The Effect of COVID-19 Fear in Patients and Clinical Nurses on Night Nursing Care

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Abstract
This study was conducted with the aim of determining the effect of fear of COVID-19 in patients and clinical nurses on night nursing care. This was a cross-sectional study. The research sample consisted of 604 patients and 270 clinical nurses selected by the convenience sampling method. Data were collected between August 2021 and July 2022 using a Patients' Information form, a Nurse's Information form, the Fear of COVID-19 scale, and the Night Nursing Care instrument. No significant difference was found between the total mean scores of the patients and the nurses on the Fear of COVID-19 scale or the Night Nursing Care instrument (rho = –0.017, p = .702; rho = –0.020, p = .741). It was found that patients' and nurses' fears of COVID-19 did not affect their perceptions of night nursing care.

Keywords
fear of COVID-19, night care, nurse, patient

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Introduction

During the time of COVID-19, nurses have experienced serious anxiety and fear because of such problems as heavy workloads, uncertainties concerning the treatment and course of the illness, limited clinical knowledge, discomfort from working with protective equipment, the fear of being infected or of infecting others, the fear of not helping patients, changed routines and lifestyles, not being in one-to-one contact with patients, relaxation of precautions in the normalization period, and lack of rotation of nurses working in pandemic clinics (Ahorsu et al., 2022; Baysal et al., 2022; Lavoie-Tremblay et al., 2022). Uncertainty about COVID-19 symptoms and incorrect or totally irrelevant information has caused anxiety and fear in patients (Buheji & Buhaid, 2020). Despite the anxiety and fear experienced by both patients and nurses, treatment and care has continued in emergency services, operating theaters, internal medicine, and surgical and intensive care units (Unver & Yeniğün, 2021). The main role of nurses in COVID-19 treatment is to help patients, even at a time of social distancing, to provide care, and to calm their worries (Buheji & Buhaid, 2020).

Nurses working on night shifts do not receive enough support because of a shortage of staff working at night. At the same time as trying to provide a dark and quiet environment in the ward during night care to allow patients to sleep, nurses have to cope with their own tiredness. Patients may have a greater need for nurses on the night shift for reasons such as darkness, sleeplessness, and tiredness (Karakurt & Yildiz Findik, 2020). Many factors, such as education levels, social status and conditions, age, previous experience of surgery, respect from nurses, nursing care received, and communication with and access to nurses, affect satisfaction with nursing care (Cerit & Coşkun, 2018).

In a study conducted during the COVID-19 pandemic by Asadi et al. (2020), the quality of care given by nurses was found to be at a high level, but in a study by Lavoie-Tremblay et al. (2022), it was found to be low. In the literature, studies evaluating night nursing care during the COVID-19 pandemic through the eyes of patients and nurses are limited. The aim of this research was to determine the effect of fear of COVID-19 on night nursing care in patients and clinical nurses.

Research Questions of the Study

1. What is the level of fear of COVID-19 in patients?
2. What is the level of fear of COVID-19 among nurses?
3. What are the levels of perception of night nursing care in patients?
4. What are the levels of perception of night nursing care among nurses?
5. What are the factors affecting patients' levels of fear of COVID-19 and their perceptions of night nursing care?
6. What are the factors affecting nurses' levels of fear of COVID-19 and their perceptions of night nursing care?

7. What is the correlation between patients' levels of fear of COVID-19 and their perceptions of night nursing care?
8. What is the correlation between nurses' levels of fear of COVID-19 and their perceptions of night nursing care?

Methods

Sample

This was a cross-sectional study. The population of the research consisted of in-patients and clinical nurses at three government hospitals and one teaching and research hospital located in two provinces in the southeast region of Turkey. A study by Karakurt & Yildiz Findik (2020) had a 95% confidence interval, a 5% error margin, and a 90% power level, and the sample consisted of 97 nurses and 97 patients. The sample of the present study consisted of 604 patients and 270 nurses. In the collection of data, the convenience sampling method was used. Convenience sampling is a non-probability sampling method generally used for clinical research. This sampling technique is related to the motivation of those participating in the research (Stratton, 2021). In the convenience sampling method, researchers announce the study in the clinic, and participants choose to join the research on a voluntary basis. This study was designed and reported following the consolidated criteria for reporting cross-sectional studies (STROBE) (von Elm et al., 2007).

Patients were included in the research who (1) were 18 years or older; (2) had been admitted to internal medicine, surgical, intensive care, or COVID-19 units; (3) had no mental illness; (4) had been in the hospital for at least one day; (5) had no problem with sense of place, time, or person; and (6) participated voluntarily in the research. 28 patients who did not agree to participate voluntarily in the study and 10 who filled out the forms incompletely were excluded.

The nurses included in the study (1) were 18 years or older; (2) worked in internal medicine, surgical, intensive care, or COVID-19 units; (3) were on the night shift (16.00–08.00); and (4) agreed voluntarily to participate in the research. Twelve nurses who completed the questionnaire forms incompletely were excluded from the study.

Measures

A Patients' Information form, a Nurse's Information form, the Fear of COVID-19 scale, and the Night Nursing Care instrument (NNCI) were used to collect data between August 2021 and July 2022.

The Patients' Information form was devised by the researchers in accordance with the literature (Karakurt & Yildiz Findik, 2020; Sürme et al., 2021). It consists of 13 questions on the patient's socio-demographic characteristics (age, gender, marital status, education level, profession, income level, chronic illnesses, current chronic illness, and length of time in the hospital) and on COVID-19-related information (status

of having had COVID-19, history of contact with individuals with COVID-19, the existence of anyone near them who was diagnosed with COVID-19, and the extent of implementing measures to protect from COVID-19).

The Nurse's Information form was devised by the researchers in accordance with the literature (Asadi et al., 2020; Karakurt & Yildiz Findik, 2020). It consists of 14 questions on the nurses' socio-demographic characteristics (age, gender, marital status, education level, years of experience, place of work (clinic), number of patients cared for during the COVID-19 pandemic, and the number of night shift nurses) and on information relating to COVID-19 (participation in training, seminars, symposiums, or congresses on the COVID-19 pandemic, status of having had COVID-19 and history of contact with individuals with COVID-19, the existence of anyone near to them with COVID-19, the extent of implementation of measures to protect against COVID-19, and the extent of implementation of measures to protect against COVID-19 in night care).

