ORIGINAL ARTICLE

Investigation of the Relationship Between Nurses' Burnout Levels and Caring Behaviors During the COVID-19 Pandemic

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ABSTRACT

AIM: The present study aimed to investigate the relationship between nurses' burnout levels and caring behaviors during the COVID-19 pandemic.

METHOD: This descriptive and cross-sectional study was performed with 136 nurses working in three pandemic hospitals in Istanbul. The data were collected with the "General Information Form," "Maslach Burnout Inventory," and "Caring Behaviors Inventory-24."

RESULTS: The nurses' mean total score on the Maslach Burnout Inventory (MBI) was 38.61±12.90, and the mean total score on the Caring Behaviors Inventory-24 (CBI-24) was 5.09±0.64. It was identified that the mean MBI rank of the nurses who predominantly worked in shifts was statistically significantly higher than the other groups (p<0.05). The mean CBI-24 rank of the nurses with 2-5 years of experience was found to be significantly higher compared to the other groups (p<0.05). A moderate negative correlation was detected between the nurses' MBI total score and CBI-24 total score (r=-0.506) (p<0.01).

CONCLUSION: In line with the study results, it was revealed that nurses experienced a high level of emotional exhaustion, and a moderate negative correlation was found between nurses' burnout levels and their perception of care quality. It can be said that the perception of caring behavior decreases with the increased burnout levels of nurses providing care to patients diagnosed with COVID-19. Interventions to reduce the burnout levels of nurses will increase the professional commitment and job satisfaction of nurses and will be effective in providing quality care.

INTRODUCTION

While the COVID-19 pandemic caused many deaths worldwide, the delivery of health services was considerably impacted since healthcare professionals were also affected. Healthcare professionals performed the necessary health interventions for patients diagnosed with COVID-19 by working long hours and under strenuous conditions on the front lines (1,2).

Whereas nurses work under stress due to reasons such as providing services to sick individuals, intense working conditions, excessive workload, nurse shortage, low wages, and irregular working hours, numerous stress factors were added with COVID-19, including the risk of infection, social isolation, and economic consequences (3-6). These factors influence the mental and physical health of nurses and cause burnout, one of the most important occupational problems of our age (7).

When nurses exhibit a lack of energy/enthusiasm to provide the service, they may experience emotional exhaustion, detachment when emotionally depersonalized, and a sense of low professional accomplishment, which is essentially related to a sense of job dissatisfaction (8). A recent study investigating the burnout syndrome of nurses working in intensive care units in Italy reported that 60% of nurses exhibited burnout syndrome during the study. Furthermore, it was stated that the anxiety levels of nurses were higher than other healthcare team members (9). Studies conducted in this process demonstrated that the prevalence of burnout in healthcare professionals was higher than 40% and those working in critical care areas, e.g., emergency and intensive care units rates of burnout had higher than service nurses (6). The consequences of this syndrome can impact the individual, health institutions, and patients (10).

Nurses provided care for patients to regain their health without keeping a social distance from patients during the pandemic (11). The concept of care is the basis of nursing and is one of the independent roles of nurses. Therefore, the quality of the care service provided indicates the level of development of the nursing profession (12). However, burnout experienced by nurses reduces work efficiency, distracts nurses from professionalism, and causes them to display negative caring behaviors. This increases the care and treatment errors that may adversely impact patient safety and healthcare-associated infections (13,14). This adverse effect of burnout on nurses' caring behaviors prolongs patients' length of hospital stay. Strategies to reduce burnout levels of nurses reduce the risk of morbidity and mortality, along with providing high-quality nursing care (4,15). It is important to evaluate burnout at regular intervals to prevent possible negative situations. The objective of the present research is to investigate the relationship between the burnout levels of nurses providing care to patients diagnosed with COVID-19 and their caring behaviors.

METHODS

Design, participants, and setting

The current study is descriptive and cross-sectional and was performed on nurses working in three pandemic hospitals in Turkey and providing care to patients diagnosed with COVID-19. The sample group of the study consisted of 136 nurses who volunteered to take part in the research.

Data Collection

The researchers sent the online survey via social media to nurses through the training nurses of pandemic hospitals between May and June 2021. The data were collected via Google Forms, and it took approximately 15-20 minutes to fill out the data collection tools.

Data Collection Tools: The research data were collected with the "General Information Form," "Maslach Burnout Inventory," and "Caring Behaviors Scale."

General Information Form: The form prepared by the researchers consists of questions about the individual characteristics of nurses, such as "age, gender, marital status and educational status," and characteristics related to their working conditions, such as "working year in the profession, working type, and the number of working days per week."

