Research Article

THE EFFECTS OF COVID-19 PANDEMIC ON HEALTH MANAGEMENT SYSTEM AND INTERPERSONAL RELATIONS: A MIXED METHOD STUDY OF THE EXPERIENCES OF MIDWIVES AND NURSES

Hacer YALNIZ DİLCEN[1], Ebru BULUT[2], Zeynep TURHAN[3], İlknur DOLU[4]

Abstract

Aim: This study aims to explore how nurses and midwives construct the meanings of the changes due to the pandemic and their post-traumatic stress and secondary traumatic stress in the COVID-19 pandemic.

Method: The study is a mixed method study that consist cross-sectional data and individual interview data. The study was conducted in Turkey, during February 2021. In the first stage, a questionnaire, Post Traumatic Stress Disorder Short Scale and Secondary Traumatic Stress Scale were administered to midwives and nurses. Qualitative stage of the study was designed by informing the socio-ecological theory by focusing on participants' the individual, organizational and societal level experiences. At the second stage, semi-structured interviews with midwives and nurses via video communications were conducted. The thematic analysis was used.

Findings: Our study showed that midwiferies and nurses experience above of the average post-traumatic stress and secondary traumatic stress during COVID-19 pandemic. In the examination of the lived experiences of nurses and midwives on adaptions of the pandemic conditions, three themes were emerged including: The roles of health managers on pandemic conditions, influences of health-care policies and effects of pandemic on interpersonal relations.

Results: This study shows that health organization and management system need to be well adapted to the pandemic conditions for health-care workers' well-being and effective practices. Successful health management can provide quick and beneficial tools for enhancing well-being among not only healthcare workers but also patients.

Keywords: COVID-19 Pandemic; Health Management; Midwives; Nurses; Organization

[1]: Associate Professor. Department of Midwifery, Faculty of Health Science, Bartın University, Turkey e mail: hdilcen@bartin.edu.tr, ORCİD: 0000-0001-5911-7201

[2] Corresponding Author: Research Assistant. Department of Midwifery, Faculty of Health Science, Bartın University, Turkey, esert@bartin.edu.tr, Orcid: 0000-0002-3175-752X

[3]Associate Professor. Department of Social Work, Faculty of Health Science, Bartın University, Turkey, e mail: zturhan@bartin.edu.tr, ORCİD: 0000-0002-5343-9442

[4]Associate Professor. Department of Nursing, Faculty of Health Science, Bartın University, Turkey, idolu@bartin.edu.tr, ORCİD: 0000-0002-0958-8395

Covid-19 Pandemisinin Sağlık Yönetim Sistemi ve Kişilerarası İlişkiler Üzerindeki Etkileri: Ebe ve Hemşire Deneyimlerinin Karma Yöntemle İncelenmesi

Öz

Amaç: Bu çalışma, Covid-19 pandemisinin sağlık yönetim sistemi ve kişilerarası ilişkiler üzerindeki etkilerini belirlemeyi, pandeminin ebe ve hemşirelerde post-travmatik stres ve ikincil travmatik stres oluşumuna nasıl katkı sağladığını keşfetmeyi amaçlamıştır.

Yöntem: Çalışma, kesitsel veriler ve bireysel görüşme verilerinden oluşan karma yöntemli bir çalışmadır. Çalışma Türkiye'de Şubat 2021'de gerçekleştirilmiştir. İlk aşamada ebe ve hemşirelere anket formu, Travma Sonrası Stres Bozukluğu Kısa Ölçeği ve İkincil Travmatik Stres Ölçeği uygulanmıştır. Araştırmanın nitel aşaması, katılımcıların bireysel, örgütsel ve toplumsal düzeydeki deneyimlerine odaklanılarak sosyo-ekolojik kurama dayandırılarak tasarlanmıştır. İkinci aşamada ebe ve hemşirelerle görüntülü iletişim yoluyla yarı yapılandırılmış görüşmeler yapılmıştır. Tematik analiz kullanılmıştır.

