# ORIGINAL ARTICLE



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# Experiences of health professionals diagnosed with COVID-19 in coping with the disease

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#### **Abstract**

**Aim:** This study evaluates the experiences of health professionals diagnosed with Coronavirus Disease 2019 (COVID-19) in coping with the disease.

**Background:** During the COVID-19 pandemic, health professionals faced various physical and psychological difficulties. Many of them were also infected with COVID-19.

**Methods:** This study used a descriptive phenomenological approach and was conducted between May and June 2020. The participants were 24 health professionals who were diagnosed with COVID-19. Data were collected by phone using semistructured and indepth interviews. Data were analyzed using Colaizzi's seven-step method with the support of MAXQDA software.

**Results:** After the data analysis, the primary codes were extracted, and subthemes were created by categorizing these codes. The subthemes were organized, and themes were created. From the perspective of the participants, four main themes emerged: effects of the disease process on the participants, feelings of the disease process, differences in being infected with COVID-19 as a health professional, and ways to cope with the disease.

**Conclusion:** The reactions of the people around them, their feelings and experiences, and their environmental and institutional support systems affected the ways health professionals coped with COVID-19.

Implications for health policy and nursing: Health managers should provide medical, psychosocial, and legal resources as soon as possible so that health professionals diagnosed with COVID-19 can receive the treatment and care that they need. COVID-19 should be considered an occupational disease by health professionals all over the world.

#### KEYWORDS

coping, COVID-19, experience, health professionals, qualitative research

#### INTRODUCTION

The emergence of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2), which began in China in December 2019 and spread to the whole world, led to the declaration of a pandemic by the World Health Organization (WHO). Its rapid spread resulted in a high number of patients who needed hospitalization and treatment in a short time. Infection risk and incidence are higher among health professionals in the case of COVID-19, similar to Ebola (Grinnell et al., 2015) and H1N1 (Lietz et al., 2016). The WHO estimated that 115 000 healthcare workers died because of the COVID-19 between January 2020 and May 2021 (World Health Organization, 2021). The rate of illness of health professionals

due to COVID-19 was reported as 57.4% in an average year from the date of the first case in Turkey (Cumhuriyet, 2021). Since the COVID-19 outbreak in Turkey, 403 health professionals have died until May 31, 2021 (Turkish Medical Association, 2021).

Health professionals are frontliners in dealing with the pandemic, and it is imperative to protect them. Preventing their illness through infection and improving their morale are the keys to dealing with the pandemic (Jin et al., 2020). For this reason, various guidelines and expert opinions have been published (Kang et al., 2020a; Lancet, 2020). Similarly, various studies have been conducted to explore strategies to maintain the psychosocial well-being of health professionals (Chen et al., 2020; Kang et al., 2020b).

During the pandemic, health professionals experienced physical and mental exhaustion, difficult triage decisions, risk of infection, and physical or psychological attacks, including coughing on them (Joob & Wiwanitki, 2020; Montemurro, 2020). Moreover, the loss of their colleagues to COVID-19 resulted in a difficult situation for them (Jin et al., 2020). Health professionals experienced difficulties in maintaining other social roles, such as being a spouse, child, or parent, because of the long and tiring work hours and the fear of transmitting infection to their family (Souadka et al., 2020). Therefore, following up on infected health professionals and maintaining their psychological well-being is important not only for the professionals themselves but also for their colleagues, family members, patients, healthcare organizations they serve, and society.

Coping with an infection like COVID-19 could be very complicated as health professionals are aware of the consequences of COVID-19, and most would have seen very sick patients in the hospital. Knowing all that information about the disease and loneliness or lack of social contact can make it extra difficult and scary for health professionals. Studies have been conducted on the experiences of health professionals who had COVID-19 in their return-to-work processes (Mohammadi et al., 2021; Zheng et al., 2021). However, we have not found any studies focusing on the ways health professionals infected with COVID-19 coped with the disease. Therefore, this study aimed to evaluate the experiences of health professionals infected with COVID-19 and how they coped with the disease, during the pandemic. We believe that the findings of this study can help understand how the infection affected their transformation from health professionals to healthcare receivers, the difficulties they faced during this process, the issues they needed to face, and the methods they used to cope with the disease. Within this context, we asked the following research questions:

- 1. What are the experiences of health professionals diagnosed with COVID-19?
- 2. How do health professionals diagnosed with the disease cope with COVID-19?
- 3. What are the suggestions of health professionals infected with COVID-19 for other infected health professionals to cope with the disease?

#### **METHODS**

# Research design

This study used a descriptive phenomenological design. Qualitative research focuses on how individuals make sense of their lives, the outlines of the process of making sense, and how they interpret their experiences. Phenomenological studies, one of the qualitative research designs, investigate the meaning of individuals' experiences with an event or aim to understand a concept/event more clearly (Morrow et al., 2015; Speziale et al., 2011; Yıldırım & Şimşek, 2016).

# Participants and procedure

The data were collected between May and June 2020. We used a purposive sampling method to recruit participants (Yıldırım & Şimşek, 2016). Health professionals aged 18–60 who were diagnosed with COVID-19 and could understand and respond to the questions were included in the study. Health professionals who were just diagnosed with COVID-19 and could not complete their COVID-19 treatment and those with conditions that prevent them from completing the interview (e.g., cough attacks and exhaustion) were excluded.

