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Experiences of Intensive Care Nurses During Covid-19 Pandemic: An Interpretative Phenomenological Analysis Study

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ABSTRACT:
Purpose: The aim of this study was to determine the experiences of intensive care nurses who cared for patients with suspected or confirmed COVID-19.
Material and Methods: The research was carried out with nurses. Data collection included in-depth interviews conducted between June-August 2020. Interviews were audio recorded, transcribed verbatim, and analysed using the Interpretative Phenomenological Analysis
Results: Three main themes emerged: (a) nurses' compliance with the process; (b) factors affecting motivation; and (c) emotional responses observed in patients. While challenging situations, increase in workload, and situations that cause anxiety were the factors that negatively affected nurses' motivation to work, awareness/empathic behavior and flexible working hours were the factors that positively affected the motivation to work.
Conclusion: Intensive care nurses make great efforts to prevent transmission from patients with COVID-19. It is thought that nurses should be supported in terms of the factors that negatively affect their motivation to work. It is considered that nurses' awareness/empathic behaviors affected their perceptions of the patients' fear of death and feeling of helplessness.
Keywords: *COVID-19, experience, nurse, phenomenological*

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INTRODUCTION

COVID-19 is an acute and highly contagious infectious disease caused by a novel coronavirus 2019 (2019-nCoV). After 2-14 days of incubation, patients with COVID-19 often experience pneumonia symptoms such as sudden high fever, cough and shortness of breath (Chan et al., 2020). COVID-19 first appeared in Wuhan, China, spread all over the world in a short time and caused a pandemic (Holshue et al., 2020; Silverstein et al., 2020). Over 118 million cases and 2,6 million deaths have been reported all around the world. Unfortunately, COVID-19 caused by infected people entering from abroad started to appear in Turkey since March 10, 2020. The number of cases and deaths has increased dramatically in a short time (World Health Organization, 2021). COVID-19 continues to affect the world very quickly. Despite the impact on healthcare providers, excellent management of a pandemic depends on the level of preparedness of healthcare providers, including nurses (Al Thobaity and Alshammari, 2020). The occupational group with the highest risk of transmission are nurses who have close contact with patients and provide care and treatment of patients. Nurses are the frontline healthcare professionals who work across acute care hospitals, long-term care agencies, nursing homes, schools, community, and government healthcare

agencies (Chen et al., 2020).

Background

Patients with signs of COVID-19 are directed to the hospital for intensive care (Karimi et al., 2020). COVID-19 can cause severe pneumonia and even cause death in all age groups in critical care. Therefore, providing care and treatment of patients with COVID-19 in the Intensive Care Unit (ICU) is vital. Since the vast majority of severe patients with COVID-19 require mechanical ventilator, intensive care nurses have responsibilities such as close monitoring of the patient's respiratory function, aspiration of secretions, oral care, giving prone position to the patient, monitoring of early symptoms of sepsis, maintaining enteral nutrition, providing hygiene requirements. During all these treatment and care attempts, it is not possible for the intensive care nurse to leave the patient's room, stay away or behind from the patient's room (Kıraner et al., 2020). Therefore, nurses who care for these patients are considered to be at high risk for this infection and their protection is considered to be one of the top priorities (Raurell-Torreda, 2020). Nurses who have long-term and close contact with patients are at great risk for their and also their families' health status. Nurses experience intense stress during the patient's care process and due to the occurrence of many deaths in working life (Chen et al., 2005; Khalid et al., 2016; Kim and Lee, 2016). In addition to being at risk for health, nurses feel pressure from an ethical perspective since they are responsible for providing care (Torda, 2006).

The investigation of how nurses perceive patient care and the examination of nurses' experiences in establishing a safe procedure are considered to be of great importance in preparing for potential epidemics in the future (Kim, 2018). In this context, the determination of the experiences of nurses while caring for patients with COVID-19 will help to increasing nurses' resilience in response to the crisis (Al Thobaity and Alshammari, 2020).

MATERIAL and METHODS

Purpose and Type of the Study

This study aimed to determine the experiences of intensive care nurses who cared for patients with suspected or confirmed COVID-19. The research questions for the study were 'How did you experience caring for suspected or confirmed COVID-19 patients?' and 'What are your recommendations to our colleagues in terms of caring for suspected or confirmed COVID-19 patients?'

