

Anxiety and Violence Against Nurses in Turkey During The COVID-19 Pandemic

Sevilay Senol Celik¹, Hulya Bulut², Azize Atli Ozbas⁴, Azize Karahan³, Gulten Koc⁴, Cigdem Ozdemir Ozleyen⁵, Firuze Cevik Aydin⁶, Beyhan Celik⁷, Inci Mercan Annak^{2*}, Yusuf Celik⁸

¹Koc University, School of Nursing, İstanbul, Turkey

²Gazi University, Faculty of Health Sciences, Department of Nursing, Ankara, Turkey; incimercan@gazi.edu.tr (Corresponding Author)

³Baskent University, Faculty of Health Sciences, Department of Nursing, Ankara, Turkey

⁴Hacettepe University, Faculty of Nursing, Ankara, Turkey

⁵Ankara Guven Hospital, Ankara, Turkey

⁶Ankara City Hospital, Ankara, Turkey

⁷Bayındır Hospital, Ankara, Turkey

⁸Marmara University, Faculty of Health Sciences, Department of Health Management, İstanbul, Turkey

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ABSTRACT

During the pandemic process, nurses felt more anxious and nervous compared to other health professionals and were frequently exposed to verbal-emotional-psychological violence. This study was conducted to determine the anxiety levels of nurses, their exposure to violence, and the factors affecting the anxiety and witnessed violence of nurses during the COVID-19 pandemic in Turkey. The descriptive study data were collected in the period between October 2020 and March 2021 via the online questionnaire published on the Turkish Nurses Association's website. The study sample consisted of 3,230 nurses. In this study, it was found that the majority of participants in the study were women (83.5%), working 24-hour shifts (49.3%) at hospitals run by the Ministry of Health (68.7%), caring for COVID-19 patients (82.1%). Nurses experienced very high levels of anxiety and were exposed to violence from patients, family members, or other healthcare professionals during the COVID-19 pandemic. Also, this study shows that nurses experienced high anxiety levels and increased exposure to violence in association with the high number of patients to provide care for, long working hours, being forced to work despite COVID-19 symptoms, working with COVID-19 patients, the fear of infecting family members, having difficulties in caring for family members, financial losses, and the unavailability of changing rooms. In line with the results of this study, the responsibility range of managers and decision-makers is wide in protecting the physical and mental integrity of nurses, anticipating, and addressing their needs and resolving their problems, and managing the nurse manpower and the supply of PPE in accordance with standards so that nurses can provide qualified and safe nursing practices. The findings of this study will help to ensure that nursing care is safe, consistent, and competent, as well as guide future planning.

Keywords: anxiety; COVID-19; nurses; pandemic; violence

INTRODUCTION

COVID-19, caused by the highly transmissible coronavirus SARS-CoV-2, has many effects on health systems besides economic, social, and societal effects. The number of patients during the pandemic has increased the demand for health services, which have fallen short of meeting the need (Carter et al., 2020). Consequently, many inpatient clinics have been converted to COVID-19 inpatient units to meet the constant need for patient admissions. Additionally, all non-emergency leaves of healthcare workers have been canceled (Deliktas Demirci et al., 2021).

Nurses, who constitute the majority of healthcare professionals, play a key role in health services, especially in controlling and preventing the spread of infectious diseases. Nurses have been at the forefront during the COVID-19 pandemic as critical manpower in preventing the health system's collapse. This caused nurses to face high risks and big problems at the core of the pandemic. It was reported that nurses encountered many unfavorable conditions in many

countries because of the uncertainty, high transmission rate and the risk of death during pandemic. Over workload, working overtime, increasing number of patients, nursing shortage, inexperienced staff, the inadequacy of personal protective equipment (PPE), the inadequacy of the equipment and the physical infrastructure, inadequate rest breaks, increased job role tasks and responsibilities, inadequate triage, limited access to basic needs, and fear of providing inadequate care are some examples (Carter et al., 2020; Kang et al., 2020; Leli et al., 2022; Liu et al., 2020a; Sun et al., 2021). Moreover, it has been reported that nurses have been exposed to violence from individuals in society, their colleagues, and other health workers during the pandemic (Arafa et al., 2022; Byon et al., 2022; Que et al., 2020). A study has revealed that nurses' exposure to violence increased during the pandemic compared to the pre-pandemic period and that nurses were most frequently exposed to verbal-emotional-psychological violence (Ozkan Sat et al., 2021).