Researchers and participants were part of the same social network. The infected health professionals in the sample group were recruited through social media. The participants posted their COVID-19 status on their social media accounts. Following this, they were contacted by one of the researchers. Contact information was obtained from the participants who gave their consent. After establishing that the potential participant was diagnosed with COVID-19 by a specialist, an interview was arranged. The interview was conducted at a mutually convenient time.

Thirty participants were invited to the study, and 24 agreed to participate. These included 11 nurses, 5 doctors, 5 midwives, and 3 paramedics. Most participants were female (n = 14; 58.3%), married (n = 12; 50%), and university graduates (n = 11; 45.8%). The mean age of the participants was  $30.13 \pm 2.56$ , and most of them (n = 17; 70.8%) worked at a state hospital (public hospital and university hospital). The average time elapsed from diagnosis to the time of the interview was  $21.67 \pm 5.37$  days.

# **Data collection**

Data were collected using a sociodemographic form consisting of seven questions and a semistructured interview-guide prepared by the researchers using the relevant literature (Chen et al., 2020; Jin et al., 2020). The form asked the respondents about their ideas before and after diagnosis, and after the end of the treatment of COVID-19, the changes after the pandemic, the reactions of their environment after diagnosis, and the ways in which they coped with these reactions during COVID-19 treatment.

During the interview, open-ended questions were used, and participants were prompted when required (this situation occurred three times). During emotional moments, they were asked if they wanted to take a break from the interview; they refused and continued with the interview. We made sure to avoid judgmental and confirmative attitudes during the interviews. We conducted all interviews by phone. The mean period for the interviews was  $33 \pm 3.24$  min (min and max: 25-45). Data collection was terminated when data saturation was achieved. The sample consisted of 24 participants.

The interviews were conducted by psychiatric nurses who had worked in this field for at least 12 years. The researcher received training on qualitative studies, including MAXQDA, and conducted various qualitative studies.

# Data analysis

We conducted a descriptive qualitative analysis using Colaizzi's seven-step analysis method for phenomenological studies (Morrow et al., 2015). The interviews were first transcribed word-for-word by the researchers who collected the data (NEB and EO), and then the transcriptions were checked (MT, NEB, and EO). The expressions in the first three recorded transcripts were coded independently by each researcher and discussed until consensus was reached on the coded expressions. The coded transcripts were categorized, and subthemes and themes were created. The findings of the study were reviewed by each researcher. All authors participated in the analysis process, which was carried out with the help of MAXQDA qualitative data analysis software.

# Rigor

Credibility, confirmability, dependability, and transferability are among the criteria for maintaining trustworthiness in a qualitative study (Speziale et al., 2011). In this research, credibility and confirmability were strengthened by spending plenty of time in the data collection and analysis process, recording the interviews, and transcribing them as they are. To enhance dependability, an audit trail was kept for where and how the data were obtained, the analysis process, the results obtained, and all transactions performed in this process. All researchers involved in the study reviewed the explanations and experiences and agreed with the findings of the study.

In the research, feedback was received from two academics experienced and experts in qualitative research. In addition, four participants were asked to check the findings obtained (member check). Participants confirmed our findings. In addition, the direct statements of the participants were also included in the text. Based on this information, the validity and reliability principles were met for the qualitative studies in the literature (Merriam, 2018; Shosha, 2012; Yıldırım and Şimşek, 2016).

#### **Ethical dimensions**

The study was conducted in accordance with the principles of the Declaration of Helsinki. Prior to the research, we obtained permission from the ethics committee of İstanbul University-Cerrahpaşa Social and Human Sciences Research (Decision No: 2020-73) and work permission from the Ministry of Health. We also obtained verbal informed consent from all participants. The names of the participants were not stated in the research; instead, we used numbers to distinguish them.

# **FINDINGS**

The findings are presented in accordance with the COREQ guidelines. As shown in Table 1, the statements of the participants are grouped into four themes: effects of the disease

process on the participants, feelings of the disease process, differences in being infected with COVID-19 as a health professional, and ways to cope with the disease.

# Effects of the disease process on the participants

The effects of the disease process on the participants, which is the first theme of the study, were divided into two main categories: reactions of colleagues and others and experiences of individual change and interpersonal relationships. In this theme, the reactions of the participants from their environment (their colleagues and others) during the illness and their experiences during this process were included.

# Reactions of colleagues and others

This subtheme was defined using the codes of social exclusion, unawareness, carelessness, and support and help. Participants stated that they faced many reactions from their colleagues at workplaces or their environment during the illness process. These reactions included criticism of being accused of infection, exclusion, and stigmatization, as well as offers of support and help from the environment. The following are some of the participants' statements:

"My neighbors reacted like I was a virus, but the disease is caused by a virus... They reacted like I was a radioactive element." (P 2)

"The head nurse asked, "Did you wear a mask when you were working?" (P 10)

"My friends, other than health professionals, began to avoid me because I was a doctor, even before I was diagnosed." (P7)

"When people heard that I was diagnosed, they reacted very badly because they thought I would be bedridden and die." (P 4)

"So many people called me that almost half of my day was spent on the phone. People I never expected and hadn't spoken to for a long time called for support" (P 5)

It was understood that the reactions were mostly negative and they did not find enough support, although there were good wishes and help initiatives. Although reactions such as criticism and judgment negatively affected the participants, reactions with support and aid helped the participants feel good.

