

# Evaluation of the caregiving roles and attitudes of nurses during the COVID-19 pandemic

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## Abstract

**Background:** Nurses play a critical role in providing care to patients, in particular, they work in the frontlines in caring for patients with complicated COVID-19 requiring hospitalization. Evaluation of the caregiving roles and attitudes of nurses is critical in the current crisis. Therefore, this study aimed to determine the caregiving roles and attitudes of nurses during the COVID-19 pandemic.

**Methods:** A quantitative descriptive study was performed with 130 nurses in Turkey. The attitude scale for the caregiving roles of nurses (ASCRNs) was used to collect data. We conducted an online survey between May and November 2020.

**Results:** The mean total score of the participants on the ASCRN was  $62.20 \pm 18.42$ . All nurses stated that they were affected by the COVID-19 pandemic. The ASCRN scores of nurses who received training about the COVID-19 pandemic and who thought that the personal protective equipment they used was sufficient had statistically higher scores on the ASCRN ( $p < .05$ ).

**Conclusion:** The results of this study suggested that the COVID-19 pandemic had a negative effect on the caregiving roles and attitudes of the nurses.

## KEYWORDS

attitudes, caregiver roles, COVID-19, nurses, nursing care

## 1 | INTRODUCTION

COVID-19, which has been declared as a pandemic by the World Health Organization (WHO), is associated with various symptoms; however, it generally causes respiratory symptoms and severe acute respiratory airway infection. Death may occur in patients with a more advanced disease.<sup>1</sup> COVID-19 is highly transmissible and thus spreads rapidly among humans. Healthcare workers dealing with these patients also become infected.<sup>2</sup> The rates of new infections and deaths are shared daily by official institutions via mass communication tools. The number of COVID-19-positive patients and COVID-19-associated mortalities have significantly increased worldwide.<sup>3</sup> The fight against this disease has had a negative psychosocial impact on the entire society, including healthcare workers in general and nurses in particular.<sup>4-7</sup> The health of the nurses is at a serious risk.<sup>7</sup> Additionally,

issues regarding the supply of personal protective equipment (PPE) and healthcare materials, uncertainty about COVID-19, and the increase in the numbers of suspected/confirmed COVID-19 cases have further increased the anxieties of healthcare professionals.<sup>8,9</sup> The COVID-19 pandemic has had negative effects on the physical, psychosocial, and politicoeconomic aspects pertaining to the nurses.<sup>10</sup>

The healthcare systems of countries worldwide have fallen inadequate because of the COVID-19 pandemic. The number of patients who are infected and require intensive care has rapidly increased. The pandemic has reiterated the importance of the concept of “care,” which is the main purpose of nursing. Thus, because of social necessity, the “profession of nursing” has been on the agenda.<sup>11-14</sup>

The most indispensable and basic independent role of a nurse is care. The caring role of a nurse includes the preparation and implementation of a personalized care plan in the case of disease.

Additionally, nurses evaluate the psychosocial wellbeing by communicating with patients and their families. In a global pandemic, nurses are required to actively participate in training, public health, related political arrangements (regarding the salary, working hours, and working conditions of the health workers during the pandemic period), and particularly clinical care. Nurses play a key role in the efforts towards ending the pandemic.<sup>12–15</sup>

While nurses are providing care for patients infected with COVID-19, it is important to support them in protecting themselves in line with infection control protocols.<sup>12,13,16</sup> In this context, the Centers for Disease Control and Prevention (CDC) has published recommendations for nurses and administrators on how to manage infection control processes, including access to support services and patient care guidelines regarding COVID-19.<sup>17</sup> In this sense, measuring the attitudes of nurses about their caregiver roles will reveal whether nurses fulfill their main and independent roles of care. At the same time, it will provide perspectives about the nurses.<sup>10,12,18</sup>

Effective nursing care will reduce the duration of hospitalization, hospital-acquired infections, and decrease the expenses related to healthcare services, labor, and production losses.<sup>15–20</sup> To date, studies examining the effects of the COVID-19 pandemic period on the caregiving roles and attitudes have not been performed. Thus, this study was performed to determine the caregiving roles and attitudes of nurses during the COVID-19 pandemic.

## 2 | METHODS

### 2.1 | Study design, setting, and sample

This descriptive and correlational study was conducted to determine the caregiving roles and attitudes of nurses during the COVID-19 pandemic. This study was performed between May and November 2020. The data were collected using an information form and the attitude scale for the caregiving roles of nurses (ASCRNs). Nurses working in the province of Istanbul in Turkey who agreed to participate in the study were sent an online questionnaire link and asked to fill it out. After completing the questionnaire, the nurses sent it back to the researchers.

