

# Impacts of the COVID-19 Pandemic on Nurses: A Qualitative Study

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## Abstract

**BACKGROUND/AIMS:** Nurses are the largest healthcare professional group providing frontline care in coronavirus disease-2019 (COVID-19). As COVID-19 is a new disease and the medical system and culture of different countries varies, research is needed on the effects of this pandemic on nurses in order to increase knowledge. This study was performed to explore the impacts of the COVID-19 pandemic on nurses.

**MATERIALS AND METHODS:** This qualitative study was conducted using mass media and social media settings between March, 11<sup>th</sup> and May, 15<sup>th</sup> 2020. A total of 31 nursing statements were examined.

**RESULTS:** Analysis of the statements of the Turkish nurses about the impacts of the COVID-19 pandemic revealed four main themes, namely “emotions”, “self-health”, “patient care” and “employee rights.”

**CONCLUSION:** Management strategies to support nurses coping with emotions, self-care, patient care and employee rights issues should be developed.

**Keywords:** COVID-19, Coronavirus disease, pandemic, nursing

## INTRODUCTION

In today's modern world, millions of people are at severe risk of acquiring evolving viral infections.<sup>1</sup> A novel coronavirus disease-2019 (COVID-19) was first reported and then became widespread within Wuhan, China, in November, 2019. This disease rapidly spread becoming a global health emergency.<sup>2,3</sup> Since the first case of unexplained pneumonia in Wuhan, COVID-19 has affected many countries worldwide, with over 131 million cases and over 2.8 million deaths being reported globally as of the time of writing.<sup>2,4,5</sup> The COVID-19 pandemic was confirmed to have reached Türkiye in March, 2020, with the first case being officially confirmed on the 11<sup>th</sup> of March, 2020. As of the 5<sup>th</sup> of April, 2020, the number of confirmed total cases in the country was over 3.5 million, of which 3,130,977 had recovered and 32,456 had died.<sup>6</sup>

Coronaviruses are a large family of viruses which may cause illness in animals or humans.<sup>2,7</sup> COVID-19 mainly causes respiratory and digestive

tract symptoms, with symptoms ranging from mild self-limited disease to systemic multiple organ failure syndrome.<sup>4</sup> COVID-19 is associated with intensive care unit admission, mechanical ventilation and it causes high mortality. In general, the disease is an acute illness but it can be deadly, with an average case fatality rate of 2%.<sup>5</sup> To date, there are no particular medications or vaccines against COVID-19 infection for human therapy.<sup>8,9</sup> Its medical treatment and nursing care mainly include antiviral and traditional medicine treatment, isolation, symptomatic support, and close monitoring.<sup>4</sup>

There have been many negative effects of the COVID-19 pandemics on communities all over the world. As a disaster condition, the pandemic has caused serious disruption to the functioning of communities involving widespread human, material, economic and environmental losses and impacts, which have exceeded the ability of the affected societies to cope using their own resources.<sup>10</sup> In this context, medical

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workers have important responsibilities in the struggle against this epidemic. Unfortunately, many front-line personnel have sacrificed their own well-being and have been infected and even died.<sup>4</sup> The mental health of healthcare staff has also been greatly challenged during this viral epidemic.<sup>11</sup>

In this global crisis, nurses are the largest healthcare professional group providing frontline care. Nurses' play pivotal roles in the care and management of the novel COVID-19 pandemic.<sup>5</sup> They are in a natural position to take an active role in disaster management because they spend the most time with patients, and they have expertise in providing clinical care, team leadership, and creative problem-solving skills.<sup>12</sup> In order to recognize the vital service of nurses in health care, the World Health Organization designated 2020 as the International Year of the Nurse and Midwife.<sup>13</sup> Clinical nurses have experienced great stress during their fight against COVID-19 which can affect their health and safety and also requires their interpersonal relationships and related knowledge.<sup>14</sup>

In Türkiye, as well as in other countries, nurses are at the forefront of the struggle against COVID-19 in the healthcare team, together with physicians. Nurses play pivotal roles in the organization of health services, safety precautions, planning and the implementation of care, providing training and evaluating the effectiveness of care in the fight against COVID-19. In Türkiye, as a top priority, the government took an effective role in resource allocation, and the education of the public regarding precautions. Nursing managers and the Turkish Nurses Association also have played active roles by providing protective equipment to nurses, ensuring appropriate nurse manpower, and providing transparent information. However, as is the case all over the world, nurses have been physically and psychosocially affected by this pandemic.