This study have an interpretative phenomenological design. Phenomenology is a philosophical approach to the study of experience, and the goal of it is to explore a lived experience (Charlick et al., 2016). This approach was put forward by Husserl, and was developed by Heidegger, Sartre and Merleau-Ponty (Patton, 2015). Heideggerian phenomenological approach, conceptualized being of people as being-in-the-world, a shared human understanding determined by those things in our world thatare important to us. Heideggerian phenomenology guided the design of this study (Erdogan et al., 2020; Horrigan-Kelly et al., 2016; Patton 2015). In this study, a interpretative phenomenological study approach was chosen because it was thought to be a method which could contribute to the thorough investigation of the experiences of intensive care nurses in ICU.

Sampling and Participant

The study was conducted in a training and research hospital in Istanbul, Turkey. Potential participants were selected for inclusion in the study using the purposive and snowball sampling methods. The inclusion criteria in the study were (a) being an intensive care nurse, (b) having at least one year of working experience in ICU, and (c) having taken care to patients with suspected or confirmed COVID-19 for at least 2 months.

One (SU) of researchers was working as a nurse, and was also a master's degree student with qualitative interview experience (Figure 1). Other researchers (AE, NT) were academic nurses with PhD degree who qualitative research courses, participated in various qualitative interviews and conducted studies. In the first stage, a nurse who met the study criteria and was willing to share her experiences was recommended by the researcher (SU). Then, other nurses were reached using the snowball sampling method. The research team

invited to 20 nurses for voluntarily participate in face-to-face interviews. However, three of the

nurses did not participate in the study. The data analysis was performed together with the process of including nurses in the study in order to determine the data saturation. As a result of the interviews, data saturation was reached due to non-emergence of new codes or themes. achieved. The sample of the study consisted of 15 nurses.

Figure 1. A nurse in intensive care unit

Data Collection

The nurses were interviewed face-to-face using an individual in-depth interview method. A safe environment was provided by using Personal Protective Equipment (PPE) during the interviews. A Nurse Information Form and a semi-structured Interview Guide were used in the interviews. The Nurse Information Form consisted of questions about demographics as age, gender, marital status, educational status, income status, professional working year (Al Thobaity and Alshammari, 2020; Chen et al., 2020; Karimi et al., 2020; Kiraner et al., 2020). Also, the Interview Guide was based on the literature (Kiraner et al., 2020; Kim, 2018; Sperling, 2021). The Interview Guide included open-ended main questions, and clarifying questions to help the interview process which were used if the nurses had problems recalling their experiences (Table 1).

The interview guide was tested by pre-interviews in nurses not included in the actual study, which resulted in corrections of the language and content. The questions on the form were evaluated regard to their purpose, meaning, and scope. Then, interview guide was tested again, after which no further changes were made.

The interviews were conducted by a researcher (SU) with experience interviewing healthcare providers in a private room of ICU between June-August 2020. Each interviews were happened to out of hours in order not to prevent the care provided to patients, and not spending rest hours of nurses. The researcher explained the purpose of study, agreement, and progress method before starting the interview. During the interview, attention was paid to ensure that no health care team member was present to provide nurses' comfort and privacy. Following informed consent, qualitative interviews were conducted. The interviews lasted between 15 and 45 minutes, were digitally recorded and were transcribed verbatim.

The questions included in the interview guide were asked to the nurses. Recording device was used during interviews. The audio recordings of the interviews were transcribed by the researchers and the presence of missing or incorrect information was checked by comparing the audio recordings with the minutes. Non-verbal expressions of the participants such as smile, silence and sigh were recorded in the relevant forms.

Tablo 1. Interview guide

1. How did you experience caring for suspected or confirmed COVID-19 patients?
a. What kind of change did you experience in the intensive care unit during the pandemic process?
b. How did the change affect you?
c. How do you feel while treating or caring for the patient?
d. How was your motivation to work (positive / negative) affected?
e. What precautions do you take to protect yourself when going to the patient?
f. How does using PPE affect you?
g. How are patients affected by change?
h. What kind of changes do you observe in the emotional state of the patients?
2. What are your recommendations to our colleagues in terms of caring for suspected or confirmed COVID-19 patients?

