



ORIGINAL ARTICLE

Examining Perceived Stress and Individualized Care Practices by Senior Nursing Students During the COVID-19 Pandemic

Son Sınıf Hemşirelik Öğrencilerinin COVID-19 Pandemi Sürecinde Algıladıkları Stresin ve Bireyselleştirilmiş Bakım Uygulamalarının İncelenmesi

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Abstract

Objective: This research was conducted to analyze the perceptions of senior nursing students regarding stress and individualized care during the Coronavirus disease-2019 (COVID-19) pandemic.

Method: The research was conducted between May and June 2021 with 194 senior nursing students. Data collection was conducted using a structured information form, perceived stress scale (PSS), and the individualized care scale-A-nurse version (ICS-A-nurse).

Results: It was found that the stress experiences of the students were moderate. Their perception of individualized care was at a good level. A highly significant statistically negative correlation existed between the PSS mean scores and the ICS-A-nurse total mean scores in addition to the mean scores in all sub-dimensions ($p < 0.001$).

Conclusion: It was determined that the higher the level of stress students perceived during the COVID-19 pandemic, the more negative their perceptions of individualized care became. Adequate personal protective equipment should be available in clinics during clinical applications and clinical practice training should be planned for intern nursing students during possible pandemic processes. It is also suggested that nursing students should use methods of coping with stress in pandemic situations and develop skills and behaviors to protect themselves, their families, and society from infectious diseases.

Keywords: Perceived stress, COVID-19, nursing students, individualized care

Öz

Amaç: Bu araştırmada, son sınıf hemşirelik öğrencilerinin Koronavirüs hastalığı-2019 (COVID-19) pandemi sürecindeki stres algıları ile bireyselleştirilmiş bakım algılarını incelemek amaçlanmıştır.

Yöntem: Araştırma, Mayıs-Haziran 2021 tarihleri arasında 194 son sınıf hemşirelik öğrencisi ile yapılmıştır. Veriler, yapılandırılmış bilgi formu, algılanan stres ölçeği (ASS) ve bireyselleştirilmiş bakım skalası-A hemşire versiyonu (BBS-A-hemşire) kullanılarak toplandı.

Bulgular: Öğrencilerin stresi orta düzeyde yaşadıkları ve iyi düzeyde bireyselleştirilmiş bakım algılarına sahip oldukları belirlenmiştir. ASS puan ortalamaları ile BBS-A-hemşire toplam ve tüm alt boyut madde puan ortalamaları arasında istatistiksel açıdan negatif yönde çok ileri derecede anlamlı bir ilişki saptanmıştır ($p < 0,001$).

Sonuç: Öğrencilerin, COVID-19 pandemi süreci içinde stres düzeyi algıları artarken bireyselleştirilmiş bakım algılarının azaldığı belirlenmiştir. Klinik uygulamalar sırasında kliniklerde yeterli kişisel koruyucu ekipman bulundurulması ve olası pandemi süreçlerinde intörn hemşirelik öğrencilerine yönelik klinik uygulama eğitimlerinin planlanması önerilmektedir. Ayrıca hemşirelik öğrencilerinin pandemi durumlarında stresle baş etme yöntemlerini kullanmaları, kendilerini, ailelerini ve toplumu bulaşıcı hastalıklardan korumaya yönelik beceri ve davranışlar geliştirmeleri önerilir.

Anahtar Kelimeler: Algılanan stres, COVID-19, hemşirelik öğrencileri, bireyselleştirilmiş bakım

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Introduction

Nursing education consists of theory and practice, which requires professional knowledge and skill acquisition (1). It includes cognitive, affective, and psychomotor learning and requires coordination of theory and practice (2). Clinical practice education, which has an important place in nursing education, is intended to convert the theoretical knowledge of the student into practice, developing students' cognitive, affective, and psychomotor skills for use in professional practice and providing real-life settings in which to explore them (3,4). The internship offered to senior nursing students strengthens the professional competencies they are expected to acquire and prepares them for their professional life. Thus, students can develop professional attitudes and behaviors before they graduate.

Although clinical practice environments are an arena for students to develop their professional knowledge and skills, they are also a source of stress (5). Factors such as making mistakes in clinical practices, encountering negative reactions, harming the patient, lack of knowledge and skills to provide patient care, unfamiliarity with the clinic, low self-confidence, and caring for patients with infectious diseases can cause students to experience stress (4,5).

