

The Correlation Between Nurses' Job Stress, Satisfaction, and Caring Behaviors Perception During the COVID-19 Pandemic*

COVID-19 Küresel Salgın Sürecinde Hemşirelerin İş Stresi, İş Doyumu ve Bakım Davranışları Algısı Arasındaki İlişki

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Abstract

Aim: This study was conducted to examine the correlation between nurses' perceptions of job stress, job satisfaction, and caring behavior during the COVID-19 pandemic.

Method: The study, which has descriptive and correlational design, was conducted with 261 nurses working in a training and research hospital between December 2020 and January 2021. Data were collected with the "Descriptive Information Form", "Nurse Job Satisfaction Scale", "Swedish Demand-Control-Support Questionnaire" and "Caring Behavior Inventory-24". Data were summarized with number, percentage, mean, and standard deviation. Data were analyzed with t-test, ANOVA, Bonferroni test, Pearson test, and linear regression test in independent groups. Institutional permission, ethics committee approval, and written consent were obtained from the nurses.

Results: The nurses' Swedish Demand-Control-Support Questionnaire, Nurse Job Satisfaction Scale and Caring Behavior Inventory-24 scores were found to be 1.04 (SD=0.24), 3.35 (SD=0.53) and 5.20 (SD=0.61), respectively. A weak negative correlation ($r = -0.19$; $p < 0.05$) was found between the caring behavior and job stress, and a moderate positive correlation ($r = 0.36$; $p < 0.05$) was found between care behavior and job satisfaction. A significant difference was found between nurses' career choice, work unit, evaluation of the work environment before the pandemic, intention to leave work during the COVID-19 pandemic and the total score of the Caring Behaviors Inventory-24.

Conclusion: In this study, it was determined that nurses' job stress level was low, and their job satisfaction and caring behavior perception levels were high.

Keywords: COVID-19 pandemic, nursing care, job satisfaction, job stress.

Öz

Amaç: Bu çalışma, COVID-19 küresel salgını sürecinde hemşirelerin iş stresi, iş doyum ve bakım davranışları algıları arasındaki ilişkiyi incelemek amacıyla yapılmıştır.

Yöntem: Tanımlayıcı ve ilişki arayıcı tasarımdaki çalışma, Aralık 2020-Ocak 2021 arasında bir eğitim ve araştırma hastanesinde çalışan 261 hemşire ile yürütülmüştür. Veriler, "Tanımlayıcı Bilgi Formu", "Hemşire İş Tatmin Ölçeği", "İsveç Talep-Kontrol-Destek Anketi" ve "Bakım Davranışları Envanteri-24" ile toplanmıştır. Veriler; sayı, yüzde, ortalama ve standart sapma ile özetlenmiştir. Veriler, bağımsız gruplarda t-testi, ANOVA, Bonferroni testi, Pearson testi ve doğrusal regresyon testiyle analiz edilmiştir. Kurum izni, etik kurul onayı ve hemşirelerden yazılı onam alınmıştır.

Bulgular: Hemşirelerin, "İsveç Talep-Kontrol-Destek Anketi, Hemşire İş Tatmin Ölçeği ve Bakım Davranışları Ölçeği-24" puanları sırasıyla 1,04 (SS=0,24), 3,35 (SS=0,53) ve 5,20 (SS=0,61) olarak bulunmuştur. Bakım davranışı ile iş stresi arasında zayıf derecede olumsuz ilişki ($r = -0,19$; $p < 0,05$) ve iş doyum arasında orta derecede olumlu ilişki ($r = 0,36$; $p < 0,05$) saptanmıştır. Hemşirelerin meslek seçimi, çalışma birimi, küresel salgın öncesinde çalışma ortamını değerlendirme, COVID-19 küresel salgını döneminde işten ayrılma niyeti ile Bakım Davranışları Ölçeği-24 toplam puanı arasında anlamlı bir fark bulunmuştur.

Sonuç: Bu çalışmada, hemşirelerin iş stresi düzeyinin düşük, iş doyum ve bakım davranışları algı düzeylerinin yüksek olduğu belirlenmiştir.

