores. Their MBI "depersonalization" subscale scores were negatively correlated with their NPCS total (r=-0.416; p=0.001) and "willingness to make an effort" (r=-0.353; p=0.001), "belief in goals and values" (r=-0.288; p=0.001), and "maintaining membership" (r=-0.421; p=0.001) subscale scores. Their MBI total score was negatively correlated with their NPCS total

score (r=-0.428; p=0.001) and "maintaining membership" (r=-0.506; p=0.001) and "belief in goals and values" (r=-0.181; p=0.001) subscale scores.

Table 3. Correlation between MBI and NPCS scores

MBI subscales / NPCS subscales	**Emotional exhaustion**		**Personal accomplishment**		**Depersonalization**		**MBI Total**	
	r	**p**	**r**	**p**	**r**	**p**	**r**	**p**
Willingness to make an effort	-0.531	**0.001***	0.447	**0.001***	-0.353	**0.001***	-0.351	**0.001***
Maintaining membership	-0.643	**0.001***	0.351	**0.001***	-0.421	**0.001***	-0.506	**0.001***
Belief in goals and values	-0.297	**0.001***	0.371	**0.001***	-0.288	**0.001***	-0.181	**0.001***
NPCS Total	-0.605	**0.001***	0.456	**0.001***	-0.416	**0.001***	-0.428	**0.001***

Pearson Correlation Analysis, r= Pearson Correlation, *p≤ 0.001

The regression analysis showed that burnout explained 18% of the total variance of professional commitment (R=.428, R^2=.182 p<0.001). The t-test showed that burnout, especially emotional exhaustion, and personal accomplishment, significantly predicted professional commitment (p=0.001). Emotional exhaustion, personal accomplishment, and depersonalization explained 45% of the total variance of professional commitment (R=.673, R^2=.450 p<0.001). The t-test results showed that emotional exhaustion and personal accomplishment predicted professional commitment significantly (p=0.001), whereas depersonalization did not (p=0.649) (Table 4).

Table 4. Linear regression analysis results from MBI and NPCS

Variable	**B**	**S.E.**	**β**	**t**	**P**
Constant	3.588	0.127		28.259	.001**
Burnout	-0.626	0.051	-0.428	-12.263	.001**
R=.428 $F_{(1.670)}$=150.373 p=0.000			R^2=.182		
Constant	1.990	0.142		13.992	.001**
Emotional exhaustion	-0.419	0.029	-0.526	-14.480	.001**
Personal accomplishment	0.374	0.037	0.311	10.093	.001**
Depersonalization	0.013	0.029	0.017	0.455	0.649
R=.673 $F_{(3.670)}$=183.902 p=0.000			R^2=.450		

Simple Linear Regression Analysis, Student's t-test, β= Beta, **p≤ 0.001

4. Discussion

The COVID-19 pandemic has caused economic and social problems all over the world. It has taken a great toll on healthcare professionals, especially nurses. Some nurses have left the profession, while others have considered quitting because they have faced numerous risks and problems since the onset of the pandemic.

Our participants had an above-average burnout level. They mostly suffered from emotional exhaustion. However, the results indicate that nurses are in the first burnout stage. In other words, 0they

have low depersonalization levels and high personal accomplishment levels, which is a pleasing result. These results suggest that nurses experience depersonalization regarding their patients and profession. They also feel high levels of personal accomplishment because they have been fighting against the pandemic for a long time even though they cannot meet their needs and have a low quality of life and poor psychological resilience [17,18,46,47].

Our participants had high burnout levels as reported in other studies [4,6,9,11,12, 31,35,48-52]. Research shows that nurses suffer from anxiety, depression, hopelessness, post-traumatic stress disorder, insomnia, fear of COVID-19, and suicidal thoughts [10,53-64]. Moreover, nurses working in high-risk units (intensive care units) or with COVID-19 patients are more likely to suffer from high levels of burnout [58, 64, 65].

Research shows that one in two nurses experiences burnout. Moreover, nurses are much more likely to experience burnout and depression than other healthcare professionals [59,66]. Especially young nurses experience emotional burnout due to long working hours [66,67]. Nurses caring for COVID-19 patients experience more burnout due to increased workload, emotional and psychological pressures, and short and unproductive breaks [31,37,63].

Our participants had a low professional commitment, especially regarding “willingness to make an effort” and “maintaining membership.” They had a moderate professional commitment regarding "belief in goals and values." In addition, more than half of our participants stated that the pandemic negatively affected their professional commitment. One-third of our participants noted that they considered leaving the profession. One-fourth remarked that they sometimes considered leaving the profession. This is probably because nurses experience burnout due to conditions during the pandemic. There were significant correlations between all subscales of burnout and professional commitment, suggesting that burnout significantly affects professional commitment. Burnout negatively affected the "willingness to make an effort" and "maintaining membership" subscales the most. This is a concerning result for the future of nursing because it suggests that more and more nurses are likely to leave the profession. However, our participants had a moderate level of professional commitment regarding "belief in goals and values," which is promising.

Most participants were young and married. They had been working in shifts in intensive care or emergency departments of advanced hospitals since the onset of the pandemic. They stated that they worked long hours caring for COVID-19 patients. Although most participants had never tested positive for COVID-19, they had family members and relatives who had. Therefore, it is no surprise that they experience burnout affecting their professional commitment. Nurses who do not work directly with COVID patients have higher occupational satisfaction than those who do. Nurses who care for COVID patients experience more emotional burnout and consider leaving the profession more frequently than other nurses [41,64,68,69]. In addition, working conditions during the pandemic negatively affect the professional commitment of healthcare professionals [20]. Cengiz et al. [8] also reported that nurses had been considering leaving the profession since the pandemic began. All these results indicate that it is of paramount significance to take the necessary steps to help nurses experience less burnout and develop professional commitment.

4.1. Strengths and Limitations

This study had two limitations. First, the data were collected online due to the pandemic, which posed a challenge in accessing nurses. Second, the results are sample-specific, and therefore, cannot be generalized to all nurses.

5. Conclusion

Nurses have been experiencing high levels of burnout since the pandemic began. They suffer particularly from emotional burnout. However, they have low levels of depersonalization and high levels of personal accomplishment. Nurses have low professional commitment. They are unwilling to make an effort and consider leaving the profession. However, they have firm beliefs in professional goals and values. Burnout negatively affects their professional commitment.

Hospital administrators, executive nurses, and policymakers should develop strategies to discourage nurses from leaving the profession. They should also take initiatives to increase nurses' professional commitment and reduce their burnout levels so as not to suffer from nurse shortages in times of crisis. Hospitals should provide nurses with better working conditions and safer working environments. They should also create an emotionally supportive organizational climate and design interventions to help nurses develop psychological resilience.

Ethical statement

The study was approved by the Health Sciences Non-Interventional Research Ethics Committee of Bandırma Onyedi Eylül University (Date: 12.03.2021 & No: 2021-14).

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Conflict of interest

The authors declare that there is no conflict of interest.

Authors' Contributions

S. A.: Conceptualization, Methodology, Formal analysis, Writing- Original draft preparation.
F. T.: Conceptualization, Methodology, Resources, Writing, Investigation.
All authors read and approved the final manuscript.

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