The Fear of COVID-19 scale was developed by Ahorsu et al. (2022) and adapted to Turkish society by Satici et al. (2021). It shows the level of fear caused by COVID-19 and its psychosocial effects. The scale has a single dimension and consists of seven items. The scale items are scored from 1 (I definitely disagree) to 5 (I definitely agree); the maximum score is 35, and the minimum is 7. A high score indicates a great fear of COVID-19, and a low score indicates little fear of COVID-19. The Cronbach's alpha coefficient of the Turkish form of the scale is 0.84 (Satici et al., 2021). Previous research reported excellent predictive validity and reliability between 0.82 and 0.92 (Ahorsu et al., 2022; Bakioğlu et al., 2021; Labrague & de Los Santos, 2021; Işıklı et al., 2022; Unver & Yeniğün, 2021).

In the present study, the Cronbach's alpha coefficient was 0.85 for the nurses and 0.84 for the patients.

The adaptation to Turkish society of the Night Nursing Care instrument (NNCI), developed by Johansson (2005), was performed by Acaroğlu et al. (2009). The instrument evaluates night nursing care from the point of view of patients and nurses. The first part of the instrument deals with nurses' evaluations, while the second part deals with those of patients. The instrument is composed of 11 items in three subdimensions. The subdimension of Nursing Interventions (items 1–6) includes items covering situations like taking account of patients' needs at night, being informed on duties to be performed, assessing toilet and position change needs, meeting needs for eating and drinking throughout the night, allowing for sharing of needs relating to insomnia, and making observations throughout the night. The subdimension of Medical Interventions (items 7 and 8) takes in items including the administration of drugs, infusions, and injections at planned times and the unplanned prompt administration of pain killers and drugs to aid sleep. The subdimension of Evaluation (items 9–11) includes items covering the state of rest through the night, the state of feeling self-confident, and the state of satisfaction with night nursing care (Acaroğlu et al., 2009; Johansson et al., 2005). The lowest possible score on the NNCI was 11, and the highest was 55. A high score obtained on the instrument indicates a positive evaluation of night care, while a

low score indicates a negative evaluation (Acaroğlu et al., 2009). The Cronbach's alpha coefficient in the original scale was 0.85 for nurses, and in the study by Acaroğlu et al. (2009), it was 0.65 (Acaroğlu et al., 2009). Previous research reported excellent predictive validity, and reliability was found to be 0.91 in nurses and 0.88 in patients (Rodríguez-gázquez et al., 2012).

In the present study, the Cronbach's alpha coefficient in nurses was calculated as 0.86 and in patients as 0.75.

Procedure

Data were collected using the face-to-face interview technique. Before the distribution of the data collection forms, the aim of the study was explained to all participants, and their written and oral approval was obtained. The researchers visited the patients in their rooms in the evening (20.00–22.00) and met the nurses in the nurses' room. The reason for choosing this time was that the clinics were available for the collection of night data at that time. In order for the patients and nurses to not be affected by people with them, the researchers remained in the room until the questionnaires were completed. Completion of the questionnaires took approximately 15 minutes. As the forms were collected, they were checked for incomplete data.

Ethical Considerations

Ethics committee permission to conduct the research, No. 21042, dated 2 August 2021, was obtained from the Ethics Committee of Batman University. After that, institutional permission was obtained from the hospitals where the research was conducted. Permission was obtained by email from the authors to use the Fear of COVID-19 scale and the NNCI.

Data Analysis

The data were analyzed using the Statistical Package for Social Sciences 25.0 (SPSS, IBM Corp., Armonk, NY, USA). Descriptive statistics were given as numbers, percentages, means, standard deviations, medians, maxima, and minima. To determine whether numerical data conformed to normal distribution, the Shapiro–Wilk test and Q–Q graphics were used. With data that did not conform to normal distribution, the Mann–Whitney U test and the Kruskal–Wallis test were applied. In order to determine between which means the difference originated, Bonferroni's test was applied. In order to examine the correlation between the total score of the scale and the subdimensions, Spearman correlation analysis was performed. The resulting interpretations were evaluated according to a significance of $p < 0.05$. In categorizing the ages of the patients and nurses participating in the research, use was made of Levinson's (1980) age structure theory.

Results

It was found that 35.4% of the patients taking part in the research were aged 57 years or older, and that their mean age was 48.84 ± 12.69 years. It was determined that 53.3% were male, most (72%) were married/non-marital partnership, 39.5% were educated to the primary level, and 35.4% were self-employed. The income level of 57.7% of the patients participating in the research was poor. A majority of the patients (67.3%) had a chronic illness, and 16.7% had a chronic illness of hypertension + diabetes. It was found that 34.6% of the patients had been in the hospital for 21 days or more. A majority of the patients taking part in the research (56.2%) had COVID-19, and 46.5% had a history of contact with someone with COVID-19. In addition, 65.8% of the patients stated that there was someone close to them with a diagnosis of COVID-19, and 44% stated that when it was compulsory, they conformed to the rules of masks, distance, and hygiene when they went out (Table 1).

The ages of 50% of the clinical nurses were in the range of 19–28 years, and their mean age was 28.61 ± 5.27 years. It was found that 62.6% of the clinical nurses were female, 54.1% were married/non-marital partnership, and most (80%) were university graduates. It was also found that 43.7% of the nurses had 6–10 years of work experience, and that many (38.9%) had worked in intensive care units. It was found that 21.5% of the clinical nurses had provided care to an average of 26–30 patients per day during the pandemic, and that according to many (44.8%), the number of nurses working on the night shift was two. It was found that 76.7% of the nurses had not participated in any training, seminars, symposiums, or congresses on the COVID-19 pandemic. It was also found that 62.2% of the clinical nurses had previously had COVID-19, and that 83.3% had a history of contact with someone with COVID-19. Most of the nurses (90.0%) stated that there was someone close to them with a diagnosis of COVID-19. In this research, 49.6% of the nurses stated that they complied with the rules of mask wearing, distance, and hygiene when it was compulsory when they went out. Many of the nurses (42.6%) stated that they wore surgical masks and gloves for protection from COVID-19 when they were on night duty (Table 2).