As COVID-19 is a novel disease and the medical system and culture of different countries varies, research is needed on the effects of this pandemic on nurses in order to increase knowledge. Understanding the impacts of the COVID-19 pandemic on nurses will be beneficial in developing strategies so as to cope with future outbreaks. The aim of this study was to determine of the impacts of the COVID-19 pandemic on Turkish nurses.

## MATERIALS AND METHODS

### Research Design

This study was performed retrospectively with a descriptive phenomenological approach to explore the effects of the COVID-19 pandemic on nurses. In this research, Colaizzi's descriptive phenomenological investigation method was applied.<sup>15</sup>

### Procedures

A semi-structured tool was used in this study to frame the data collection. The framework of this study included the following areas of questioning in order to investigate the effects of the COVID-19 outbreak on nurses: What are the effects of the COVID-19 outbreak on the emotions of the nurses? What are the effects of the COVID-19 outbreak on the self-health of the nurses? and What are the other effects of the COVID-19 outbreak on nurses?

This study was conducted using Turkish mass media (newspapers, TV channels, web pages of the nursing associations) and social media

websites (Facebook and Twitter) between March, 11<sup>th</sup> and May, 15<sup>th</sup> 2020, which was the beginning period of this outbreak. Search terms related to the COVID-19 pandemic were monitored daily by the two researchers. Nursing statements regarding the effects of the pandemic were recorded by hand or by mobile phone and then transferred to Microsoft Word documents. Content about the other healthcare professionals' statements was excluded. The confidentiality of the statements was assured by using numbers instead of names. A total of 31 nursing statements were examined.

### Ethical Aspects

Ethical approval was obtained from the Near East University Review Board (approval number: YDU/2021/91-1347). Although data collection was performed from mass media and social media, the statements of the nurses were recorded using participant numbers for confidentiality. Informed consent was not required because of the data collection method.

### Statistical Analysis

The two co-authors analyzed the data simultaneously following Colaizzi's descriptive phenomenological steps. Content analysis was applied in this study. In this context, the researchers first transcribed the recordings and read the texts several times independently for familiarization. The researchers identified those statements which were of direct relevance to the effects of the COVID-19 outbreak on nurses. Following this, they formulated meanings in these statements and categorized the meanings into clusters of common themes. The meanings and themes throughout the analysis process were compared and discussed by them until consensus on the themes was achieved. Finally, a reflective process by returning to the participant statements from the original mass media or social media settings was performed for validation. In addition, an independent researcher who was experienced in phenomenological research was asked to evaluate the consistency between the data and the themes. Finally, revisions were made in line with their suggestions.

## Results

The data about impacts of the COVID-19 pandemics on Turkish nurses were analyzed under the four main themes of "emotions", "self-health", "patient care" and "employee rights" (Table 1).

### Emotions

The Emotions theme was composed of clusters of themes including "Anxiety", "Fear", "Fighting", "Threatened", "Anxiety of family members", "Concern about contamination of microorganisms", "Separation", "Longing", "Fear", "Panic", "Sadness", "Happiness" and "Motivation."

Examples of the statements related to this category include:

"At the beginning, I was more anxious, I followed the literature constantly and always had a fear of being infected."

"We fight against COVID-19 at the zero point, we are at risk."

"I left my son with my mother before starting work. We haven't seen each other for a month. We try to eliminate separation by talking on video calls. My child is without me these days..."