It has been reported that, because of all such above mentioned factors in the pandemic, nurses experienced emotional/behavioral changes such as the development of fear, anger, anxiety, depression, and burnout, their quality of life decreased, and some left the profession (Ghareeb et al., 2021; Kackin et al., 2021; Manurung et al., 2021; Ozkan Sat et al., 2021; Sun et al., 2021). It was found out in studies that, during the pandemic process, nurses felt more anxious and nervous compared to other health professionals, and they had a higher level of anxiety compared to physicians (Cai et al., 2020; Lai et al., 2020; Liu et al., 2020b).

Both the pandemic process and comprehensive pre-pandemic nursing care involve the active participation of nurses. Turkey was one of the last nations to experience the epidemic, thus there was time to undertake some nursing care preparations. Nonetheless, there will inevitably be unknown risks throughout the pandemic. Because of these dangers, nurses are subject to a variety of psychosocial stressors. Nursing staff members endure higher levels of anxiety and violence as a result of stressors. In view of the limited number of studies in the national and international literature about nurses' exposure to violence, their anxiety levels, the factors affecting these two entities, and the relationship between the violence and anxiety experienced by nurses during the COVID-19 pandemic, it is envisaged that the results of this study will guide decision makers and managers in the management of the pandemic processes and contribute to the literature. This study conducted to determine the anxiety levels of nurses, their exposure to violence, and the factors affecting anxiety and witnessed violence of nurses during the COVID-19 pandemic in Turkey. This study was conducted to determine nurses' anxiety levels, their exposure to violence, and the factors affecting anxiety and witnessed violence of nurses during the COVID-19 pandemic in Turkey.

Study Questions

1. What are the anxiety levels of nurses during the COVID-19 pandemic?
2. What are the facts about the exposure of nurses to violence during the COVID-19 pandemic?
3. What are the factors affecting nurses' anxiety levels and exposure to violence during the COVID-19 pandemic?

METHOD

Type of the Study

A descriptive study was conducted. We used the STrengthening the Reporting of OBservational studies in Epidemiology (STROBE) checklist to prepare the our research.

Universe and Sample

The study population comprised 227,292 nurses, who actively worked during the COVID-19 pandemic in Turkey (Saglık Bakanligi, 2021), and the study sample consisted of 3,230 nurses, who voluntarily filled out the online questionnaire on the official website of the Turkish Nurses Association.

Data Collection

The link of the questionnaire, "Status of Nurses in the COVID-19 Pandemic", was shared with large groups of nurses on online platforms including TNA's website, TNA's official Instagram and Facebook pages, and Whatsapp. Thus, the questionnaire was distributed to a high number of nurses. In order to not to allow participants to fill out the questionnaire more than once, the response settings of the questionnaire were set to "Limit to one response". It was ensured that participants proceeded to answer the survey questions only after reading the online information about the research and ticking the checkbox for the phrase "I have read, understood, approved". It took an average of 20 minutes to answer the questionnaire.

Measures

Study data were collected in the period between October 2020 and March 2021 via the online questionnaire, "Status of Nurses in the COVID-19 Pandemic", which was published on the Turkish Nurses Association (TNA)'s website. The questionnaire was developed based on the researchers' observations and information from the literature (Arafa et

al., 2022; Byon et al., 2022; Kackin et al., 2021; Lai et al., 2020; Que et al., 2020; Zhang et al., 2020). The tools were validated by a board of experts, who assessed the relevance and appropriateness of the questionnaire items.

The questionnaire comprised 43 questions in total, including 12 questions about the socio-demographic characteristics of nurses, 9 questions about their personal needs, 17 questions about the working conditions and environment of nurses during the COVID-19 pandemic, and 5 questions aiming to find out the development and levels of anxiety experienced by nurses, whether exposure to violence occurred, and sources and type of violence. Nurses were asked to mark their anxiety levels on a horizontal line from 0 “not at all” to 10 “very severe”.

Validity, Reliability, and Rigour

Four clinical nurses and five academic nurses collaborated to create the questionnaire. The questionnaire's format and readability were tested in a pilot study. Minor changes were made as a result of the pilot test.