The mean total scores in this study on the Fear of COVID-19 scale were 18.82 ± 6.29 for the patients and 18.35 ± 5.90 for the clinical nurses. No significant difference was found between these figures ($p = 0.603$). The mean total scores on the NNCI were 42.36 ± 6.32 for the patients and 46.90 ± 6.90 for the clinical nurses. A highly significant difference was found between these figures ($p = .000$). For patients and clinical nurses, the subdimension with the highest mean scores was found to be Nursing Interventions, with 22.64 ± 4.18 and 26.08 ± 4.31, respectively. The subdimension with the second highest scores was found to be Evaluation, with 11.66 ± 2.10 for the patients and 12.16 ± 2.45 for the clinical nurses, while the subdimension of Medical Interventions had the lowest scores, with 8.05 ± 1.66 and 8.65 ± 1.64 for the patients and nurses, respectively. A highly significant difference was found between the mean scores of patients and nurses on the subdimensions of Nursing Interventions, Medical Interventions, and Evaluation ($p = .000$) (Table 3).

Table 1. Patients' Socio-demographic Characteristics (*n* = 604).

Variable	*n* (%)
Age (years) (Mean ± SD)	48.84 ± 18.14
18–30	127 (21.0)
31–43	109 (18.0)
44–56	154 (25.4)
>57	214 (35.4)
Gender	
Female	282 (46.6)
Male	322 (53.3)
Marital status	
Married/non-marital partnership	434 (72.0)
Single/divorced/widower	170 (29.0)
Education level	
Illiterate	194 (32.1)
Primary school	239 (39.5)
High school	105 (17.3)
University	66 (10.9)
Profession	
Government employee	47 (7.7)
Worker	97 (16.0)
Self-employed	214 (35.4)
Housewife	173 (28.6)
Retired	73 (12.0)
Income level	
Poor	349 (57.7)
Medium	210 (34.7)
High	45 (7.4)
Chronic illnesses	
Yes	407 (67.3)
No	197 (32.6)
Current chronic illness	
Hypertension + diabetes	84 (16.7)
Hypertension	59 (11.7)
Diabetes	52 (10.3)
Asthma, Bronchitis, COPD (chronic obstructive pulmonary disease)	50 (9.9)
Migraine	45 (8.9)
Rheumatic disease	35 (6.9)
Paralysis, epilepsy	34 (6.7)
Cancer	24 (4.8)
Hypothyroidism	12 (2.4)
Kidney failure	12 (2.4)

Table 1. (continued)

Variable	n (%)
Length of time in the hospital (days)	
1–5	74 (12.2)
6–10	146 (24.1)
11–15	93 (15.3)
16–20	82 (13.5)
>21	209 (34.6)
Status of having had COVID-19	
Yes	340 (56.2)
No	264 (43.7)
History of contact with individuals with COVID-19	
Yes	281 (46.5)
No	323 (53.4)
The existence of anyone near them who was diagnosed with COVID-19	
Yes	398 (65.8)
No	206 (34.1)
The extent of implementing measures to protect from COVID-19	
I went out when necessary, conforming to mask, distance, and hygiene regulations	266 (44.0)
I went out as before but conformed to mask, distancing, and hygiene regulations	178 (29.4)
I definitely did not leave the home	82 (13.5)
I went out as frequently as before without taking any precautions	78 (12.9)

In the patients, factors such as female gender, being illiterate, being a housewife, and taking the precaution of definitely not leaving the house affected fears of COVID-19 and perceptions of night nursing care. Details are shown in Table 4.

Among the nurses, perceptions of the night nursing care were affected by factors such as being aged between 39 and 48 years and having 17 years or more of experience, and fears of COVID-19 were affected by factors such as previously having had COVID-19 and taking the measures of wearing a surgical mask, an N95 mask, gloves, a face shield, or a protective suit. Details are shown in Table 5.

A weakly significant positive correlation was found between the patients' ages and their total scores on the Fear of COVID-19 scale and total scores on the NNCI and its subdimensions of Nursing Interventions, Medical Interventions, and Evaluation (rho = 0.142, p = .001; rho = 0.223, p = .000; rho = 0.223, p = .000; rho = 0.149, p = .001; rho = 0.092, p = .040). No significant correlation was found between the patients' Fear of COVID-19 scale total and the NNCI total scores (rho = -0.017, p = .702). A strongly significant positive correlation was found between the NNCI total scores and the scores of the subdimensions of the Nursing Interventions, Medical interventions, and Evaluation (rho = 0.906, p = .000; rho = 0.543, p = .000; rho = 0.709, p = .000). A

Table 2. Clinical Nurses' Socio-demographic Characteristics (*n* = 270).

Variable	*n* (%)
Age (years) (Mean ± SD)	28.61 ± 5.27
19–28	135 (50.0)
29–38	118 (43.7)
39–48	17 (6.3)
Gender	
Female	169 (62.6)
Male	101 (37.4)
Marital status	
Married/non-marital partnership	146 (54.1)
Single/divorced/widower	124 (45.9)
Education level	
High school	35 (13.0)
University	216 (80.0)
Postgraduate	19 (7.0)
Years of experience	
1–5	111 (41.1)
6–10	118 (43.7)
11–16	31 (11.5)
>17	10 (3.7)
Place of work (clinic)	
Internal care units	58 (21.5)
Surgical care units	55 (20.4)
Intensive care units	105 (38.9)
COVID-19 care units	52 (19.3)
Number of patients cared for during the COVID-19 pandemic	
1–5	19 (7.0)
6–10	24 (8.9)
11–15	38 (14.1)
16–20	43 (15.9)
21–25	51 (18.9)
26–30	58 (21.5)
>31	37 (13.7)
The number of night shift nurses	
1	35 (13.0)
2	121 (44.8)
3	31 (11.5)
4	43 (15.9)
>5	40 (14.8)

Table 2. (continued)

