Clinical Nurses ' COVID-19 Phobia And Professional Commitment During The Pandemic: Cross-Sectional Study

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ABSTRACT

Objective: This study, aims to determine the COVID-19 phobia levels and professional commitment of nurses during the pandemic and investigate the relationship between them.

Materials and methods: Data were collected from 283 clinical nurses during the COVID-19 pandemic between September 2020 and February 2021, using a Personal Information Form, COVID-19 Phobia Scale and Nursing Professional Commitment. The data were analyzed using multiple regression analysis and descriptive statistics.

Results: Results showed that COVID-19 phobia and nursing professional commitment of clinical nurses were above mean. Predictor variables explained 34% of the nursing professional commitment. It was determined that there was a relationship between the professional commitment and nurses' gender, confidence in personal protective equipment, whether they were contemplating resignation. It was observed that COVID-19 phobia negatively affected nursing professional commitment.

Conclusion: As a result of the study, it was found that the female gender, confidence in personal protective equipment positively affected and consideration of resignation negatively affected the nursing professional commitment. Within the scope of these results, eliminating the anxiety of nurses will increase them to be professional commitment.

Keywords: COVID-19, Mental Health, Workplace

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ÖZET

Amaç: Bu araştırma, pandemide klinikte çalışan hemşirelerin COVID-19 fobisi ile mesleki bağlılık düzeylerini ve aralarındaki ilişkiyi belirlemek amacıyla yapılmıştır.

Gereç ve Yöntemler: Eylül 2020 ile Şubat 2021 arasında COVID-19 salgını sırasında hastanede çalışan 283 klinik hemşiresinden Kişisel Bilgi Formu, COVID-19 Fobi Ölçeği ve Hemşirelikte Mesleğe Bağlılık Ölçeği kullanılarak veriler toplanmıştır. Verilerin analizinde, çoklu regresyon analizi ve tanımlayıcı istatistikler kullanılmıştır.

Bulgular: Araştırmadan elde edilen bulgular, klinik hemşirelerinin COVID-19 fobi düzeylerinin ve mesleki bağlılıklarının ortalamanın üzerinde olduğunu göstermiştir. Yordayıcı değişkenler, hemşirelik mesleğine bağlılığın %34'ünü açıklamıştır. Hemşirelerin cinsiyetleri, kişisel koruyucu donanıma güvenleri ve istifa etmeyi düşünüp düşünmedikleri ile hemşirelik mesleğine bağlılıkları arasında ilişki olduğu saptanmıştır. COVID-19 fobisinin hemşirelerin mesleki bağlılığını negatif yönde etkilediği belirlenmiştir.

Sonuç: Çalışma sonucunda, kadın cinsiyetin, kişisel koruyucu donanıma güvenin mesleki bağlılığı pozitif yönde ve istifayı düşünmenin ise mesleki bağlılığı negatif yönde etkilediği belirlenmiştir. Hemşirelerin COVID-19 fobisi arttıkça mesleki bağlılıklarının azaldığı tespit edilmiştir. Bu sonuçlar doğrultusunda hemşirelerin kaygılarının giderilmesi onların mesleki bağlılıklarını artıracaktır.

Anahtar Kelimeler: COVID-19, Ruh Sağlığı, İş Yeri

Coronavirus disease (COVID-19) is a new variant disease caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), which started spreading in December 2019. The COVID-19, which has been rapidly proliferating around the world due to its unique properties, was declared a global pandemic by the World Health Organization (WHO) on March 11, 2020 (1). At the time of writing this study (November 23, 2022), more than 635 million confirmed cases and more than 6,6 million deaths have been reported worldwide, and this number is increasing every day (2).