Data Analyses

Statistical analysis was performed using the IBM Statistical Package for Social Science (SPSS) for Windows 22.0 software. The chi-square test, ANOVA, and the independent t-test were used as statistical methods to compare the experienced violence and anxiety levels during the COVID-19 pandemic according to individual characteristics and implemented measures in health care institutions. Appropriate F or t-values were used to compare groups in view of the results of homogeneity tests. Binary logistic and linear regression models were employed to determine the likely predictors of experienced violence and anxiety levels by considering the effects of confounding factors.

Ethical Considerations

Prior to the commencement of the study, a submission to the Ministry of Health's Scientific Research Platform was performed and authorization was obtained (2021-04-16T17_55_48). In addition, ethical approval was obtained from the Social Sciences Research Ethics Committee of Koc University, number 2021.234.IRB3.106. Before filling out the online questionnaire, the participants were requested to read the online informed consent indicating that they agreed to participate in the study. No personal information or any information that might reveal the identity of participants was included in the study. The data were recorded and stored on the researcher's computer to be used for research purposes only, and not to be shared with unauthorized parties.

RESULT

The study sample comprised 3,230 nurses; of which the majority were female (83.5%) working at the Ministry of Health Hospitals (68.7%) on 24-hour shifts (49.3%) to provide care for patients diagnosed with COVID-19 (82.1%). More than half of the nurses received training about protection methods against COVID-19 (52.5%), were provided with training materials on this subject (55.4%), worked in a unit related to COVID-19 (59.6%), and worked for 40-48 hours a week (62.2%). Of the nurses, 22.6% received the diagnosis of COVID-19 during the pandemic, 27.8% worked while having COVID-19 symptoms, 17.0% did not have the opportunity to take a shower in the institution they worked after providing care for a patient with COVID-19 diagnosis, 20.7% experienced difficulties in getting COVID-19 testing despite having symptoms, 24.0% shared the same house with family members, who contacted to a COVID-19 patient or were diagnosed with COVID-19, and nearly half (43.3%) stayed in a facility to reduce the risk of transmission of the virus to family members. While 3.6% of the nurses reported that they had no difficulty in obtaining PPE to provide care to a COVID-19 patient, 13.2% reported that they experienced serious difficulties. Of the nurses, 43.2% reported that the health care institution partially resolved the problems reported during the COVID-19 process and that the institution provided partial support in the supply of medications/medical consumables (69.2%). Of the nurses, 52.6% reported that they commuted to the hospital by their cars, more than half were provided with meals by the hospital (62.4%), 59.7% experienced difficulties in taking care of family members, a little more than half experienced no financial losses (62.6%), 53.7% benefited from extra payments, nearly half reported that the rest areas in the institution were inappropriate (49.2%), and more than 25% reported the lack of rest areas in the institution (30.1%) (Table 1).

Although not given in the table, 33.7% of the nurses (n: 1092) were exposed to violence at least once, 22.5% (n:733) were subjected to violence by patients or their relatives, and 19.5% (n:631) were subjected to violence by other healthcare professionals. The ownership of the health care institution was found to be a statistically significant risk factor for exposure to violence. Nurses reported exposure to violence more commonly from hospitals affiliated to the Ministry of Health and from those under the category of others with different types of ownership. Another important risk factor for higher rates of exposure to violence was the working shift. Exposure to violence was found to be the highest among

those nurses working 24-hour shifts. Furthermore, the exposure to violence increased as the weekly hours of working increased. The exposure to violence was found to be the highest among nurses working more than 48 hours a week.