Anahtar Sözcükler: COVID-19 pandemisi, hemşirelik bakımı, iş doyum, iş stresi.

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Introduction

COVID-19 is a health crisis that emerged in Wuhan, China, and quickly spread around the world, causing thousands of deaths. That's why it was declared a pandemic by the World Health Organization (World Health Organization [WHO], 2020). Nurses, who encountered infected patients the most and spent long periods of time with them during the pandemic, fulfilled the roles of infection prevention, care, education and counseling (Choi et al., 2020; WHO, 2020). Nurses were psychosocially affected by this process due to intense workload conditions such as long working hours, working with inadequate equipment, fear of getting sick and infecting others, and lack of up-to-date information (Hoseinabadi et al., 2020; Kuo et al., 2020; Lee, 2020; Schroeder et al., 2020).

Job stress, which negatively affects the physical and mental well-being of employees, is generally defined as a reaction resulting from the incompatibility between the physical and emotional requirements of the job and the employee's abilities and resources (Pandey and Pestonjee, 2013). Job satisfaction is defined as the extent to which the employee is physically and psychologically satisfied with the work environment or the satisfaction that occurs when the demands of the employee are in line with the characteristics of the job (Georgellis et al., 2012). Workload, one of the factors affecting nurses' job stress during the COVID-19 pandemic, negatively affects nurses' job performance and caring behaviors (Pourteimour et al., 2021). In the study by Nia and colleagues (2021), it was determined that workload had a negative relationship with small-medium effect size and job satisfaction and care intention, and a positive relationship with large effect size between job satisfaction and care intention, and workload was a significant predictor of job satisfaction. In the study by Babapour and colleagues (2022), it was determined that there was a weak negative relationship between job stress and care behavior. In the study by Labrague and colleagues (2020), it was determined that there was a positive relationship between quality of care and job satisfaction. Alfuqaha and colleagues (2023) found that nurses during COVID-19 had significantly higher satisfaction levels and lower intention to leave compared to nurses before the COVID-19 outbreak. Although there are studies in the literature examining job stress, job satisfaction, and care behavior during the COVID-19 pandemic, there are limited studies examining these factors together (Labrague and de Los Santos 2021b; Nia et al., 2021; Pourteimour et al., 2021; Said and El-Shafei et al., 2021).

The aim of this study is to determine nurses' perceptions of job stress, job satisfaction and caring behavior during the COVID-19 pandemic, to evaluate the relationship between these variables and to analyze the factors affecting the perception of caring behaviors. In this context, the study aims to bring a new perspective to the relationship between the psychosocial factors and caring behaviors experienced by nurses in the work environment during the pandemic. In addition, it is thought that the data obtained during the most intense period of the pandemic will be an important source for understanding the main factors affecting nurses' job stress, satisfaction and quality of care. The findings may shed light on healthcare managers' determination of strategies that will increase nurses' job satisfaction and reduce job stress.

Method

Study Aim and Design: This descriptive and correlational study aims to determine nurses' perceptions of job stress, job satisfaction and caring behavior during the COVID-19 pandemic, to evaluate the relationship between these variables and to analyze the factors affecting the perception of caring behavior.

Research Question:

- What is the level of nurses' perception of job stress, job satisfaction and care behaviors during the COVID-19 pandemic?
- Does nurses' perception of care behaviors during the COVID-19 pandemic change according to their socio-demographic and professional characteristics?
- What is the relationship between nurses' perception of job stress, job satisfaction and care behaviors during the COVID-19 pandemic?
- What are the determinants of nurses' perception of care behaviors during the COVID-19 pandemic?

Study Setting and Sample: This study was conducted in a training and research hospital. The hospital is located on the campus and consists of three separate blocks: the main building, the obstetrics and gynecology and pediatrics building, and the cardiovascular surgery building and three separate annex buildings. A total of 1,166 nurses work in the hospital. A total of 1,166 nurses work in the hospital. Free Statistics Calculators version 4.0 was used for the sample size of the study. In the calculation, the sample size for the 26-variable multiple regression analysis was found to be 247 by taking medium effect size ($d = 15$), 5% margin of error ($\alpha = 0.05$) and 95% power ($1 - \beta = 0.95$) (Cohen, 1988; Soper, 2020). It was aimed to

reach at least 247 nurses during the data collection process. The study was completed with 261 nurses who had worked as nurses for at least 3 months. All volunteer nurses, except those who were on leave or sick leave during the COVID-19 period and those whose working period was less than 3 months, were included in the research sample.