The study was performed with 130 nurses. Nurses who agreed to participate were informed about the study, and their consent was obtained in the first question on the survey. The nurses who provided consent moved to move on to the data collection forms.

#### *Inclusion criteria*

- \* Agreeing to participate in the study and aged  $\geq 18$  years.

#### *Exclusion criteria*

- \* Having a change of service at the study start date.
- \* Being on leave at the date of the study.
- \* Not having internet access.

Kendall's sample size calculation principle yielded sample sizes 5–10 times the number of variables.<sup>21</sup> Our study had 12 variables

(5 related to sociodemographic information, 6 related to information on COVID-19 infection control, and 1 related to the attitudes of nurses in caregiving roles). Considering a dropout probability of 20%, the sample size in this study was set at  $72-144[12 \times 5 \times (1 + 0.2)] = 72 - 12 \times 10 \times (1 + 0.2) = 1$ .

## 2.2 | Data collection and instruments

### 2.2.1 | Information form

The information form was prepared by the researchers after a thorough literature review included a total of 11 questions on the sociodemographic characteristics of the nurses, their unit of employment, and information on COVID-19 management.

## 3 | ASCRN

The scale was developed and tested for validity and reliability; the scale is a 16-item 5-point Likert-type scale for measuring the caregiving attitudes of nurses.<sup>22</sup> The ASCRN consists of three subscales as follows: attitude towards meeting the self-care requirements of the patient and the counseling role of the nurse (items 2, 6, 10, 11, 14, 15, and 16), attitude towards protecting the individual and respecting their rights (items 3, 5, 12, and 13), and attitude towards their own role in the treatment process (items 1, 4, 7, 8, and 9). The responses of the nurses to the items were absolutely disagree, disagree, somehow agree, agree, or absolutely agree, and these responses were scored between 1 and 5. The maximum and the minimum scores that could be obtained from the scale were 80 and 16, respectively. Higher scores indicated a more positive attitude of the nurses towards their caregiving roles. Lower scores indicated a more negative attitude. In this study, Cronbach's alpha coefficient for the ASCRN was .89.

### 3.1 | Ethical considerations

Before commencement of the study, permission was obtained from the COVID-19 Scientific Research Committee of the Turkey Ministry of Health, and ethical approval was received from the local Ethics Board with the decision number 20292139-050.01.04. Additionally, their consent was obtained on the questionnaire form. The study was performed in accordance with the principles of the Declaration of Helsinki.

### 3.2 | Data analysis

The data were analyzed using the SPSS 26.0 package software. The descriptive information of the participants was presented as frequencies, percentages, and means. Shapiro–Wilk test was used to

test the normality of the distributions. The data were analyzed by using correlation, Kruskal-Wallis, and Mann-Whitney *U* tests. All results were considered significant at  $p < .05$  and in a 95% confidence interval.

## 4 | RESULTS

The data obtained from 130 nurses were analyzed in this study. The mean age of the nurses was  $29.96 \pm 6.74$  years. The mean total professional experience was  $8.14 \pm 7.54$  years, and most of them worked at intensive care units and other inpatient units. Most nurses were female (87.7%), and most had undergraduate degrees (62.3%). Vocational health high schools are high-school-like institutions that train assistant nurses in Turkey. Individuals graduate from these institutions as assistant nurses after 4 years of education. Both undergraduate and vocational health high school graduates are responsible for fulfilling the roles and responsibilities of nurses in Turkey. Some differences are observed in the education level of these nurses (Table 1).

The mean total ASCRN score of the participants was  $62.20 \pm 18.42$ , their mean score on the subscale of attitude towards meeting the self-care requirements of the patient and the counseling role of the nurse was  $26.96 \pm 7.24$ , their mean score on the subscale of attitude towards protecting the individual and respecting their

**TABLE 1** Sociodemographic characteristics of the nurses (N = 130)

	Min-Max	$\bar{x} \pm SD$
Age (years)	21-53	$29.96 \pm 6.74$
Gender	<i>n</i>	%
Female	114	87.7
Male	16	12.3
<i>Education status</i>		
Vocational high school of health	7	5.4
Associate degree	36	27.7
Undergraduate	81	62.3
Postgraduate	6	4.6
<i>Unit of employment</i>		
Pandemic service	16	12.3
Intensive care unit	38	29.2
Emergency service	18	13.8
Other inpatient services	36	27.7
Operating room	4	3.1
Outpatient clinic	18	13.8
	Min-Max	$\bar{x} \pm SD$
Professional experience (years)	0.5-33	$8.14 \pm 7.54$

Abbreviations: Max, Maximum; Min, Minimum; SD, Standard deviation.