The most important of these risk factors lately has undoubtedly been the situation caused by the Coronavirus disease-2019 (COVID-19). COVID-19 emerged in Wuhan, China, and became a pandemic in a short time, affecting people worldwide. COVID-19 spread rapidly in Turkey and affected many areas of Turkish life. The COVID-19 pandemic influenced nursing education to a great extent, as did other fields of health science education. With the pandemic, senior nursing students began to encounter and care for patients with COVID-19 during their internships, creating fears in them of being infected with the virus or transmitting the disease to their families. This stress was suggested to negatively affect the clinical practices of the students. A study conducted by Sheroun et al. (6) revealed that the perceived stress level of nursing students was high during the COVID-19 pandemic, and it was recommended that this stress on students should be reduced. Aslan and Pekince (7) evaluated the views of nursing students regarding the COVID-19 pandemic as well as their stress levels and found that the students were experiencing moderate stress. The stress level was increased because nursing students in the clinical setting witnessed patients with COVID-19 develop severe conditions and loss of life. Stressful clinical environments for nursing students who are doing their internships negatively impact the care relationship and practices they will establish with patients.

Main Points

- Nursing students should gain the ability to use stress-coping methods in pandemic situations.
- Students need to develop skills to protect themselves, their families, and the community against infectious diseases.
- During possible pandemic periods, clinical practice training to be conducted by intern nursing students should be planned.

Care is based on communication and interaction between the patient and the nurse. As this process progresses, care distinguishes the patient from others and recognizes him or her as unique (8). As a global approach in nursing, individualized care is a profession that touches people's lives and includes interventions tailored to each patient performed with close physical contact (9). However, during the COVID-19 pandemic, social distance and contact restrictions must be strictly followed to prevent the transmission of the disease. This situation does not coincide with the nature of nursing and is thought to negatively affect individualized care practices and the interaction between students and patients in the clinical setting.

Uncertainties about the course of the epidemic in the absence of a specific treatment or an effective and safe vaccine for COVID-19 disease have been a stress factor for healthcare professionals and nurses, as well as nursing students who practice internships. In addition, the fact that the students witnessed patients diagnosed with COVID-19, whose condition was severe and who lost their lives in the clinical environment, led to an increase in the stress level. While all this process is going on, stressful clinical environments for nursing students doing internship practice are a negative factor in realizing the care relationship and practices that they will establish with the patient at the desired level.

This research is descriptive, cross-sectional, and relationship seeking. This study intends to evaluate senior nursing students' perceptions of stress and individualized care during the COVID-19 pandemic and to analyze the factors that affect them and their interrelationships. The relevant data collected and the results obtained contribute to the planning of clinical practice training for intern nursing students during possible epidemics.

Research Questions

1. What is the level of stress that students perceive and their perception of individualized care during the COVID-19 pandemic?
2. What factors affect students' perceived stress and their perception of individualized care?
3. Is there a relationship between students' stress during the COVID-19 pandemic and their perceptions of individualized care?

Material and Method

Design

This study was conducted according to descriptive and correlational research models to examine the relationship between stress perceptions and individualized care perceptions of senior nursing students during the COVID-19 pandemic.

Sample

The research population was composed of 346 senior nursing students from three universities in İstanbul who completed clinical internships between May and June 2021 during the COVID-19 pandemic. The sample size of the study was calculated according to the simple random sampling formula. The sample size was determined to consist of at least 182 students with a 95% confidence interval and a margin of error of 0.05. The sample of the study included 194 students who gave consent for their participation in the study following the information provided regarding the scope of the research.

Data Collection Tools

The structured information form, perceived stress scale (PSS), and individualized care scale-A nurse version (ICS-A-nurse) were employed.

Structured information form: The researcher modeled the structured information form using examples found in the literature. The form includes the demographic characteristics of the nursing students and the characteristics of their experiences in internship practice.