"When I was diagnosed with COVID-19, of course, I experienced fear and panic like everyone else."

Table 1. Statements of the nurses regarding the impacts of the COVID-19 pandemics with themes		
Significant statements	Theme clusters	Emergent themes
“At the beginning, I was more anxious, followed the literature constantly and always had a fear of being infected.”	Anxiety Fear	Emotions
“We fight against COVID-19 at the zero point, we are at risk.”	Frightened Threatened	
“We also know from examples in the world that this disease has a high risk of transmission to healthcare workers. Our families are also concerned for us.”	Anxiety of family members	
“The anxiety of contamination of microorganisms from hospital to home is affecting me psychologically.”	Concern about contamination of microorganisms	
“I miss my family very much.”	Separation	
“I left my son with my mother before starting work. We haven’t seen each other for a month. We try to eliminate this separation by talking on video calls. My child is without me these days...”		
“When I was diagnosed with COVID-19, of course, I experienced fear and panic like everyone else.”	Fear Panic	
“I feel very disappointed to see people who go out to socialize. People should be aware of the severity of this event”	Sadness	
“I feel happy when patients recover.”	Happiness	
“The applause of people on the balconies for healthcare workers motivated me and made me feel better.”	Motivation	
“This is my fifteenth hour in these protective gowns. My lungs have faded from constantly taking my breath. In the overalls, I lost all of the water I drank. The pit that the mask and visor caused on my face is not to be mentioned...”	Fluid loss Discomfort in breathing Mask marks	Self-health
“In this epidemic, there is a risk of contamination to ourselves, and we have to protect ourselves.”	The need to protect self- health	
“We, the healthcare providers, are not immune. It should not be forgotten that we are human beings. Who will take care of the patients if we are not good?”		
I had a lot of trouble when I caught COVID-19. There were incomparable joint pains, respiratory distress.	COVID-19 illness Joint pain and respiratory distress due to COVID-19	
“There is always fatigue.”	Fatigue	Patient care
“We have to provide the care they deserve to a large number of patients with the same efficiency and sensitivity.”	Increase in the number of patients Challenge in providing effective care to a large number of patients	
“Patients are afraid of our protective equipment such as masks, and protective gowns.”	Discomfort of patients due to protective measures	
“Prolonged work and fatigue of the nurses can increase the risk of errors.”	Increased risk of errors due to fatigue	Employee rights
“Nurses in intensive care are having difficulties. Sometimes we work with a few hours of sleep. There are nurses who have a 24-hour working shift.”	Long working hours	
“We work day and night without leaving the clinic.”	Working without vacation	
“When first cases in Türkiye were announced, I was on annual vacation. I left my vacation and returned to my job in the intensive care unit.”		
“I was transferred to the corona clinic from my clinic.”	Workspace change	
“Nurses can’t make their voice heard enough. The phrase “physicians and other healthcare personnel” is used as if it is only physicians providing the entire service. However, nurses are the closest working group to the patients 24/7.”	Underappreciation Not getting paid enough for labor	
“Healthcare providers cannot get the salary they deserve. Nurses should be provided with additional funding during this process.”		
“Under these difficult conditions, healthcare workers should not be exposed to violence.”	Violence	
It is positive that the Ministry of Health has increased nurse recruitment.	Recruitment increase	
“The personal protective materials are not enough. The meals are inadequate.”	Insufficient protective equipment Insufficient food	

“I feel very disappointed to see people who go out to socialize. People should be aware of the severity of this event.”

“The applause of people on the balconies for healthcare workers motivated me and made me feel better.”

### Self-Health

“Fluid loss”, “Discomfort in breathing”, “Mask scars”, “The need to protect self-health”, “COVID-19 illness”, “Joint pain and respiratory distress due to COVID-19” and “Fatigue” were the clusters of themes related to the “Self-health” theme.

