

VIEWS OF THE PRE-HOSPITAL HEALTHWORKERS IN THE TRANSFER OF COVID-19 PATIENTS TO THE HOSPITAL AND MANAGEMENT: A QUALITATIVE STUDY**Dr. Sarper YILMAZ (M.D.)** **ABSTRACT**

The main purpose of this study is to make an assessment based on the opinions of pre-hospital HCWs, who provide the first care to patients during the pandemic and who work in patient transport or within the pre-hospital emergency medical services (PEMS) system. A case study was conducted with qualitative research methods from the literature. While analyzing the experiences through the eyes of the HCWs, it was witnessed that they had gained experiential knowledge from previous epidemics and that although they had been tested very hard professionally, they never stopped fighting the pandemic. It was observed that not only society but more specifically HCWs had to deal with enormous risks due to the insufficient awareness of COVID-19. Though they experienced a great sense of professional satisfaction and gained experience, they were tested by the difficult conditions of the pandemic, both professionally and personally. The main defense system for societies against the COVID-19 pandemic—in which prevention methods, treatments, and vaccines are continuously discussed and high levels of worldwide uncertainty prevails—are HCWs; therefore, the events they experience throughout this unique period in time should be recorded in history.

Keywords: Emergency Department, Covid-19, Management, Prehospital, Healthcare Workers.

JEL Codes: I10, H70, H11

COVID-19 HASTALARININ HASTANE NAKLİNDE VE YÖNETİMİNDE HASTANE ÖNCESİ SAĞLIK ÇALIŞANLARININ GÖRÜŞLERİ NİTEL BİR ÇALIŞMA**ÖZET**

Çalışmanın temel amacı Covid-19 pandemi döneminde, en önde Acil Sağlık Hizmetleri çatısı altında 112 ambulanslarında görev alan ve hastaların ilk bakımını sağlayıp, nakillerinde görev yapan sağlık çalışanlarının sürece dair görüşlerinden yola çıkarak, değerlendirmektir. Araştırmada nitel araştırma yöntemlerinden yararlanılarak, durum çalışması yapılmıştır. Yaşanılanları onların gözünden analiz ederken onların en büyük bilgi birikimini eski salgınlardan sağladığını, mesleki açıdan çok zor bir şekilde sınındıklarını ama yine de asla savaşmayı bırakmadıklarına şahit olduk. Toplumun ve sağlık çalışanlarının Covid-19 farkındalıklarının yeterince sağlanamaması nedeniyle çok büyük riskler ile

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mücadele etmek zorunda kaldığını ve mesleki açıdan büyük deneyim ve tatmin duygusu yaşarken mesleki ve insani olarak zor şartlar ve pandemi nedeniyle sınındıkları görüldü. Korunma yöntemleri, tedaviler, aşuların tartışıldığı ve belirsizliğin dünyaya hâkim olduğu Covid-19 pandemi sürecinde toplumların ana savunma sistemleri sağlık çalışanlarıdır ve bu dönemde yaşadıkları olaylar tarihe not düşülmelidir.

Anahtar Kelimeler: *Acil Servis, Covid-19, Yönetim, Hastane Öncesi, Sağlık Çalışanları.*

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1. INTRODUCTION

HCWs (health care workers) are at the forefront of the fight against COVID-19. They continue a successful fight by providing critical care to people infected with the virus that causes COVID-19, even with the possibility of becoming infected themselves. They have continued to provide patients with quality care, despite the personal risk of infection, the fear of infecting their families, the illness or death of friends or colleagues, and the enormous amount of fatigue (Mehta, et al., 2021). Unfortunately, 1 out of every 74 people who died in Turkey from COVID-19 in December 2020 was an HCW. As the pandemic continues, these numbers have increased significantly (Türk Toraks Derneği, 2021).