TABLE 1 Codes, subthemes, and main themes of experiences of health professionals diagnosed with COVID-19

| Codes                                                                                                                                                                                                                                           | Subthemes                                                              | Main themes                                                                |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------|----------------------------------------------------------------------------|
| <ul><li>Social exclusion</li><li>Carelessness</li><li>Unconsciousness</li><li>Support and help</li></ul>                                                                                                                                        | Reactions of colleagues and others                                     | Effects of the disease process on the participants                         |
| <ul> <li>Strengthened relations</li> <li>Behaviors to prevent reinfection</li> <li>Empathy</li> <li>Feeling stronger</li> <li>Change in life outlook</li> <li>Expectation for institutional support</li> </ul>                                  | Experiences of individual change and interpersonal Relationships       |                                                                            |
| <ul><li>Stress/fear</li><li>Desire to help</li><li>Underestimating the disease</li></ul>                                                                                                                                                        | Feelings prior to COVID-19 diagnosis                                   | Feelings of the disease process                                            |
| <ul> <li>Psychological and Physical Exhaustion</li> <li>Relief</li> <li>Accepting the Disease</li> <li>Shock</li> <li>Idea of Easy Recovery</li> <li>Burden on Workfellows</li> <li>Uncertainty</li> <li>Transmission</li> <li>Death</li> </ul> | Feelings after COVID-19 diagnosis                                      |                                                                            |
| <ul><li> Motivation</li><li> Professional Fatigue</li><li> Longing for Family</li><li> Relief</li></ul>                                                                                                                                         | Feelings after COVID-19 treatment                                      |                                                                            |
| <ul><li>Witnessing recovered patients</li><li>Becoming more conscious</li><li>Having priorities</li></ul>                                                                                                                                       | Advantages of being a health professional                              | Differences in being infected with<br>COVID-19 as a health<br>professional |
| <ul><li>Witnessing patients getting worse</li><li>Risk of reinfection</li><li>Being unconsidered as patient</li></ul>                                                                                                                           | Disadvantages of being a health professional                           |                                                                            |
| <ul> <li>Not thinking about the disease</li> <li>Believing in recovery</li> <li>Reading the literature</li> <li>Communication</li> <li>Religious coping</li> <li>Considering the disease as an opportunity to take a rest</li> </ul>            | Self-coping methods                                                    | Ways to cope with the disease                                              |
| <ul> <li>Being optimistic</li> <li>Adherence to therapy</li> <li>Prioritizing themselves</li> <li>Effective time management</li> <li>Religious coping</li> <li>Avoiding news about COVID-19</li> </ul>                                          | The suggestions for other health professionals diagnosed with COVID-19 |                                                                            |

# Experiences of individual change and interpersonal relationships

This subtheme was defined using six codes: strengthened relations, empathy, feeling stronger, behaviors to prevent reinfection, change in outlook in life, and expectation of institutional support. The experiences of the participants mostly included awareness of the meaning and importance of

life and interpersonal relationships depending on the severity of the disease. In addition, the participants stated that they understand the importance of health and will make more efforts not to be infected again. The following are some of the participants' statements about some of the codes:

"I hugged my family more; our family ties became stronger." (P10)

"I can understand the patients better. I tell them that they will recover since I recovered easily" (P 8).

"This disease showed me that no problem in life is more important than health." (P 9)

"I considered myself more powerful after the disease. Pain that does not kill me empowers me." (P 14)

"I will not postpone anything because of the fear of death, I will spend more time with my wife, children and friends." (P 11)

"I liked to be called by the responsible nurse and the head nurse at my hospital, especially during the first two days. Eventually, I was infected at that institution." (P 1)

The illness process was a serious and traumatic experience for the participants. They thought that their process provided a positive change both in their personal development and in their professional or interpersonal relationships. On the other hand, it was understood how important workplace support was for health professionals.

### Feelings of the disease process

The second theme of the research was categorized into three subthemes: feelings before COVID-19 diagnosis, feelings after COVID-19 diagnosis, and feelings after COVID-19 treatment. This theme includes participants' emotions before the COVID-19 test results are unascertained, the quarantine process after diagnosis, and their feelings during the recovery process.

### Feelings prior to COVID-19 diagnosis

Some participants were worried about the possibility of being positive before the diagnosis of COVID-19 was confirmed. Participants stated that they were afraid of transmitting the disease to themselves and their relatives during the prediagnosis process. However, some participants did not think that they could be infected with the disease before they were diagnosed, because they take the necessary protective measures and do not show any symptoms.

The subtheme of feelings prior to COVID-19 diagnosis was defined using three codes: stress/fear, desire to help, and underestimating the disease. The following are some of the participants' statements about the codes:

"At first, we were very stressed. I thought, 'what if something happened to us' or 'what if we infected the people at home?"" (P 1)

"I tried to be empathetic. The patients were already suffering from emotional deprivation. I tried to communicate with them more." (P 2)

"I thought that this disease would only affect people above the age of 65 and those with chronic diseases." (P 5)

The sense of anxiety experienced by the participants for themselves and their relatives before the diagnosis seemed to increase their willingness to help them by leading them to a better understanding of COVID-19 patients.

