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Committed care in the shadow of fear: The experiences of emergency medical services staff encountering with COVID-19 patients

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Abstract:

BACKGROUND: By the beginning of the coronavirus disease 2019 (COVID-19) pandemic, emergency medical services (EMSs) played a key first-line role in patients affected by this disease care. In Iran, EMSs is a main part of health system that has a substantial role in managing emerging crisis and disasters. This study aimed to investigate the experience of the EMSs staff encountering with COVID-19 patients.

MATERIALS AND METHODS: This was a descriptive qualitative study conducted on 14 EMSs staff selected by purposive sampling from August 2021 to September 2022. This study was conducted in the southern part of Iran. Data were collected using a semi-structured interview, and Graneheim, U.H. and Lundman, B. (2004) conventional content analysis method applied for their analysis. MAXQDATA 2020 was used to store the interview data and codes. Till reaching data saturation, sampling was continued.

RESULTS: Data analysis contributed to the extraction of 783 primary codes, 15 subclasses, 4 classes, and 2 main themes, including “committed care” (with two classes of “respect to the personal identity of the patient” and “facilitators to adhere to care”) and “the bottleneck of care in the shadow of fear” (with two classes of “the fine line between fear and responsibility” and “the sacrifice in care”).

CONCLUSIONS: Although there was a fear of encountering COVID-19 patients among the EMSs staff, they provided devotional and committed care to patients considering moral values and human principles. Health policymakers should minimize the challenges of EMSs staff encountering with emerging infectious diseases with effective planning.

Keywords:

COVID-19, emergency medical services, empathy, fear

Introduction

The advent of emerging infectious diseases has been accompanied by more attention from scientific communities to these infections in recent decades.^[1] Based on the definition by the Centers for Disease Control and Prevention, emerging infectious diseases are those with an increased incidence rate in the recent two decades, or there is the risk of their possible increase soon.^[2] The

development of emerging infectious diseases, including severe acute respiratory syndrome, H1N1 influenza virus (2009), Middle East respiratory syndrome coronavirus (2012), and the COVID-19 pandemic has been reported during the last two decades. These infections have led to many challenges for healthcare systems.^[3] There has been spread of COVID-19 among these infections quickly turned out to be a pandemic and Public Health Emergency of International Concern

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after the first outbreak in China in December 2019.^[4] EMSs have played an essential role in the management cycle of COVID-19 infection after its spread. Many facilities of this organization, including the assessment, care, and quick transfer to hospitals and medical centers, have been devoted to COVID-19 patients to conduct treatment processes and decrease the mortality rate.^[5] In many countries, EMSs has a principal role in being prepared and facing crises. It is also crucial for accessing primary and specialized care and treatments.^[6] Due to a close encounter with COVID-19 patients, the EMSs staff experience psychological problems like fear and anxiety,^[7] psychological tensions, social isolation, tiredness, and significant depression that many dimensions of these experiences have remained unknown.^[8-11] Improving the quality of EMSs in the care of COVID-19 patients would be impossible without getting informed from the experiences of EMSs staff facing these patients. Investigation of these experiences would be helpful in better understanding the weaknesses and strengths and developing effective resolutions and strategies to improve the planning and quality of prehospital emergency medicine care, especially in pandemics and similar cases. The nature of activity in EMSs is based on the interaction with people and the environment. The experiences of encountering disease are diverse among the EMSs staff of different countries and geographical regions.^[12] A comprehensive literature review indicated the limitations of studies with a qualitative approach to survey the experiences of EMSs staff encountering COVID-19 patients.

Since the encountering way and experiences of the EMSs staff in social and cultural settings could be different, the researchers aimed to conduct this study with a qualitative approach to the experiences of EMSs staff encountering COVID-19 patients. Using qualitative research methods to have a detailed understanding of a phenomenon's nature and the people's dynamic experiences in the context of social activities and interactions and determine its different aspects is suggested.^[7,13] In the case of less surveying of the informants' understanding of the selected phenomenon, descriptive qualitative research is used since the researchers are related to the people's comprehension in their exclusive context.^[14] Presenting the experiences of EMSs staff to health policymakers will aid in the programming for improvement of encountering patients affected by newly emerging infectious diseases. This study aimed to investigate the experiences of EMSs staff encountering COVID-19 patients.