The transport of sick and injured patients is one of the most important functions of emergency first aid. It is known that first contact with patients and making the first diagnosis is vital for first intervention. In this field, the PEMS (pre-hospital emergency medical services) Anglo-American model is practiced in Turkey. Ambulances equipped with professional crew and equipment are activated by the call (112) made to Command Control Centers (Dick, 2003). The team receiving the emergency call is responsible for providing basic and advanced life support to sick and injured patients at the stage before hospital entrance (Karcıoğlu & Yıldırım, 2006). While emergency medical technicians (EMTs), paramedics, and doctors (pre-hospital HCWs) work inside the ambulance, the ambulance drivers are generally not considered HCWs. These pre-hospital HCWs, have regular duties that include lifting patients and equipment, providing initial treatment to patients with infectious diseases, and participating in the emergency transport of patients over land or by aircraft. These duties are essential to their role as primary providers of emergency medical care and are critical components of disaster response (Reichard, Marsh, & Moore, 2011).

Only a few studies have described the impact the COVID-19 pandemic has had on PEMS systems (Jaffe, et. al., 2021; Fagoni, et. al., 2021; Katayama, et. al., 2021). These studies are also largely limited to reports on the impact of pandemic changes to a number of patient clinics in EMS. A limited number of studies have reviewed the impact this period has had on HCWs and it has been shown that HCWs struggle not only with the pandemic itself but also with many challenging conditions such as overwhelming workloads, uncertainty, lack of control, lack of protective equipment, and difficulties in the use of this equipment (Saberian, et. al., 2021; Ardebili, et. al., 2020). The main purpose of this study is to evaluate the experiences and opinions of pre-hospital HCWs during the COVID-19 pandemic;

these HCWs are employed in EMS and transfer patients to hospitals in the provinces of Turkey which have the highest number of COVID-19 cases.

2. METHODOLOGY

2.1. Research Model

The approach of this study is to examine specific cases in line with the case study model. Case studies can involve the close examination of people, issues, or problems. According to Creswell, a case study is a qualitative research approach in which the researcher defines the time frame and situational themes (Cresswell, 2007).

2.2. Research Sample

In order to reach the participants of the research, pre-hospital health workers who were active during the Covid-19 pandemic were invited via social media. The study group in this research consists of 15 EMTs, 19 paramedics, and 15 doctors. The 49 participants of the study group were selected from among the Prehospital HCWs who transferred COVID-19 patients to the hospital. All interviews were conducted online; data collection began approximately 6 months after the pandemic began in Turkey (March 11, 2020). Research data were collected between March 2020 and May 2020. Of the pre-hospital HCWs participating in this study, 24 are men and 25 are women. Their ages vary between 22-59 years of age; a total of 36 participants are 30 or younger. While 42 of the HCWs are public university graduates, 7 are private university graduates. Considering their years of work experience, a range between 5 months and 17 years is seen; however, 36 participants have at least 3 years of experience. Working hours vary between 155-288 hours a month. Almost half of the participants (24 people) work in Istanbul while the other HCWs work in provinces throughout the various regions of Turkey.

2.3. Data Collection and Analysis

Ethical approval was obtained from the Cyprus Science University, following the receipt of submission for ethical committee approval (No. 2021/21). Within the scope of the research, data collection was conducted in a structured interview format. The questions in this semi-structured interview (prepared by the researchers) were determined based on the literature review and requirements from the field. The form, which was used as a data collection tool, was evaluated by three different experts in the field and then took its final form after 2 pilot interviews.

Written and verbal consent of the individual was obtained before starting all interviews. Code names are used to protect the privacy of the participants. Throughout the study, the job titles were coded with a letter: EMTs (E), paramedics (P), and doctors (D). They were then numbered according to the order of their interview (E1, E2, E3, P1, P2, P3, D1, D2, D3, etc.).

The thematic analysis of this research is organized in stages: the coding of data, identifying themes, organizing themes and codes, defining and interpreting the findings (Yıldırım & Şimşek, 2016).

The data obtained within the scope of the analyzis were examined using 3 themes. The codes of the researcher and the expert were compared and the reliability of the research was then performed. While calculating the reliability of this study, codes by the researcher and the expert that were found to be similar were accepted as a “Consensus” and those that were different were described as “Disagreement.” The numbers of "Consensus" and "Disagreement" codes were determined, and the reliability of the study was calculated using the 1994 Miles and Huberman's formula: $P (\text{Percentage of Consensus}) = \frac{Na (\text{Consensus})}{Na (\text{Consensus}) + Nd (\text{Disagreement})} \times 100$. Reliability was found to be $P = 88.90\%$ (Hartmann, et. al., 2020). In this formula, when $P = 70\%$ and above, the study is considered reliable. Accordingly, this study was accepted as reliable since it was calculated as $P = 89\%$.