Data Analysis

Interpretative phenomenological researches try to gain a different understanding of the subjects, deep focussing on the quality of the data (Jack and Wibberley, 2014). In research, the nurse must consider the "phenomenon" as something experienced. Phenomenology seeks the understanding and the interpretation of each particular case of the experience, in the way in which life has manifested itself in the being and in the way in which this life speaks of itself (Guerrero-Cantaneda et al., 2019).

Data were analysed according to the principles of Interpretative Phenomenological Analysis (Smith et al., 2009). The themes were determined by researchers. All researchers independently read the

contents of the forms several times so that they would be fully comprehended. Important expressions and their formulated meanings were determined in order to create a coding scheme. A coding scheme was created as a result of the meetings organized by the research team. According to this scheme, all forms were reviewed and the defined meanings were grouped according to themes. This process was repeated when the coding scheme was revised. The themes were generated from the data. Nurses' important expressions were compared with each relevant theme to provide a comprehensive explanation. Regular research meetings were held to ensure the thoroughness of the analysis.

The analysis was performed on Turkish forms and translated into English at the final stage of article writing. Important expressions translated into English by our colleague with a good command of English were compared with Turkish forms.

Consolidated Criteria for Reporting Qualitative Studies (COREQ) guide was followed in the writing of the article.

Ethical Approval

Ethical approval was obtained from the Istanbul University-Cerrahpasa Social and Humanities Research Ethics Committee in Istanbul, which follows international standards and the principles adopted by the World Medical Association Declaration of Helsinki (Dnr: 65169). Before commencing the study, institutional approval was obtained from the hospital. Participants who conformed to the inclusion criteria were given information about the study and their oral and written consent was obtained. The study results were given by coding the names of the participants. The names of the nurses who agreed to participate in the study were symbolized with alphabetical letters on the basis of respect for individuality and human dignity.

Rigour

Various measures were taken by the researchers to minimize or eliminate the factors that affect/threaten validity and reliability in the study (Oral and Çoban, 2020; Rose and Johnson, 2020). To ensure the internal validity of the study; the interview guide was prepared by taking expert opinion. Questions using the interview guide were asked to two nurses from outside the study. The questions were evaluated in terms of understandability. To ensure external validity; the research model, working group, data collection tools, data collection, analysis of data and findings were described in detail. Using the sound recorder in interviews with nurses, data loss was prevented. The research findings were presented to the reader without comment; this situation had been an enhancing effect on increasing the internal reliability (consistency) of the research. In addition, the data were independently read by the three researchers and codes were generated. Themes were created based on the codes, and reached a consensus by all researchers.

RESULTS

Characteristics of the Participants

It was determined that the mean age of the nurses was 26.47±1.81 years (min.-max.: 25-29), 87% of them were women, and the vast majority (87%) of them were single. All of the nurses had bachelor's degree, and 66.7% of them lived alone. The mean working time in the intensive care unit was 3.13±0.25 years (min.-max.: 3-5), and the professional working time was 4.73±4.06 (min.-max.: 3-10) years (Table 2). 20% of the nurses were diagnosed with COVID-19.

Main themes

Three themes were identified in the interviews, which are presented in Figure 2.

Nurses' compliance with the process

This theme is related to nurses' efforts to protect themselves and their environment from infection in the intensive care unit and to prevent transmission in a period during which COVID-19 cases occurred and hospitalizations increased. The existence of an infection, the effect and the process of which are not known exactly, also changed the routine functioning of the health care service, which required nurses to adapt to new practices. Nurses explained the use of PPE and compliance with the new rules as follows:

Sufficient number of PPE was given to us. We have no problem in terms of equipment. We use visors, N95 masks, surgical masks, bonnets, liquid-proof aprons or overalls, and gloves while caring for patients. (Nurse C)

I frequently apply antiseptic solution to my hands. I do not rub my hands on my mouth, face or eyes in any way. I use a mask. I go to the patients by wearing my PPE. I wear my forma only once and when I take off my PPE, I change my forma since it gets wet from sweat. (Nurse J)

We are already paying attention to the use of masks. I pay attention to not to remove the mask in crowded areas, the lifetime of the mask and hand hygiene. We wear our PPE while going to the patients. I pay attention not to sit closely with our colleagues and to follow the distancing rule. (Nurse M)

All of the nurses used similar expressions regarding the use of PPE and compliance with the new rules.