PSS: Developed by Cohen et al. (10) to measure the perceived stress level of participants, the scale was adapted into Turkish by Eskin et al. (11) for reliability and validity studies. It measures the extent to which unexpected life situations are perceived as stressful. The five-point Likert-type scale includes 14 items and consists of one dimension. Scoring of the scale items ranges from "Never (0)" to "Very often (4)" and 7 items (4-7,9,10,13) with positive expressions are reverse coded. The obtainable scores from the scale range from 0 to 56. A high score indicates high levels of perceived stress. With the knowledge and permission of the scale author, the researcher adapted the instructions and items of the scale to consider the pandemic process. The phrase "during the COVID-19 pandemic" was added to both the directive and the beginning of the scale items, and students were asked to consider their personal experiences in this context. The Cronbach's alpha coefficient of the scale was determined to be 0.86 in the study by Cohen et al. (10), 0.84 in the study by Eskin et al. (11), and 0.65 in this study.

ICS-A-nurse: Developed by Suhonen et al. (12) in 2007 to examine the perspectives of nurses on individualized care in the healthcare setting, the scale was adapted to Turkish society by Acaroğlu and Şendir (13). The ICS-A-nurse version, the first part of the scale that includes two parts, was used to analyze the nurses' perceptions on supporting the patients' individuality in their care practices (12). The scale includes three sub-dimensions: Clinical status, personal life status, and control of decision making.

Clinical status: Care behaviors that consider the responses of sick individuals to the disease, the meaning of the disease for them, and their feelings, emotions, and feelings.

Personal life status: Nurses' care behaviors to support the individuality of the individual in matters such as activities, habits, preferences, family relations, work and hospital experience reflecting the beliefs and values of the patient individuals. includes.

Control of decision-making: Reflecting the feelings, thoughts, and desires of patients and enabling them to participate in decisions about their own care nurses in matters such as providing care to support the individual's individuality decision-making control over care, including their behavior.

The scale is a 5-point Likert-type scale of 17 items. Total and scale sub-dimension mean scores were calculated by summing the scores obtained from the items and dividing them by the number of items. The lowest obtainable total and sub-dimension score is 1, and the highest is 5. A high score indicates that their perception of supporting their individuality is high. In the scale directive, students were asked to consider the COVID-19 pandemic process while answering the questions. The Cronbach alpha coefficient of the scale was determined to be 0.88 in the study by Suhonen et al. (12), 0.91 in the study by Acaroğlu and Şendir (13), and 0.94 in this study.

Data Collection

The data were collected using online questionnaire forms after obtaining the necessary permissions (institutional permissions and ethics committee approval). The students were provided information regarding the study and invited to participate by making an announcement via e-mail and social media by the institutions where they continue their education. On the first page of the questionnaire, there was a confirmation box that validated their participation in the research, in addition to the information (consent form) regarding the purpose of the study, the content, and the rights of the students.

Statistical Analysis

SPSS (version 22.0) was used to analyze the data. For data evaluation, descriptive statistics, independent groups analysis of variance (ANOVA), t-test, and correlation analysis were used. Significance was evaluated at the level of 0.05 ($p < 0.05$).

Ethical Consideration

Ethics committee permission from (date of meeting: May 6, 2021; number of decision: 2021/08) the University's Social and Human Research Ethics Committee, written permission of the institutions where the research would take place, and permission to use the scales from the authors of the scales to be used in the study were obtained. The informed voluntary consent form explaining the purpose and content of the study and the rights of the participants, and an online agreement indicating that the students participated in the study voluntarily were collected from the participants.

Results

When the individual characteristics of senior nursing students and their experiences in internship practice were analyzed, the mean age was 22.64 ± 1.63 years, 70.6% were female, 67.5% lived with their families, 79.4% chose the nursing profession willingly, 60.3% had COVID-19 vaccination, 24.7% had COVID-19 disease, 47.4% were diagnosed with COVID-19 in their families, 48.5% had a person who died due to COVID-19 in their family or environment. It was determined that 92.8% of the students increased the frequency of hand washing, 63.4% had a patient diagnosed with COVID-19 in the clinic where they practiced, 27.3% provided care to the patient diagnosed with COVID-19, 62.4% (27.3% completely, 35.1% partially) experienced a shortage of personal protective equipment in clinics, the frequency of entering the patient room decreased in 38.1%, the frequency of touching the patient decreased in 54.6%, the duration of being in the patient room decreased in 57.7% and 72.7% of the students had difficulty in complying with protective measures such as hand washing, mask and distance in care practices (37.6% completely, 35.1% partially) (Table 1).