# Feelings after COVID-19 diagnosis

As in the prior to diagnosis period, some participants were surprised to be infected as they did not show any symptoms. Participants who showed symptoms were relieved when the uncertainty disappeared when the diagnosis was finalized, as they guessed that they were infected. However, some of the participants also stated that the process was very exhausting and worried about the worsening of the disease.

This subtheme is composed of the following codes: psychological and physical exhaustion, relief, accepting the disease, shock, idea of easy recovery, burden on colleagues, uncertainty, transmission, and death. The following are the participants' statements about some of the codes:

"I was upset because I could not leave the room or see the sun... I died of boredom." (P 17)

"I was already taking care of COVID-19 patients at the hospital; I was expecting to get infected eventually." (P 5)

"In fact, I did not expect this diagnosis. I took the test as a precaution. I was very surprised when I was diagnosed." (P 13)

"The only thing I was upset about was that my colleagues had to work in my stead." (P 5)

"I have a fear of reinfection. I am qualified for a pension. I am cautious. If necessary, I may retire." (P 8)

It was seen that the participants who suspected that they might have been infected with COVID-19 before the diagnosis accepted the diagnosis more easily. It was understood that

during the mandatory quarantine process, some participants were upset because of the isolation and some participants were upset due to the increased workload of their colleagues at workplaces.

# Feelings after COVID-19 treatment

The participants stated that they felt good after their treatment because they survived the disease without developing a poor prognosis. This subtheme was formed using the codes of motivation, professional fatigue, longing for family, and relief. The following are the participants' statements about each code:

"During this period, I developed more self-esteem. I also acquired immunity to the disease. If I get reinfected, I believe that it will be easier for me to recover." (P 13)

"I was exhausted, and the disease gave me a chance to rest." (P 2)

"I did not see anyone during the treatment period. I just left my room and went to work. I was not able to see my children during this process. I missed them a lot." (P 6)

"I said to myself that I would finally be able to go out. At least I would have contact with people again." (P 3)

The compulsory quarantine process was seen as an opportunity to rest during the exhaustion participants experienced due to the intense work tempo. However, the quarantine increased the feelings of longing for their relatives even more. In addition, it was understood that the most participants were more motivated both in their working life and in their private lives after recovery.

# Differences in being infected with COVID-19 as a health professional

The third theme was categorized into two subthemes: advantages of being a health professional and disadvantages of being a health professional. This theme points out that being health professionals creates an advantage and/or disadvantage in their experience of being infected with COVID-19.

# Advantages of being a health professional

The advantages of being a health professional subtheme were formed using the following codes: witnessing recovered

patients, becoming more aware, and having priorities. The participants thought that they were more advantageous in the disease process as they could reach professionals more quickly, obtain professional information more quickly, and observe the recovery process of many patients, compared with other patients, because they were health professionals. The following are the participants' statements about each code:

"Witnessing patients who were much older than me recovering gave me courage." (P 14)

"I was anxious, but I controlled myself at home. I looked at the color of my nails and lips and saw that they were normal. I tried to do breathing exercises by myself." (P 6)

"Medicines are the same, and treatment is the same. However, I had access to any physician I wanted at any time." (P7)

As it can be understood from the expressions in this theme, the participants benefited from some advantages of being health personnel in managing the disease process, such as easier access to information and specialists.

# Disadvantages of being health professional

Participants also experienced the downsides of being a health professional, such as a higher risk of reinfection, more frequent exposure to poor prognostic instances of the disease, and increased need for health professionals. This subtheme was analyzed using the codes of witnessing patients getting worse, risk of reinfection, and being unconsidered as a patient. The following are the participants' statements about each code:

"Witnessing patients who were intubated or died during the period that the disease reached its peak negatively affected me." (P 22)

"We may be reinfected by patients because of our profession. Currently, no one says that reinfection is impossible." (P 5)

"Although people diagnosed with COVID-19 who were not health professionals were sent on leave for up to one month, we were called back earlier with the argument that we already know of this disease." (P 11)

The fact that working environments are more risky areas for the transmission of COVID-19 and seeing the death of many

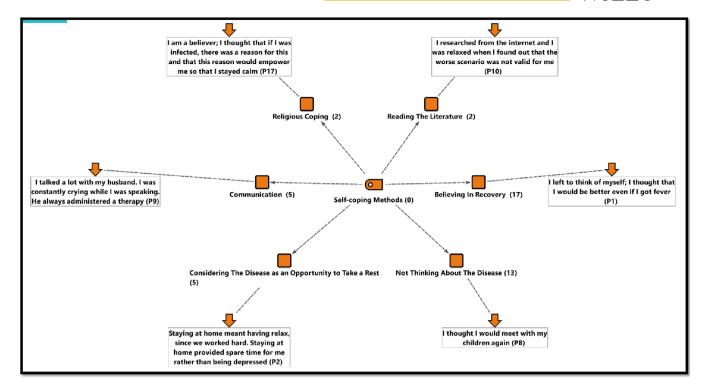


FIGURE 1 Codes and statements of the participants' subthemes of self-coping methods

patients has been a significant disadvantage for the health professional. At the same time, the increase in the need for health personnel during the pandemic caused the participants to be overlooked that they were patients in need of care.