Nurses stated the following:

“This is my fifteenth hour in these protective gowns. My lungs faded from constantly taking my breath. In the overalls, I lost all of the water I drank. The pit that the mask and visor caused my face is not to be mentioned...”

“We, the healthcare providers, are not immune. It should not be forgotten that we are human beings. Who will take care of the patients if we are not good?”

“I had a lot of trouble when I caught COVID-19. There were incomparable joint pains, respiratory distress.”

### Patient Care

The “Patient care” theme includes clusters of themes; “Increase in the number of patients”, “Challenges in providing effective care to a large number of patients”, “Discomfort of patients due to protective measures” and “Increased risk of errors due to fatigue.”

Examples of the statements related to this category are as follows:

“We have to provide the care they deserve to a large number of patients with the same efficiency and sensitivity”.

“The prolonged work and fatigue of the nurses can increase the risk of errors.”

### Employee Rights

“Employee rights” was another theme originating from clusters of themes including “Long working hours”, “Working without vacation”, “Workspace change”, “Underappreciation”, “Not getting paid enough for labor”, “Violence”, “Recruitment increase”, “Insufficient protective equipment” and “Insufficient food.”

Nurses stated the following:

“Nurses in intensive care are having difficulties. Sometimes we work with a few hours of sleep. There are nurses who have a 24-hour working shift.”

“Nurses can’t make their voice heard enough. The phrase “physician and other healthcare personnel” is used as if it is only physicians providing the entire service. However, nurses are the closest working group to the patients 24/7.”

“Healthcare providers cannot get the salary they deserve. Nurses should be provided with additional funding during this process.”

“Under these difficult conditions, healthcare workers should not be exposed to violence.”

## Discussion

The results of this study were discussed with the themes including “emotions”, “self-health”, “patient care” and “employee rights.”

### Emotions

The number of medical healthcare professionals (doctors, nurses, paramedics) suffering from mental health impacts after epidemics and pandemics are often greater than the physical injury.<sup>16</sup> In the current study, it was determined that the nurses had anxiety and fear of being contaminated by microorganisms. The nurses stated that they could not see their families for a long time and that they missed them. They expressed their sadness that some individuals in the community break the rules of staying at home and do not obey the rules while they are working with devotion away from their families. The nurses who were diagnosed with COVID-19 and recovered stated that they experienced a feeling of fear and panic. In line with these findings, these problems were emphasized in the Turkish Nurses Association’s report.<sup>17</sup> The emotional effects of the pandemic have also been emphasized in the international literature.<sup>3,4,11,18-20</sup> Sun et al.<sup>4</sup> performed a study with the aim of exploring the psychology of nurses caring for COVID-19 patients. They found that nurses had psychological helplessness, health threats, a lack of knowledge, and interpersonal unfamiliarity under the threat of epidemic disease, which led to a large number of negative emotions such as fear, anxiety, and helplessness. In another study conducted to explore the mental health status of medical and nursing staff during the COVID-19 pandemic in Wuhan, trends in levels of psychological distress and factors such as exposure to infected people and psychological assistance were identified. 36.9% of participants had subthreshold mental health disturbances, 34.4% had mild disturbances and 22.4% had moderate disturbances in the immediate wake of the viral epidemic.<sup>11</sup> Another study showed that around 85% of the surveyed health care workers were afraid of becoming infected at work.<sup>18</sup> Another study also reported that nurses were trying to cope with the fear and anxiety of contracting the illness themselves and passing the disease on to friends and family.<sup>3</sup> Nurses are parents, siblings, friends and partners with all of the worries and concerns shared by most people providing for and protecting themselves and their families, and so in addition to caring for patients, the well-being of their own families weighs heavily on them as nurses at this time.<sup>21</sup> Accordingly, we found that the nurses stated that they were mutually concerned about their own health as well as their families. In the relevant literature, it is emphasized that mental health services, efficacy of psychological care, and the assessment of psychological care needs are necessary for nursing staff.<sup>16</sup> Mental healthcare and mental healthcare training need to be developed and implemented.<sup>22</sup>