Caring Behaviors Scale-24: The scale, organized by Wu et al. (2006) as 24 items and 4 subgroups, consists of "assurance" (8 items= 16, 17, 18, 20, 21, 22, 23, 24), "knowledge-skill" (5 items = 9, 10, 11, 12, 15), "being respectful" (6 items = 1, 3, 5, 6, 13, 19), and "connectedness" (5 items = 2, 4, 7, 8, 14) subgroups (16). A 6-point Likert scale (1=never, 2=almost never, 3=occasionally, 4=usually, 5=almost always, 6=always) is employed to evaluate the items. Internal consistency ranges from 0.96 for the overall scale to 0.82-0.92 for the subgroups. The total scale score between 1-6 is acquired by summing the scores of all items and dividing them by 24, and the subdimension scale scores between 1-6 are acquired by summing the scores of the items in the subdimensions and dividing the score acquired by the number of items. The high subdimension and total scale scores indicate that the perceptions of patients/nurses regarding the quality of nursing care are more positive. Cronbach's alpha value for the scale total is 0.96 (17). In this study, the internal consistency of the scale was found to be 0.83.

Maslach Burnout Inventory: Ergin (1992) conducted the reliability and validity studies of the "Maslach Burnout Inventory" developed by Maslach and Jackson (1981). There are 9 items in the emotional exhaustion dimension "1, 2, 3, 6, 8, 13, 14, 16, 20", 5 items in the depersonalization dimension "5, 10, 11, 15, 22", and 8 items in the personal accomplishment dimension "4, 7, 9, 12, 17, 18, 19, 21" (18,19). The scale is a 5-point Likert scale, and the items are evaluated between 0-4 points. On the scale, the emotional exhaustion and depersonalization subdimensions contain negative statements, the personal accomplishment subdimension contains positive statements, and receiving a high score from the emotional exhaustion and depersonalization subdimensions and receiving a low score from the personal accomplishment subdimension is considered burnout. To obtain the scale's total score, the items in the personal accomplishment subscale should be calculated by reverse scoring. After its adaptation into Turkish by Ergin (1992), Cronbach's alpha coefficients for the three subdimensions are as follows: 0.83 for emotional exhaustion, 0.65 for depersonalization, and 0.72 for personal accomplishment. In the current research, the internal consistency coefficients were determined to be 0.84 for Emotional Exhaustion, 0.72 for Depersonalization, and 0.76 for Personal Accomplishment (19).

Data Evaluation

Statistical analyses of the data acquired from the research were conducted in the 'IBM SPSS for Windows Version 25.0' software. Number, percentage, mean and standard deviation were utilized as descriptive tests. The Kolmogorov-Smirnov test analyzed whether the numerical variables were normally distributed or not. It was found that the data were not normally distributed (p=0.00). Spearman's rank-difference correlation analysis was carried out to determine the correlation between the scale scores. Difference analyses between sociodemographic data and scale scores were evaluated with the Mann-Whitney U and Kruskal-Wallis tests. The level of significance was accepted as p<0.05.

Ethical Aspect of the Study

Before the study, an approval dated April 2021 and numbered E-10840098-772.02-1876 was received from the Non-Interventional Research Ethics Committee of Medipol University. All nurses participating in the research were informed about the study, and their verbal and written consent was acquired.

Limitations of the Study

Since the results of the research are limited to the data obtained from the nurses working in 3 pandemic hospitals in Istanbul, they cannot be generalized for Türkiye.

RESULTS

Most nurses (79.4%) participating in the study were female, and their mean age was 25.60±2.84 (22-36) years. More than half of the nurses (57.3%) had a bachelor's degree. It was found that they worked 53.40 ± 2.85 hours a week and provided care to 7.34 ± 2.02 patients on average. It was determined that the nurses gave 4.11 ± 2.07 points to the support they received from the workplace during the pandemic. Table 1 contains other information on the nurses' individual characteristic.

