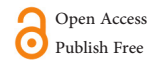


Original Article



Lived Experiences of Physicians Working in Hospitals during the COVID-19 Crisis: A Qualitative Study

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Abstract

Background: With the onset of the coronavirus pandemic in 2019, healthcare workers were at the forefront of dealing with the disease. Medical centers were faced with limited facilities and insufficient information. A number of medical staff became infected with the disease, and some lost their lives. This study was conducted to understand the perceived impact of the pandemic on physicians working in healthcare facilities of Shiraz and Yazd Universities of Medical Sciences during the COVID-19 pandemic.

Methods: The present study was a qualitative one conducted in the teaching hospitals of Shiraz and Yazd in the southwest of Iran in 2020-2021. Purposive sampling was used to select the participants and the process continued until data saturation was reached. Data were collected through semi-structured interviews with 21 physicians working in hospital wards during the COVID-19 crisis. Data were analyzed using the seven-step analytical method proposed by Colaizzi.

Results: Four themes and eleven subthemes emerged from data analysis. The main themes included *managerial weakness*, *burnout*, *distorted doctor-patient relationship*, and *misinformation*.

Conclusion: The preparedness of the medical system and the infrastructure needed to deal with the coronavirus pandemic were not as expected. The COVID-19 crisis also highlighted the lack of information and support for physicians as a significant challenge.

Keywords: COVID-19, Physicians, Phenomenology, Crisis

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Introduction

The novel coronavirus (2019-nCoV, or COVID-19) broke out in late December 2019 in Wuhan, China (1) and spread rapidly to other parts of the world (2). SARS-CoV-2 has been classified as a zoonotic disease and the causative agent of COVID-19 infectious pneumonia, which was declared a global pandemic by the World Health Organization (WHO) on January 30, 2020 (3). The virus has overshadowed many people's daily lives worldwide and has negatively affected all aspects of human life, for being new to most people (4). The World Health Organization has developed guidelines for preparing for the COVID-19 pandemic. These preparations include monitoring patients, testing samples, infection control in health centers, maintaining appropriate and proper resources, and communicating with the public about the COVID-19 virus (5). Medical staff (physicians, nurses, medical laboratory staff, maintenance staff, clinical trainees, volunteers, etc) serving in healthcare centers, regardless of their employment status, are at the hazard of direct or indirect exposure to COVID-19 patients' hazardous substances and infectious agents (6). Previous

epidemics have revealed healthcare providers' high stress, anxiety, and low mood (7,8).

COVID-19 has put pressure on the entire healthcare system, and it is imperative that, through objective measures, the exhaustion and burnout concerns of physicians and residents be regularly addressed to prevent possible short-term and long-term adverse consequences (9). In a study in Pakistan, Haq et al examined the experiences of physicians during the pandemic and addressed the challenges like psychological stress and infrastructural flaws (10). Physicians were at the forefront of the fight against the COVID-19 pandemic and a number of them died. Exploring their experiences during the coronavirus can help the system prepare for similar situations in the future. However, there are very few studies on the experiences of physicians during the COVID-19 pandemic. In Iran, very few studies have been conducted on physicians' perceptions and experiences while facing the COVID-19 pandemic. Therefore, the present study explores physicians' perceptions and experiences in dealing with the COVID-19 pandemic in teaching hospitals.



Methods

This study was conducted using a qualitative method with a phenomenological approach to evaluate the experiences of physicians working in COVID-19 wards of teaching hospitals affiliated with Shiraz and Yazd universities of medical sciences in 2020-2021. The study participants were physicians and specialists working in the wards of COVID-19 teaching hospitals in Shiraz and Yazd, including Ali Asghar, Faghihi, Namazi, and Shahid Sadoughi hospitals. Criteria for inclusion in the study were being physicians of Shiraz and Yazd universities of medical sciences who provided care to COVID-19 patients admitted to hospital wards and willingness to participate in the study. This qualitative study was conducted from December 2020 to March 2021. In this study, data were collected through in-depth and semi-structured interviews. Purposive sampling was used to select the physicians who had experienced COVID-19. A total of 21 physicians (Table 1) participated in the study and the process of data collection through interviews continued until data saturation was reached i.e. to the point where no new information was obtained (11).

The interviews with the participants working in COVID-19 wards of teaching hospitals were conducted by the first author in Shiraz and by the third author in Yazd. The interviewers had experience in conducting qualitative research.