Materials and Methods

Study design and setting

This descriptive qualitative study was conducted using a conventional content analysis method from August

2021 to September 2022. Qualitative content analysis is used to obtain valid and reliable results from textual data to provide knowledge, new ideas, facts, and a practical guideline for performance.^[15] This method aims to provide the subjective interpretation of the content of textual data using the analysis of the content of texts to extract the main themes and existing patterns among data.^[16]

Study participants and sampling

The study took place in Fars province, southwestern Iran. The participants of this study were selected among Fars province EMSs staff by purposive sampling. The inclusion criteria were having an associate degree or bachelor's degree in EMSs or a bachelor's or Master of Science degree in nursing, at least two years of clinical work experience in EMSs, and the ability to properly communicate to convey the experiences completely. The exclusion criterion was the noncooperation of the EMSs staff at any stage of the research. A maximum variation sampling approach was used for the sampling among participants in terms of age, work experience, cultural and social status, and culture. Totally, 14 EMSs staff who had experienced encountering COVID-19 patients and were also willing to express their experiences were selected.

Data collection

Semi-structured face-to-face interviews were conducted to collect data in this study. First, the researcher introduced himself to the participants and presented the aims of this study. Then, the written consent form was obtained from the participants. After emphasizing research aims, participants were assured about the privacy of their information and anonymity.

An open and general question was asked at the start of the interview. The interviewer wanted participants "to tell about their experiences of encountering COVID-19 patients" or "describe their experiences of the first or last missions (dispatch) for these patients." After gaining the trust of participants, exploratory and follow-up questions were asked, including how you felt about this, please explain more about it, and can you give me an example in this field? Subsequently, more specific and deep subjects were surveyed.

The interviews were carried out individually in a peaceful environment under the participants' agreement. A voice recorder was used to record the interview process with the consent of the participants. The behavior and the nonverbal movements of the participants were also recorded in this process. The interviews lasted an average of 75 min (45–125 min). The process of data collection continued till achieving data saturation, i.e., until no additional data were appeared and classes were not saturated in terms of properties and dimensions.

Data analysis

Data analysis was conducted simultaneously with data collection. Instantly after each interview, listening to these interviews was carried out many times, and the interviews were transcribed verbatim. Data analysis was conducted using Graneheim, U.H. and Lundman, B. (2004) conventional content analysis method^[17] and MAXQDATA 2020 software as follows: First, the transcripts of interviews were reviewed word by word and line by line to achieve a sense of totality and immersing in data. The words, sentences, and paragraphs with key points about encountering COVID-19 patients were selected as meaning units. The codes were labels assigned to meaning units. Based on the similarities and differences, the classification of similar codes was conducted in more comprehensive classes, and following the next interviews, the expansion of classes was continued.^[17]

Data trustworthiness criteria

Lincoln and Guba's evaluative criteria were used to achieve data accuracy and trustworthiness.^[18] The member checking and maximum variation of sampling in terms of age, work experience, and level of education, as well as prolonged engagement with participants, were applied to investigate data credibility. The texts of interviews and generated codes were returned to participants, and they were asked to express their thoughts about the researchers' perceptions of their comments. If there were any discrepancies, the codes would have been corrected. Three faculty members, experts in qualitative research, who supervised the interviews, codings, and classifications carried out the peer review process. To survey two criteria of data trustworthiness, including dependability and conformability, methods such as audibility, negative case analysis, and surveying by a panel of experts composed of three members were used. The items, including immersion in the data, comprehensive mention of the study details, and triangulation method, were applied to reach data transferability assurance.

Ethical considerations

This study has been approved by the deputy of research and technology at Shiraz University of Medical Sciences (SUMS) with the code 22210. This research has also been approved by the Ethics Committee of SUMS with the code of ethics of IR.SUMS.NUMIMG.REC.1400.017. The participants were assured about the privacy of their information, and they were also able to exit at each step of the study with no detriment. The identification information of any one of the participants was recorded using nicknames (P1, P2 ...). The recorded voices, texts, and interview notes were stored in a password-protected computer. All obtained data would be removed five years after the completion of the research steps and its publication.

Results

Participants' characteristics

Fourteen participants with an average age of 35.6 ± 6.62 years old (26–47 years old) and an average work experience of 11.14 ± 6.85 (2–25 years old) participated and interviewed in this study. Fourteen participants' interviews were entered into the MAXQDATA 2020 software. Other demographic characteristics of the participants are listed in Table 1.

Data analysis contributed to the extraction of 783 primary codes, 15 subclasses, 4 classes, and 2 main themes, including "committed care" and "bottleneck of care in the shadow of fear", and four classes, including "respect to the personal identity of the patient" (four subclasses), "facilitators to adhere to care" (three subclasses), "the fear of getting affected by the disease" (three subclasses), and "the sacrifice in care" (two subclasses), were extracted after analysis of data of this study [Table 2].