Variable	n (%)
Participation in training, seminars, symposiums, or congresses on the COVID-19 pandemic	
Yes	63 (23.3)
No	207 (76.7)
Status of having had COVID-19	
Yes	168 (62.2)
No	102 (37.8)
History of contact with individuals with COVID-19	
Yes	225 (83.3)
No	45 (16.7)
The existence of anyone near to them with COVID-19	
Yes	243 (90.0)
No	27 (10.0)
The extent of implementation of measures to protect against COVID-19	
I went out when necessary, conforming to mask, distance, and hygiene regulations	134 (49.6)
I went out as before but conformed to mask, distancing, and hygiene regulations	114 (42.2)
I definitely did not leave the home	9 (3.3)
I went out as frequently as before without taking any precautions	13 (4.8)
The extent of implementation of measures to protect against COVID-19 in night care	
I wore a surgical mask and gloves	115 (42.6)
I wore a mask, gloves, and a face shield	72 (26.7)
I wore a surgical mask, an N95 mask, gloves, a face shield, and a protective suit	57 (21.1)
I wear a mask, gloves, a face shield, and a protective suit	26 (9.6)

weakly significant positive correlation was determined between the subdimension of the Nursing Interventions score and the scores of the subdimensions of Medical Interventions and Evaluation (rho = 0.298, p =.000; rho = 0.462, p = .000). A weakly significant positive correlation was found between the scores on the subdimensions of Medical Interventions and Evaluation (rho = 0.293, p = .000) (Table 6).

A weakly significant positive correlation was found between the nurses' age and their total NNCI and Nursing Interventions subdimension scores (rho = 0.157, p = .010; rho = 0.158, p = .009). No significant correlation was found between the nurses' total scores on the Fear of COVID-19 scale and the NNCI (rho = −0.020, p = .741). A strongly significant positive correlation was found between the NNCI total and the scores on the subdimensions of Nursing interventions, Medical Interventions, and Evaluation (rho = 0.843, p = .000; rho = 0.594, p = .000; rho = 0.739, p = .000). A weakly significant positive correlation was found between the Nursing Interventions subdimension score and the Medical Interventions and Evaluation subdimension scores (rho = 0.391, p = .000; rho = 0.397, p = .000). A weakly significant positive correlation

Table 3. Comparison of the Total Score of the Fear of COVID-19 Scale and the Total NNCI and its Subdimensions Scores of Patients and Clinical Nurses.

Scale	Patients (n = 604)		Clinical nurses (n = 270)		z*	p Value
	Mean ± SD	Median (Min–Max)	Mean ± SD	Median (Min–Max)		
The fear of COVID-19 scale	18.82 ± 6.29	18.00 (7.00–35.00)	18.35 ± 5.90	18.00 (7.00–35.00)	−0.520	.603
NNCI	42.36 ± 6.32	43.00 (24.00–55.00)	46.90 ± 6.90	49.00 (11.00–55.00)	−10.301	< .001
Nursing interventions	22.64 ± 4.18	23.00 (7.00–30.00)	26.08 ± 4.31	27.00 (6.00–30.00)	−11.506	< .001
Medical interventions	8.05 ± 1.66	8.00 (2.00–10.00)	8.65 ± 1.64	9.00 (2.00–10.00)	−5.609	< .001
Evaluation	11.66 ± 2.10	12.00 (5.00–15.00)	12.16 ± 2.45	13.00 (3.00–15.00)	−3.852	< .001

Note. *z: Mann–Whitney U test, NNCI: Night Nursing Care instrument.

Table 4. Comparison of Patients' Scores on the Fear of COVID-19 Scale and the Total NNCI and its Subdimensions According to Socio-Demographic Characteristics.

Variable	Nursing interventions Median (Min–Max)	Medical interventions Median (Min–Max)	Evaluation Median (Min–Max)	NNCI Median (Min–Max)	Fear of COVID-19 Scale Median (Min–Max)
Gender					
Female	24.00 (8.00–30.00)	9.00 (2.00–10.00)	12.00 (5.00–15.00)	44.00 (24.00–55.00)	19.00 (7.00–35.00)
Male	23.00 (7.00–30.00)	8.00 (3.00–10.00)	12.00 (5.00–15.00)	43.00 (24.00–55.00)	17.00 (7.00–35.00)
Mann–Whitney/KW	$z = -3.021, p = .003$	$z = -2.638, p = .008$	$z = -0.281, p = .779$	$z = -2.851, p = .004$	$z = -4.604, p < .001$
Marital status					
Married/non-marital partnership	24.00 (7.00–30.00)	9.00 (2.00–10.00)	12.00 (5.00–15.00)	44.00 (25.00–55.00)	18.00 (7.00–35.00)
Single/divorced/widower	22.00 (8.00–29.00)	8.00 (2.00–10.00)	12.00 (5.00–15.00)	40.00 (24.00–51.00)	17.50 (7.00–33.00)
Mann–Whitney/KW	$z = -4.724, p < .001$	$z = -2.614, p = .009$	$z = -1.814, p = .070$	$z = -4.428, p < .001$	$z = -1.321, p = .187$
Education level					
Illiterate	24.00 (7.00–30.00)	9.00 (2.00–10.00)	12.00 (5.00–15.00)	45.00 (26.00–55.00)	19.00 (7.00–35.00)
Primary school	24.00 (12.00–30.00)	8.00 (2.00–10.00)	12.00 (7.00–15.00)	43.00 (25.00–55.00)	18.00 (7.00–35.00)
High school	21.50 (12.00–28.00)	7.50 (3.00–10.00)	11.00 (5.00–15.00)	38.50 (24.00–52.00)	17.00 (7.00–26.00)
University	21.00 (10.00–28.00)	9.00 (4.00–10.00)	11.00 (7.00–15.00)	43.00 (24.00–50.00)	15.00 (7.00–31.00)
Mann–Whitney/KW	KW:24.122, $p < .001$	KW:18.831, $p < .001$	KW:20.635, $p < .001$	KW:28.889, $p < .001$	KW:17.367, $p < .001$
Profession					
Government employee	22.00 (16.00–28.00)	8.00 (5.00–10.00)	11.00 (7.00–14.00)	40.00 (30.00–50.00)	15.00 (7.00–31.00)
Worker	24.00 (15.00–30.00)	8.00 (4.00–10.00)	12.00 (6.00–15.00)	43.00 (34.00–50.00)	19.00 (7.00–32.00)
Self-employed	23.00 (7.00–30.00)	8.00 (3.00–10.00)	12.00 (5.00–15.00)	43.00 (24.00–52.00)	16.00 (7.00–30.00)