Table 2. Sociodemographic characteristics of nurses (n=15)

Nurse	Age	Gender	Marital status	Working time in ICU (years)	Total working time (years)	Dependent people
Nurse A	25	M	Single	3	3	No
Nurse B	27	F	Single	3	4	No
Nurse C	26	F	Single	3	4	No
Nurse D	25	F	Single	3	3	Family
Nurse E	27	F	Single	3	5	No
Nurse F	27	F	Married	3	10	Family
Nurse G	25	F	Married	3	7	Family
Nurse H	27	F	Single	3	7	No
Nurse I	27	M	Single	3	4	Family
Nurse J	29	F	Single	5	7	No
Nurse K	25	F	Single	3	4	No
Nurse L	29	F	Single	3	4	No
Nurse M	27	F	Single	3	3	No
Nurse N	25	F	Single	3	3	No
Nurse O	26	F	Single	3	3	Family

Abbreviations: F, female; M, male.

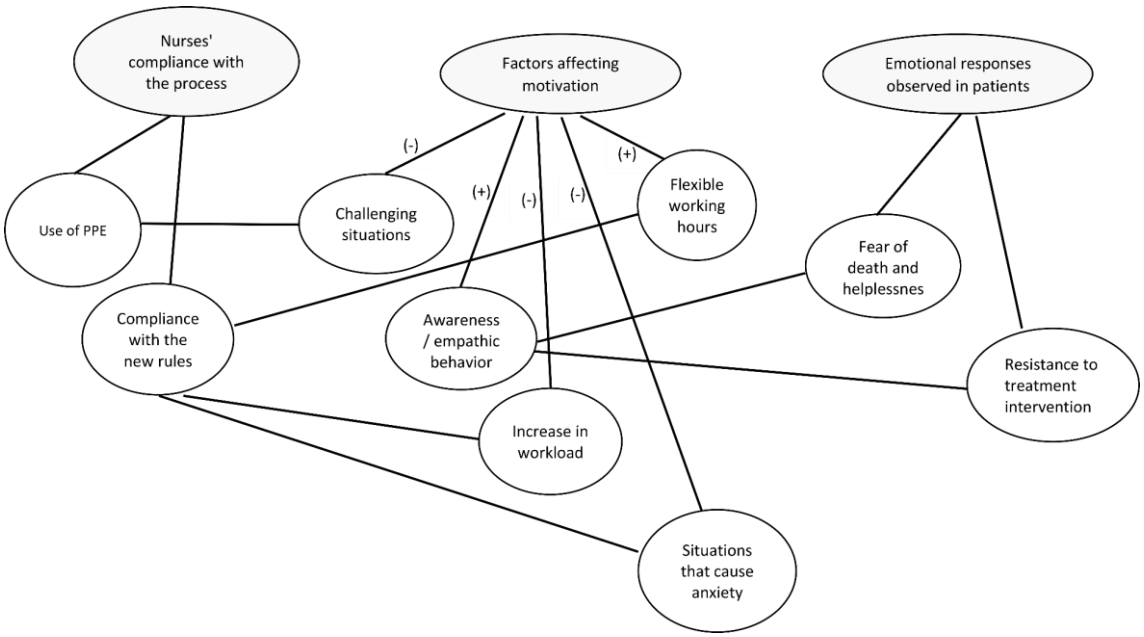

Figure 2. Themes and coding tree generated from data

Factors affecting motivation

The periods of pandemics affect health care workers' motivation to work as well as their psychology. This theme is related to the determination of the factors that positively and negatively affected the motivation to work of intensive care nurses during the pandemic process. While the factors that negatively affected the nurses were categorized as challenging situations, increase in workload, and situations that cause anxiety, the factors that positively affected them were categorized as awareness/empathic behavior, and flexible working hours. Some of the nurses explained these factors as follows:

When I stay with the patient for a long time, I have a serious sweating problem. Therefore, I have to change my uniform when I take off PPE. This ever-repeating process is tiring. The working hours we are in intensive care are also very busy. Flexible working system has been introduced, the number of working days decreased, our off days increased, which made us relaxed. (Nurse A)

The patient can suddenly become desaturated while placing the patient in the bed, giving a body bath or changing the bedclothes. Caring for patients diagnosed with COVID-19 is much more difficult compared to other patients. (Nurse B)