# Ways to cope with the disease

The last theme, ways to cope with the disease, was divided into the subthemes of self-coping methods and suggestions for other health professionals diagnosed with COVID-19. In this theme, the methods of coping with the difficulties experienced by the participants during the illness, quarantine, and treatment process were dealt with.

Participants tried various coping methods in this process. Obtaining information about the disease process from accurate sources, trying to take care of oneself, and maintaining optimism were prominent coping methods. There were also participants who talked with relatives, made good use of their free time, and coped with faith such as praying. Participants thought that these coping experiences would also help other individuals. The codes and the participants' statements about each subtheme are presented in Figures 1 and 2, respectively.

#### **DISCUSSION**

This study provides important contributions to understanding the disease process and coping experiences of COVID-

19-infected health professionals. The results of this study were analyzed under four main themes: effects of the disease process on the participants, feelings of the disease process, differences in being infected with COVID-19 as a health professional, ways to cope with the disease.

The reactions to health professionals diagnosed with COVID-19 were both constructive and critical. Free transportation, accommodation, and additional payments were made for a certain period to support health professionals in the early phases of the COVID-19 outbreak in Turkey (Turkey Ministry of Health, 2020). Online and telephone psychological support service by phone was also provided to health professionals in İstanbul (Istanbul Provincial Directorate of Health, 2020). In China, online psychological support services and temporary accommodation opportunities were provided to health professionals (Chen et al., 2020). Nevertheless, health professionals experienced negative reactions, such as stigmatization, exclusion, and even violence. In Turkey, some health professionals were asked to leave the hotel they stayed in because clients were disturbed by their presence (Gazete Duvar, 2020) or were stigmatized by announcements asking them not to use the elevator (Hürriyet, 2020). Studies have shown that health professional stigmatization is widespread in society and that it affects health professionals' psychological well-being and life satisfaction during the COVID-19 pandemic (Taylor et al., 2020; Teksin et al., 2020).

The experiences of individual change and interpersonal relationships of the participants included strengthened relations, empathy, feeling stronger, change in outlook in life, expectation of institutional support, and behaviors to prevent

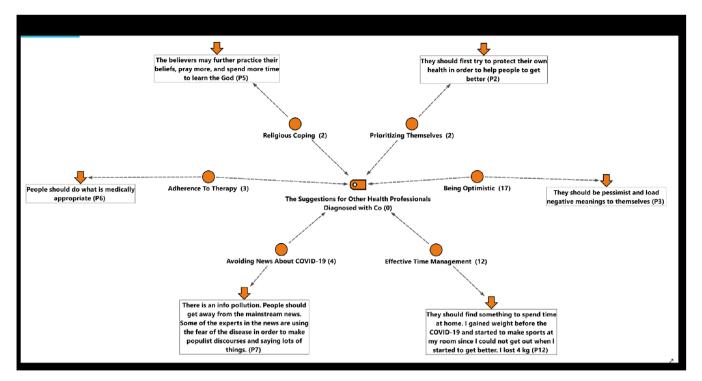


FIGURE 2 Codes and statements of the participants' subthemes of the suggestions for other health professionals diagnosed with COVID-19

reinfection. Analyses of the experiences of health professionals after the severe acute respiratory syndrome (SARS) and the Middle East respiratory syndrome (MERS) pandemics have shown that the implementation of standard hygiene practices has increased (Alsubaie et al., 2019). These behaviors, which are evident in our research, are the measures to decrease the risk of reinfection. During the disease process, the health professionals in our study experienced positive developments in their relationships and attitudes toward life. The participants who recovered from COVID-19 expressed that they felt stronger and empathized with COVID-19 patients. Another issue encountered by the participants was the demand for institutional support. Although some of the participants were supported by their institutions, most were not during the process of the disease. It has been reported that the support for health professionals from the organizations they work for during the COVID 19 process was lower than that from their families and the community. Organizational support plays an important role in the work motivation of health workers (Sapkota et al., 2021). Support from medical institutions decreases the intention to resign (Kusui et al., 2017), and supportive managers have a positive effect on the emotional status of health professionals (Greenberg et al., 2020). The adaptation process of nurses after COVID-19 quarantine is related to their psychological health, and emotional and institutional support should be given during this process. These regulations are also important in terms of the quality and safety of nursing care (Zheng et al., 2021).

Prior to diagnosis, most of the participants believed that they would not get infected; thus, they were shocked when

they were diagnosed with COVID-19. A study of health professionals diagnosed with COVID-19 found that most of the participants were careful to avoid the disease before the diagnosis, but some were anxious. Following the diagnosis, most of the participants felt psychological stress during isolation. Their sources of stress were the process of the disease, fear of infecting someone else, negative news, change in the social environment, and social exclusion (Jin et al., 2020). Posttraumatic stress disorder symptoms have been reported to be seen among health professionals during the COVID-19 process (Carmassi et al., 2020). Studies on the feelings of health professionals during the SARS and the MERS pandemics found that anxiety, fear of death, uncertainty, fear of transmitting the disease, professional responsibility, and exhaustion were common feelings among health professionals (Alsubaie et al., 2019; Kim & choi, 2016).