Committed care

One of the concerns of EMSs staff was the committed care of patients during the COVID-19 pandemic. Although the participants were afraid of getting infected, they always intended to commit principled and standard care of patients in the best way in this study. The committed care included two classes "respect for the personal identity of the patient" and "facilitators to adhere to care".

Respect for the personal identity of the patient

The participants in this study stated that despite having fear, stress, and fatigue when encountering patients, respect for the patient's personal identity must be considered as the basis of care and treatment activities. Concerning this issue, maintaining independence, appropriate communication with patients accompanied by goodwill, kindness and compassion, participating of the patient in making decisions, respect for the patient, attending to the mental and psychological problems of the patient, and providing a favorable care environment were necessary. This class comprises four subclasses, including effective interaction, compassion, respecting patient autonomy, and responsibility.

Effective interaction

According to the participants' comments, a proper relationship with patients is one of their essential needs in receiving care. They stated that cases like fear of an infectious disease should not be negatively effective in making a relationship with patients since it would affect the proper care of patients. The statements of one of the participants are as follows:

"...When I spoke with a patient in a tranquil manner and justified him, his fear decreased. Then he started talking to

Table 1: The demographic characteristics of the study participants

Participant	Age (Year)	Marital status	Education level	Job experience (years)
P1	43	Married	Associate's degree in EMS	23
P2	47	Married	Bachelor's degree in EMS	25
P3	33	Married	Master's degree in nursing	11
P4	28	Married	Bachelor's degree in EMS	3
P5	26	Single	Associate's degree in EMS	2
P6	30	Married	Bachelor's degree in EMS	7
P7	41	Single	Bachelor's degree in EMS	16
P8	31	Single	Bachelor's degree in EMS	5
P9	29	Single	Bachelor's degree in Nursing	7
P10	44	Married	Master's degree in nursing	14
P11	32	Married	Master's degree in nursing	9
P12	34	Married	Master's degree in nursing	10
P13	40	Married	Associate's degree in EMS	15
P14	35	Married	Bachelor's degree in EMS	9

Table 2: Main themes, classes, and subclasses

Main themes	Classes	Subclasses
Committed care	Respect to the personal identity of the patient	Effective interaction
		Compassion
		Respecting patient autonomy
		Responsibility
	Facilitators to adhere to care	Being in the light of the divine plan
The bottleneck of care in the shadow of fear	The fear of getting affected by the disease	Accepting the risk by vaccination
		Awareness raising
		Passing the wall of fear
		Worrying about becoming infected by work colleagues
	The sacrifice in care	Being concerned about underlying health conditions
		Care in the shadow of danger
		Being voluntary in patient care

me. This issue helped me in the understanding of his problem and also his better assessment..." (P7)

Compassion

Based on the experiences of the participants, making the patient peaceful, consoling, and understanding his feelings facilitated the care process of COVID-19 patients. The participants intended to disappear factors creating anxiety and stress in patients, including unknowingness of disease, fear about the transmission of infection to their families, lack of support from their family members, advertisements, information attacks of media, and fear of transferring to hospital by providing kindness and emotional support.

"...By announcing a mission by the dispatcher for a COVID 19 patient, I got heart beating. I was all thinking of just taking him to the hospital on the way to the patient's house. When I saw the patient with breath shortening, I felt sympathy for him, and I tried to do my best for him..." (P9)

Respecting patient autonomy

The participants stated that most COVID-19 patients had the fear of transferring to the hospital by ambulance during the pandemic. They preferred to be transferred by their private vehicles as much as possible. Considering the patient's clinical condition, counseling with an emergency physician, and obtaining informed consent, they were transferred to the hospital in their cars. Respecting patient thoughts, the authority of the patient in making decisions, respecting the patient's beliefs about the disease, and obtaining informed consent were important in the field of patient autonomy.

"...We had serious problems in transferring patients to the hospital. They were ready to stay at home and die and they were still afraid of going to the hospital. They believed that if they came to the hospital, they would die. We had respect for their thoughts. Following the survey of their condition and counseling with the emergency physician, if it was agreeable, the informed consent was obtained, and they were not transferred to the hospital as much as possible..." (P4)

Responsibility

The participants in this study had a feeling of responsibility for the safety and health of patients. They aimed to prevent the transmission of infection from COVID-19 patients to others by meeting the health protocols strictly. They also had this feeling of responsibility for their coworkers and were not doing the activities resulting in the spread of infection in their workplace.