It was determined that the students' PSS total mean score was 31.32 ± 5.21 (Table 2). The mean ICS-A-nurse total score was (3.97 ± 0.72) . Considering the ICS-A-nurse sub-dimensions, the highest mean score was obtained from the clinical status (4.07 ± 0.73), followed by the decision-making control (4.05 ± 0.77) and personal life status mean scores (3.66 ± 0.95) (Table 2).

Those students who had chosen the nursing profession unwillingly; had a family member with COVID-19 disease; did not change the frequency of handwashing; had a patient with a diagnosis of COVID-19 in the practice clinic; had a shortage of personal protective equipment in the clinics; had a reduced frequency of entering the patient's room and of physical contact with the patient; had difficulty in complying with protective measures such as handwashing, masking, and social distancing in care practices had a statistically and significantly higher PSS total mean scores ($p < 0.05$). The difference between the PSS scores of the students who were and were not vaccinated against COVID-19 and those who had and did not have COVID-19 was not found to be statistically significant ($p > 0.05$; Table 3).

The comparison of the ICS-A-nurse total and all sub-dimension mean scores according to the experience of students in internship practice during the COVID-19 pandemic period is indicated in Table 4. The ICS-A-nurse total mean scores of the students whose handwashing frequency increased, who cared for a patient with a diagnosis of COVID-19, whose frequency of entering the patient's room did not change, and without difficulty in complying with protective measures such as handwashing, mask, and distance in care practices were observed to be statistically and significantly higher than the others ($p < 0.05$). There was no statistically significant difference between the ICS-A-nurse total and all sub-dimension mean scores considering the presence of patients diagnosed with COVID-19 in the practice clinic ($p > 0.05$).

Table 1. Distribution of Individual Student Characteristics and Their Experiences in Internship Practice		
	n (194)	Percentage (%)
The mean age mean \pm standard deviation	22.64 \pm 1.63	Min=20 max=33
Gender		
Female	137	70.6
Male	57	29.4
Co-habitation during the internship		
In a dormitory	43	22.2
With family	131	67.5
Home alone	5	2.6
With flatmate	15	7.7
Chose nursing profession willingly		
Yes	154	79.4
No	40	20.6
COVID-19 vaccination		
Yes	117	60.3
No	77	39.7
History of COVID-19 infection		
Yes	48	24.7
No	146	75.3
Family member with history of COVID-19 disease		
Yes	92	47.4
No	102	52.6
Loss of a family member or relative due to COVID-19		
Yes	94	48.5
No	100	51.5
Change in the handwashing frequency		
No change	14	7.2
Increased	180	92.8
Presence of patients with a diagnosis of COVID-19 in the clinic		
Yes	123	63.4
No	71	36.6
Caring for a patient diagnosed with COVID-19		
Yes	53	27.3
No	141	72.7
Lack of personal protective equipment		
Yes	53	27.3
No	73	37.6
Partial	68	35.1
Frequency of entering the patient's room		

Table 1.
Continued

	n (194)	Percentage (%)
Decreased	74	38.1
Did not change	120	61.9
Frequency of physical contact with the patient		
Decreased	106	54.6
Did not change	88	45.4
Length of stay in the patient's room		
Decreased	112	57.7
Did not change	82	42.3
Difficulty complying with protective measures		
Yes	73	37.6
No	53	27.3
Partial	68	35.1

COVID-19=Coronavirus disease-2019

Table 2.
Distribution of Student PSS and ICS-A-nurse Mean Scores

Scale and factors	Min.	Max.	Mean	SD
Perceived stress scale (total)	17.0	44.0	31.32	521
Individualized care scale (total)	1.88	5.00	3.97	0.72
Clinical status	1.71	5.00	4.07	0.73
Personal life status	1.25	5.00	3.66	0.95
Decision-making control	2.00	5.00	4.05	0.77

SD=standard deviation, PSS=perceived stress scale, ICS-A-nurse=the individualized care scale-A-nurse

It was observed that there was a statistically moderate, negative, and highly significant correlation between the PSS mean score and ICS-A-nurse total mean score and the sub-dimension mean scores of the students who participated in the study ($r=-0.370$; $p<0.001$; Table 5).