In addition to negative emotions, our participants also expressed their positive emotions such as happiness as a result of the recovery of the patients and motivation from social support and appreciation. A literature review also reported that nurses experience both positive and negative emotions including pride, fear, commitment and other overwhelming emotions.<sup>10</sup> In a similar fashion to this, Sun et al.<sup>4</sup> found the presence of positive emotions in nurses such as confidence, calmness, relaxation, and happiness. Optimism has a protective effect against psychological trauma during disasters.

### Self-Health

Nurses expressed their experiences regarding their individual health. The importance of protecting their own health due to the risk of transmission of the disease was emphasized by many nurses. Sweating caused by the use of personal protective equipment, difficulty breathing, and marks on the face caused by the masks were expressed as the main problems. In addition, those nurses who were diagnosed with and recovered from COVID-19 stated that they had problems such as pain and respiratory distress. During disasters and infectious disease outbreaks, nurses sacrifice their own needs in order to actively participate in their work and make selfless contributions as a result of their professional responsibility.<sup>4</sup> One study showed physical health as a basic necessity required to overcome an epidemic, and all of the respondents exhibited a strong need for maintaining health.<sup>14</sup> Another study showed that resilience (tenacity, strength) and social support (objective support, subjective support and availability of support) could significantly predict the mental health in fresh staff. A high level of training and professional experience, resilience and social support are necessary for health care workers who are taking part in their first public health emergency.<sup>19</sup> It is helpful to apply effective interventions in order to meet the needs of those nurses caring for COVID-19 patients.

### Patient Care

The statements of the nurses revealed the responsibilities they feel about patient care and society. Their thoughts about giving care to all patients with the same sensitivity, their emotional support to patients, their motivation to heal patients and their expressions about not making mistakes show their sensitivity to care. However, it is important to provide nurses with conditions under which they can effectively maintain healthcare. These issues also have been reported by the Turkish Nursing Association. The Turkish Nursing Association has reported that nurses face barriers to providing care in a manner that does not compromise patient safety.<sup>2,17</sup> Zhang et al.<sup>18</sup> also emphasized that medical systems should ensure that frontline workers have enough time to rest between shifts in order to avoid overworking and making unconscious errors during epidemic relief efforts.

### Employee Rights

Nurses expressed their problems such as long working hours, insomnia, changing the clinic where they work, violence, not getting enough salary and the inadequacy of meals. They also stated that nurses could not make their voices heard, despite being the closest healthcare professionals working with patients 24/7. They expressed that they perceived themselves as being like warriors on the frontline. According to the Turkish Nurses Association report during the COVID-19 period, 21.1% of the nurses could not take a break while working, 58.3% of them work 40-48 hours per week and 50.0% have not been provided with the necessary food for adequate and balanced nutrition.<sup>17</sup> In one study, it was also reported that during the COVID-19 epidemic, some deficiencies were present at a major tertiary general hospital. Prediction capacity and strategic preparatory awareness for public health emergencies were not sufficient. This resulted in an evident lack of workforce and supplies at the beginning of the outbreak.<sup>23</sup>

In this study, it was seen that nurses stated that protective materials were insufficient. The Turkish Nurses Association also showed that nurses stated that they had frequent difficulty in obtaining gloves

(5.0%), medical masks (8.5%), visors or goggles (12.4%) and disposable overalls (19.0 %) during their care for patients with COVID-19.<sup>17</sup>

In the current study, many nurses stated that they had been transferred to a corona clinic. The transfer of nurses to pandemic clinics without their orientation was also indicated by the Turkish Nurses Association as an important issue. According to the report by the Turkish Nurses Association, nurses stated that they were not informed (13.1%) or only partially informed (39.7%) about the measures which should be taken in order to protect themselves while providing care to those patients with COVID-19 diagnoses or even those with suspected COVID-19.<sup>17</sup>

### Study Limitations

There are certain limitations to the current study which need to be addressed. The search from social media was limited to the open accessible statements of the nurses by the researchers. Individual interviews were not conducted in this study. Another limitation was that accessing the participants individually for validation was not possible because of the data collection method used in this study.