I was diagnosed with COVID-19 and I regained my health as a result of the care and treatment provided. When I returned to my duty in intensive care, the first sentence I said to my patients was "You know, I also had this disease". There may also be difficulties in communicating with the patients. I tell my patients "Look, I also had this disease like you, and I recovered and came back and I am back at my job, you will continue your life as I do. Be strong, don't let yourself go". By empathizing with my patients, I try to comfort them by stating that "I had a headache like you, ... I benefited when I did it, I recovered". I try to make them feel that they are not alone. I try to motivate them to get better. However, an increase in my work load affects my motivation to work negatively. Newly appointed nurses are given to the intensive care nurses so that they would gain experience. In intensive care unit, the number of people suddenly doubles. The number of health care workers seems to be high, however, the number of trained staff is low. The workload of competent nurses has significantly increased during this period. Day by day, COVID-19 tests of one or some of health care workers are positive. We come to the hospital doubtfully as to who is the next victim. Many nurses even stated that they could not sleep the night before they came to the hospital and that they had palpitations while coming to the hospital. (Nurse F)

Since they stayed in intensive care unit, they all felt that they would die, and I was very sorry for them. Therefore, I usually tell patients that they are better and their health is getting better. I also say it to patients with poor condition in order to motivate and support them. I also feel panicked within the period I stay with the patient. I want to finish my work and leave the room as soon as possible. (Nurse O)

All of the nurses made great efforts get their patients back to health as soon as possible. They tried to cope with situations that caused anxiety. They continued to work diligently under heavy workload. Some of the nurses explained the increase in workload as follows:

I think that nurses do much more than their responsibilities. We are told "Let's do it when you are in the room" even in the works that are not our duty. (Nurse E)

I sometimes pray that the patient's condition does not suddenly deteriorate. Because the patient can sometimes unwittingly disconnect a vital apparatus. I cannot describe the level of stress I experienced while wearing PPE to get to the patient as soon as possible. Because we are nurses and we have to get ready and enter the room immediately at the slightest alarm sound. (Nurse N)

Emotional responses observed in patients

Patients with COVID-19 treated in the intensive care unit suffer from severe respiratory distress and many of them are intubated. Increased difficulty in breathing triggers anxiety and fear of death in patients. Although oxygen treatments continue, adequate oxygenation cannot be provided. Desaturation may occur in patients at any time during the treatment and care process. The nurses explained the fear of death and helplessness, and resistance to treatment intervention they observed

in patients as follows:

I observe that conscious patients intensely feel fear and anxiety. “What would happen to me, will I be able to get out of here, why did I become like that etc.”… most of the patients with whom I talked have similar feelings. (Nurse M)

I saw that some conscious patients were hopeless about being able to leave the intensive care unit. They are concerned about their families. Most patients ask us to call their family and have them talk to them. Furthermore, the fact that we go to them like an astronaut dressed in PPE scares them in that their health is deteriorating. Each time they ask why we dress this way. We tell that they should not worry by shouting since what is spoken inside the PPE is not heard well. After completing the treatment and care processes, we leave them immediately. We think that the longer we stand next to them, the risk of getting sick increases even if we are dressed in PPE, which leads to a sense of abandonment in patients, I think. Because they always call us and want us to stand next to them. (Nurse N)

Some conscious patients seem to be helpless. Because we cannot always be with them. They have difficulty in breathing and think that they will die. I also know patients who say I don't want to die, nurse lady. He/she holds my hand says I do not want to die. (Nurse B)

The nurses emphasized the importance of PPE use, and agreed that health care workers should first protect their own health. They strongly recommended working in compliance with the new rules applied with the use of PPE. They emphasized that conscious patients needed morale and motivation, and it may be beneficial to maintain interaction with them through positive suggestions.

DISCUSSION

Be it in daily routine or disasters, nurses are on the frontline and are responsible for providing holistic care for all types of patients in the intensive care unit (Al Thobaity and Alshammari, 2020). In this study, the experiences of intensive care nurses caring for patients diagnosed with COVID-19 were investigated by a phenomenological approach. The results were summarized in 9 categories consisting of 3 themes. They were nurses' attitude in preventing transmission, factors affecting nurses' motivation to work, and behaviors observed in patients. This study is of great importance with regard to the experiences of nurses in the intensive care unit and making sense of these experiences.