Discussion

This research was conducted to analyze the perceptions of senior nursing students regarding stress and individualized care during the COVID-19 pandemic. The study showed that the stress perceived by the students while doing their internship during the COVID-19 pandemic period was moderate. National and international studies (14-17) conducted before the COVID-19 pandemic reported that nursing students experienced moderate stress. Studies (7,18,19) conducted during the COVID-19 pandemic similarly showed that nursing students experienced stress at a moderate level, corresponding with the findings of this study. It has been stated that nursing students are under stress while conducting clinical practice because of factors

Table 3.
Comparison of PSS Mean Scores According to Individual Student Characteristics and Internship Experience

Introductory characteristics	PSS	Test value
	Mean \pm SD	
Choosing the nursing profession willingly		
Yes	30.90 \pm 5.30	t=-2.210 p=0.028
No	32.93 \pm 4.54	
Being vaccinated against COVID-19		
Yes	31.31 \pm 4.76	t=-0.037 p=0.970
No	31.34 \pm 5.86	
Having a history of COVID-19		
Yes	32.31 \pm 4.79	t=1.528 p=0.128
No	30.99 \pm 5.31	
Having a family member with a history of COVID-19		
Yes	32.47 \pm 4.08	t=3.029 p=0.003
No	30.28 \pm 5.88	
Handwashing frequency		
Did not change	35.79 \pm 5.96	t=3.423 p=0.001
Increased	30.97 \pm 5.00	
Presence of patients with a diagnosis of COVID-19 in the clinic		
Yes	32.27 \pm 4.91	t=3.432 p=0.001
No	29.68 \pm 5.33	
Lack of personal protective equipment		
Yes ^a	33.15 \pm 4.95	F=9.646 p=0.000 a>c>b
No ^b	29.38 \pm 5.36	
Partial ^c	31.97 \pm 4.59	
Frequency of entering the patient's room		
Decreased	32.58 \pm 5.57	t=2.692 p=0.008
Did not change	30.54 \pm 4.83	
Frequency of physical contact with the patient		
Decreased	32.41 \pm 5.31	t=3.267 p=0.001
Did not change	30.01 \pm 4.79	
Difficulty complying with protective measures		
Yes ^a	33.82 \pm 4.24	F=16.346 p=0.000 a>c>b
No ^b	29.23 \pm 5.67	
Partial ^c	30.26 \pm 4.74	

t=Independent sample t-test, F=ANOVA, *= $p<0.05$, SD=standard deviation, COVID-19=coronavirus disease-2019, PSS=perceived stress scale

such as interactions with educators, other healthcare professionals, patients, and families; patients' rapidly changing conditions; being unfamiliar with the clinic; difficulty in adapting to a new environment; and lack of knowledge and skills to improve patient care (4,20). Although the stress level of the students during the pandemic process

Table 4.
Comparison of the ICS-A-nurse Mean Scores According to Individual Student Characteristics and Experience in Internship Practice