**TABLE 2** Attitude scale for the caregiving roles of nurses (N = 130)

Scale and subscales	$\bar{x} \pm SD$
Attitude scale for the caregiving roles of nurses (total)	$62.20 \pm 18.42$
<i>Dimensions</i>	
Meeting the self-care requirements of the patient and the counseling role of the nurse	$26.96 \pm 7.24$
Protecting the individual and respecting their rights	$16.77 \pm 3.96$
Own role in the treatment process	$18.47 \pm 5.70$

Abbreviation: SD, standard deviation.

rights was  $16.77 \pm 3.96$ , and their mean score on the subscale of attitude towards own role in the treatment process was  $18.47 \pm 5.70$  (Table 2).

Seventy (53.8%) nurses stated that they had previously received training about the COVID-19 pandemic. Majority ( $n = 93$ , 71.5%) of the nurses worked at a pandemic hospital, most ( $n = 98$ , 75.4%) had provided care for patients with suspected/confirmed COVID-19 infection, most ( $n = 97$ , 74.6%) considered the PPE they used to be adequate, and a large majority ( $n = 117$ ) had not been diagnosed with COVID-19. Although all nurses stated that they were affected by the COVID-19 pandemic, 52.3% of the nurses reported that the pandemic had an intense psychological effect on them. Additionally, the factors that significantly affected the caregiving roles and attitudes of the nurses included the training they received about managing the COVID-19 pandemic, adequacy of the PPE kits provided, and their status of being diagnosed with COVID-19 ( $p < .05$ ; Table 3).

## 5 | DISCUSSION

This study focused on determining the caregiving roles and attitudes of nurses during the COVID-19 pandemic period from May to November 2020.

Among the healthcare personnel, nurses are the ones who communicate with and spend the most time with patients. While providing treatment and care, the nurses are at risk, and thus, they feel intense stress. Nurses play an important role in providing care during this pandemic.<sup>9,23</sup> The mean total ASCRN scores of the participants were  $62.20 \pm 18.42$ . Despite experiencing several difficulties during the COVID-19 pandemic period such as long working hours, problems with protective equipment, high levels of daily stress, and feeling at risk for their health and that of their loved ones, the maximum possible score of 80 observed on the scale indicates that the nurses had a positive attitude towards their caregiving roles.

The results of this study showed that more than half of the nurses had received training on COVID-19, and those who had received training had more positive attitudes towards their caregiving roles than those who had not received the training. Additionally,

**TABLE 3** Effects of the COVID-19-related characteristics of the nurses on their caregiving roles and attitudes ( $N = 130$ )

	n (%)	Total score on the attitude scale for the caregiving roles of nurses		
		$\bar{x} \pm SD$	Statistic value	p
<i>Status of having received training on the COVID-19 pandemic</i>				
Yes	70 (53.8)	66.24 $\pm$ 16.09	-2.596*	.009
No	60 (46.2)	57.50 $\pm$ 19.93		
<i>Status of working at a pandemic hospital</i>				
Yes	93 (71.5)	60.79 $\pm$ 19.60	-.863*	.388
No	37 (28.5)	65.75 $\pm$ 14.69		
<i>Providing care for patients with suspected/confirmed COVID-19 infection</i>				
Yes	98 (75.4)	62.26 $\pm$ 18.78	-.292*	.770
No	32 (24.6)	62.03 $\pm$ 17.56		
<i>Thinking that the personal protective equipment used was adequate</i>				
Yes	97 (74.6)	69.83 $\pm$ 18.85	-2.250*	.024
No	33 (25.4)	52.77 $\pm$ 17.36		
<i>Status of diagnosis with COVID-19</i>				
Yes	13 (10.0)	51.93 $\pm$ 26.34	-2.83*	.021
No	117 (90.0)	63.54 $\pm$ 16.82		
<i>Level of being affected by the COVID-19 period</i>				
Low	29 (22.3)	61.00 $\pm$ 16.57		
Moderate	33 (25.4)	62.12 $\pm$ 18.85	1.693**	.429
Intensity	68 (52.3)	62.76 $\pm$ 19.18		

\*Mann-Whitney  $U$  test  $Z$  score.