3. FINDINGS

3.1. COVID-19 Awareness

Within the scope of the codes and anecdotes that emerged when the research data was examined, the following was understood. After COVID-19 emerged in December 2019, awareness training was provided to HCWs, the public was informed through social media and public locations, a scientific committee was organized under the Ministry of Health, Republic of Turkey (to provide consultancy on the epidemic). In this context, there were general rules that should be followed such as wearing masks, attaching importance to hygiene, and not paying close attention to patient contact with HCWs. Since COVID-19 is a new disease, there has been an abundance of misinformation and due to this, a period of panic and complexity occurred. Some HCWs participating in this study also stated that they have experienced such pandemic conditions during the recent influenza A/H1N1 pandemic. The most dominant codes under the COVID-19 Awareness theme are shown in Table 1.

Table 1. The dominant codes under the theme of COVID-19 Awareness

SUBTHEME	CODES	EXPLANATION
1. COVID-19 Awareness	1.1. Training	Trainings were provided to HCWs to spread the awareness of COVID-19.
	1.2. Publishing The Covid-19 Diagnosis Guide	A guide about the disease was developed in order to raise awareness.
	1.3. Experiences Of Pandemic Influenza A/H1n1	Some of the participants recounted similar experiences during the swine flu epidemic.
	1.4. Disinfection	Performing disinfection procedures increased the seriousness and perception of the disease.
	1.5. Experience A Period of Conflict and Panic	Confusion and panic were experienced by all HCWs and the public due to uncertainty.
	1.6. Making Over-Reactive / Agressive Decisions	Since planning had not been done at the beginning of the pandemic, quick decisions were made.
	1.7. Presence Of Patients Without Masks	The awareness of the pandemic in the patients was not well established.
	1.8. Ministry Of Health Establishing a Scientific Committee	Consultancy service were received by establishing a scientific committee by the Ministry of Health.
	1.9. Lack Of Protective Equipment and Difficulty of Use	The limited and insufficient equipment forced HCWs to make choices and find solutions regarding the health of patients and themselves.
	1.10. The Presence of People Who Do Not Care for Hygiene and Social Distancing	Some security measures were not taken effectively, including by HCWs.
	1.11. Unclear Explanation of Contact Story	Patients did not explain clearly that they had been in contact with COVID-19 positive people.
	1.12. Misinformation	There has been a lot of speculation and misinformation about COVID-19 on social media.

Among the participants, E1 and the majority of the other participants stated that trainings were provided for HCWs at the provincial level, but they were insufficient. The reasons provided for its insufficiency were that the training environment was crowded, the mask-distancing rules were not observed, and the cases were not adequately explained.

“Educational seminars were held in the conference hall of the Provincial Directorate of Health, but unfortunately, I believe that there was not enough information.” (E1)

“We went to the training. The masks were okay, hygiene was ok, but the social distancing; everyone was too close to each other and it was overcrowded.” (P2)

Apart from the COVID-19 Diagnostic Guide provided by the Ministry of Health which was delivered to all HCWs, a separate transport guide was developed for use in ambulances and the pre-hospital HCWs who were expected to intervene in this context. Guides that had been created for other epidemics where the causes, results, and processes were not fully known, have been an important guide for HCWs.

“From the first case, we followed the patient transfer guide that was provided by the head physician of the provincial ambulance service.” (E4)

One of the largest dilemmas experienced during the early period of spreading COVID-19 awareness was whether or not patients that the pre-hospital HCWs go to collect should be considered a COVID-19 suspect or not. It is known that pre-hospital HCWs reach patients in order of their announcement from the general call center. According to the complaints of the patients they reached, there were difficulties in diagnosing COVID-19. In this regard, the process became chaotic process due to misinformation, especially since there was such a low number of cases. Ultimately, all patients visited by ambulances were considered COVID-19 suspects and transferred for treatment.