(continued)

Table 4. (continued)

Variable	Nursing interventions Median (Min–Max)	Medical interventions Median (Min–Max)	Evaluation Median (Min–Max)	NNCI Median (Min–Max)	Fear of COVID-19 Scale Median (Min–Max)
Housewife	24.00 (8.00–30.00)	9.00 (2.00–10.00)	12.00 (5.00–15.00)	44.00 (27.00–55.00)	19.00 (7.00–35.00)
Retired	23.00 (12.00–30.00)	9.00 (5.00–10.00)	12.00 (5.00–15.00)	42.00 (31.00–55.00)	20.00 (7.00–35.00)
Mann–Whitney/KW	KW:14.555, p = .006	KW:7.967, p = .093	KW:4.995, p = .288	KW:13.638, p = .009	KW:32.527, p < .001
Income level					
Poor	24.00 (7.00–30.00)	8.00 (2.00–10.00)	12.00 (5.00–15.00)	44.00 (24.00–55.00)	18.00 (7.00–35.00)
Medium	23.00 (8.00–30.00)	8.00 (2.00–10.00)	12.00 (5.00–15.00)	43.00 (25.00–55.00)	17.00 (7.00–33.00)
High	24.00 (10.00–25.00)	9.00 (4.00–10.00)	12.50 (9.00–15.00)	43.00 (24.00–49.00)	16.30 (10.00–30.00)
Mann–Whitney/KW	KW:2.921, p = 232	KW:0.389, p = .823	KW:2.033, p = .362	KW:2.756, p = .252	KW:6.662, p = .036
Length of time in hospital (days)					
1–5	23.00 (16.00–29.00)	8.00 (5.00–10.00)	12.00 (7.00–15.00)	42.50 (30.00–52.00)	19.00 (7.00–30.00)
6–10	22.50 (12.00–30.00)	8.00 (2.00–10.00)	12.00 (5.00–15.00)	43.00 (25.00–55.00)	16.50 (7.00–35.00)
11–15	22.00 (12.00–30.00)	8.00 (6.00–10.00)	12.00 (5.00–15.00)	41.00 (24.00–55.00)	18.00 (7.00–31.00)
16–20	24.00 (7.00–30.00)	8.00 (3.00–9.00)	12.00 (5.00–14.00)	44.50 (26.00–51.00)	19.00 (7.00–31.00)
>21	24.00 (8.00–30.00)	9.00 (2.00–10.00)	12.00 (7.00–15.00)	44.00 (24.00–55.00)	18.00 (7.00–35.00)
Mann–Whitney/KW	KW:4.871, p = .301	KW:13.053, p = .011	KW:5.575, p = .233	KW:3.691, p = .449	KW:10.545, p = .032
Status of having had COVID-19					
Yes	23.00 (7.00–30.00)	8.50 (3.00–10.00)	12.00 (5.00–15.00)	43.00 (24.00–55.00)	19.00 (7.00–35.00)
No	23.00 (12.00–30.00)	8.00 (2.00–10.00)	12.00 (5.00–15.00)	44.00 (24.00–55.00)	18.00 (7.00–35.00)
Mann–Whitney/KW	z = −1.236, p = .216	z = −1.250, p = .211	z = −0.805, p = .421	z = −1.108, p = .268	z = −2.793, p = .005

Table 4. (continued)

Variable	Nursing interventions Median (Min–Max)	Medical interventions Median (Min–Max)	Evaluation Median (Min–Max)	NNCI Median (Min–Max)	Fear of COVID-19 Scale Median (Min–Max)
The extent of implementing measures to protect from COVID-19					
I went out when necessary, conforming to mask, distance, and hygiene regulations	23.00 (7.00–30.00)	9.00 (2.00–10.00)	12.00 (5.00–15.00)	43.00 (25.00–55.00)	19.00 (7.00–35.00)
I went out as before but conformed to mask, distancing, and hygiene regulations	23.00 (8.00–30.00)	8.00 (2.00–10.00)	11.00 (5.00–15.00)	41.00 (24.00–52.00)	17.00 (7.00–32.00)
I definitely did not leave the home	25.00 (12.00–30.00)	9.00 (5.00–10.00)	12.00 (6.00–15.00)	46.00 (24.00–52.00)	23.00 (7.00–35.00)
I went out as frequently as before without taking any precautions	23.00 (13.00–30.00)	8.00 (5.00–10.00)	12.00 (8.00–15.00)	44.00 (30.00–55.00)	14.00 (7.00–23.00)
Mann–Whitney/KW	KW:12.934, p = .005	KW:6.880, p = .076	KW:11.545, p = .009	KW:15.204, p = .002	KW:73.269, p< .001

Note. *z: Mann–Whitney *U* test, KW: Kruskal–Wallis test, NNCI: Night Nursing Care instrument.

Table 5. Comparison of Clinical Nurses' Scores on the Fear of COVID-19 Scale and the Total NNCI and its Subdimensions According to Socio-Demographic Characteristics.