Table 1. Descriptive Characteristics of Participants

Individual and Institutional Support Variables	n	%
Gender		
Female	2698	83.5
Male	532	16.5
Ownership of health institution		
University Hospital	677	21.0
Ministry of Health	2218	68.7
Private Hospital	208	6.4
Primary Care	56	1.7
Other	71	2.2
Working shift		
Changing	460	14.2
8 Hours	698	21.6
16 Hours	481	14.9
24 Hours	1591	49.3
Caring for patients diagnosed with COVID-19		
No	578	17.9
Yes-When I was assigned	1072	33.2
Yes-Always	1580	48.9
Receiving training on how to be protected from COVID-19 in your health institution		
No	1536	47.5
Yes	1694	52.5
Provided guideline/training material that is specific to unit you work in		
No	1440	44.6
Yes	1790	55.4
Chronic illness existence that might be critical when you are infected with COVID-19		
No	2665	82.5
Yes	565	17.5
Working hour per week		
Less than 40 hours	144	4.5
40-48 hours	2009	62.2
More than 48 hours	1077	33.3
Do you work in COVID related unit?		
No	1922	59.6
Yes	1308	40.5
On leave during COVID-19 due to chronic illness		
No	2779	86.0
Yes	451	14.0
Having opportunity to work in a unit minimizing the risk of COVID-19 due to chronic illness		
No	2623	81.2
Yes	607	18.8
Being pregnant during COVID-19		
No	2725	84.4
Yes	505	15.6
On leave during COVID-19 due to pregnancy		
No pregnancy	2725	84.4
Yes	460	14.2
No	45	1.4
Sharing the same house with a family member diagnosed/contacted with COVID-19		
No	2456	76.0
Yes	774	24.0

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Individual and Institutional Support Variables	n	%
Any opportunity to leave in a facility to reduce the risk for family members during COVID-19		
No	1832	56.7
Yes	1398	43.3
Where do you wash your workplace clothes?		
Hospital	420	13.0
Home	2810	87.0
Opportunity to take a shower in health institution after caring for a patient diagnosed with COVID-19		
No	2682	83.0
Yes	548	17.0
Are you diagnosed with COVID-19?		
No	2501	77.4
Yes	729	22.6
Working even if you have COVID-19 symptoms		
No	2331	72.2
Yes	899	27.8
Difficulty in getting test for COVID-19 even if you have COVID-19 symptoms		
No	2563	79.3
Yes	667	20.7
Having problem in accessing PPE when you care for patients diagnosed with COVID-19		
Never	116	3.6
Seldom	1596	49.4
Sometimes	1091	33.8
Always	427	13.2
Having problem in accessing PPE when you care for patients diagnosed with COVID-19		
No	1248	38.6
Yes	1982	61.4
Getting support from your health institution in solving the scarcity problems of PPE during COVID-19		
No support or I was myself	3054	94.5
Yes. I was supported	176	5.5
The approach of your health institution in providing PPE during COVID-19		
Good enough	527	16.3
Provided regularly	646	20.0
Provided by controlling	1695	52.5
Witnessed serious problems	362	11.2
The approach of your health institution in providing drug/medical material during COVID-19		
Full support	820	25.4
Partly support	2237	69.2
Inadequate support	173	5.4
The approach of your health institution against reported problems during COVID-19		
Reported-Quick solution	298	9.2
Reported-Partly solution	1394	43.2
Reported-No solution	707	21.9
Reported-Nobody cared	141	4.4
Reported-Witnessed mobbing	366	11.3
Couldn't report	324	10.0
Main transportation means during COVID-19		
Public transportation	1328	41.1
Own Car	1700	52.6
Shuttle	202	6.3
Meeting food needs during COVID-19		
My hospital	2017	62.4
My own way	1213	37.6

Cont...

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Individual and Institutional Support Variables	n	%
The appropriateness of the place used for clothing change in your health institution during COVID-19		
Good enough	720	22.3
Not appropriate	1989	61.6
No available place	521	16.1
The appropriateness of the place used for resting in your health institution during COVID-19		
Good enough	669	20.7
Not appropriate	1589	49.2
No available place	972	30.1
Having difficulty in caring for family members during COVID-19		
No	1301	40.3
Yes	1929	59.7
Taking protective medicine during COVID-19		
No	2491	77.1
Yes	739	22.9
Having financial lost during COVID-19		
No	2021	62.6
Yes	1209	37.4
Benefitting from additional payments during COVID-19		
No	1496	46.3
Yes	1734	53.7
Place availability for uniform change		
Yes. There is a place	2709	83.9
No place	521	16.1
Place availability for resting		
Yes. There is a place	720	22.3
No place	2510	77.7