Table 1. Socio-demographic and occupational characteristics, burnout levels and caring behaviours of the participating nurses (n=136)

Variables	n	%	CBI-24		MBI	
			Mean rank	**Test and p value**	**Mean rank**	**Test and p value**
Gender						
Female	108	79.4	69.90	Z= -	63.54	Z= -2.887
Male	28	20.6	63.11	0.813	67.64	p= -0.304
				p= 0.416		
Marital status						
Married	33	24.3	78.21	Z= -	64.06	Z= -0.744
Single	103	75.7	65.39	1.627	69.92	p= 0.457
				p= 0.104		
Educational status						
vocational high school	14	10.3	86.50		84.25	
Associate degree	14	10.3	64.36	KW=	72.29	KW= 2.820
Licence	78	57.3	64.10	4.532	66.12	p= 0.420
Master/Doctorate	30	22.1	73.48	p= 0.209	65.57	
Years of work in the profession	36	26.5	45.71		69.82	
0-1 years	77	56.7	73.78	KW=	65.08	KW= 1.246
2-5 years	19	13.9	71.61	13.977	56.71	p= 0.742
6-9 years	4	2.9	65.00	**p= 0.003**	65.38	
10 years and above						
How it works						
Daytime	22	16.2	81.93	KW=	38.88	KW= 17.742
Night shift	40	29.4	59.56	4.543	83.25	**p= 0.000**
Mixed	74	54.4	68.61	p= 0.103	68.02	
			Mean ± SD (min-max)			
Age			25.60 ± 2.84 (22-36)			
Weekly working hours			53.40 ± 2.85 (40-80)			
Number of patients cared for during a shift			7.34 ± 2.02 (1-30)			
Support from the workplace during the Covid-19 pandemic			4.11 ± 2.07 (1-10)			

Abbreviation: SD, standard deviation.

p<0.05; Z* = Mann–Whitney U test, KW= Kruskall-Wallis test.

Upon evaluating the nurses' mean scores on the "Maslach Burnout Inventory" and its subdimensions, it was identified that the mean scores on the emotional exhaustion subdimension were 21.53±7.49 points, the mean scores on the depersonalization subdimension were 8.55±4.72 points, and the mean scores on the personal accomplishment subdimension were 8.53±4.31 points. The total score of the scale was determined as 38.61±12.90 (Table 2).

Table 2. Burnout levels and caring behaviours of the participating nurses (n=136)

Scale and sub-scales

		Minimum	Maximum	Mean	SD
CBI-24	Assurance	3.63	6.00	5.09	0.70
	Knowledge and skills	4.00	6.00	5.34	0.62
	Respectfulness	2.33	6.00	5.06	0.73
	Connectedness	2.80	6.00	4.91	0.81
	Total	3.46	6.00	5.09	0.64
MBI	Emotional exhaustion	3.00	36.00	21.53	7.49
	Depersonalization	0.00	20.00	8.55	4.72
	Personal accomplishment	0.00	17.00	8.53	4.31
	Total	4.00	66.00	38.61	12.90

Abbreviation: SD, standard deviation.

When the "Maslach Burnout Inventory" scores were examined according to the nurses' individual characteristics, it was revealed that the mean rank of the nurses who predominantly worked in shifts was statistically significantly higher than the other groups (Table 1).

Considering the mean scores on the caring behaviors scale and its subdimensions, it was determined that the mean score on the assurance subdimension was 5.09±0.70, the mean score on the knowledge-skill subdimension was 5.34±0.62, the mean score on the being respectful subdimension was 5.06±0.73, the mean score of the connectedness subdimension was 4.91±0.81 points, and the mean total score of the scale was 5.09±0.64 points (Table 2). When the scores the nurses obtained from the "Caring Behaviors Scale" were examined according to their individual characteristics, the mean rank of the nurses with 2-5 years of experience was determined to be significantly higher than the other students (p<0.05) (Table 1).

A moderate negative correlation was detected between the nurses' total score on the "Maslach Burnout Inventory" and the "assurance" subdimension (r=-0.423), "knowledge-skill" subdimension (r=-0.452), "being respectful" subdimension (r=-0.464), "connectedness" subdimension (r=-0.454) of the Caring Behaviors Scale, and the scale total score (r=-0.506) (p<0.01) (Table 3).

Table 2. Burnout levels and caring behaviours of the participating nurses (n=136)

Scale and sub-scales

		Minimum	Maximum	Mean	SD
CBI-24	Assurance	3.63	6.00	5.09	0.70
	Knowledge and skills	4.00	6.00	5.34	0.62
	Respectfulness	2.33	6.00	5.06	0.73
	Connectedness	2.80	6.00	4.91	0.81
	Total	3.46	6.00	5.09	0.64
MBI	Emotional exhaustion	3.00	36.00	21.53	7.49
	Depersonalization	0.00	20.00	8.55	4.72
	Personal accomplishment	0.00	17.00	8.53	4.31
	Total	4.00	66.00	38.61	12.90

Abbreviation: SD, standard deviation.