“Which patient will we consider a COVID-19 suspect?” (P1)

“All cases have been studied with the underlying principle of detecting COVID-19.” (D1)

Participants were of the opinion that the greatest contribution for eliminating chaos and misinformation that had occurred during the spread of COVID-19 awareness, was whitening more cases. In this instance, the more cases that were seen, the greater the awareness of the epidemic; the HCWs were able to create new routines within a short amount of time. None of the participants said they were accustomed to the pandemic.

“The chaos that arose in the early days and the fear of being inadequate at all times gave way to new habits and routines within a week or two.” (D2)

There is a period of approximately 3 months between the time the first case emerged (December 2019) and the first case was confirmed and officially announced in Turkey (11 March 2020). HCWs, who were aware of the disease and followed up-to-date studies during this period, stated that they were informed about the disease before the first case was seen in Turkey and they followed the precautions suggested.

“Since I constantly read international media and publications, even before the first case was announced in Turkey, I knew more or less about this, and I could predict the situation.” (D3)

There have been various attempts to spread COVID-19 Awareness to HCWs, and these initiatives have yielded some results. However, the most effective training has been spontaneous and information has been learned by whitening current cases in the field. The faster and easier it has been to spread this awareness to HCWs, the more difficult it has been to spread to society.

3.2. Professional Satisfaction and its Benefits

The COVID-19 pandemic has had various effects on the professions of HCWs. The dominant codes found in the data about these effects and the benefits of the profession were collected; one distinct code was “people's consultation about the disease” and was seen as a major occupational benefit. HCWs stated that, “they love their duties,” and their respect for their jobs has increased along with their professional satisfaction. The dominant codes under the Professional Satisfaction and its Benefits theme is presented in Table 2.

Table 2. The dominant codes under the theme of Professional Satisfaction and its Benefits

Subtheme	Codes	Explanation
2. Professional Satisfaction and Its Benefits	2.1. Increased Respect for Profession	Some of the participants stated that their respect for their profession increased during the pandemic.
	2.2. Love of Duty	Participants reported that they love their profession.
	2.3. Being a Consultant	HCWs were pleased to have people from other professions around to consult.

Until the COVID-19 pandemic, a large majority of the participants stated that they did not see any benefits in their profession other than being able to help relatives and receive occasional good wishes from patients. In this context, the participants expressed that through the events they had experienced, they felt more competent and valuable over time. It has been reported by HCWs who struggle everyday at the center of the COVID-19 pandemic were frequently consulted about the pandemic by people around them.

“I can’t say that I gain any large benefit from the people we serve apart from their occasional good wishes.” (E3)

“We are fully in the midst of COVID-19 and people find it appropriate to get news or consult someone. I guess this makes people feel more significant.” (E4)

“In addition to the many benefits of doing this profession, I gained the ability to better manage the situation for my family and myself.” (D6)

People who work in the healthcare sector choose a people-oriented profession. In this sense, participant E4 and E8 stated that helping people and trying to save lives gave them professional satisfaction. Participants often stated that they were proud of their profession.

“Helping someone in need and intervening in order to save a life, provides insatiable satisfaction.” (E4)

“The pleasure of being useful to people makes me very proud.” (E8)

“I felt like people needed us more than ever.” (P15)

Pre-hospital HCWs, who worked in a 24-hour duty shift system during the pandemic, emphasized that they did not have time to eat or rest due to the increase in cases; they tried to see as many cases as possible during their shift hours and in spite of drowsiness and exhaustion, they treated each case equally as they distinguished between COVID-19 cases and others. In this context HCWs are people-oriented and altruistic in even in the middle of the most strenuous circumstances. At the same time, they cited that being in the priority occupation group during the vaccination program was an additional benefit of the profession.