Variable	Nursing interventions Median (Min–Max)	Medical interventions Median (Min–Max)	Evaluation Median (Min–Max)	NNCI Median (Min–Max)	Fear of COVID-19 Scale Median (Min–Max)
Age (years)					
19–28	27.00 (6.00–30.00)	9.00 (2.00–10.00)	12.00 (3.00–15.00)	48.00 (11.00–55.00)	18.00 (7.00–35.00)
29–38	27.50 (12.00–30.00)	9.00 (4.00–10.00)	13.00 (6.00–15.00)	49.00 (22.00–55.00)	18.00 (7.00–35.00)
39–48	30.00 (21.00–30.00)	9.00 (6.00–10.00)	14.00 (5.00–15.00)	51.00 (40.00–55.00)	21.00 (7.00–35.00)
Mann-Whitney/KW	KW:7.569, p = .023	KW:0.063, p = .969	KW:8.426, p= .015	KW:8.488, p = .014	KW:2.115, p = .347
Years of experience					
1–5	26.00 (6.00–30.00)	9.00 (2.00–10.00)	12.00 (3.00–15.00)	47.00 (11.00–55.00)	18.00 (7.00–35.00)
6–10	28.00 (12.00–30.00)	9.00 (4.00–10.00)	13.00 (6.00–15.00)	49.00 (22.00–55.00)	18.00 (7.00–35.00)
11–16	28.00 (19.00–30.00)	9.00 (6.00–10.00)	13.00 (5.00–15.00)	49.00 (34.00–55.00)	17.00 (7.00–35.00)
>17	29.00 (21.00–30.00)	9.00 (8.00–10.00)	14.00 (12.00–15.00)	50.00 (41.00–55.00)	20.50 (7.00–27.00)
Mann-Whitney/KW	KW:9.232, p = .026	KW:6.517, p = .089	KW:3.550, p = .314	KW:8.643, p = .034	KW:1.288, p = .732
Participation in training, seminars, symposiums, or congresses on the COVID-19 pandemic					
Yes	27.00 (12.00–30.00)	9.00 (4.00–10.00)	14.00 (6.00–15.00)	49.00 (22.00–55.00)	18.00 (7.00–30.00)
No	27.00 (6.00–30.00)	9.00 (2.00–10.00)	12.00 (3.00–15.00)	48.00 (11.00–55.00)	18.00 (7.00–35.00)
Mann-Whitney/KW	z = −0.429, p =.668	z = −0.563, p = .573	z = −3.198, p = .001	z = −1.747, p = .081	z = −0.054, p = .957
Status of having had COVID-19					
Yes	27.00 (12.00–30.00)	9.00 (4.00–10.00)	13.00 (4.00–15.00)	49.00 (22.00–55.00)	19.00 (7.00–35.00)
No	27.00 (6.00–30.00)	9.00 (2.00–10.00)	12.50 (3.00–15.00)	48.50 (11.00–55.00)	17.00 (7.00–28.00)
Mann-Whitney/KW	z = −1.072, p = .284	z = −0.194, p = .846	z = −0.228, p = .819	z = −0.143, p = .887	z = −2.351, p = .019

Table 5. (continued)

Variable	Nursing interventions Median (Min–Max)	Medical interventions Median (Min–Max)	Evaluation Median (Min–Max)	NNCI Median (Min–Max)	Fear of COVID-19 Scale Median (Min–Max)
The extent of implementation of measures to protect against COVID-19					
I went out when necessary, conforming to mask, distance, and hygiene regulations	27.00 (12.00–30.00)	9.00 (4.00–10.00)	13.00 (4.00–15.00)	49.00 (22.00–55.00)	18.00 (7.00–35.00)
I went out as before but conformed to mask, distancing, and hygiene regulations	27.50 (6.00–30.00)	9.00 (2.00–10.00)	12.00 (3.00–15.00)	48.00 (11.00–55.00)	18.50 (7.00–35.00)
I definitely did not leave the home	27.00 (20.00–30.00)	9.00 (9.00–10.00)	12.00 (11.00–15.00)	50.00 (42.00–53.00)	19.00 (7.00–27.00)
I went out as frequently as before without taking any precautions	24.00 (12.00–30.00)	7.00 (4.00–10.00)	12.00 (6.00–15.00)	41.00 (22.00–55.00)	14.00 (7.00–35.00)
Mann-Whitney/KW	KW:1.787, p = .618	KW:9.487, p = .023	KW:7.889, p = .048	KW:5.891, p = .117	KW:2.892, p = .409
The extent of implementation of measures to protect against COVID-19 in night care					
I wore a surgical mask and gloves	27.00 (12.00–30.00)	9.00 (4.00–10.00)	12.00 (6.00–15.00)	48.00 (22.00–55.00)	16.00 (7.00–35.00)
I wore a mask, gloves, and a face shield	27.00 (6.00–30.00)	9.00 (2.00–10.00)	13.00 (3.00–15.00)	48.00 (11.00–55.00)	18.00 (7.00–29.00)

Table 5. (continued)

Variable	Nursing interventions Median (Min–Max)	Medical interventions Median (Min–Max)	Evaluation Median (Min–Max)	NNCI Median (Min–Max)	Fear of COVID-19 Scale Median (Min–Max)
I wore a surgical mask, an N95 mask, gloves, a face shield, and a protective suit	29.00 (16.00–30.00)	10.00 (4.00–10.00)	13.00 (7.00–15.00)	49.00 (31.00–55.00)	20.00 (7.00–30.00)
I wear a mask, gloves, a face shield, and a protective suit	27.50 (16.00–30.0)	9.00 (4.00–10.00)	12.00 (5.00–15.00)	48.00 (29.00–53.00)	20.00 (9.00–35.00)
Mann-Whitney/KW	KW:7.942, p = .047	KW:11.984, p = .007	KW:0.584, p = .900	KW:4.001, p = .261	KW:13.808, p = .003

Note. *z: Mann–Whitney U test, KW: Kruskal–Wallis test, NNCI: Night Nursing Care instrument.

Table 6. Correlation Between Patients' and the Clinical Nurses' on the Fear Of COVID-19 Scale and Total Scores on the NNCI and its Subdimensions Scores.