Data Collection Tools:

Introductory information form: The form, which was developed by the researchers in line with the literature, consisted of 24 questions including the sociodemographic characteristics of the nurses, their working characteristics before the pandemic, their working characteristics during the pandemic and their opinions on the pandemic process (Büyükbayram and Gürkan, 2014; Özaltın and Nehir, 2010; Sakaoglu et al., 2020).

Swedish Demand-Control-Support Questionnaire (Job Stress Scale): The Turkish validity and reliability study of the scale developed by Karasek and colleagues (1998) was conducted by Demiral and colleagues (2007). The scale has a 4-point likert structure and consists of 17 items and 3 sub-dimensions (workload: items 1-5, job control: items 6-11, social support: items 12-17). The 4th and 9th items of the scale are scored in reverse. The total score of the sub-dimensions is obtained by adding the sub-dimension item scores (1-4). The job stress score is obtained from the ratio of the job load score to the job control score (Demiral et al., 2007). An increase in the job stress score is considered a high level of stress, and a decrease in the job stress score is considered a low level of stress. The Cronbach alpha value of the scale was determined as 0.63 in the study.

Job Satisfaction Scale for Nurses: The Turkish validity and reliability of the scale developed by Muya and colleagues (2014) in Japan was conducted by Yılmaz and Yıldırım (2016). The scale has a 5-point Likert structure and consists of 27 items and 4 sub-dimensions (positive feelings about work: items 1-8, appropriate support from superiors: items 9-14, perceived importance in the workplace: items 15-22, pleasant work environment: items 23-27). Items 6 and 20 are reverse scored. The items of the scale are added and divided by 27 to obtain a scale score between 1-5. As the total score increases towards 5, job satisfaction is considered high, and as it decreases towards 1, job satisfaction is considered low (Muya et al., 2014; Yılmaz and Yıldırım, 2016). The Cronbach alpha value of the scale was determined as 0.86 in this study.

Caring Behaviors Inventory-24: The scale developed by Wu and colleagues (2006) is an abbreviated version of the 42-item "CBI-42" developed by Wolf and colleagues (1994) and aims to evaluate the nursing care process (Wolf et al., 1994; Wu et al., 2006). The Turkish validity and reliability studies of the scale were conducted by Kurşun and Kanan (2012). The scale has a 6-point Likert structure and consists of 4 sub-dimensions (assurance, knowledge and skill, respectful, connectedness). After all item scores are added, the total scale score is divided by 24 and a score range between 1 and 6 is obtained. It is thought that as the score obtained from the scale increases, the perceptions of nurses regarding caring behaviors improve accordingly (Kurşun and Kanan, 2012). In this study, the Cronbach alpha value of the scale was determined as 0.95.

Data Collection: This study was conducted between December 2020 and February 2021. All nurses working in the hospital where the study was conducted were given an equal chance. The research data were obtained through a survey with nurses who could be reached within the hospital during time periods that did not affect the study process. The research data of many nurses who could not be reached due to the pandemic were communicated to all nurses working by contacting each clinical nurse through an online survey (Google forms) and were asked to fill out voluntarily.

Data Analysis: All data were recorded and evaluated on the computer using SPSS version 23 program and summarized using frequency, percentage, mean and standard deviation. Kolmogorov-Smirnov, kurtosis-skewness values and histogram graph were used for normality distribution. T-test, ANOVA and Bonferroni test were used to determine the source of difference in independent groups in comparison of groups. Pearson correlation analysis was used for the relationship between variables and linear regression analysis was used to determine the predictors of quality of care.