“Even the intensity of the work could not dampen our human side. We were able to approach the first and the last case of our shift with the same compassion.” (E6)

“It is satisfying to be a priority for receiving the vaccination and being a member of a self-sacrificing professional group that struggles for human life all over the world.” (D10)

3.3. Questioning the Profession

HCWs face many difficulties throughout their profession; however, the burden that the COVID-19 pandemic is having on HCWs is even greater and in their responses, participants questioned their reasons for choosing this profession. In line with the codes obtained, it was found that HCWs earnestly worked against this unknown disease and they began to doubt their choice of profession due to the events they had experienced during this period. Reasons for doubting their profession included that their trust in the Ministry of Health had been shaken, they were psychologically mobbed, their thoughts and opinions had been ignored, they were left professionally alone during the pandemic, they worked relentlessly and robotically, and their personal rights were disregarded. The dominant codes under the Questioning the Profession theme are shown in Table 3.

Table 3. The dominant codes under the theme of Questioning the Profession

Subtheme	Codes	Explanation
3. Questioning the Profession	3.1. Loss of Confidence in Managers	Some of the participants stated that their trust was shaken due to the disorganization of the system.
	3.2. Working Under Stress	All of the participants stated that they had psychological difficulties.
	3.3. Feel Alone During the Pandemic	They stated that they could not find support due to the mobbing they experienced during the pandemic.
	3.4. Experienced Psychological Mobbing	Participants stated that they were psychologically exposed to mobbing and pressure.
	3.5. Thinking Their Voice Was Ignored	It was stated that suggested solutions were ignored during the planning period and into the pandemic.
	3.6. Experiencing Burnout Syndrome	Participants stated that they became dismissive towards their profession and experienced burnout syndrome.
	3.7. Work Like a Robot	Working permanently and being without a social life led them to question their choice of profession.
	3.8. Superhuman Study	The working conditions and work loads of the participants were well beyond their capacity.
	3.9. Dissatisfaction With Personal Rights	They stated that although they worked under strenuous and risky conditions, they did not have similar personal rights with other professions such as police, military, etc.

The majority of HCWs who, over time, experienced difficulties in their profession but tried to cope with them, stated that they do love their profession but this strenuous period had made them more pessimistic. HCWs reported that they felt insignificant due to the lack of personal rights and the behavior from managers. Participants who reported having had COVID-19 during this period stated that they were not supported on issues such as treatments, reports, and obtaining different permissions as well as also being forced to continue working; this situation was another reason for questioning their profession.

“Many of us have already gotten sick due to these unhealthy working conditions and we have understood the value that has been given to us. You know, HCWs were valuable!” (E10)

“During this time, I honestly felt like a pawn.” (E19)

HCWs stated that with the gradual rising in the number of cases, their friends and co-workers received news of the COVID-19 disease cases, and deaths. For this reason, they stated that they could not avoid the disease and were just waiting for the time they would become sick; and eventually they were infected with COVID-19. Within the anecdotes given, the majority of the participants had contracted the disease before being vaccinated.

“Deep inside, we were waiting for the time when we would come down with COVID-19.” (P2)

“Like many of my friends, I sometimes questioned why I am working in this profession.” (D10)

Since the beginning of the COVID-19 pandemic, HCWs have made various attempts to have this disease accepted as an occupational disease by the SII (Social Insurance Institution); however, it was decided on May 7, 2020 that for the insured who were found to be exposed to COVID-19, it was “not considered a work accident or occupational disease, but as a normal disease” (Özkan Şat, Akbaş & Yaman Sözbir, 2021). For this reason, it was stated that providing additional allowances or performance payments to HCWs was inconsequential and that the disease had risks; this was yet another reason many HCWs questioned their profession.

“COVID-19 is not considered an occupational disease in our country, and the cost of putting yourself and your loved ones at risk while trying to save someone else's life are not going to be compensated with performance payments.” (D4)

HCWs who have questioned their profession during the COVID-19 pandemic and think they have chosen the wrong profession are at a considerably high level. The majority of the participants expressed negative opinions on this issue. The largest reason for this has become clear, “not feeling that you are valued enough.”

4. DISCUSSION

Within the scope of our findings, it was concluded that panic and chaos in the environment prevailed throughout the early stages of spreading awareness about COVID-19, no solutions were found to discriminate information and despite the great efforts to do so by managers, trainings were held in conference halls with unsuitable conditions.