Table 1. Demographic characteristics of the study participants

	Gender	Major/occupation	Duration of presence in COVID-19 ward
1	Female	Surgeon	9 months
2	Male	Specialist	9 months
3	Male	General practitioner	9 months
4	Female	Anesthesiologist	9 months
5	Female	Infectious disease specialist	9 months
6	Male	Surgeon	9 months
7	Female	General practitioner	9 months
8	Female	General practitioner	9 months
9	Male	General practitioner	9 months
10	Male	General practitioner	9 months
11	Female	General practitioner	9 months
12	Male	General practitioner	9 months
13	Female	Social medicine	9 months
14	Male	General practitioner	12 months
15	Male	Pulmonologist	9 months
16	Male	Infectious disease specialist	9 months
17	Male	ICU specialist	9 months
18	Male	ICU specialist	9 months
19	Male	Anesthesiologist	9 months
20	Female	General practitioner	12 months
21	Female	General practitioner	12 months

Written informed consent was obtained from the participants. Interview questions included “*Would you please tell us about your experience of taking care of patients with COVID-19?*” and “*How do you cope with that situation?*”. For more details, questions such as “*Can you explain more?*” or “*What do you mean by that?*” were also asked.

Some of the interviews were conducted face to face and some by phone. In-person interviews were carried out in the hospital. Each interview lasted 30-35 minutes on average and all were fully recorded via an audio recorder and then transcribed. Each interview was coded for confidentiality.

Data analysis was performed simultaneously with data collection. Three team members did the coding individually. Data were analyzed using the seven-step analytical method proposed by Colaizzi (12). First, the statements of the participants were read to empathize with them. In the second stage, the essential phrases were extracted. In the third stage, set concepts i.e., the meaning or concept of each important phrase, were formed. Fourth, the set concepts were organized into thematic categories. Fifth, the findings were integrated into a comprehensive description of the phenomenon in question, and the comprehensive description of the phenomenon under study was formulated in the form of an explicit statement. In the last step, the results were returned to the participants to elicit their opinions. Lincoln and Guba’s criteria were used to determine the accuracy of qualitative data (13). The credibility of the findings was ensured using a triangulation strategy. Three researchers assisted in reviewing the findings. In addition to the interviews, the long-term involvement with the data added to the validity of this study. Preliminary findings of the study, along with codes and initial categories, were presented to some participants for member checking. Some parts of the data were analyzed by other colleagues who were not involved in the study (peer checking). The researchers discussed with a faculty member to determine the dependability of the data. All activities were recorded for confirmability, and a report on the research flow was prepared. Regarding transferability, the results were shared with two faculty members specialized in infectious diseases familiar with the subject, and they confirmed the findings. A written informed consent was obtained from the participants. The objective of the study and the right to leave the study were explained to the participants, and they were asked for permission to record the interviews.

Results

Nine female and twelve male physicians participated in this study, all of whom were working from the beginning of the pandemic in the COVID-19 wards.

From the total codes obtained, four themes and eleven

subthemes were extracted. The main themes included *managerial weakness, burnout, distorted doctor-patient relationship, and misinfodemic* (Table 2).

Managerial Weakness

Management systems suffered a severe shock with the coronavirus disease (COVID-19) outbreak. Passive defense systems were paralyzed entirely, which ostensibly should have anticipated requirements for such events. Participants were somewhat negative and critical in their view of crisis management amid the COVID-19 pandemic. The subthemes of managerial weakness were *lack of medical equipment, lack of protective equipment, and lack of financial support*.

Lack of medical equipment

One issue was the lack of medical equipment and facilities, which is a requirement for physicians to treat and control patients and a necessity for hospitals. Participant 9 pinpointed, *“Due to the large number of patients attending teaching hospitals, there was a shortage of equipment and facilities. We did not have the necessary equipment, especially in the early days of the COVID-19 outbreak”*.

Lack of protective equipment

The problem that arose during the COVID-19 outbreak was that the medical staff, especially the physicians, did not have protective and safety equipment, and this was a big challenge at the hospital.

One participant said, *“Well, in the early days when we were involved in the COVID-19 response, the facilities were really limited. Coveralls, caps, safety shoes and gloves, and protective equipment were available late. Even face masks were not enough for all staff. Some colleagues used to buy personal protective equipment such as safety gloves, face masks, and disinfectants on their costs”* (Participant 3).