	Age		Fear of COVID-19 scale		NNCI		Nursing interventions		Medical interventions		Evaluation	
	rho	p	rho	p	rho	p	rho	p	rho	p	rho	p
Patients												
Age	—	—	0.142	.001	0.223	< .001	0.233	< .001	0.149	.001	0.092	.040
Fear of COVID-19 scale	0.142	.001	—	—	−0.017	.702	−0.013	0.733	−0.043	0.340	−0.009	.834
NNCI	0.223	< .001	−0.017	.702	—	—	0.906	< .001	0.543	< .001	0.709	< .001
Nursing interventions	0.233	< .001	−0.013	.773	0.906	< .001	—	—	0.298	< .001	0.462	< .001
Medical interventions	0.149	.001	−0.043	.340	0.543	< .001	0.298	< .001	—	—	0.293	< .001
Evaluation	0.092	.040	−0.009	.834	0.709	< .001	0.462	< .001	0.293	< .001	—	—
Clinical nurses												
Age	—	—	0.058	.339	0.157	.010	0.158	.009	0.064	.292	0.100	.103
Fear of COVID-19 scale	0.058	.339	—	—	−0.020	.741	0.037	.549	−0.035	.566	−0.004	.950
NNCI	0.157	.010	−0.020	.741	—	—	0.843	< .001	0.594	< .001	0.739	< .001
Nursing interventions	0.158	.009	0.037	.549	0.843	< .001	—	—	0.391	< .001	0.397	< .001
Medical interventions	0.064	.292	−0.035	.566	0.594	< .001	0.391	< .001	—	—	0.288	< .001
Evaluation	0.100	.103	−0.004	.950	0.739	< .001	0.397	< .001	0.288	< .001	—	—

Note. *rho: Spearman Correlation test, NNCI: Night Nursing Care instrument.

was found between the Medical Interventions and the Evaluation subdimension scores (rho = 0.288, p = .010) (Table 6).

Discussion

The aim of this study was to determine the effect of fear of COVID-19 in patients and clinical nurses on night nursing care. The information gained from the research will help to show how the fear of COVID-19 affects the quality of the administration of nursing care and patient care at night. In Turkey, the government has asked its citizens to voluntarily quarantine themselves and stay at home to reduce the number of infections and protect the elderly and those with chronic diseases (Satici et al., 2021). Many uncertainties in the pandemic process have caused stress, anxiety, and fear in the general Turkish population (Metin et al., 2022).

In this study, the patients' mean total score on the Fear of COVID-19 scale was 18.82 ± 6.29, and that of the nurses was 18.35 ± 5.90 (Table 3). Considering that the maximum score on the scale was 35, it can be said that the patients' and nurses' fear levels were medium. According to these results, patients and nurses have a fear of the COVID-19 virus. There are studies in the literature that have found, using the Fear of COVID-19 scale, that nurses' fears are at a medium level (De los Santos & Labrague, 2021; Labrague & de Los Santos, 2021; Unver & Yeniğün, 2021). There are also studies that have found that nurses' COVID-19 fears are at a high level (Arpacioglu et al., 2021; Baysal et al., 2022; Khattak et al., 2021). In qualitative studies by Cakici et al. (2021), Ji & Lee (2021), and Simeone et al. (2022) to show the experiences of nurses caring for COVID-19 patients, the themes of uncertainty and fear, anxiety and fear of being infected, fear felt toward infectious patients, and loneliness and fear. The quantitative and qualitative data in the literature are similar. In Turkey, seminars and events were organized for nurses on the internet on such sites as the Turkish Ministry of Health, the Turkish Nurses' Association, the Turkish Surgical Nurses' Association, Koç University, Bartın University, and Gümüşhane University, as well as on social media platforms such as YouTube and Instagram. Among the seminar topics were nurses' responsibilities during the COVID-19 pandemic and current information on the coronavirus (Unver & Yeniğün, 2021). In light of these findings, it was found that even though nurses were informed on topics relating to COVID-19, they still had a medium level of fear concerning COVID-19. It emerged that training programs by themselves were not productive and that nurses also needed to be given psychological support. In this regard, after training, nurses should be given follow-up training and coaching or mentoring sessions by supervisors.

Studies were also conducted which, similar to this research, found that fear of COVID-19 was at a medium level in patients (Dymecka et al., 2021; Işıklı et al., 2022; Sahu et al., 2021; Sürme et al., 2021). It is noticeable that, according to the findings of this study and the literature results, the fear of COVID-19 continues to be at a medium level among patients.

In this research, using the NNCI, it was found that the mean scores on the scale total and subdimensions of both patients and nurses were high (Table 3). According to this, the perception of the night nursing care of patients and nurses is positive. They think that the night nursing care given during COVID-19 is done well. In this research, it was found that the mean total NNCI score of nurses was higher than that of patients. According to the research results, nurses' perceptions of night nursing care were more positive.

In emergency and disaster situations, nurses must provide individualized holistic care at a reasonable cost that is available to everyone (International Council of Nurses, 2022). In this study, the nurses' high mean total score on the NNCI showed that their care behaviors during the pandemic were at the desired level. Similarly, Asadi et al. (2020) found that in a study using the Caring Behaviors inventory, the mean scale total and subdimension scores were high in nurses. In a study by Lavoie-Tremblay et al. (2022) using the Strain and Performance scale, it was found that the quality of care given by nurses during the pandemic was low. The reason for the difference between these results and their own findings may be the differences in the sample populations between the countries. The sample population of this research was nurses working on the night shift (16.00–08.00) in Turkey. Night duty may have consequences for nurses, leading to physical and mental illness, a reduction in work efficiency, an increase in sensitivity to stress, and wrong decisions on the clinical care of patients, affecting patient safety and care quality (Chang & Peng, 2021). In the literature, there are a limited number of studies assessing night nursing care during the pandemic from the point of view of patients and nurses.

It was found in this study that the highest mean scores of patients and clinical nurses on the subdimensions of the NNCI were for nursing interventions, and the lowest were for medical interventions. It was found that in the subdimensions of Nursing Interventions, Medical Interventions and Evaluation, the scores of the clinical nurses were higher than those of the patients. As a result, it was seen that the nurses perceived nursing evaluations, medical evaluations, and evaluation more positively and found them adequate. Nurses see the needs of patients throughout the night; they provide sufficient information on procedures; they meet the needs of patients with regard to toilet needs, position change, eating and drinking, and sleeplessness; and they can support patients throughout the night. In night care, nurses administer medications at scheduled times. In a study by Karakurt and Yildiz Findik (2020) conducted before COVID-19 evaluating night care given to surgical patients, nurses had higher scores in the Nursing Interventions subdimension, while patients had higher scores in the subdimensions of Medical Interventions and Evaluation. The patients in our study thought that they were not benefiting enough in the COVID-19 pandemic from nursing interventions, medical interventions, and evaluation services. The reasons why patients feel night nursing care to be inadequate during the pandemic may include the proportionately small number of nurses providing care at night, nurses' increasing workload, the increased number of patients in the wards, the time taken to put on

personal protective equipment (which takes away time from patient care), and a reduction in communication with patients because of a fear of infection.