In their study, Hu et al. stated that the public response times to COVID-19 awareness differs between countries and that public attention is short (Hu, et. al., 2020). In the same study, increasing the dissemination of information by governments was identified as an important factor in strengthening public awareness about COVID-19. It was emphasized that this would inform the public about the importance of protecting themselves with adequate measures and finally enable the ability to control the global spread of COVID-19. When “COVID-19 Awareness” is considered, which is the first theme of our research, it can be said that there were high levels of uncertainty in this first stage. During this period, the public was not sufficiently aware of the danger and the effect of this situation was later projected

onto the HCWs. As a result, the the training that was provided could not prevent the spread of misinformation and the teams had to make decisions that would provide immediate solutions, depending on the situation they encountered. The largest issue that came to the forefront in this context, was the lack and misuse of cleaning and protection equipment.

The study by Ardebili et al. revealed many difficult situations faced by HCWs include overwhelming workload, uncertainty, directionlessness, lack of protective equipment and difficulties in their use. Similar codes were also expressed in our study (Ardebili, et. al., 2020). All studies have shown that the increase in these adverse effects on HCWs during the pandemic can affect their attitude and their struggle against the pandemic (Trumello, et. al.,2020). These situations need to be detected and resolved at an earlier stage. Similar problems are being experienced in many countries which reveals the necessity of a global struggle surrounding this situation. Organizations that lead the world during the pandemic, such as the World Health Organization (WHO), the International Labour Organization, and the United Nations should closely evaluate these reports and provide suggestions about possible solutions. It should be known that as the impact of the pandemic on HCWs increases, the front defence line of the fight will be severely injured.

In the second theme of this study, “Professional Satisfaction and Benefits,” the majority of participants stated that they did not see any additional benefits to their profession. They asserted that hearing good wishes from recovered patients, in which they had contributed, was highly motivating since they work in a human-oriented profession. In addition, it was also stated by other participants that the benefit of their profession was that they were given priority in the vaccination program and were able to provide guidance to their relatives about the pandemic. Within the scope of this study, the theme of “Questioning the Profession” was created due to the reasons that were provided about their exhaustion.

The most prominent code for questioning their professional situation was that COVID-19 had not been recognized as an occupational disease, despite the fact that thousands of HCWs contracted COVID-19 and hundreds of them have died. In the study conducted by Özkan et al. during the early stages of the pandemic, the majority of nurses stated that they were exposed to mobbing, and half of the participants in the study stated that they considered quitting their profession during that period (Özkan Şat, Akbaş & Yaman Sözbir, 2021). Similarly, this code was emphasized in our study multiple times along with many different examples. In related studies, similarly high rates of mobbing should worry us as well as administrators because while the pandemic continues to spread, we could soon face the risk of not having enough HCWs in the field.

Pre-hospital HCWsexperience very emotional moments from time to time, but despite all this, they continue to provide equal care throughout their 24-hour duty shift. In a study of professionals working with COVID-19 patients, the percentage of professionals who considered seeking psychological support was twice that of the group not working with COVID-19 patients. It is suggested

that the mental health of HCWs, especially those who have first contact, should seriously be taken into consideration and targeted prevention and intervention programs are necessary and must be created.

5. CONCLUSION

Views of the pre-hospital healthworkers in the transfer of COVID-19 patients to the hospital and management are revealed under three themes: COVID-19 awareness, professional satisfaction and its benefits and questioning the profession. Under these themes, they expressed professional satisfaction as well as the problems arising from the nature of the pandemic and the professional difficulties in the pandemic process. To more quickly overcome the COVID-19 pandemic, granting personal rights especially to pre-hospital HCWs, having managers adopt more moderate managerial approaches, following the worldwide disease literature, increasing the awareness of the disease in society, reorganizing educational trainings and guides with the aim of preventing misinformation about the disease, is recommended.

6. LIMITATIONS

The research is limited to data collected between March 2020 and May 2020 from prehospital healthcare workers. The participants of the research are limited to those who voluntarily accept the research invitation made through social media.

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