Ethical Considerations: Permission for the study was obtained from the Scientific Research Platform of the Ministry of Health (21.10.20/20T154918). Ethics committee approval was obtained from the Non-Interventional Clinical Research Ethics Committee of the Nursing Faculty of Selçuk University (04.11.20/17) and institutional permission was obtained from the training and research hospital (07.12.20/31234050-799). The research protocol was conducted in accordance with the ethical rules of the Declaration of Helsinki. In addition, nurses who participated in the study face-to-face gave their consent by reading the purpose of the study and the informed consent document on the upper part of the introductory information form.

Limitations of the Study: A limitation is that the study was conducted with nurses working in a training and research hospital in 2020-2021 and cannot be generalized to all nurses. A limitation is that the reliability of the scale is low due to the low Cronbach alpha coefficient (0.48) of the workload sub-dimension of the Job Stress Scale and similar results were obtained in the original study and the validity-reliability study of the scale. Data were collected by face-to-face interviews

by distributing forms to the remaining areas of nurses who were considered clean. The fact that online forms were sent to many nurses who could not be reached face-to-face in order to prevent virus transmission between COVID-19 clinics and clean clinics was also considered a limitation.

Results

Table 1. Comparison of nurses' pre-pandemic working characteristics with CBI-24 total score average (N:261)

Variables		n (%)	CBI-24 x̄ (SD)
Profession choice	Yes	181 (69.3)	5.26 (0.62)
	No	80 (30.7)	5.08 (0.58)
Significance test / p value		t/p	2.18 / 0.030*
Total work experience	Less than 5 years	156 (60.4)	5.14 (0.64)
	6-10 years	49 (18.8)	5.27 (0.54)
	11-15 years	18 (7.0)	5.39 (0.50)
	15 years and above	36 (13.8)	5.23 (0.58)
Significance test / p value		F/p	1.26 / 0.280
Staff	Contractual	157 (60.9)	5.16 (0.63)
	Regular	101 (39.1)	5.29 (0.55)
Significance test / p value		t/p	-1.64 / 0.100
Position	Nurse	244 (94.6)	5.21 (0.62)
	Responsible nurse	14 (5.4)	5.27 (0.40)
Significance test / p value		t/p	-0.39/ 0.70
Work unit	Surgical clinics ^a	49 (20.9)	5.08 (0.53)
	Internal clinics ^b	30 (12.7)	5.07 (0.43)
	Adult ICU ^c	85 (36.2)	5.39 (0.58)
	Pediatric units ^d	13 (5.5)	5.11 (0.67)
	Bedless units ^e	58 (24.7)	5.19 (0.65)
Significance test / p value		F/p	3.11 / 0.010* c>a
Work shift	Day	25 (10.3)	5.14 (0.66)
	Day+night	218 (89.7)	5.22 (0.59)
Significance test / p value		t/p	-0.46 / 0.64
Weekly working hours	45hr	92 (40.5)	5.21 (0.58)
	46hr and above	135 (59.5)	5.27 (0.57)
Significance test / p value		t/p	-0.73 / 0.460
Evaluation of the work environment	Good ^a	90 (37.4)	5.35 (0.52)
	Middle ^b	129 (53.5)	5.17 (0.63)
	Bad ^c	22 (9.1)	4.91 (0.57)
Significance test / p value		F/p	5.72 / 0.010* a>c

SD: standard deviation, CBI-24, Caring Behaviors Inventory-24

F: ANOVA test, t: independent groups t test

*p<0.5

In the study, it was found that 70.5% (n:184) of the nurses were between the ages of 20-29, 65.1% (n:170) were female, 80.5% (n:210) had a bachelor's degree, 34.6% (n:90) were married and 61.9% (n=161) did not have enough monthly income to cover their expenses.

It was found that there was no difference between the scores according to age group, gender, marital status, education level, having children and having enough income to cover their expenses (p>0.05). In the study, the total job stress score of the nurses was determined as 0.86 (SD=0.19), the average total job satisfaction score was 3.35 (SD=0.53) and the average total caring behavior score was 5.20 (SD=0.61). In the study, it was found that the difference between the scores of the nurses' career choice (p=0.03), evaluation of the work environment (p<0.05) and work unit (p<0.05) and caring behavior was significant. (Table 1).