Lack of financial support

The organization should have provided various supports such as sufficient salary and benefits for the staff to

provide their medical services to patients with delight. One of the participants said, *“Despite the dire situation that arose in the beginning, I had to endure the worry of late payment of salaries and non-payment of benefits. Hospital officials were expected to at least address the staff’s financial concerns in those critical circumstances; not that we pursue our overdue payments and benefits”* (Participant 11).

Burnout

The high number of patients admitted to the hospitals and the lack of human resources to deal with this huge admission were the most important reasons for the burnout of human resources. The attending physicians were involved in a high workload, on the one hand, and family issues on the other. This main theme was divided into three subthemes including *disruption of family relationships, stress and fear of getting infected, and excessive fatigue in the ward*.

Disruption of family relationships

Due to the influx of patients to hospitals and the possibility of infecting other family members, physicians had to maintain strict social distancing from their families during this unprecedented time. Therefore, physicians in the first and second surges, in particular, preferred not to go home or, if they did go home, they adhered to the most severe protective measures and behaviors that transmitted fear and anxiety to them and their families. *“It has become very difficult for me. I do not have even small joys anymore. When I arrived home from work, I used to hug and kiss my children to relieve my tiredness. My wife does not even allow me to approach my children due to extreme fear. I do not know how long I will survive in these conditions”* (Participant 13).

Stress and fear of being infected

The medical staff were severely stressed at work, and fears of family infection and virus transmission at home were other concerns of the participants. *“Well...in the early days when the virus was detected, we were all really scared, we thought we were going to die because no one knew what was going to happen and what to do, and that was a cause for concern for colleagues”* (participant 6).

Excessive fatigue in the ward

The high workload, especially while wearing protective equipment, created a lot of physical stress and fatigue for the participants. This fatigue was aggravated by the increased patient admission and the illness of part of the medical staff. *“You cannot ignore the fatigue and work pressure in such a situation. The lack of manpower and high workload and that we had to work while wearing a protective dress in hot weather in the absence of proper ventilation, had multiplied our fatigue”* (Participant 9).

Table 2. Themes and subthemes of the study

Themes	Subthemes
Managerial weakness	Lack of medical equipment
	Lack of protective equipment
	Lack of financial support
Burnout	Disruption of family relationships
	Stress and fear of getting infected
	Excessive fatigue in the ward
Distorted doctor-patient relationship	Lack of effective communication with the patient
	Patient’s fears
Misinfodemic	False and baseless beliefs
	Lack of reliable news sources
	The irresponsibility of some individuals

Distorted doctor-patient relationship

One of the most important reasons for the distorted doctor-patient relationship was ineffective communication with patients. Full protective equipment would hinder communication between physicians and patients and lead to poor visibility and hearing. The subthemes were *lack of effective communication with the patient and patient's fears*.

Lack of effective communication with the patient

Patients did not know their doctors and could not have eye-to-eye contact with them. Physicians also had to communicate louder with their patients because of wearing protective equipment. *"One of my patients was diagnosed with COVID-19, but I could not talk to him from behind the shield and mask. It was very difficult to utter a promising dialogue"* (participant 14).

"Every time I go for a visit; I have to re-introduce myself loudly because the sound is not heard well from behind the two-filter face mask. I had patients whom I visited several times in the hospital, and later, they did not recognize me when they saw me in the office" (participant 16).

Patient's fears

Wearing such a thick and hard covering by the medical staff, especially the physicians, made the patients afraid of what disease they were suffering from; all healthcare workers approached the patients with a complex and firm cover. *"Patients were all anxious. They became worried and afraid when they saw healthcare personnel in this condition, and this hurt our relationship with the patients"* (Participant 14).

Misinfodemic

False or misleading COVID-19 online information led people to make decisions and do behaviors that exacerbated the disease and even resulted in death. False and misleading information about the incidence of the disease, transmission methods, infection of treatment staff, and treatment approaches created difficult and complex conditions for the participants. Every day, much online information was published on various COVID-19 topics whose accuracy is still unknown. The subthemes were *false and baseless beliefs, lack of reliable news sources, and irresponsibility of some individuals*.

False and baseless beliefs

Misinfodemic can complicate the situation for healthcare workers. Besides the excessive work pressure due to the high admission of patients, the participants were also complaining about a high number of hospitalizations due to COVID-19 myths and misinformation, particularly during the first and second surges of COVID-19. *"It's really unfortunate that we saw so much irrational behavior*

during the Corona crisis, from consuming detergents to drinking industrial alcohol (methanol) for whatever reason, and such behaviors are associated with severe poisoning, blindness, and death" (Participant 11).