Wearing a mask as a protective equipment is a must for health care workers who work on the frontline (Goh et al., 2020). PPE, which protects health care workers from infection, is a critical component of infection control strategies in the settings where health care services are provided. It is essential to protect health care workers from infectious diseases since they provide clinical care to patients during the pandemic process (Patel et al., 2017; Leng et al., 2020). The sudden outbreak of COVID-19 and its rapid spread to many healthcare systems around the world led to a lack of PPE (Boškoski et al., 2020). In the study, it was remarkable that there was a sufficient number of PPE in the intensive care unit and that the nurses had no lack of equipment. Nurses made great efforts to protect themselves from the disease. It was determined that they developed attitudes based on compliance with the new rules along with the use of PPE. The fact that the government quickly restarted procurement of PPE to hospitals from the beginning of the pandemic had a significant effect on nurses' access to equipment. It was considered that the fact that the trainings on fighting against COVID-19 were initiated and repeated frequently in the hospital contributed greatly to the use of PPE by nurses. Furthermore, new decisions were taken by the government's Scientific Committee and new rules were created. These new rules have been updated frequently. The importance of compliance with the new rules and the use of PPE was explained in the in-service training provided by the training nurses in the hospital. It was considered that all these interventions had a positive effect on nurses' use of PPE and compliance with the new rules.

The use of PPE may lead to metabolic fatigue (Martin-Rodriguez et al., 2020). Furthermore, the use of PPE may restrict effective communication in verbal and non-verbal ways in terms of communicating and sharing information (Scott and Unsworth, 2020). In the study, the nurses felt tired with regard to the use of PPE, however, they

described this fatigue as challenging situations that exhausted them rather than metabolic fatigue. The most emphasized challenging situations were intense sweating and repetitive dressing processes due to the use of PPE. Furthermore, deterioration in the vital signs of the patients was an important problem in many interventions for the care of patients with COVID-19, which may negatively affect nurses' motivation to work.

Nurses are at high risk of transmitting the disease to them (Sperling, 2021). The severity of the disease and its unknown dimensions are among the conditions that cause anxiety among nurses (Galehdar et al., 2020). The fear of getting infected and the problems caused by the use of PPE are important sources of stress for nurses (Wang et al., 2020). The provision of care has been negative influenced by factors such as the isolation of patients and the fear experienced by health care providers (Fernandez-Castillo et al., 2021). Nurses were so tired due to the epidemic process and intense work pressure. In the study, nurses' increased workloads while adapting to new rules and worrying about their own and their families' health while caring for patients was a factor that may negatively affect their motivation to work. The literature supports our study in this respect (Fernandez-Castillo et al., 2021; Halcomb et al., 2020). However, flexible working hours, which were arranged by reducing the working hours and increasing the number of off days, can be considered among the factors that partially relieved and motivated the nurses.

As an individual, death is a fact that is mostly denied or attempted to be postponed by people. It was determined that in disaster/crisis situations such as epidemic diseases, individuals' mental health was negatively affected or they had trauma since they witnessed the disease/death process of their relatives/colleagues and their experiences of suffering. In the study, it was observed that the patients had fear of death and felt helpless. It was remarkable that nurses who were diagnosed with COVID-19 and continued to care for patients after treatment exhibited empathic behaviors more intensely. They fact that nurses inspired patients and said motivational words so that patients would not give up hope indicated that they developed empathic behaviors.

Limitations

The fact that the study was conducted in a single-centre is the limitation of the study. These results cannot be generalized to all nurses. Additionally, the mean age of nurses is much younger than that reported in Turkey (Goktepe et al., 2021), and so their experiences may differ from that of older nurses.

CONCLUSION

The nurses working in intensive care units used PPE and complied with the new updated rules. There was an interaction between the use of PPE and challenging situations. While challenging situations, increase in workload, and situations that cause anxiety were the factors that negatively affected nurses' motivation to work, awareness/empathic behavior and flexible working hours were the factors that positively affected the motivation to work. It is predicted that nurses should be supported in terms of the factors that negatively affect their motivation to work. Nurses' awareness/empathic behaviors affected their perceptions of the fear of death and feeling of helplessness, and resistance to treatment intervention of the patients with COVID-19.