"...When we returned from a COVID-19 mission, we had been disinfecting our equipment. We even were washing our socks since it was possible to go to the house of a non-COVID patient, and we did not intend to transfer the infection to them..." (P1)

Facilitators to adhere to care

This class was one of the subclasses of the main theme of "committed care". The participants stated that despite being tired, fearful of infection, and having difficulties with care during the pandemic, some cases facilitated patient care and contributed to commitment to care. This class includes three subclasses: being in the light of the divine plan, accepting the risk by vaccination, and decreasing fear alongside acquiring awareness.

Accepting divine destiny

Based on participants' experiences, trusting in God, praying and glorifying, and consigning other matters to him resulted in resolving the difficulties of COVID-19 patient care and improving this care.

"...I was so afraid of endotracheal intubation. My thoughts were if I got close to the patient's airways and secretion, I would be affected by COVID-19. I wished that hospital would do this work, but my conscience did not accept, and I trusted in God. Fortunately, I did not get a positive result..." (P2)

Being assured by vaccination

Based on the comments of participants in this survey, the quality of COVID-19 patients' care improved vastly after vaccination. A decrease in fear of patients was involved in this matter. Also, close encounter with patients, especially critical ones, and the process of endotracheal tube intubation were facilitated.

"...When I was vaccinated, I felt that I have another protective coverall, and it gave me so strength. I sat near the patients and examined them..." (P5)

Awareness raising

The lack of knowledge and awareness about COVID-19 has been associated with worry and anxiety facing patients. Acquiring awareness through education and media, the stress levels of the staff decreased, and the quality of patient care improved.

"...My feeling was that if I enter the patient's house, I would be affected by COVID-19. I told the family of the patient to bring him out of the house for examination. Even in the first days, I told them to just get him in the ambulance to we could go to the hospital. I had no idea my chance of getting affected by this disease and its lethality rate. Studying and learnings new information about this disease made me aware, and I realized that it was not like what media was saying, and my fear decreased..." (P10)

Shield of personal protective equipment (PPE)

Despite having many challenges, the PPE of participants, in terms of quality and quantity, was an assurance in facing the COVID-19 patients and facilitated their care of them.

"...I was afraid of getting close to COVID-19 patients. These alien clothes gave me some bravery (smiling!), and I felt was somehow safe from COVID-19. These clothes were like a shield for a soldier in the war..." (P2)

Bottleneck of care in the shadow of fear

This theme includes two classes: the fear of getting affected by the disease and the sacrifice in care.

The fear of getting affected by the disease

This class includes three subclasses: passing the wall of fear, worrying about becoming infected by work colleagues, and being concerned about underlying health conditions.

Passing the wall of fear

Close contact with a patient was necessary for his direct care. The high contagiousness and rapid spread of COVID-19 aggregated the fear of getting affected by this disease. The commitment and feelings of participants about the desired care of patients led to conquering this fear and successfully doing their duties.

"...When I intended to care for patients on the first days, I was so scared of getting infected. This issue affected my work and contributed to possible careless work of min. But I told myself what I would do if this patient had been my father. These thoughts helped me to carry out care precisely despite being afraid..." (P11)

Worrying about becoming infected by work colleagues

The sense of responsibility of the emergency staff was not affected by infections of their coworkers and their shifts leavings, a severe manpower shortage, and fear of getting infected. Using the increase in the extra shifts, they could compensate for the manpower shortage in part and help each other unselfishly.

"...we all were so afraid of the test result positivity of one of the staff in the base. There was the possibility of infection of this base which we had been on shift. The situation of other bases was also similar, and all staff was getting infected. Based on the authorities' decisions to prevent the closing of the base, the number of sick leaves decreased inevitably. We had to cooperate morally..." (P7)

The concern about an underlying health condition

Some participants had underlying health conditions, including diabetes and coronary diseases, resulting in more fear of COVID-19 infection. However, this situation did not affect their patients' care functions. Also, they had a sense of responsibility for facing these patients' practical and advantageous care.

"...Since I had diabetes, I decreased the number of my shifts after the beginning of this outbreak. I was afraid, and my co-workers were not allowing me to attend to the patients as much as possible. I was trying to do my best for the infected patients since my co-worker was under pressure, and I was responsible for my patient..." (P8)

The sacrifice in care

This main class includes two subclasses named Care in the shadow of danger and Being voluntary in patient care.