The workload of health professionals serving COVID 19 patients during the pandemic period was found to be high, adversely affecting their mental states (Shoja et al., 2020). This situation was also observed in our study. Some of the quarantined health professionals stated that they were upset that their friends had more workload because they became infected. Unlike other studies, our study found that the participants felt relieved after the diagnosis. This finding may be related to the disappearance of uncertainty about whether the disease was transmitted, causing the participants to feel relieved.

After treatment, the participants showed motivation, professional fatigue, relief, and longing for their families. Although motivation and relief were positive themes, professional fatigue and longing for their families could be related to the need for rest together with their family members. Exhaustion, burnout, and reluctance to work indicate that emotional and social support should be given to health professionals during and after the pandemic.

The theme of differences comprises the subthemes of the advantages and disadvantages of health professionals infected with COVID-19 compared with other members of society. Health professionals are witnesses to COVID-19 patients recovering or deteriorating during the pandemic. This situation, which is the common point of both subthemes, was considered an advantage by some participants and a disadvantage by others. This finding may be related to the participants' attitudes in life, whether they are health professionals or not. Perceiving both the positive and negative sides and choosing which side to prioritize are in the power of an individual. However, witnessing negative situations may prevent individuals from developing a positive attitude. For this reason, psychosocial support should be provided to health professionals. Becoming more conscious and having priorities, which are the codes of the subtheme of advantages, are the expected codes. Conversely, the risk of being reinfected, which is one of the codes of the subtheme of disadvantages, explains the reason for the behaviors to avoid reinfection, which is one of the codes of the process of the disease theme. Another code of this subtheme is being unaccepted as patients. Due to the increasing need for health professionals, some participants stated that the institutions they work for treat them as if they are not sick. This situation caused the participants to think that they are seen only as a labor force by the institutions. Mohammadi et al. (2021) found that nurses who returned to work after being infected with COVID-19 had concerns about transmitting the disease to their families and being reinfected, which could be more severe. In addition, these nurses were not evaluated as patients by their institutions, were seen as part of the labor force, and were treated unsympathetically. Thus, they lost their motivation for the profession, their quality of patient care decreased, and their desire to leave their jobs increased.

The participants explained how they coped with the disease and provided suggestions to other health professionals. Not thinking about the disease, believing in recovery, reading literature, communication, religious coping, and considering being sick as an opportunity to rest were among the selfcoping methods of the participants. Jin et al. (2020) found that self-motivation, verbal or written messages, video conversations with the family or colleagues, literature review, avoiding providing information, and seeking psychological support are self-coping methods. In their study conducted after the MERS pandemic, Son et al. (2019) listed personal competence, belief in instincts, positive consideration of the situation, and spiritual coping as methods for coping with the disease. Although our findings are consistent with the literature (Jin et al., 2020; Son et al., 2019), considering being infected with the disease as an opportunity to rest has not been listed in the literature. This consideration may be related to the intensive working hours and professional exhaustion experienced during the pandemic. The suggestions of the participants to health professionals diagnosed with COVID-19 include being optimistic, adhering to therapy, prioritizing themselves, effective time management, religious coping, and avoiding news about COVID-19. These suggestions are generally summarized as follows: if you are infected with COVID-19, think positive and believe in recovery, adhere to therapy, manage your time effectively during quarantine, pray if you want to, avoid negative news about COVID-19, and think and protect yourself

#### **CONCLUSIONS**

Health professionals diagnosed with COVID-19 should be supported not only by their families, friends, or colleagues but also by the managers of their institutions. Health professionals should be given the opportunity to express their emotions and ideas online, if not face-to-face, so that they will not feel alone during the pandemic process.

During the quarantine period, the expectations of infected health professionals of achieving full recovery should be encouraged, and activities and facilities that could keep them busy should be suggested. Their physical and emotional wellbeing should be monitored, and professional support should be provided if needed.

#### Limitations

The findings of this study are limited to the comments of 24 health professionals who agreed to take part in this research; thus, they are not generalizable. Age and symptom severity of the disease are the other limitations in this study. The majority of the participants were in their 30s and had mild symptoms. As the severity of the disease may differ in young people versus older people, the mental concerns of patients of different ages may differ.

# Implications for health policy and nursing

The negative experiences of health professionals diagnosed with COVID-19 harm not only themselves but also the quality of healthcare services because of the decreased quality of services they provide during the pandemic. Existing studies have revealed the long-term effects of the negative experiences of pandemics.

Health managers should provide medical, psychosocial, and legal resources as soon as possible so that health professionals diagnosed with COVID-19 can receive the treatment and care needed. Society should be informed about the working conditions and difficulties experienced by health professionals during the pandemic process through public service announcements. Health professional organizations can help health professionals receive material and moral support by communicating their increasing physical and psychosocial burdens to policy makers. Moreover, COVID-19 should be accepted as an occupational disease by health professionals all over the world.