\*\*Kruskal-Wallis test.

those who thought the PPE they used was adequate had more positive caregiving roles and attitudes. Moreover, the results of this study showed that informing the nurses and the healthcare team about issues such as the COVID-19 pandemic and precautions for controlling the infection affects their attitudes towards their caregiving roles, and these issues must be given adequate importance. Our results were similar to those reported in a study performed in China in that the negative attitudes of the nurses decreased with an increase in the knowledge levels related to COVID-19.<sup>24-30</sup> Results of previous studies pertaining to this subject showed that training provided by hospitals and relevant institutions plays a vital role in the prevention of contagious diseases.<sup>28,29</sup> Hidiroglu et al. stated that healthcare workers should be empowered by supporting their skills of evidence-based information collection and usage.<sup>30</sup> Other studies have argued that the implementation of appropriate training and protective measures increases the willingness of personnel to work.<sup>8,31-33</sup>

Another significant finding of the study was that nurses diagnosed with COVID-19 had a more negative attitude towards their caregiving roles than those who were not diagnosed with COVID-19.

Medical support provided to patients with a particular disease increases as the healthcare workers learn and understand more about the disease. In the case of diseases that are epidemic or pandemic, the efficiency of the health system decreases with an increase in the spread of the disease in a region.<sup>33-35</sup> As the number of patients increases, the workload of nurses increases, and they may become infected themselves. Therefore, the medical attention received by the patients infected at a later stage gradually decreases compared to the patients infected in the initial stages.<sup>34</sup> Nurses who provide care for COVID-19 patients are exposed to the highest risk of infection due to their close and frequent contact with patients and their long working hours.<sup>9,35-37</sup> Previously, frontline nurses providing care for patients with severe acute respiratory syndrome (SARS) experienced physical and psychological difficulties while committing themselves for providing high-quality nursing care for patients.<sup>38</sup> Furthermore, a study performed with 1216 healthcare workers during the Middle East respiratory syndrome (MERS) epidemic in 2012 showed that the work performances dropped, and most participants experienced psychological problems.<sup>39</sup> This result was consistent with that of studies performed during similar epidemics. The attitudes of the nurses diagnosed with COVID-19 towards their caregiving roles were negatively affected because of both physical and psychological problems experienced by them.

## 5.1 | Limitations of the study

The study had several limitations. This study was performed with nurses who could access the survey form. Additionally, participants were recruited only from one facility in one country. Therefore, the findings of this study cannot be generalized for all nurses.

## 5.2 | Educational implications

The results of this study showed that the attitudes of the nurses who participated in this study had positive attitudes towards their caregiver roles during the COVID-19 pandemic period. Participation in educational programs about COVID-19 and the assurance about the efficiency of the PPE kits were important factors that affected the positive attitude of the nurses towards their caregiver roles. As we continue to experience COVID-19 and the other inevitable health crises that we may experience in the future, ensuring the safety of the nurses and our communities will continue to be a challenge. Nurses are a critical resource in an effective healthcare system, and thus, it is imperative to understand the factors that influence the caregiver roles and attitudes of the nurses. Our results indicate that intensive training programs on topics such as the use of PPE kits and precautions for isolation should be provided to the nurses.

The results of this study showed the effects of the COVID-19 pandemic period on the caregiver roles and attitudes of the nurses and the quality of care in general. Additionally, this study showed the importance of providing necessary intensive training programs to

nurses on subjects such as the use of PPE and measures for isolation. Nurse administrators should pay attention to in-service training, especially regarding the use of PPE in the COVID-19 pandemic.

## 6 | CONCLUSIONS

The mean total ASCRN scores of the nurses were  $62.20 \pm 18.42$ . All nurses stated that they were affected by the COVID-19 pandemic. The ASCRN scores of nurses who received training on the COVID-19 pandemic and who thought that the PPE used by them was sufficient were statistically higher. These findings suggested that the COVID-19 pandemic negatively affected the caregiving roles and attitudes of the nurses.

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## CONFLICT OF INTERESTS

The authors declare that there are no conflict of interests.

## ETHICAL APPROVAL

For the study to be conducted, permission was received from the COVID-19 Scientific Research Committee of the Turkey Ministry of Health, and ethical approval was received from the Ethics Board of Istanbul Sabahattin Zaim University Ethics Committee with the decision number of 20292139-050.01.04. Additionally, after informing the participants about the study, their consent was obtained on the questionnaire form. The study was conducted in accordance with the Declaration of Helsinki.

## DATA AVAILABILITY STATEMENT

Data are available upon request from the corresponding author.

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