The results of the stepwise logistic regression examining the more likely predictors of being exposed to violence were provided in Table 2. The results showed that male (OR=0.673) and relatively older (OR=0.973), and those nurses working at university hospitals were less likely to be exposed to violence. In addition, increasing working hours per week (OR=1.365) and number of patients per nurse (OR=1.160) were statistically significant variables increasing the risk of exposure to violence. Some easy measures taken by healthcare institutions such as providing transportation to decrease the during SARS-CoV-2 might be important factors in increasing or decreasing the risk of exposure to violence. Providing shuttle services was found to be associated with a lower risk of exposure to violence compared to the use of public transportation (OR=0.580). The unavailability of appropriate changing rooms (OR=1.538) and an ignorant attitude toward nurses' reports of emerging problems (OR=1.172) were associated with an increased risk of exposure to violence. 'Providing care to COVID-19 patients', 'being forced to work even when having symptoms of COVID-19', and 'the fear of being infected by catching COVID-19' were other significant factors increasing the risk of being exposed to violence. Interestingly, the results also suggested that financial issues might be significant factors to predict the risk of exposure to violence because nurses having financial losses during the COVID-19 pandemic (OR=1.913) and benefiting from the highest amounts of extra payments (OR=1.239) had an increased risk of being exposed to violence.

Table 2. Results of Stepwise Binary Logistic Regression Model for The Effect of Individual-Specific and Institutional Variables on The Risk of Exposure to Violence from Patients or Other Healthcare Workers

Individual-Specific and Institutional Support Variables	B	S.E.	Wald	df	Sig.	Exp(B)	95% C.I. for EXP(B)	
							Lower	Upper
Age	-0.03	0.01	16.06	1	0.000	0.973	0.961	0.986
Gender (Male)	-0.40	0.14	7.91	1	0.005	0.673	0.511	0.887
Ownership of the health care institution			10.12	4	0.039			
Ministry of Health	-0.01	0.13	0.01	1	0.942	0.991	0.769	1.276
Private Hospital	-0.42	0.24	2.99	1	0.084	0.659	0.411	1.057
Primary Care	-0.16	0.44	0.14	1	0.714	0.852	0.361	2.010
Other*	0.83	0.34	5.90	1	0.015	2.301	1.174	4.508
University Hospital	Ref.							
Provision of care for COVID-19 patients (Yes)	0.18	0.07	6.33	1	0.012	1.197	1.040	1.377
Working hours per week	0.31	0.09	11.02	1	0.001	1.365	1.136	1.640
Continued working while having COVID-19 symptoms (Yes)	0.57	0.10	30.03	1	0.000	1.766	1.441	2.164
Health care institution's approach toward reported problems during the COVID-19 pandemic	0.16	0.03	23.64	1	0.000	1.172	1.099	1.249
Main transportation means during the D-19 pandemic			7.40	2	0.025			
Own car	-0.19	0.10	3.35	1	0.067	0.827	0.675	1.014
Shuttle	-0.54	0.23	5.41	1	0.020	0.580	0.367	0.918
Public transportation	Ref.							
Availability of changing rooms (No)	0.43	0.13	10.66	1	0.001	1.538	1.188	1.992
Experienced financial losses during the COVID-19 pandemic	0.65	0.10	42.22	1	0.000	1.913	1.573	2.326
Benefited from extra payments during the COVID-19 pandemic	0.21	0.11	4.07	1	0.044	1.239	1.006	1.526
Number of patients per nurse to provide care	0.15	0.03	23.36	1	0.000	1.160	1.092	1.232
Constant	-2.19	0.38	33.18	1	0.000	0.112		

-2 Log likelihood: 2573.675; Cox & Snell R Square: 0.114; Nagelkerke R Square: 0.158; Model Chi-Square: 268.025 (p=0.000)

*It includes institutions for the provision of contact tracing, home care, and long-term care.