Introductory characteristics	Total		Clinical status		Personal life status		Decision-making control	
	Mean ± SD	Test value	Mean ± SD	Test value	Mean ± SD	Test value	Mean ± SD	Test value
Chose nursing profession willingly								
Yes	4.01±0.72	Z=-1.439	4.11±0.73	Z=-1.546	3.65±0.95	Z=-0.214	4.12±0.75	Z=-2.381
No	3.82±0.73	p=0.150	3.93±0.72	p=0.122	3.67±0.95	p=0.830	3.80±0.81	p=0.017
Loss of a family member or relative due to COVID-19								
Yes	4.06±0.67	Z=-1.640	4.15±0.70	Z=-1.207	3.82±0.87	Z=-2.296	4.13±0.71	Z=-0.907
No	3.88±0.76	p=0.101	4.01±0.76	p=0.228	3.50±0.99	p=0.022	3.98±0.83	p=0.365
Change in the handwashing frequency								
Did not change	3.06±0.76	Z=-4.074	3.24±0.75	Z=-3.846	2.77±0.78	Z=-3.585	3.05±0.88	Z=-4.045
Increased	4.04±0.67	p=0.000	4.14±0.69	p=0.000	3.73±0.93	p=0.000	4.13±0.71	p=0.000
Presence of patients with a diagnosis of COVID-19 in the clinic								
Yes	3.93±0.77	Z=-0.590	4.03±0.77	Z=-0.762	3.65±0.99	Z=-0.137	4.00±0.82	Z=-1.007
No	4.03±0.62	p=0.555	4.14±0.66	p=0.446	3.66±0.87	p=0.891	4.14±0.69	p=0.314
Caring for a patient diagnosed with COVID-19								
Yes	4.23±0.68	Z=-3.438	4.28±0.71	Z=-2.705	4.05±0.84	Z=-3.632	4.29±0.70	Z=-2.893
No	3.87±0.72	*p=0.001	4.00±0.72	*p=0.007	3.51±0.95	*p=0.000	3.96±0.78	p=0.004
Frequency of entering the patient's room								
Decreased	3.81±0.78	Z=-2.074	3.90±0.76	Z=-2.453	3.63±0.95	Z=-0.362	3.82±0.85	Z=-2.995
Did not change	4.07±0.67	p=0.038	4.18±0.69	p=0.014	3.68±0.95	p=0.717	4.20±0.69	p=0.003
Length of stay in the patient's room								
Decreased	3.87±0.78	Z=-1.834	3.97±0.77	Z=-2.057	3.56±0.98	Z=-1.518	3.96±0.87	Z=-1.191
Did not change	4.10±0.62	p=0.067	4.22±0.65	p=0.040	3.79±0.90	p=0.129	4.18±0.60	p=0.234
Difficulty complying with protective measures								
Yes ^a	3.78±0.81	$\chi^2=13.740$ p=0.001 b>c>a	3.89±0.78	$\chi^2=13.914$ p=0.001 b>c>a	3.61±0.97	$\chi^2=7.359$ p=0.025 b>a>c	3.77±0.87	$\chi^2=17.826$ p=0.000 b>c>a
No ^b	4.27±0.58		4.39±0.58		3.91±0.97		4.38±0.58	
Partial ^c	3.93±0.64		4.03±0.71		3.51±0.87		4.10±0.69	

Z=Mann-Whitney U, χ^2 =Kruskal-Wallis H *p<0.05, SD=standard deviation, COVID-19=coronavirus disease-2019, ICS-A-nurse=the individualized care scale-A-nurse

Table 5.
Relationship Between Student Perceived Stress Levels and Individualized Care Perceptions

		Individualized care scale			
		Total	Clinical status	Personal life status	Decision-making control
PSS	r	-0.370	-0.324	-0.306	-0.371
	p	0.000	0.000	0.000	0.000

Pearson correlation analysis p<0.001, PSS=perceived stress scale

has not been observed to change compared with the pre-pandemic process, factors such as the presence of patients with COVID-19 in the practice clinic, inadequacy of personal protective equipment, and caring for patients with COVID-19 may affect the stress they experience during the pandemic period.

In this study, the students' perceived stress level did not change whether or not they were vaccinated or had the disease, whereas the stress level of students who had a family member with a COVID-19 disease was higher. In fact, studies (21,22) conducted using semi-structured interviews revealed that nursing students are more afraid of and

experience more stress related to the possibility of infecting their families and relatives with COVID-19 than the possibility of being infected with the virus themselves.

The study found that during the COVID-19 pandemic, the stress level of students with a patient in the practice clinic diagnosed with COVID-19 was higher than that of students without such patients. The students whose frequency of entering the patient's room and of physical contact with the patient decreased experienced more stress than the students whose frequency did not change. These findings support each other and suggest that students with a patient in the practice clinic diagnosed with COVID-19 experience stress and anxiety about catching the disease, and accordingly, the frequency of entering the patient's room and touching the patient decreases. Indeed, the study by Okuyan et al. (23) with nursing students revealed that the anxiety level of the students who were afraid of being infected with the COVID-19 virus due to the pandemic was higher than the students who were not afraid of getting infected. Yazici and Ökten (19) reported that 78.2% of nursing students experienced anxiety about coming down with COVID-19 disease during clinical practice.

The study determined that the students' perception of individualized care was at a good level. In studies (24,25,26) conducted before the pandemic, it was detected that the ICS-A-nurse total mean score of students varied between 3.99 ± 0.74 and 4.33 ± 0.67 . In this research, students' perceptions of individualized care were found to be slightly low (3.97 ± 0.72), and the scale by asking them to answer by considering the associated COVID-19 pandemic process.