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REFERENCES

Al Thobaity, A., Alshammari, F. (2020). Nurses on the frontline against the COVID-19 pandemic: An integrative review. Dubai Medical Journal, 3, 87-92. https://dx.doi.org/10.1159/000509361

Boškoski, I., Gallo, C., Wallace, M.B. et al. (2020). COVID-19 pandemic and personal protective equipment shortage: Protective efficacy comparing masks and scientific methods for respirator reuse. Gastrointest Endoscopy, 92(3), 519–523. https://doi.org/10.1016/j.gie.2020.04.048

Chan, J.F.W., Yuan, S., Kok, K.H. et al. (2020). A familial cluster of pneumonia associated with the 2019 novel coronavirus indicating person-to-person transmission: a study of a family cluster. Lancet, 395(10223), 514-523. https://doi.org/10.1016/S0140-6736(20)30154-9

Charlick, S., Pincombe, J., McKellar, L. et al. (2016). Making sense of participant experiences: Interpretative phenomenological analysis in midwifery research.

International Journal of Doctoral Studies, 11, 205-216. http://www.informingscience.org/Publications/3486

Chen, S.C., Lai, Y.H., Tsay, S.L. (2020). Nursing perspectives on the impacts of COVID-19. Journal of Nursing Research, 28(3), e85. https://doi.org/10.1097/jnr.0000000000000389

Chen, C.S., Wu, H.Y., Yang, P. et al. (2005). Psychological distress of nurses in Taiwan who worked during the outbreak of SARS. Psychiatric Services, 56(1), 76–79. https://doi.org/10.1176/appi.ps.56.1.76

Erdogan, S., Nahcivan N, Esin N. (2020). Hemşirelikte Araştırma: Süreç, uygulama ve kritik (4th ed.). Istanbul: Nobel Tıp Kitabevleri.

Fernandez-Castillo, R., Gonzalez-Caro, M., Porcel-Galvez, A. (2021). Intensive care nurses' experiences during the COVID-19 pandemic: A qualitative study. Nursing in Critical Care, 26(5), 397-406. https://doi.org/10.1111/nicc.12589

Galehdar, N., Kamran, A., Toulabi, T. et al. (2020). Exploring nurses' experiences of psychological distress during care of patients with COVID-19: A qualitative study. BMC Psychiatry, 20(1), 489. https://doi.org/10.1186/s12888-020-02898-1

Goh, Y., Tan, B.Y.Q., Bhartendu, C. et al. (2020). The face mask: How a real protection becomes a psychological symbol during Covid-19?. Brain, Behavior, and Immunity, 88, 1–5. https://doi.org/10.1016/j.bbi.2020.05.060

Goktepe, N., Turkmen, E., Bozkurt, G. et al. (2021). The views of critical care nurses participating in an adult intensive care nursing certification program. Turkish Journal of Intensive Care, 19, 123-30. https://doi.org/10.4274/tybd.galenos.2020.58076

Guerrero-Cantaneda, R.F., Oliva Menezes, T.M., Prado, M.L. (2019). Phenomenology in nursing research: reflection based on Heidegger's hermeneutics. Escola Anna Nery, 23(4), e20190059. https://doi.org/10.1590/2177-9465-EAN-2019-0059

Halcomb, E., McInnes, S., Williams, A. et al. (2020). The experiences of primary healthcare nurses during the COVID-19 Pandemic in Australia. Journal of Nursing Scholarship, 52(5), 553-563. https://doi.org/10.1111/jnu.12589

Holshue, M.L., DeBolt, C., Lindquist, S. et al. (2020). First case of 2019 novel coronavirus in the United States. New England Journal of Medicine, 382, 929–936. https://doi.org/10.1056/NEJMoa2001191

Horrigan-Kelly, M., Millar, M., Dowling, M. (2016). Understanding the key tenets of Heidegger's philosophy for interpretive phenomenological research. International Journal of Qualitative Methods, 15(1), 1-8. https://doi.org/10.1177/1609406916680634

Jack, K., Wibberley, C. (2014). The meaning of emotion work to student nurses: A Heideggerian analysis. International Journal of Nursing Studies, 51(6), 900-907. https://doi.org/10.1016/j.ijnurstu.2013.10.009