#### AUTHOR CONTRIBUTION

Study conception and design: NEB, EO, and MT; data collection: NEB and EO; data analysis and interpretation: NEB, EO, and MT; drafting of the article: NEB, MT, and EO; critical revision of the article: NEB, EO, and MT.

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#### CONFLICT OF INTEREST

No conflicts of interest have been declared by the authors.

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#### ETHICS APPROVAL

The study was conducted in line with the principles of Helsinki Declaration. Prior to research, we obtained permission from the Istanbul University Cerrahpaşa Social and Human Sciences Research Ethics Committee (No. 2020\_73). We also obtained work permission from the Ministry of Health. Additionally, we obtained verbal informed consent from all the participants. Names of the participants were not stated in the research; rather we used numbers to indicate different participants.

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#### REFERENCES

- Alsubaie, S., Temsah, M.H., Al-Eyadhy, A.A., Gossady, I., Hasan, G.M., Al-Rabiaah, A. et al. (2019) Middle East respiratory syndrome coronavirus epidemic impact on health care workers' risk perceptions, work and personal lives. *The Journal of Infection in Developing Countries*, 13(10), 920–926. https://doi.org/10.3855/jidc.11753
- Carmassi, C., Foghi, C., Dell'Ostea, V., Cordone, A., Bertelloni, C.A., Bui, E. & Dell'Ossoa, L. (2020) PTSD symptoms in health care workers facing the three coronavirus outbreaks: What can we expect after the COVID-19 pandemic. *Psychiatry Research*, 292, 113312. https://doi.org/10.1016/j.psychres. 2020.113312
- Chen, Q., Liang, M., Li, Y., Guo, J., Fei, D., Wang, L. & Wang, J. (2020) Mental health care for medical staff in China during the COVID-19 outbreak. *The Lancet Psychiatry*, 7(4), e15–e16. https://doi.org/10.1016/S2215-0366(20)30078-X
- Cumhuriyet (2021) 'The rates of infected with COVID-19 among health-care workers have been announced: 1 out of 74 people who died from Corona is a healthcare worker'. Available at: https://www.cumhuriyet.com.trf/haber/saglikcilarin-COVID-19a-yakalanma-oranlari-aciklandi-koronadan-olen-74-kisiden-1i-saglikci-1816420 [Accessed 27th May 2021] (in Turkish).
- Gazete Duvar (2020) Health professionals were fired from the hotel they accommodated. Available at: https://www.gazeteduvar.com.tr/

- gundem/2020/04/13/saglik-calisanlari-konakladiklari-otelden-kovuldu/ [Accessed 20th May 2020] (in Turkish).
- Greenberg, N., Brooks, S. K., Wessely, S. & Tracy, D. K. (2020) How might the NHS protect the mental health of health care workers after the COVID-19 crisis? *The Lancet Psychiatry*, 7(9), 733–734. https://doi.org/10.1016/S2215-0366(20)30224-8
- Grinnell, M., Dixon, M.G., Patton, M., Fitter, D., Bilivogui, P., Johnson, C. & Raghunathan, P. (2015) Ebola virus disease in health care workers Guinea, 2014. Morbidity and Mortality Weekly Report, 64(38), 1083–1087. https://www.jstor.org/stable/24856806
- Hürriyet. (2020) They tell notes saying "use the back door". Health professionals and their relatives are telling these. Available at: https://www.hurriyet.com.tr/kelebek/hurriyet-pazar/apartmanlara-arka-kapiyi-kullanin-gibi-notlar-asiliyor-saglik-calisanlari-ve-yakinlari-anlatiyor-41497718 [Accessed 20th May 2020] (in Turkish).
- Istanbul Provincial Directorate of Health. (2020) Online psychological support during the corona pandemic. Available at: https://istanbulism.saglik.gov.tr/TR,180686/korona-virus-pandemisinde-online-ruhsal-destek.html [Accessed 20th May 2020] (in Turkish).
- Jin, Y.H., Huang, Q., Wang, Y.Y., Zeng, X.T., Luo, L. S., Pan, Z.Y. & Wang, N. (2020) Perceived infection transmission routes, infection control practices, psychosocial changes, and management of COVID-19 infected health care workers in a tertiary acute care hospital in Wuhan: a cross-sectional survey. *Military Medical Research*, 7, 1–13. https://doi.org/10.1186/s40779-020-00254-8
- Joob, B. & Wiwanitkit, V. (2020) Traumatization in medical staff helping with COVID-19 control. *Brain, Behavior, and Immunity*, 87, 10–12. https://doi. org/10.1016/j.bbi.2020.03.020
- Kang, L., Li, Y., Hu, S., Chen, M., Yang, C., Yang, B. X. & Chen, J. (2020a) The mental health of medical workers in Wuhan, China dealing with the 2019 novel coronavirus. *The Lancet Psychiatry*, 7(3), e14. https://doi.org/10.1016/ S2215-0366(20)30047-X
- Kang, L., Ma, S., Chen, M., Yang, J., Wang, Y., Li, R. & Hu, S. (2020b) 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, Behavior, and Immunity*, 87, 11–17. https://doi.org/10.1016/j.bbi.2020.03.028
- Kim, J.S. & Choi, J.S. (2016) Factors influencing emergency nurses' burnout during an outbreak of Middle East respiratory syndrome coronavirus in Korea. Asian Nursing Research, 10(4), 295–299. https://doi.org/10.1016/j. apr 2016/10.002
- Kusui, Y., Yamazaki, T., Yamada, T., Hamada, M., Ueshima, K., Tajima, K. & Sokejima, S. (2017) Worker resignation due to patient nuisance in hospitals: determinants and prevention. Archives of Environmental & Occupational Health, 72(1), 10–19. https://doi.org/10.1080/19338244.2016.1140628
- Lietz, J., Westermann, C., Nienhaus, A. & Schablon, A. (2016) The occupational risk of influenza A (H1N1) infection among health care personnel during the 2009 pandemic: a systematic review and meta-analysis of observational studies. *Plos One*, 11, e0162061. https://doi.org/10.1371/journal.pone.0162061
- Merriam, S.B. (2018) *Qualitative research: A guide to drawing and implementation.* (Trans. Ed. Turan, S.), (Translation from 3rd Edition). Ankara: Nobel Publishing (in Turkish).
- Mohammadi, F., Radfar, M. & Hemmati Maslak Pak, M. (2021) Work-place challenges and nurses recovered from COVID-19. *Nursing Ethics*. https://doi.org/10.1177/09697330211020439
- Montemurro, N. (2020) The emotional impact of COVID-19: from medical staff to common people. *Brain, Behavior and Immunity*, 87, 23–24. https://doi.org/10.1016/j.bbi.2020.03.032
- Morrow, R., Rodriguez, A. & King, N. (2015) Colaizzi's descriptive phenomenological method. The Psychologist, 28, 643–644.
- Sapkota, A., Sedhain, A., Gachhadar, R. & Bhattarai, G.R. (2021) Family, social and organizational support among healthcare professionals during COVID-19 pandemic in selected districts of Nepal. *Journal of Chitwan Medical College*, 11(1), 4–11.
- Shoja, E., Aghamohammadi, V., Bazyar, H., Moghaddam, H.R., Nasiri, K., Dasthi, M. et al. (2020) Covid-19 effects on the workload of Iranian