The COVID-19 pandemic has caused many physiological and psychological problems such as high infection and death rates, stress related to known and especially unknown information, financial difficulties, fear of uncertainty about the ongoing impact (3). Previous research shows that disasters and epidemics cause harmful emotions and disorders in the short and long run, such as phobias, anxiety, depression, hopelessness, and hostility (4-7). Nurses, who carry out the treatment, and care of COVID-19 patients, have developed psychological problems (4,8). Working in an environment with a virus that has no clear cure and can be easily transmitted from person to person, nurses risk their lives while dealing with life-and-death situations, and these circumstances have created a real sense of danger in them. Nurses fear being infected and potentially infecting their family members. Many healthcare professionals have been assigned to units outside their specialty, working longer shifts to meet the high patient demand (9). These difficulties has led to a decreases in the life satisfaction, motivation and productivity of nurses (10). These negativities may have damaged the professional commitment of nurses.

Nurses' professional commitment refers to their belief in, acceptance of, and dedication to realizing the value of the profession; it entails willingness to develop themselves in the professional field and determination to continue their work (11). Professional commitment has been determined to reduce anxiety, physical health symptoms, and turnover intention (12,13). In addition, it can also enhance the motivation (14), strengthen the intention of improving professional capabilities (15). The fears and psychological problems that develop in nurses who are at the frontline against COVID-19 have been thought to affect their determination and motivation to continue the profession.

There are studies that separately analyzed the COVID-19 fears/phobia of nurses (4,10,16,17), and professional commitment of nurses (13,18). However, no study has examined their COVID-19 phobia together professional commitment during this period. The present research was conducted to determine the COVID-19 phobia levels and professional commitment of nurses during the pandemic and investigate the relationship between them.

Material and Methods

Study Design
This research has a cross-sectional descriptive design.

Study Population and Sample
The population of the research, located in east Turkey, consisted of 346 nurses working in hospitals between September 2020 and February 2021. The sample size was set to 283 nurses with a confidence level of t = 1.96, a sampling error of d = 0.03, and a frequency of p = 0.50. Considering the data losses, the sample size was planned to be 289 nurses (10% more of the calculated size). However, the sample included the 283 nurses who volunteered to participate in the study. Data were collected through an online self-report survey using Google Forms. The data collection form was shared on the social media platform (WhatsApp) as an online survey link with participants. Information about the research was given at this link to the participants, and the participating nurses filled out the questionnaire. It was provided to access the survey with an e-mail during the creation of the online form such that each nurse could respond only once. The collected questionnaires were checked daily, and quality control was conducted. Difficulties in information security tend to arise in social media research. However, in cases where data cannot be easily gathered in person, such as the COVID-19 outbreak, social media enables easy access to data.

Data Collection Tools
In the research, "Personal Information Form, COVID-19 Phobia Scale and Nursing Professional Commitment Scale" were used in this study.

Personal Information Form: This form consists of 4 questions examining the socio-demographic characteristics of nurses.

COVID-19 Phobia Scale (C19P-S): This scale was developed by Arpaci et al. (2020) to measure the phobia that can develop against coronavirus (3). The scale consisting of 20 questions. The scale score can range from 20 to 100. The scores indicate the intensity of the phobia. In Arpaci et al. (2020), the Cronbach alpha of the scale was 0.92. In the present study, it was 0.92 (3).

Nursing Professional Commitment Scale (NPCS): The scale was developed by Lu et al. (2000) (19). Turkish validity and reliability was made by Cetinkaya et al. (2015) (11). It is consisting of 26 questions. The scale score can range from 26 to 104. The scores indicate the strength of nursing professional commitment. In the original study, the scale was Cronbach's alpha = 0.94. In the validity–reliability study, Cronbach's alpha was calculated as 0.90. In the present study, it was 0.89.

Data Analysis

The package program SPSS 23.0 (IBM Corporation, New York, NY, USA) was used for data analysis. The normal distribution of variables was examined by the Kolmogorov–Smirnov test, Shapiro–Wilk test, and normality plots. Descriptive, minimum–maximum percentage, mean, standard deviation, frequency, and regression analyses were used to evaluate the data. In addition, Cronbach's alpha was calculated to evaluate the reliability of the scales. The limit of significance was set as $p < 0.05$.