Karimi, Z., Fereidouni, Z., Behnammoghadam, M. et al. (2020). The lived experience of nurses caring for patients with COVID-19 in Iran: A phenomenological study. Risk Management and Healthcare Policy, 13, 1271–1278. https://doi.org/10.2147/RMHP.S258785

Khalid, I., Khalid, T.J., Qabajah, M.R. et al. (2016). Healthcare workers emotions, perceived stressors and coping strategies during a MERS-CoV outbreak. Clinical Medicine Research, 14(1), 7–14. https://doi.org/10.3121/cmr.2016.1303

Kıraner, E., Terzi, B., Turkmen, E. et al. (2020). Experiences of Turkish Intensive Care Nurses in the COVID-19 Outbreak. Journal of Education and Research in Nursing, 17(3), 284–286. GALE|A639265806

Kim, K., Lee, O. (2016). Knowledge, Attitudes and Perceptions of Nurses on Personal Protective Equipment: Response to the Middle East Respiratory Syndrome Coronavirus. Journal of Korean Academy of Fundamentals of Nursing, 23(4), 402–410. https://doi.org/10.7739/jkafn.2016.23.4.402

Kim, Y. (2018). Nurses' experiences of care for patients with Middle East respiratory syndrome-coronavirus in South Korea. American Journal of Infection Control, 46(7), 781–787. https://doi.org/10.1016/j.ajic.2018.01.012

Leng, M., Shi, X., Wei, Y. et al. (2020). Mental distress and influencing factors in nurses caring for patients with COVID-19. Nursing in Critical Care, 26(2), 94-101. https://doi.org/10.1111/nicc.12528

Martín-Rodríguez, F., Sanz-García, A., López-Izquierdo, R. et al. (2020). Predicting health care workers' tolerance of personal protective equipment: An observational simulation study. Clinical Simulation in Nursing, 47, 65–72. https://doi.org/10.1016/j.ecns.2020.07.005

Oral, B., Çoban, A. (2020). Kuramdan uygulamaya eğitimde bilimsel araştırma yöntemleri. Ankara: Pegem Akademi.

Patel, A., D'Alessandro, M.M., Ireland, K.J. et al. (2017). Personal protective equipment supply chain: Lessons learned from recent public health emergency responses. Health Security, 15(3), 244–252. https://doi.org/10.1089/hs.2016.0129

Patton, M.Q. (2015). Qualitative research & evaluation methods: Integrating theory and practice (4th ed.). United States of America: Sage Publications.

Raurell-Torredà, M. (2020). Management of ICU nursing teams during the COVID-19 pandemic. Enfermeria Intensiva, 31(2), 49–51. https://doi.org/10.1016/j.enfie.2020.04.001

Rose, J., Johnson, C.W. (2020). Contextualizing reliability and validity in qualitative research: toward more rigorous and trustworthy qualitative social science in leisure research. Journal of Leisure Research, 51(4), 432-451. https://doi.org/10.1080/00222216.2020.1722042

Scott, M., Unsworth, J. (2020). Lessons from other disciplines about communication, human performance and situational awareness while wearing personal protective equipment. SAGE Open Nursing, 6, 1-8. https://doi.org/10.1177/2377960820963766

Silverstein, W.K., Stroud, L., Cleghorn, G.E. et al. (2020).

First imported case of 2019 novel coronavirus in Canada, presenting as mild pneumonia. Lancet, 395(10225), 734. https://doi.org/10.1016/S0140-6736(20)30370-6

Smith, J.A., Flowers, P., Larkin, M. (2009). Interpretative phenomenological analysis: Theory, method and research. London: Sage Publications.

Sperling, D. (2021). Ethical dilemmas, perceived risk, and motivation among nurses during the COVID-19 pandemic. Nursing Ethics, 28(1), 9-22. https://doi.org/10.1177/0969733020956376

Torda, A. (2006). Ethical issues in pandemic planning. Medical Journal of Australia, 14(1), 7-14.

Wang, H., Liu, Y., Hu, K. et al. (2020). Healthcare workers' stress when caring for COVID-19 patients: An altruistic perspective. Nursing Ethics, 27(7), 1490–1500. https://doi.org/10.1177/0969733020934146

World Health Organization. (2021). WHO Coronavirus (COVID-19) Dashboard. Available from https://covid19.who.int/