- healthcare workers. BMC Public Health [Electronic Resource], 20, 1636. https://doi.org/10.1186/s12889-020-09743-w
- Shosha, G.A., (2012) Employment of Colaizzi's strategy in descriptive phenomenology: a reflection of a researcher. *European Scientific Journal*, 8(27).
- Son, H., Lee, W., Kim, H., Lee, K. & You, M. (2019) Hospital workers' psychological resilience after the 2015 Middle East respiratory syndrome outbreak. Social Behavior and Personality: An International Journal, 47(2), e7228. https://doi.org/10.2224/sbp.7228
- Souadka, A., Essangri, H., Benkabbou, A., Amrani, L. & Majbar, M.A. (2020) COVID-19 and Healthcare worker's families: behind the scenes of frontline response. EClinical Medicine, 23, 100373. https://doi.org/10.1016/j.eclinm. 2020.100373
- Speziale, H., Streubert, H. & Carpenter, D. (2011) *Qualitative research in nursing: advancing the humanistic imperative.* Philadelphia: Lippincott Williams & Wilkins.
- Taylor, S., Landry, C.A., Rachor, G.S., Paluszek, M. M. & Asmundson, G.J.G. (2020) Fear and avoidance of healthcare workers: an important, underrecognized form of stigmatization during the COVID-19 pandemic. *Jour*nal of Anxiety Disorders, 75, 102289. https://doi.org/10.1016/j.janxdis.2020. 102289
- Teksin, G., Bas Uluyol, O., Sahmelikoglu Onur, O., Teksin, M.G. & Ozdemir, H.M. (2020) Stigma-related factors and their effects on health-care workers during COVID-19 pandemics in Turkey: a multicenter study. *The Medical Bulletin of Sisli Etfal Hospital*, 54(3), 281–290. https://doi.org/10.14744/ SEMB.2020.02800
- The Lancet (2020) COVID-19: protecting health care workers. *The Lancet*, 395, 922. https://doi.org/10.1016/S0140-6736(20)30644-9
- Turkey Ministry of Health. (2020) Announcements. Available at: https://yhgm.saglik.gov.tr/TR-10084/duyurular.html?Sayfa=7 [Accessed 20th May 2020] (in Turkish).
- Turkish Medical Association (2021) What the Deaths of Health Care Workers Tell in Turkey. Available at: https://www.ttb.org.tr/userfiles/files/son\_son\_saglik\_emekcileri\_olumleri\_rapor.pdf [Accessed 17th September 2021] (in Turkish).
- World Health Organization. (2021) Health and Care Worker Deaths during COVID-19. Available at: https://www.who.int/news/item/20-10-2021-health-and-care-worker-deaths-during-covid-19 [Accessed 27th October 2021].

- Yıldırım, A. & Şimşek, H. (2016) Research methods in social sciences (Extended 10th Edition). Ankara: Seckin Publishing (in Turkish).
- Zheng, N., Zhang, T., Liu, Y. & Zhu, X.Q. (2021) Investigation of the status of nurses returning to work after recovering from COVID-19 and influencing factors. *Journal of Nursing Care Quality*, 36(1), E1–E6. https://doi.org/10. 1097/NCO.000000000000000521

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