Care in the shadow of danger

Performing procedures such as endotracheal intubation and cardiopulmonary resuscitation was challenging for almost all participants. They believed that doing these procedures is associated with a high chance of getting infected by COVID-19. Ventilation using a bag mask was another option for the participants, but they preferred an endotracheal intubation procedure to maintain the quality of the patient's ventilation.

"...The hardest work for us was the endotracheal intubation procedure. When I intended to intubate a patient, I had worn safety glasses and a face shield and was very sweaty. My eyes

could not see, and I could not remove my face shield. On the other hand, I was so afraid of being positive, but I did my duty flawlessly. Seeing the patient's need for endotracheal intubation made me do this work for him..." (P11)

Being a voluntary one in a patient's care

Some technicians had problems encountering the patients, like fear, the consequence of low experience, etc. Their coworkers tried to decrease these encounters as much as possible through voluntary care. They sacrificed somehow.

"...Once, I was on a shift with a co-worker with two years of experience who was afraid of facing a COVID-19 patient. I could not ignore the patient and intended to help that person. I told my co-worker to drive, and I cared for the patient until reaching the hospital..." (P6)

Discussion

The general findings of this study indicated the confrontation between the fears of getting affected by COVID-19 and the committed care of patients among EMSs staff. The presence of EMSs staff in the first line of encountering COVID-19 patients, the high contagiousness of this disease, lack of PPE, a low level of knowledge about this infection, concern about transmission of infection in their families, and the mortality rate play an important role in being afraid of facing these patients. In line with the results of the present study and based on the previous ones, psychological disorders such as fear have been reported as common findings among EMSs staff during the COVID-19 pandemic.^[19-21] Fear of encountering COVID-19 patients could result in trouble in patients' care. The results of the study by Fawaz *et al.*^[22] study showed that the nurses on the front line have a similar responsibility for themselves and their patients. Considering the lack of resources, the balance between these responsibilities was disturbed during the outbreak and was faced with challenges. It is because they continuously care the contagious patients, and they should determine their caring abilities of patients. They should be able to care for themselves too. Hassanian *et al.*,^[23] stated that more responsibilities of nurses contributed to the improvement in the quality of patients' care as well as the increase in the satisfaction rate of patients of provided services. The results of the present study showed that the participants passed the wall of fear and could provide satisfying care to their patients with a sense of responsibility.

The participants in the study by Rezaee *et al.*^[24] stated that their responsiveness and liability were affected by factors such as fear, lack of nurses, and fatigue as the result of successive shifts and also led to their absence at the patient bedside at necessary times. These results are

not consistent with our findings. Despite the COVID-19 infection of many EMSs staff and the severe lack of them, tiredness resulting from many shifts, and fear of encountering patients, they did their duties perfectly with a sense of responsibility toward the patients in this study. The difference in the participants is considered one of the reasons for discrepancies between our findings and the results of the study by Rezaee *et al.*^[24] Although nearly half of the participants of the study by Rezaee *et al.*^[24] were female, all were male in the current study. Men have more resistance to fatigue than women, and their fear levels of encountering patients are also lower than them. Therefore, they are more involved in the process of patient care.^[25]

Based on the results of the study by Mohammadi *et al.*,^[7] EMSs staff had a huge fear and anxiety as a consequence of constant encounters with COVID-19 patients and the transmission of this disease to their families and society. They stated that counseling with a psychologist was necessary for adapting to the pandemic situation on some occasions. The results of the study by Sheikhbardsiri *et al.*^[26] showed that the psychological problems in nurses during COVID-19 were at a moderate level. The nurses in the study by Khanjarian *et al.*^[27] were so frightened in their first encounters with a patient affected by COVID-19, and they were shocked by caring for these patients. They had wished to escape from this situation at the time of doing their professions. They had to choose between staying and leaving. Finally, they could prevail over their fears and restore their professional responsibilities. Some parts of the results of the mentioned study are not consistent with the results of the present one. In this research, the participants did their duties with responsibilities from the beginning, despite the existence of fear. One of the reasons for the difference in results is the lower contact of EMSs staff with COVID-19 patients compared to the long-time contact of nurses with them.