### CONCLUSION

In conclusion, after the analysis of the statements of the Turkish nurses about the impacts of the COVID-19 pandemic, four main themes emerged, namely “emotions”, “self-health”, “patient care” and “employee rights.” The results showed that the nurses expressed anxiety and fear regarding contamination, and a longing for their families. Those nurses who were diagnosed with and recovered from COVID-19 stated that they experienced a feeling of fear and panic. The statements of the nurses revealed their experiences about their own health, coping with their problems, as well as the responsibilities they felt about patient care and towards society. In addition, nurses expressed the problems they faced such as their long working hours, insomnia, changing the clinic where they worked, violence, not getting enough salary, and a lack of personal protective equipment and food. It can be concluded that the nurses’ roles and responsibilities in coping with the COVID-19 pandemic are substantial in order to provide health care for the general population. The related institutions and organizations, and nursing managers should develop management strategies with the aim of supporting nurses to cope with their emotions, self-care, patient care and employee rights issues. Establishing psychological coping support may contribute to fulfill the needs of nurses and protect their mental health. Social support, enough time to rest between shifts, avoiding overwork, providing the ideal nurse-to-patient ratio, adequate supplies, and the utilization of personal protective equipment can meet the needs for health and safety among nurses.

### MAIN POINTS

- The statements of the Turkish nurses about impacts of the COVID-19 pandemic revealed the 4 main themes of “emotions”, “self-health”, “patient care” and “employee rights.”
- Nurses expressed their anxiety and fear regarding contamination, and a longing for their families.
- Those nurses who were diagnosed with and recovered from COVID-19 stated that they experienced a feeling of fear and panic.



- The statements of the nurses revealed their experiences about their own health, and also the responsibilities they felt about their patient care and towards society.
- Nurses expressed the problems they faced such as their long working hours, insomnia, changing the clinic where they work, violence, not getting enough salary, and a lack of personal protective equipment and food.

## ETHICS

**Ethics Committee Approval:** Ethical approval was obtained from the Near East University Review Board (approval number: YDU/2021/91-1347).

**Informed Consent:** Informed consent was not required because of the data collection method.

## Authorship Contributions

Concept: Ü.D.Y., N.B., Design: Ü.D.Y., N.B., Supervision: Ü.D.Y., N.B., Materials: Ü.D.Y., N.B., Data Collection and/or Processing: Ü.D.Y., N.B., Analysis and/or Interpretation: Ü.D.Y., N.B., Literature Search: Ü.D.Y., N.B., Writing: Ü.D.Y., N.B., Critical Review: Ü.D.Y., N.B.