Lack of reliable news sources

At the time of COVID-19, physicians had many questions about how the virus was treated, how long it would last, how it was transmitted, ways to prevent it, etc. Like the general public, physicians were plagued by a form of widespread misinfodemic. *"Our weakness was the Lack of a reliable reference and source. This made everyone make their song. Sometimes a claim was made about an issue related to COVID-19, but after a while, the claim was rejected. We were confused"* (Participant 2).

The irresponsibility of some individuals

The participants complained about the irresponsibility of some people while healthcare staff were providing services under the most intense job pressures. However, some people do not observe health protocols, and with irresponsibility, increase the incidence of the disease in society, eventually putting pressure on the medical staff. *"Ignorance of health protocols in the early COVID-19 outbreak created a crisis in the country from the very beginning...or some people resisted wearing a mask"* (Participant 7).

Discussion

This study explored the lived experiences of physicians working in hospitals during the COVID-19 crisis through descriptive phenomenology. In a study by Parsons Leigh et al in Canada, participants noted a lack of equipment and facilities as well as fear and anxiety during the COVID-19 pandemic (14). The results of this study are consistent with some subthemes identified in the present study showing that in developed countries, due to the specific pandemic conditions and a heavy workload caused by patient referrals and deaths, physicians had similar experiences. Other similar studies by Haq et al and Liu et al are also in line with this study (10,15). The management system and its built-in processes are flawed and unable to deal with such events properly. The theme of *managerial weakness* extracted from physicians' experiences during the coronavirus outbreak in this study showed that the management system failed to sufficiently provide personal protective equipment and healthcare facilities. In the very first days of the outbreak, the medical staff especially physicians, encountered shortages of masks, gowns, face shields, and gloves. Kalateh Sadati et al showed hospitals were not prepared to handle the coronavirus outbreak in Iran and nurses faced a shortage of safety and protective equipment (16). The findings of this study are consistent with those of the studies by Kim, Shamloo et al, and Mardani et al (17-19).

Like many countries, Iran also lacked managerial readiness to encounter the COVID-19 outbreak. When health crises such as SARS or COVID-19 emerge, the health authorities should plan to consider reasonable work shifts for staff to increase their self-care (20). Blake et al distributed a digital learning package to the healthcare staff in a study to mitigate the psychological impact of COVID-19. This e-package was designed to provide psychologically safe spaces for healthcare employees. This package included guidance on communication and reducing social stigma, peer and family support, signposting others through psychological first aid, self-care strategies, and managing emotions. The package was deemed to be appropriate and effective (21). The COVID-19 situation caused burnout. In such a situation where internal and external factors were gradually creating frustration in physicians, this burnout in the long run, led to a decrease in energy, fatigue, boredom, and depression in healthcare personnel. The study by Kannampallil et al at Washington University School of Medicine revealed that physician trainees exposed to COVID-19 patients had significantly higher levels of stress. The findings of this study also showed that female trainees were more stressed and unmarried trainees were more likely to be depressed and anxious. To address these challenges, wellness programs should sustain current programs and create innovative and targeted mental health resources (22).

Since physicians spent much time in the hospital wards with COVID-19 patients and due to the nature of the disease, they had to stay away from home for a long time. Moreover, when they returned home, their family members were not there. Ogolodom et al conducted a study on the attitudes and fears of healthcare workers about the COVID-19 pandemic in southern Nigeria. In this study, participants considered themselves at risk of infection with the virus and believed occupational safety was insufficient (23). Other studies showed that healthcare workers were worried about infecting themselves or their families (24,25). In addition, physicians participating in the research revealed episodes of fear of infection not only for themselves but also for their families and their loved ones since they could act as a highly possible carrier of the virus. They experienced stress and nervous tension after entering the workplace. During the SARS and MERS epidemics, the medical staff at the forefront of the fight against the diseases suffered fear, anxiety, and burnout and even underwent post-epidemic mental health problems (26-28). Huang et al pointed to fear, depression, and widespread disruption in the performance of the medical staff (29). The results of some other studies showed that pandemics have caused psychological problems in individuals (30-33). The coronavirus pandemic caused an endless loop of fatigue in the COVID-19 wards. The stressful and tense atmosphere as well as wearing personal

protective equipment (e.g., medical gowns, shields, masks, and gloves) caused fatigue among healthcare staff and made daily activities difficult for the medical staff.