Another aspect of encountering the participants with patients in this study was the sacrifice in care. The sacrifice in care means giving up self-advancement, family, and life to care for patients. It is an action of the highest level of moral behavior with a patient.^[28,29] The nurses in the study by Darvishpour *et al.*,^[29] believed that one's conscience and selflessness are associated with prioritizing a patient's life in critical situations requiring immediate and life-giving actions. They considered themselves soldiers providing selfless volunteering to defend the health of patients. These findings were consistent with the results of the current study. Despite the fear of getting infected themselves or their families, the participants of this study to decrease the encounters of their coworkers affected by underlying health conditions were always in the first line of encountering these patients.

The results of the study by Liu *et al.*,^[30] in line with the results of the current study, indicated that healthcare providers kept their spirits and flexibility in facing problems, despite the existence of physical and psychological challenges and lack of PPE, fear of being infected, and transmission of infection to the others. The care of a patient is intertwined with prized concepts like responsible care, commitment to the care of patients, and sacrifice. The nurses might consider this care as worshiping and providing facilities as well as prefer being near the patients over their families in the pandemic. They also might prefer solving patients' problems over their own health statuses and feel satisfied.

The committed care despite fear of infection in the context of COVID-19 was one of the findings of this study. Although participants of this study had the fear of affecting by COVID-19, they carried out committed care of patients, considering respect to the personal identity of the patient, trusting in God, being fully vaccinated, and increasing knowledge and awareness about COVID-19 and its prevention principles. Even though they were in the first line of encountering these patients, this commitment was not distracted. The participants in the study by Torabi *et al.*^[31] believed that the profession of EMSs and prehospital emergency concerns the lives, properties, and reputations of the people, so they should have respect for the professional and human values and altruistic services. In the current study, alongside respecting for beliefs and wishes of the patients, the EMSs staff tried to perform their duties and responsibilities. Because they believed that being respectful of patients is involved in the increase in their participation in the process of care and also decreasing the negative consequences.

Contrary to the result of this research, those of the study by Özkan Şat *et al.*^[32] indicated that more than half of nurses wished to leave this job during the COVID-19 pandemic because of a low level of professional commitment. Also, their commitment to the care of patients had been decreased during this pandemic. The reason stated for this issue was the verbal violence of the patients to the nurses, which had not been reported by the participants of the current study. The results of the study by Liu *et al.*,^[30] in line with our results, showed that healthcare providers always took committed and sacrificial care of COVID-19 patients by being at risk and making efforts. It is necessary to improve the competence of healthcare workers to effectively face disasters.^[33] Considering the findings of this study, EMSs staff are committed to provide standard care in ethical and legal frameworks, and they respect the personal identity of patients too.

This study was carried out for the first time using a qualitative approach at the level of EMSs in Fars province

in Iran, one of the biggest provinces of this country, and has advanced and extensive EMSs centers.

Limitations

As conducting face-to-face interviews was not possible at the peak of COVID-19 pandemic, so, three interviews were carried out on the Internet using the WhatsApp video call facility. Therefore, assessing their feelings and behaviors was not completely possible. This item could be considered one of the limitations of this study.

Conclusions

The EMSs staff encountering COVID-19 patients during this disease pandemic are mainly affected by several damages, including the infection of themselves and their families, which might result in fear of attending to these patients. Despite these issues, they provide a commitment and responsibility to care about patients, considering moral values and human principles. Although there was a fear of getting affected by COVID-19 among the participants of this study, they were committed to principled and standard care of patients in the best way. According to the results of this study, it is suggested that policymakers in this field take notice of these subjects in their future programs and promote the encounter of EMSs staff facing emerging infectious diseases. Exploring the exposure process of Emergency Medical Technicians in future studies will help to identify the unknown dimensions of this process.

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Ethical consideration

This study has been approved by the deputy of research and technology at SUMS with the code 22210. This research has also been approved by the Ethics Committee of SUMS with the code of ethics of IR.SUMS.NUMIMG.REC.1400.017. The participants were assured about the privacy of their information, and they were also able to exit at each step of the study with no detriment. The identification information of any one of the participants was recorded using nicknames (P1, P2,...). The recorded voices, texts, and interview notes were stored in a password-protected computer. All obtained data would be removed five years after the completion of the research steps and its publication.

Author's contribution

All authors have been personally and actively involved in substantive work leading to the report. Study concept and design was done by MA, MP, CT, MTI, and MNK. Data collection was done by MA. Data analysis was done by MA, MP, CT, MTI, and MNK. Drafting the manuscript was done by MA, MP, CT, MTI, and MNK. Reviewing, editing, and supervising the manuscript was done by MA, MP, CT, MTI and MNK. All authors have approved the manuscript's submission for publication.

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Conflicts of interest

There are no conflicts of interest.

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