The effects of individual characteristics of nurses and the measures taken by health care institutions on the level of anxiety during the COVID-19 pandemic were provided in Table 3. The saturated stepwise regression model was achieved at 11 steps and explained 0.09% of the total variance. Of individual characteristics, being a male nurse was found as a statistically significant predictor of low anxiety levels. Besides this finding, being pregnant during the COVID-19 pandemic and having a chronic disorder were other significant predictors of increased anxiety levels of nurses. The results showed that difficulties in taking care of other family members and having financial losses during the COVID-19 pandemic were other statistically significant predictors of high anxiety levels. Another important point is that measures and supportive actions from health care institutions during the COVID-19 pandemic have had significant effects on anxiety levels. Unfavorable attitudes of health care institutions toward reported problems were associated with increased anxiety levels. Having problems in accessing PPEs and the unavailability of appropriate rest and shower areas, which might be considered controllable measures within the institutional responsibility of health care institutions, were associated with statistically significantly increased anxiety levels in nurses. However, according to the results of this study, a low level of anxiety was successfully maintained among nurses working in health care institutions, where nurses with chronic diseases were allowed to work in non-COVID-19 clinics, where nurses were provided with training materials on how to deal with COVID-19 patients, and shower facilities were made available to nurses.

Table 3. Results of the Stepwise Linear Regression Model on The Main Determinants of Anxiety Levels of Nurses

Individual-Specific and Institutional Support Variables	Unstandardized Coefficients	Std. Error	Standardized Coefficients	t	Sig.
	B		Beta		
Difficulty in caring for family members during the COVID-19 pandemic (Yes)	0.569	0.073	0.145	7.84	0.0000
Health care institution's approach toward reported problems during the COVID-19 pandemic	0.105	0.025	0.082	4.259	0.0000
Gender (Male)	-0.584	0.096	-0.112	-6.097	0.0000
Problems in accessing PPE when providing care for COVID-19 patients (Yes)	0.203	0.048	0.081	4.231	0.0000
Experienced financial losses during the COVID-19 pandemic (Yes)	0.343	0.074	0.087	4.668	0.0000
Availability of rest areas (No)	0.227	0.077	0.055	2.952	0.0030
Being pregnant during the COVID-19 pandemic (Yes)	0.412	0.2	0.038	2.057	0.0400
Comorbid chronic disease that might be critical with COVID-19 (Yes)	0.341	0.091	0.069	3.729	0.0000
In the presence of chronic disease, the opportunity to work in a unit with a minimized risk of COVID-19 (Yes)	-0.39	0.165	-0.044	-2.36	0.0180
Provided with guidelines/training materials specific to the unit worked in (Yes)	-0.15	0.072	-0.039	-2.1	0.0360
Opportunity to take a shower in the health care institution after the provision of care for a patient diagnosed with COVID-19 (Yes)	-0.195	0.097	-0.037	-2.02	0.0440
Constant	7.533	0.191		39.433	0.0000
R: 0.307; R2: 0.094; AD: R2: 0.090; F: 25.711 (p=0.000)					

DISCUSSION

It has been reported that healthcare professionals were exposed to violence during the pandemic in association with the mistrust toward healthcare professionals, false beliefs about the disease and its treatment, high patient expectations, inadequate capacity of hospitals to admit COVID-19 patients, and the death of COVID-19 patients (Bhatti et al., 2021; Yang et al., 2021; Ghareeb et al., 2021). In Turkey, it has been observed that nurses have been exposed to violence from other health care workers and managers in association with long working hours, excessive patient load, the assumptions of duties that fall within the responsibility of other health care staff, working without rest breaks, and the poor quality and inadequacy of PPE during the pandemic period (Celik et al., 2020; Celik et al., 2021).

This study found that nurses experienced very high levels of anxiety and were exposed to violence from patients, family members, or other healthcare professionals during the COVID-19 pandemic. Anxiety levels of nurses, who were exposed to violence, were statistically higher compared to those nurses, who were not exposed to violence. The study conducted by Bitencourt et al (2021) reported an increased anxiety level in the group exposed to violence. Similarly, other studies reported that, compared to the pre-pandemic period, nurses suffered from mobbing more (Ozkan Sat et al., 2021), experienced stigmatization and exclusion due to people's concern that they might transmit SARS-CoV-2 (Chew et al., 2020), and that they were exposed to violence from patients and patient relatives in the workplace (Ghareeb et al., 2021). A meta-analysis found that approximately one-third of nurses actively working during the COVID-19 pandemic experienced psychological symptoms and that the combined prevalence of anxiety was 37% from 73 studies and the prevalence of depression was 35% from 62 studies (Al Maqbali et al., 2021).