In the study, the decision-making control sub-dimension mean score of the students who willingly selected the profession of nursing was higher than those who did not. Studies (27,28) reported that students who willingly selected the profession of nursing had a higher level of perception of individualized care behaviors than students who did not. The decision-making control sub-dimension of the scale includes nurses' decision-making control over care, reflecting individuals' feelings, thoughts, and desires and enabling them to participate in decisions about their own care. Individuals who choose their profession willingly have high professional relations, more quality communication with team members, and more job satisfaction. Accordingly, a sense of belonging develops because they love their profession and perceive the environment in which they work positively (29). This finding of the study supports the literature.

In this study, it was observed that the personal life status sub-dimension mean scores of the students who lost their family or relatives due to COVID-19 were higher than the personal life status sub-dimension mean scores of the students who did not experience a loss. The personal life status sub-dimension of the scale involves care behaviors to enhance the individuality of the person, such as family relationships reflecting the values and beliefs of sick individuals (13).

This finding suggests that the loss of a family member or a relative deeply affects students emotionally and that they are more sensitive to caring behaviors that reflect family relationships.

The "ICS-A-nurse" total and all sub-dimension mean scores of students whose handwashing frequency increased during the COVID-19 period were found to be higher than those of students whose handwashing frequency did not change. The first step of the process during nursing care practices is handwashing (30). Both creating a hygienic environment for the patient and COVID-19 Given that hand washing is an important preventive measure against the disease, students whose handwashing frequency increases, as well as themselves during care practices they spend more time with their patients by ensuring the safety of their patients and care that they exhibited their care behavior better.

Students who less frequently entered patient rooms in the practice clinic had lower ICS-A-nurse total scores and lower clinical status and decision-making control sub-dimension mean scores compared with students whose frequency of entering the patient room did not change. This finding of the study corresponds with the fact that PSS mean scores were compared according to how frequently students entered their patients' rooms ($p < 0.05$). Students who experienced stress in the practice clinic during the COVID-19 pandemic entered patients' rooms less frequently, and it was assumed that they could not communicate adequately with the patients, and their perceptions of individualized care were negatively affected.

The clinical status sub-dimension mean scores were lower for students who spent less time in their patients' rooms than for those who spent the same amount of time. The clinical status sub-dimension of the ICS-A-nurse scale includes the reactions of sick individuals to the disease and what the disease means for the individual (13). Students who spend less time in the patient room in the practice clinic will have more difficulty practicing care behaviors that consider the feelings and emotions of the patient, and it is predicted that their communication with patients will also decrease.

Students without difficulty complying with protective measures in care practices showed a higher level of perception of individualized care than students who did have difficulty complying. Güner et al. (27) reported that 73% of nursing students encountered obstacles while providing individualized care due to factors such as communication problems and lack of materials. This finding suggested that students who had difficulty complying with protective measures during their care practices saw these measures as a barrier to their relationships with their patients, and therefore their perception of individualized care decreased.

Stress is a factor that negatively affects student success. As the stress level increases, the academic and practical success of the student decreases, and accordingly, the student has difficulties in diagnosing the patient, planning,

implementing, and evaluating nursing interventions during clinical practice. This situation negatively affects the patient- nurse relationship (17). Individualized care supports the individual's participation in his/her own care, considering socio-demographic characteristics, clinical conditions, personal life situations and preferences. It is a component that considers and at the same time determines the quality of care provided (31). This component can be determined by assessing the extent to which nursing students support individuality and the extent to which they perceive care practices as individualized (31). In the process of the research, the most important factor that may affect these perceptions of nursing students is the stress they experience and the situation caused by the COVID-19 pandemic. The results of this study support this view, and a moderate, negative, and highly significant relationship was found between the stress perceived by students during the COVID-19 pandemic and their perceptions of individualized care.

Study Limitations

The research is limited to the student group from which data were collected during the COVID-19 pandemic, and no generalization can be made.

Conclusion

It was deduced that the students experienced stress at a moderate level and their perception of individualized care was generally positive. It was noted that as the stress level of the students during the COVID-19 pandemic increased, their perception of individualized care decreased. Nursing students should develop skills and behaviors that will protect themselves, their families and the society from infectious diseases and that initiatives should be planned to reduce the stress level of students and increase university-hospital cooperation. It is also suggested that adequate personal protective equipment should be available in clinics during clinical applications and that clinical practice training should be planned for intern nursing students during possible pandemic processes.

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