Table 2. Comparison of nurses' during pandemic working characteristics with CBI-24 total score average (N:261)

Variables		n (%)	CBI-24 X̄ (SD)
Work shift	Day	17 (6.6)	5.14 (0.66)
	Day+night	241 (93.4)	5.20 (0.61)
Significance test /p value		t/p	-0.39 / 0.690
Weekly working hours	45hr	59 (24.2)	5.24 (0.63)
	46hr and above	185 (75.8)	5.21 (0.59)
Significance test /p value		t/p	0.39 / 0.700
Employment in COVID-19 clinic	Yes	212 (83.1)	5.23 (0.61)
	No	43 (16.9)	5.19 (0.54)
Significance test /p value		t/p	0.37 / 0.710
Duration of work in a COVID-19 clinic	1-5 months	96 (47.8)	5.24 (0.62)
	6 months and above	105 (52.2)	5.24 (0.59)
Significance test /p value		t/p	-0.08 / 0.920
Evaluation of the work environment	Good	34 (13.2)	5.32 (0.57)
	Middle	134 (51.7)	5.24 (0.61)
	Bad	91 (35.1)	5.10 (0.62)
Significance test /p value		F/p	2.34 / 0.100

CBI-24: Caring Behaviors Inventory-24, SD: standard deviation
F: ANOVA test, t: independent groups t test

In the study, it was determined that there was no significant difference between the caring behavior scores of the nurses according to their working characteristics in terms of the pandemic period, shift, weekly working hours, working in the COVID-19 clinic and evaluating the work environment ($p>0.05$) (Table 2).

Table 3. Comparison of nurses' COVID-19 infection status and life experiences during the pandemic with their CBI-24 total score averages (N:261)

Variables		n (%)	CBI-24 X̄ (SD)
COVID-19 infection status	Yes	85 (32.9)	5.11 (0.58)
	No	173 (67.1)	5.26 (0.62)
Significance test /p value		t/p	-1.84 / 0.070
Intention to leave work during the COVID-19 pandemic	Yes	108 (41.9)	5.07 (0.66)
	No	150 (58.1)	5.31 (0.56)
Significance test /p value		t/p	-3.12 / 0.010*
Home stay status	Yes	215 (84.0)	5.20 (0.61)
	No	41 (16.0)	5.21 (0.60)
Significance test /p value		t/p	-0.09 / 0.920
Child caregiver for those not living with their family	Spouse	25 (14.8)	5.28 (0.51)
	Mom/Dad	21 (12.5)	5.13 (0.61)
	Other	19 (11.2)	5.06 (0.65)
Significance test /p value		F/p	1.11 / 0.340
Receiving psychological support during the COVID-19 pandemic	Yes	7(2.7)	5.07 (0.85)
	No	246(95.4)	5.21 (0.60)
Significance test /p value		t/p	-0.60 / 0.540

CBI-24: Caring Behaviors Inventory-24, SD: standard deviation
F: ANOVA test, t: independent groups t test

* $p<0.5$

In the study, it was determined that the difference between the nurses' intention to leave their job during the COVID-19 pandemic and the caring behavior score was significant ($p<0.05$) (Table 3).

Table 4. Comparison of Job Stress Scale and Job Satisfaction Scale for Nurses with CBI-24 total score measure (N:261)

Scale sub-dimension and total		CBI-24					
			Respectful	Connectedness	Knowledge and Skill	Assurance	Total
Job Stress Scale	Workload	r	0.01	-0.05	0.04	0.02	0.02
		p	0.840	0.930	0.490	0.650	0.740
	Job control	r	0.21	0.26	0.18	0.27	0.27
		p	0.010*	0.010*	0.010*	0.010*	0.010*
	Social support	r	0.22	0.29	0.17	0.15	0.23
		p	0.010*	0.010*	0.010*	0.010*	0.010*
Total	r	-0.15	-0.21	-0.09	-0.19	-0.19	
	p	0.010*	0.010*	0.120	0.010*	0.010*	
Job Satisfaction Scale for Nurses	Positive emotions toward work	r	0.39	0.40	0.22	0.35	0.39
		p	0.010*	0.010*	0.010*	0.010*	0.010*
	Appropriate support from superiors	r	0.17	0.23	0.06	0.14	0.18
		p	0.010*	0.010*	0.320	0.020*	0.010*
	Perceived significance in the workplace	r	0.38	0.42	0.28	0.35	0.41
		p	<0.001	<0.001	<0.001	<0.001	<0.001
	Pleasant working environment	r	0.16	0.18	-0.03	0.14	0.14
		p	0.010*	0.010*	0.590	0.020*	0.020*
Total	r	0.36	0.39	0.16	0.31	0.36	
	p	0.010*	0.010*	0.010*	0.010*	0.010*	