## DISCLOSURES

**Conflict of Interest:** No conflict of interest was declared by the authors.

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## REFERENCES

1. Al-Hazmi A. Challenges presented by MERS corona virus, and SARS corona virus to global health. *Saudi J Biol Sci.* 2016; 23(4): 507-11.
2. World Health Organisation (WHO). Coronavirus disease (COVID-19) pandemic. 2020. <https://covid19.who.int/>. Accessed April 5, 2021.
3. Stannard D. COVID-19: Impact on Perianesthesia Nursing Areas. *J Perianesth Nurs.* 2020; 35(3): 237-8.
4. Sun N, Wei L, Shi S, Jiao D, Song R, Ma L, et al. A qualitative study on the psychological experience of caregivers of COVID-19 patients. *Am J Infect Control.* 2020; 48(6): 592-8.
5. Paterson C, Gobel B, Gosselin T, Haylock PJ, Papadopoulou C, Slusser K, et al. Oncology Nursing During a Pandemic: Critical Reflections in the Context of COVID-19. *Semin Oncol Nurs.* 2020; 36(3): 151028.
6. Turkey Ministry of Health. Turkish daily COVID-19 data. Available from: <https://covid19.saglik.gov.tr/>. Accessed April 5, 2021.
7. Nursing Center. 2019 Novel Coronavirus Nurse Resources. Available from: <https://www.nursingcenter.com/coronavirus>. Accessed May 19, 2020.
8. Rothan HA, Byrareddy SN. The epidemiology and pathogenesis of coronavirus disease (COVID-19) outbreak. *J Autoimmun.* 2020; 109: 102433.
9. Naserghandi A, Allameh SF, Saffarpour R. All about COVID-19 in brief. *New Microbes New Infect.* 2020; 35: 100678.
10. Hammad KS, Arbon P, Gebbie K, Hutton A. Nursing in the emergency department (ED) during a disaster: a review of the current literature. *Australas Emerg Nurs J.* 2012; 15(4): 235-44.
11. Kang L, Ma S, Chen M, Yang J, Wang Y, Li R, et al. Impact on mental health and perceptions of psychological care among medical and nursing staff in Wuhan during the 2019 novel coronavirus disease outbreak: A cross-sectional study. *Brain Behav Immun.* 2020; 87: 11-7.
12. Smith RP. Making a case for integration of disaster-preparedness content in associate degree nursing programs. *Teach Learn Nurs.* 2007; 2: 100-4.
13. Tsay SF, Kao CC, Wang HH, Lin CC. Nursing's response to COVID-19: Lessons learned from SARS in Taiwan. *Int J Nurs Stud.* 2020; 108: 103587.
14. Yin X, Zeng L. A study on the psychological needs of nurses caring for patients with coronavirus disease 2019 from the perspective of the existence, relatedness, and growth theory. *Int J Nurs Sci.* 2020; 7: 157-60.
15. Sanders C. Application of Colaizzi's method: interpretation of an auditable decision trail by a novice researcher. *Contemp Nurse.* 2003; 14(3): 292-302.
16. Mental Well-Being of Nursing Staff During the Coronavirus Disease 2019 Outbreak: A Cultural Perspective. *J Emerg Nurs.* 2020; 46(4): 426-7.
17. Turkish Nurses Association. Nurses' situation analysis. Available from: <http://www.thder.org.tr/uploads/files/EK-SB-Hemsirelerin-Durum-Analizi-5.Rapor.pdf>. Accessed May 19, 2020.
18. Zhang M, Zhou M, Tang F, Wang Y, Nie H, Zhang L, et al. Knowledge, attitude, and practice regarding COVID-19 among healthcare workers in Henan, China. *J Hosp Infect.* 2020; 105(2): 183-7.
19. Cai W, Lian B, Song X, Hou T, Deng G, Li H. A cross-sectional study on mental health among health care workers during the outbreak of Corona Virus Disease 2019. *Asian J Psychiatr.* 2020; 51: 102111.
20. Xiang YT, Yang Y, Li W, Zhang L, Zhang Q, Cheung T, et al. Timely mental health care for the 2019 novel coronavirus outbreak is urgently needed. *Lancet Psychiatry.* 2020; 7(3): 228-9.
21. Jackson D, Bradbury-Jones C, Baptiste D, Gelling L, Morin K, Neville S, et al. Life in the pandemic: Some reflections on nursing in the context of COVID-19. *J Clin Nurs.* 2020; 29(13-14): 2041-3.
22. Usher K, Durkin J, Bhullar N. The COVID-19 pandemic and mental health impacts. *Int J Ment Health Nurs.* 2020; 29(3): 315-8.
23. Liu Y, Wang H, Chen J, Zhang X, Yue X, Ke J, et al. Emergency management of nursing human resources and supplies to respond to coronavirus disease 2019 epidemic. *Int J Nurs Sci.* 2020; 7(2): 135-8.