It is apparent that the causes of violence and anxiety experienced by nurses are similar (Bhatti et al., 2021; Bitencourt et al., 2021; Hacimusalar et al., 2020; Que et al., 2020). Yang et.al. (2021) conducted an analysis with a multivariate model and found out that the main correlates of violence in the workplace during the COVID-19 pandemic were male gender, longer work experience, higher education level, smoking, working in psychiatry or emergency services, working in tertiary care hospitals, being involved in the direct provision of care to infected patients, having infected family members/friends/colleagues, and the frequent use of social media.

In our study, consistent with the literature (Cai et al., 2020; Chew et al., 2020; Hacimusalar et al., 2020; Liu et al., 2020a; Zheng et al., 2021), nurses experienced high anxiety levels and increased exposure to violence in association with the high number of patients to provide care for, long working hours, being forced to work despite COVID-19 symptoms, the use of public transportation to commute to the hospital and home, the ignorance of questions by the hospital management, working with COVID-19 patients, sharing the house with someone with COVID-19, the fear of infecting family members, having difficulties in caring for family members, financial losses, and the unavailability of changing rooms. Also, the unfavorable attitude of the health care institution toward problems, especially in having access to PPE, was defined as violence by nurses in our study, and such attitudes were found to cause anxiety as different findings from the information in the literature. Furthermore, it was found in our study that being pregnant and having a chronic disease affected anxiety levels. In the study, which included professionals from all health care careers (2156 people), Hacimusalar et al. (2020) found that the anxiety levels of nurses were higher than those of both doctors and other healthcare professionals, and that the anxiety level increased further and the level of hopelessness was high in individuals, who lived with a high-risk individual at home, who had difficulty in caring for their children, and who had decreases in income during the pandemic period. In another study, anxiety symptoms were associated with nurses' workload and the fear of the unknown and of catching infection. In addition, it was reported that the increase in the level of exposure to a COVID-19 patient increased the likelihood of nurses developing anxiety (Zheng et al., 2021). It's possible that working circumstances got worse and routines changed as a result of COVID-19's quick spread, the lack of assurance around its diagnosis, and the additional laws created during the process. These circumstances are thought to increase nurses' anxiety and expose them to violence. The amount of anxiety and aggression among nurses may also rise as a result of all these issues.

However, in our study, it was found out that older and male nurses were exposed to violence less. Furthermore, having the opportunity to work in a unit with a minimized risk of COVID-19 because of having a chronic disorder, available shower facilities in the hospital, the provision of education and training materials or instructions about COVID-19, precautions taken by health care institutions, and the coverage of basic needs of nurses in the workplace (e.g, meal coverage, rest areas and breaks, and the provision of nursing uniforms, temporary accommodation facilities, and means of transport) were found to reduce the level of anxiety. These results show that some managerial measures should be taken during the COVID-19 period, especially for the employees of health care institutions. The study by Labrague and De los Santos (2020) reported high anxiety levels in 123 (37.8%) out of 325 nurses. The results of the multiple linear regression analysis in that study have shown that individual characteristics of nurses were not associated with the COVID-19 anxiety but the availability of social support, personal resilience, and the use of organizational support were found to be associated with the COVID-19 anxiety.

CONCLUSION

Since the beginning of the COVID-19 pandemic, no standard care practices have been established to provide patient care and protect healthcare personnel from the disease. Therefore, variations are common across implemented measures in different healthcare institutions. Inadequacy of PPE and inadequate access to PPE and the support received from the employing health care institutions were among the most discussed issues both in Turkey and other countries. In the current study, we found that nurses experienced very high levels of anxiety and violence from patients, family members, or other healthcare professionals and that among the factors for anxiety and violence included the high number of patients, long working hours, being forced to work despite COVID-19 symptoms, hospital management not answering their questions, fear about COVID-19 disease and financial losses. In line with the results of this study, the responsibility range of managers and decision-makers is wide in protecting the physical and mental integrity of nurses, anticipating, and addressing their needs and resolving their problems, and managing the nurse manpower and the supply of PPE in accordance with standards so that nurses can provide qualified and safe nursing practices. In addition, establishing governmental policies in this regard and implementing necessary measures by health care institutions for the current and future pandemics should prevent nurses and other health care professionals from developing anxiety and being exposed to violence.

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