Results

Nurses' demographic characteristics
The mean age of the participant nurses was 28.58±6.85 (min: 19, max: 55). Of the nurses, 72.8% were female. Among the nurses, 67.5% found personal protective equipment (PPE) reliable, and 23.7% were considering resignation (Table 1).

Levels of C19P-S, and NPCS
The nurses' mean C19P-S score was 54.12±15.52 (min: 20, max: 98), and their mean NPCS score was 69.23±13.23 (min: 33, max: 97) (Table 2).

Table 2. The distribution of the clinical nurses' mean scores on the C19P-S scores on the NPCS (n = 283)				
Scale	*Mean*	*SD*	*Min*	*Max*
C19P-S	54.12	15.52	20	98
NPCS	69.23	13.23	33	97
C19P-S: COVID-19 Phobia Scale, NPCS: Nursing Professional Commitment Scale				

Predictors of NPCS
The hierarchical method was chosen in the analysis, and it determined how age, gender, economic status, working experience, and the other demographic variables predicted NPCS in Model-1. Next, Model-2 was tested by C19P-S. (Table 3).

In Model 1:
In the model, it was determined that the independent variables explained 22.3% of the variance in NPCS (R^2= 0.234, Adj.R^2 = 0.223; F = 21.199; $p \leq 0.001$) (Table 3). Age (β = -0.011; p = 0.840), Gender (β = 0.140; p = 0.008), confidence in PPE (β = 0.269; $p \leq 0.001$), and resignation consideration status (β = − 0.351; $p \leq 0.001$) were found to be significantly related to nursing professional commitment. Accordingly, the female gender, and confidence in PPE positively affected the NPCS mean. Finally, consideration of resignation negatively affected the NPCS score (Table 3).

Table 1. Distribution of nurses by demographic characteristics		
Demographic Characteristics(n=283)	**n**	**%**
Gender		
Female	206	72.8
Male	77	27.2
Confidence in personal protective equipment		
Yes	191	67.5
No	92	32.5
Resignation thinking status		
Yes	67	23.7
No	216	76.3
	Mean	**Sd***
Age	28.58	6.85
Sd=Standard deviation		

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Table 3. Multiple regression model for Nursing Professional Commitment Scale

Independent Variables Step 1: Control variables	Dependent Variable Nursing Professional Commitment Scale							
	Model-1				Model-2			
	B	β	t	p	B	β	t	p
Age	-0.021	-0.011	-0.203	0.840	0.017	0.009	0.179	0.859
Gender(Female)	4.176	0.140	2.657	0.008*	4.271	0.143	2.951	0.003*
Confidence in personal protective equipment (Yes)	7.612	0.269	5.094	≤0.001*	5.104	0.180	3.594	≤0.001*
Resignation thinking status(Yes)	-10.948	-0.351	-6.586	≤0.001*	-9.170	-0.294	-5.913	≤0.001*
Step 2: Predictor variable								
COVID-19 Phobia Scale					-0.315	-0.362	-7.134	≤0.001*
Values								
R		0.483				0.594		
R²		0.234				0.353		
Adjusted R²		0.223				0.341		
R² Change		0.234				0.119		
F		21.199				30.183		
p		≤0.001*				≤0.001*		

*B: coefficient B; β: standardized beta coefficient; R²: R-square (the coefficient of determination); * as statistical difference; Dummy coded: Gender (Female =1, Male =0); Confidence in personal protective equipment (Yes=1,No=0); Resignation thinking status (Yes=1,No=0)*

In Model 2:

In the model was tested by adding C19P-S to Model 1. The results showed that the predictor variables explained 34.1% of the NPCS variance with an 11.9% increase (R^2= 0.353, Adj.R^2 = 0.341; F=30.183). It was indicated that COVID-19 phobia negatively affected the NPCS score.

When this model was investigated in detailed way, predictive variables were listed from big to small in terms of the degree to affect professional commitment as below: C19P-S (β =−0.362; p ≤ 0.001), consideration of resignation (β = − 0.294; p ≤ 0.001), confidence in PPE (β = 0.180; p = p ≤ 0.001), and gender (β = 0.143; p = 0.003).