There was a weak negative correlation between the "Emotional Exhaustion" subdimension of the Maslach Burnout Inventory and the "assurance" subdimension (r=-0.251), "knowledge-skill" subdimension (r=-0.290), "being respectful" subdimension (r=-0.292), "connectedness" subdimension (r=-0.290) of the Caring Behaviors Scale, and the scale total score (r=-0.326) (p<0.05). A moderate negative correlation was determined between the "Depersonalization" subdimension of the Maslach Burnout Inventory and the "assurance" subdimension (r=-0.415), "knowledge-skill" subdimension (r=-0.409), "being respectful" subdimension (r=-0.494), "connectedness" subdimension (r=-0.439) of the Caring Behaviors Scale, and the scale total score (r=-0.488) (p<0.01). A moderate negative correlation was found between the "Personal Accomplishment" subdimension of the Maslach Burnout Inventory and the "assurance" subdimension (r=-0.383), "knowledge-skill" subdimension (r=-0.393), "being respectful" subdimension (r=-0.389), "connectedness" subdimension (r=-0.408) of the Caring Behaviors Scale, and the scale total score (r=-0.442) (p<0.01) (Table 3).

Table 3. Correlation between burnout level and caring behaviours

MBI sub-scales		*CBI-24 sub-scales*				
		Assurance	Knowledge and skills	Respectful.	Connected.	Total
Spearman's rho	Emotional exhaustion	-.251*	-.290*	-.292*	-.290*	-.326**
	Depersonal.	-.415**	-.409**	-.494**	-.439**	-.488**
	Personal accomplish.	-.383**	-.393**	-.389**	-.408**	-.442**
	Total	-.423**	-.452**	-.464**	-.454**	-.506**

*p<0,05; **p<0,01 Depersonal: Depersonalization Accomplish: Accomplishment Respectfu: Respectfulness Connected: Connectedness

DISCUSSION

The current research was carried out to assess the relationship between burnout levels and caring behaviors of nurses in Istanbul, Turkey, during the COVID-19 pandemic. The results of this study demonstrated that the nurses participating in the study reported a high risk of burnout according to the emotional exhaustion subcategory.

According to the Maslach burnout model, the depersonalization phase begins to emerge as the emotional exhaustion observed in the initial phase progresses (20). Hence, it is necessary to take measures to prevent emotional exhaustion in order to prevent the development of depersonalization in nurses. The study showed that the burnout levels of nurses who predominantly worked in shifts were higher and nurses worked more than 53 hours a week. The working hours of nurses increased during the pandemic due to the insufficient number of nurses, the high number of patients admitted to institutions, and the high number of infected personnel in Istanbul, Turkey (21-23).

The study revealed that the level of support that nurses received from institution managers was insufficient. While working during this period, nurses tried to cope with fear, stress, fatigue, weariness, long working hours, and individual and managerial problems (1, 24). The stress experienced by nurses increased even more when the problems of accessing protective equipment, lack of protective equipment, shift work, and the abolition of leave-resignation-retirement rights were added during the pandemic (25). It was reported that the burnout levels of nurses increased because nurses faced numerous difficulties in this process (such as a busy schedule, shift work, problems in the working environment, and witnessing mass deaths) (2,26).

Our study found the caring behaviors of nurses during the pandemic to be above the average. The study performed by Jiang et al. (2021) during the pandemic found the caring behaviors of nurses to be high (27). High scores for caring behaviors indicate that nurses perform their basic duty of care well, even in challenging and extraordinary processes, such as pandemics.

The study revealed a moderate negative correlation in all correlation analyses between the nurses' total score on the "Maslach Burnout Inventory" and its subdimensions and the total score on the Caring Behaviors Scale and its subdimensions. With the increasing burnout level of nurses, their caring behavior scores decrease. The studies conducted during the pandemic found that nurses experienced high levels of emotional problems, anxiety, and burnout, which impacted the quality of care (28-30). It is reported that burnout causes nurses to exhibit negative caring behaviors because it leads to a decrease in the commitment and respect of nurses to their profession (14,31).

CONCLUSION

The study determined that emotional burnout was experienced by nurses working on the front lines and providing service to patients diagnosed with COVID-19 during the pandemic. Furthermore, it was revealed that the burnout experienced in this period impacted nurses' caring behaviors adversely. Although nurses' caring behaviors were adversely impacted by their increased burnout levels, it was found that their caring behavior scores were actually not low. Nurses' work environment should be supportive and safe. A culture of good communication, cooperation and teamwork should be encouraged. Providing psychological support and counseling services can help nurses meet their emotional needs. Interventions to reduce the burnout levels of nurses will increase the professional commitment and job satisfaction of nurses and will be effective in providing quality care.

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