Another theme identified in this study was *distorted doctor-patient relationship* which was further divided into two subthemes including *lack of effective communication with the patient* and *patient's fear*. The unique clothes of physicians and healthcare workers created an obstacle in communication between doctors and patients. In the COVID-19 wards, the face covers hindered proper communication with patients. It was difficult for the patients to hear well because of the mask. In addition, the unique covers of physicians and medical staff caused fear and panic among patients. Furthermore, the emotional aspect of the physician-patient relationship is primarily driven by nonverbal communication. Both physicians and patients must recognize and act on each other's nonverbal cues (34). The use of face masks affects nonverbal communication. It covers part of the face, and the mask influences the subtle flexibility of the voice. A study in Hong Kong showed wearing masks adversely affected patients' perceptions of physicians' empathy (35). Shayganmehr et al also reported similar findings (36).

The last theme pointed out in the present study was *misinfodemic*. Some patients who had self-medicated due to misconceptions and had consumed detergents or industrial alcohol erroneously as they thought it could cure the new coronavirus were struggling with consequences such as poisoning, blindness, and even death. Dindarloo et al conducted a study on participants in Hormozgan, a southern city in Iran, regarding the pattern of preparation and consumption of disinfectants during the outbreak of COVID-19 and the adverse effects of these substances on consumers' health. They showed that a significant number of participants were unaware of the instructions for the preparation and use of disinfectants. Improper preparations, use of disinfectants in unconventional concentrations, storage in unsafe places, overuse of these materials, receiving instructions for using these materials from unreliable sources, and improper disposal of empty containers were reported as the most critical mistakes of the participants (37). Some cultural gaps exist in Iran. Despite all the measures taken for awareness-raising and promoting health culture, there are shortcomings, such as a lack of comprehensive planning, neglecting the issue of communicable diseases by healthcare authorities, and fraudulent schemes of some individuals to misuse traditional medicine to treat COVID-19. Numerous news sources and social networks bombarded people with news, sometimes injecting inaccurate and misleading information into public opinions. The participants stated that the lack of reliable information and news sources on dealing with the disease was one of the most critical issues. More than 3000 healthcare staff in Hubei became infected with COVID-19 due to insufficient information

about the disease and how to control and prevent it (38).

Given the access of most people to smartphones and social networks, it seems that the role and effectiveness of social networks in covering news are more highlighted than other media. The results of a study by Dindarloo et al showed people used social networks (55.3%), radio and television (43.8%), healthcare workers (37.9%), peers (37.6%), and websites (21.1%) as sources of gaining information about disinfectants which confirms the impact of social networks on the study participants (37). Not feeling responsible enough to wear a mask, wash hands, and keep a social distance increased the pressure on many healthcare workers and endangered their lives. It seems that still some people are unaware of the importance of wearing a mask and have not been provided with the correct information because they have been seen either refusing to wear a mask or not covering their entire nose and mouth properly. As evidence suggests (39-44) protecting one's life and the lives of others through wearing a face mask is one of the incentives to use a mask. This study had some limitations while collecting data. It was challenging to arrange the right time for the interviews when the participants were not tired and could patiently answer the questions. Besides, for a small number of participants, telephone interviews were used. Due to COVID-19 worrying conditions, the interviews were not conducted in calm settings. Moreover, researchers' concern about virus transmission was another problem in face-to-face interviews.

Conclusion

This study explored the lived experiences of physicians working in hospitals during the COVID-19 crisis. The results showed that physicians faced many problems while fighting this disease and saving human lives. The lack of protection and treatment equipment, which should have been provided by the organization, caused many problems. Moreover, the distorted relationship between the physicians and their families as well as the fear of illness and death for themselves and their families caused anxiety in physicians. Wearing protective equipment led to a lack of proper communication between the physicians and patients, which increased their burnout. Meanwhile, the lack of reliable news sources added to the problems. These problems caused impairment in medical staff performance. Undoubtedly, identification of these problems can help make the necessary plans to face future crises.

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Authors' Contribution

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Competing Interests

The authors declare no conflicts of interest.

Ethical Approval

The protocol for this study was approved by the ethics committee of Shiraz University of Medical Sciences (IR.SUMS.REC.1399.1014).

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Transparency Statement

Mohammad Hasan Keshavarzi affirms that this manuscript is an honest, accurate, and transparent account of the study being reported; that no important aspects of the study have been omitted; and that any discrepancies from the study as planned (and, if relevant, registered) have been explained.

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