Discussion

The COVID-19 pandemic is negatively affecting the mental health of both society and healthcare professionals (20,21). Since nurses, who are at the front line of the healthcare system, their risk of contracting COVID-19 is higher than that of the general population. Therefore, nurses are worried about both their own health and the possibility of transmitting COVID-19 to family members, friends, and others (4,22,23). This study was conducted to examine nurses' level of COVID-19 phobia and its effect on their professional commitment. In the study, the nurses' COVID-19 phobia and professional commitment were above moderate. A study emphasized that healthcare workers have developed COVID-19 phobia, which has been affecting their mental health (16). Another study detected an above-intermediate fear of COVID-19 (10). Before and during the pandemic, there were studies that found nurses' professional commitment above moderate (13,18,24). The extra working hours, protective materials, more stressful hospital environment and disrupted social relationships negatively affected professional commitment of nurses (18). However, especially at the beginning of the COVID-19 process, the image of the nursing profession changed, and the nursing profession became more visible. People's awareness and positive thoughts about nurses increased during the COVID-19 pandemic (25). For this reason, it can be thought that the professional commitment of nurses were not affected by the pandemic process and nurses' professional commitment was determined at an above moderate level.

In the study, independent variables explained 34% of variance in professional commitment. Findings indicated that being female increased the nurses' professional commitment. In a study conducted on healthcare professionals working in a hospital, the professional emotional commitment and normative commitment levels of women were found to be higher than those of men (26). The social duties imposed on women and men may have cause changes in the perspectives of them in business life. Culturally, men are expected to income for household needs. While the salary received from nursing is not satisfactory for men, it may be sufficient for women (27). For this reason, women may have high professional commitment.

In this study, findings indicated that those who intend to resign from the profession had lower professional commitment. According to a study conducted in China, employees state that they can go home but are afraid to do so. This situation causes an increase in one's intent to resign (28). A study reported that nurses and midwives working in delivery rooms during an Ebola epidemic fear going to work, which reduces their enthusiasm toward the profession (29). In a study conducted on nurses in Turkey showed that intended to leave the profession were affected professional commitment (18).

The results showed that the predictor variables explained 34% of the professional commitment variance with an 11.9% increase. According to the present study, COVID-19 phobia negatively affected the nursing professional commitment. Zhang et al. (30) research result showed that perceived stress could have significantly influence professional identity of nurses during the pandemic. Nurses during the pandemic faced problems, such as increasing stress, getting infect, transmitting the infection to their relatives, new working styles, many uncertainties and severe information pollution, information of new information, ever-changing practices, working extra shifts, and longer hours (9,27). Therefore, these problems may lead to worse mental health of nurses, lose their compliance by questioning their profession.

This cross-sectional study is limited to reflecting only those conditions experienced during the data collection process. Due to limited access to samples, data collection forms were sent online. The results may have been affected by number of patients and working environment. In order to minimize the impact of these factors, future studies should be conducted in larger sample groups and various hospitals.

Conclusion

The results of this study indicated that frontline nurses' COVID-19 phobia and their professional commitment were above the mean level. Gender, confidence in PPE, and whether they were contemplating resignation were significantly related to nursing professional commitment, and independent variables explained 34% of their nursing professional commitment. As a result of the study defined that COVID-19 phobia was negative affect to nursing professional commitment. Hence, nurses should be supported in dealing with the psychological, sociological, and emotional problems that occur in a pandemic. Improving mental healthcare and psychosocial interventions will be an important investment in terms of maintaining the mental health and increasing the professional commitment of nurses for possible pandemics in the future. It is crucial to maintain and enhance nurses' professional commitment and mental health, in order to ensure that nurses work effectively and safely, and to increase of care quality.

Declarations
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Availability of data and material
Not applicable

Authors' contributions
Concept – KG,CA; Design - KG,CA; Supervision –Data Collection and/or Processing - CG; Analysis and/or Interpretation - KG; Literature Search - KG,CA; Writing Manuscript - KG,CA; Critical Review - KG,CA

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