CBI-24: Caring Behaviors Inventory-24

*p<0.05

It was determined that there was a weakly significant negative correlation between the sub-dimensions of Caring Behaviors Inventory-24, which are respectful, commitment, assurance, and total job stress score (r: -0.15, -0.21, -0.19, -0.19, respectively; p<0.05), a moderately positive correlation between the sub-dimensions of CBI-24, which are respectful, commitment, assurance, and total job satisfaction score, and a weakly significant positive correlation between knowledge-skills scores (p<0.05) (Table 4).

Table 5. Determinants of nurses' perception of care behavior

Dependent Variable: CBI-24						
Independent Variable	B	Standard error	β	t	p	VIF
Constant	2.22	0.68		3.26	0.010*	1.15
Profession choice	-0.07	0.08	-0.06	-0.90	0.370	1.13
Evaluation of the work environment before the pandemic	-0.09	0.03	-0.18	-2.89	0.010*	1.05
Intention to leave work during the COVID-19 pandemic	-0.12	0.08	-0.10	-1.58	0.120	2.76
Job Stress Scale, Job control	0.05	0.02	0.20	2.11	0.040*	1.51
Job Stress Scale, Social support	0.00	0.01	-0.03	-0.36	0.720	2.75
Job Stress Scale, Total	0.55	0.29	0.18	1.89	0.060	8.65
Job Satisfaction Scale for Nurses, Positive emotions toward work	-0.01	0.15	-0.01	-0.04	0.970	9.83
Job Satisfaction Scale for Nurses, Appropriate support from superiors	-0.21	0.10	-0.39	-2.05	0.040*	2.80
Job Satisfaction Scale for Nurses, Perceived significance in the workplace	-0.25	0.10	0.24	2.52	0.010*	7.12
Job Satisfaction Scale for Nurses, Pleasant working environment	-0.11	0.10	-0.18	-1.14	0.260	1.15
Job Satisfaction Scale for Nurses Total	0.63	0.42	0.57	1.48	0.140	9.81
R: 0.540	F: 7.76					
Corrected R²: 0.254	p: 0.010*		Durbin-Watson: 1.70			

CBI-24: Caring Behaviors Inventory-24, VIF: Variance amplification factor

*p<0.05

It was determined that nurses' evaluation of their work environment before the pandemic ($\beta=-0.18$; p<0.05) and the support they received from their superiors negatively affected their caring behavior scores ($\beta=-0.39$; p<0.05). At the same time, it was found that job control score ($\beta=0.20$; p<0.05) and perceived meaningfulness at work ($\beta=0.24$; p<0.05) had a significant

positive effect on the caring behavior score, and the total score of the sub-dimensions of choosing the profession voluntarily, wanting to leave work during the COVID-19 pandemic, positive feelings towards work, pleasant work environment and job stress and social support were not significant predictors ($p>0.05$) (Table 5).