During the pandemic, various psychological problems, such as anxiety and depression, were more frequently seen in women (Andrade et al., 2022; Wang et al., 2020). In the present study, it was found that female patients had a greater fear of COVID-19 than male patients. Other studies have similarly found that the fear levels of female patients are higher (Sürme et al., 2021; Andrade et al., 2022; Sahu et al., 2021). In the present study, the fear of COVID-19 was greater in illiterate patients than in those educated at a high school or university level. As a result, those with a high school or university-level education had an advantage over those who were illiterate with regard to being able to find reliable scientific information on the pandemic. In addition, it may be thought that illiterate patients have difficulty distinguishing scientific information and thus will experience greater fear. Similar to our study, Sahu et al. (2021) found that people with little education experienced greater fear.

In the present study, it was found that patients who were housewives had a greater fear of COVID-19 than other professional groups. The reason for this may be that housewives spend more time at home and are more exposed to the torrent of information from mass communications and social media. Sahu et al. (2021) found that those whose profession was housewife experienced a greater fear of COVID-19. In the present study, patients who had previously had COVID-19 had a higher fear of COVID-19 than those who had not. Having had the virus should have resulted in a lessening of fear caused by uncertainty. However, our results show that the source of this increase comes from 35.4% of patients aged 57 years or older and from 67.3% having a chronic illness. Sahu et al. (2021) found that patients who had previously had COVID-19 experienced greater fear. The results of our study support the literature. It may be stated in our research that clinical nurses who participated in training, seminars, symposiums, or congresses on the COVID-19 pandemic had a more positive assessment of night nursing care during the pandemic.

It was found in the study that clinical nurses in the 39–48 year age range had a more positive perception of night nursing care than those aged 19–28 years. The variable of age affected the night care behavior of nurses in the pandemic. In the COVID-19 pandemic, newly graduating nurses experienced stress because of restricted communication, an increasing workload, anxiety and fear, and a deficiency in professional competence (Ji & Lee, 2021). In the present study, clinical nurses with 17 or more years of experience had a more positive perception of night nursing care and nursing interventions than those with 1–5 years of experience. This more positive view of night nursing care by more experienced nurses in the pandemic may be connected to their greater age, which accompanies their greater experience.

Fear of COVID-19 affects nurses' working environments. Environments where there is uncertainty, stress, or stigmatization make the provision of care emotionally difficult for nurses (Khattak et al., 2021). It was found in this study that fear of COVID-19 in patients and nurses did not affect night nursing care (Table 6). Despite a medium level of fear, nurses continued to operate night care. It can be said that the quality of

night nursing care was not affected during the pandemic. Despite the physical and psychological difficulties in the pandemic, nurses fulfilled their roles and duties in a proper manner. Throughout the COVID-19 outbreak, nurses displayed a high sense of responsibility. These research findings are a welcome result.

In the literature, Asadi et al. (2020) found no significant correlation between the fear of COVID-19 and care behaviors. Similar to this research, Asadi et al. (2020) found no significant correlation between fear of COVID-19 and the subdimensions of the Caring Behaviors inventory, Professional Behaviors, Psychosocial Behaviors, and Physical-Technical Behaviors. However, qualitative studies were found in the literature which did not support these findings. In a study by Fernández-Castillo et al. (2021), it was found that nursing care was affected by the fear of COVID-19, and that this made the maintenance of individualized care more difficult. In a study by Cakici et al. (2021), it was stated that during the pandemic, patient care was performed with fear. It was seen that the quantitative and qualitative data in the literature did not match.

The age factor was presented from the beginning of the COVID-19 outbreak as an important explanatory factor (Strang et al., 2020). In the present study, a non-significant correlation was found between the age of the clinical nurses and their fear of COVID-19 (Table 6). In a study by Unver and Yeniğün (2021), it was found that there was a significant correlation between the age of nurses working in surgical units and their fear of COVID-19, and that the anxiety levels of nurses aged over 35 years were higher than those of younger nurses. The age range of 50% of the nurses in this study was 19–28 years, and their mean age was low (Table 2). The reason for the difference between these research findings and the conclusions of Unver and Yeniğün (2021) may be that young nurses adapt more easily to a "new normal."

Limitations

Data collection for this research was performed between August 2021 and July 2022. The results of the study depend on data collected from hospitals located in two provinces in eastern Turkey, excluding nurses working at other hospitals in the country. For this reason, generalization to all nurses is limited. Also, all data in this research were collected by the self-reporting method, so that it is liable to all kinds of prejudice.

Conclusion

It was found in this study that patients and nurses had a medium level of fear of COVID-19, and that there was no difference between their fear levels. It was found that patients and nurses had positive perceptions of night nursing care, and that nurses' perceptions of night nursing care were more positive. In the patients, factors such as female gender, being illiterate, being a housewife, and taking the precaution of definitely not leaving the house affected fears of COVID-19 and perceptions of night nursing care. Among the nurses, perceptions of night nursing care were affected by factors such as being aged between 39 and 48 years and having 17 years or more of experience, and fears of

COVID-19 were affected by factors such as previously having had COVID-19 and taking the measures of wearing a surgical mask, an N95 mask, gloves, a face shield, or a protective suit.

The finding emerging from this study was that, despite training being given to nurses on COVID-19, their fear of COVID-19 was found to still be at a medium level. Our research found that patients' and nurses' fears of COVID-19 did not affect their perceptions of night nursing care. Many studies have researched the psychological effects on nurses of the pandemic in general. There are a limited number of studies in the literature assessing night nursing care during the COVID-19 pandemic through the eyes of patients and nurses. For future studies, we suggest conducting qualitative studies that evaluate night nursing care from the perspective of patients and nurses during the COVID-19 pandemic.

Acknowledgments

Declaration of conflicting interests

Funding

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