Discussion

This study aimed to determine nurses' perceptions of job stress, job satisfaction and caring behavior during the COVID-19 pandemic, to evaluate the relationship between these variables and to analyze the factors affecting the perception of caring behaviors. The main interest of this study is that pandemic conditions may have a significant effect on nurses' job stress, job satisfaction, and caring behavior perception. In this study, nurses' job stress level during the COVID-19 pandemic was found to be low, and their job satisfaction and caring behavior perception levels were found to be above average. However, there are studies in the literature showing that nurses' job stress levels were high during the pandemic (Aqtam et al., 2023; Ekingen et al., 2023; Hwang et al., 2022). For example, Tomaszewska and colleagues (2022) found that 39% of nurses experienced above-average job stress. However, Leng and colleagues (2020) reported that the main reasons for nurses' job stress during the pandemic include working in an isolated environment, concerns about the lack of personal protective equipment and its use, physical and emotional deprivation, intense workload and fear of infection, and inadequate work experiences related to COVID-19. The fact that the findings of this study differ from some studies in the literature may vary depending on the decrease in the effects of the pandemic during the period the study was conducted, the supportive measures taken by healthcare institutions, or the working conditions of the sample. In this study, nurses' job satisfaction and caring behavior perception levels during the pandemic were found to be above average. In the literature, it has been reported that nurses' caring behavior score averages are generally high during the pandemic period (Hajibabae et al., 2022; Jiang et al., 2023). One of the main reasons for this may be that nurses are aware of their ethical responsibilities and give more importance to patient care during times of crisis. However, in the study by Lavoie-Tremblay and colleagues (2022), it was found that the job satisfaction and quality of care of nurses who care for COVID-19 patients were low. On the other hand, some studies found that nurses' job satisfaction was above average (Labrague and de Los Santos 2021a; Labrague and de los Santos, 2021b; Savitsky et al., 2021; de Los Santos and Labrague, 2021). This difference in findings regarding job satisfaction during the pandemic may be due to the demographic characteristics of the sample groups in the studies, the differences in working conditions, and the differences in the economic, cultural, and health systems of the countries. In this study, a weak negative relationship was found between job stress and caring behavior, and a moderate positive relationship was found between job satisfaction and caring behavior. In the literature, it has been shown that the increase in job stress of nurses during the pandemic led to a decrease in the quality of care and that job satisfaction was associated with higher nursing performance (Nia et al., 2021; Putra et al., 2021). In addition, a meta-analysis study by Yasin and colleagues (2024) found that high levels of job satisfaction reduced burnout and increased the quality of care. In this regard, the findings of this study are generally consistent with the existing literature in the field of nursing. However, some studies have reported a decrease in job satisfaction during the pandemic (Makowicz et al., 2022). For example, Makowicz and colleagues (2022) compared job satisfaction before and during the pandemic in five different countries and determined that there was a statistically significant decrease in job satisfaction during the pandemic. The reason for these differences may be that the effects of the pandemic on healthcare professionals in different countries vary. In addition, this study found that nurses' intention to leave their jobs was low and a significant difference was determined between caring behavior and intention to leave. Labrague and de Los Santos (2021b) found a strong relationship between job stress and intention to leave their jobs. The low intention to leave nurses during the pandemic may be related to professional commitment, ethical responsibilities, and healthcare professionals feeling more responsible for their patients during crisis periods. However, since an increase in burnout syndrome and an increase in the intention to leave the job may be seen in the long term, studies to be conducted in the post-pandemic period may reveal how this relationship will change.

Conclusion and Recommendations

Nurses experienced low levels of job stress, high levels of job satisfaction, and high levels of perceived caring behavior during the COVID-19 pandemic. The main factors affecting caring behavior were the evaluation of the nurses' pre-pandemic work environment, job control, support from superiors, and perceived importance scores in the work environment. The findings of this study suggest that determining the factors affecting the care provided by nurses during critical crisis periods such as the pandemic will guide future practices to optimize nursing care processes and contribute to improvements and regulations regarding nurses' job stress, satisfaction, and care provision.

In line with these results, it is recommended that strategies such as improving the work environment, supporting administrative policies, and psychosocial support programs be developed to increase nurses' job satisfaction and quality of care. In addition, despite the low levels of job stress, training programs and stress management interventions should be developed to increase the psychological resilience of nurses during crisis periods such as the pandemic. In future research,

it would be useful to examine the changes in the relationships between job stress, job satisfaction and care behavior in the post-pandemic period, to conduct comparative studies between different countries and health systems, and to analyze in depth the cause-effect relationships between these variables through longitudinal studies.

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