Bulgular: Çalışmamız, ebelerin ve hemşirelerin COVID-19 salgını sırasında ortalamanın üzerinde travma sonrası stres ve ikincil travmatik stres yaşadıklarını göstermiştir. Hemşire ve ebelerin pandemi koşullarına uyum konusunda yaşadıkları deneyimlerin incelenmesinde sağlık yöneticilerinin pandemi koşullarındaki rolleri, sağlık politikalarının etkileri ve pandeminin kişilerarası ilişkilere etkileri olmak üzere üç tema ortaya çıkmıştır.

Sonuç: Bu çalışma, sağlık çalışanlarının refahı ve etkili uygulamaları için sağlık organizasyonu ve yönetim sisteminin pandemi koşullarına iyi adapte edilmesi gerektiğini göstermektedir. Başarılı sağlık yönetimi, yalnızca sağlık çalışanları için değil hastalar için de refahı artırmak için hızlı ve faydalı araçlar sağlayabilir.

Anahtar Kelimeler: COVID-19 Pandemisi; Sağlık Yönetimi; Ebeler; Hemşireler; Organizasyon

1.INTRODUCTION

Many pandemics have occurred in the world since years. However, the spread of disease has been occurring much faster than ever before due to the globalization and new viruses. As many health care workers have been negatively affected from previous pandemics, midwives and nurses have played important roles in caring for individuals with infectious diseases and patients in acute and emergency situations during the Covid-19 pandemic (Sullivan et al., 2022). Furthermore, health systems have also been the most important factor influencing the deal with the pandemic environment. Health policies have also been under great pressure in the face of this unpredictable emergency that affects the whole world. Although countries have developed different protocols to combat the pandemic, situations such as inadequacies in economic resources, worsening working conditions of health personnel, regional inequalities in equipment and service delivery have brought the health systems of many countries to the brink of collapse (Pena-Ramoes et al., 2021).

In a study in the USA and the UK on approximately two million individuals who are not healthcare workers and approximately 100 thousand healthcare workers, it was found that COVID-19 was seen 12 times more frequently among the healthcare workers (Nguyen et al., 2020). It has been reported that health personnel exposed to Covid-19 in the provision of health services show psychological symptoms such as anxiety, depression and helplessness (Riedel et al., 2021). Working during the pandemic also negatively affects the social lives of midwives and nurses. Especially being socially isolated and being away from their families play a major role in the emergence of psychological symptoms (Haussl et al., 2021). However, problems such as increasing workload, transferring midwives and nurses to intensive care units to meet the increased care needs due to acute fluctuations related to the pandemic, and insufficient personnel and personal protective equipment have increased psychological and physical wear. (Ma et al., 2021; Vranas et al., 2021).

Nurses, who serve as one of the most crowded and effective healthcare personnel groups at all stages of providing health services, are also in the very front in the healthy management of the pandemic process, and they serve by using their knowledge, experience and talents on a high level. It is believed that, in this difficult process, management of a newly defined disease with unknown prognosis and different processes and difficulties experienced by healthcare professionals create different effects on them both occupationally and psychologically (Marshall, 2020). In line with this need, studies should be conducted to determine the situation experienced by midwives and nurses and identify the necessary strategies. The number of midwives and nurses affected by COVID-19 is on a non-negligible level. Although there are studies examining the experiences of midwives and nurses in the COVID-19 process, studies

investigating what they experience on the individual, familial, organizational, and social level by utilizing the socio-ecological theory are highly limited.

This study analyzed the research question by utilizing the socio-ecological theory (Bronfenbrenner, 1981). The socio-ecological theory has been developed within a framework aiming to understand the individual and environmental factors affecting the attitudes and behaviors of individuals. Understanding the interactive effects of these factors with each other is among its most important objectives. Factor interactions are examined on four levels, and equal importance is assigned to factors on each level. This model accounts for multidirectional interactions among four intertwined levels (individual, familial, organizational, and social) (Bronfenbrenner, 1981; Heise, 1998). In the scope of this model, it was aimed to investigate the experiences of midwives and nurses on these four levels. This study aimed to examine how midwives and nurses construct the meanings of changes they experienced on the individual, familial, organizational, and social levels in the COVID-19 process by utilizing qualitative data. Moreover, we aim to explore the level of post-traumatic stress and secondary traumatic stress among midwifes and nurses in the COVID-19 pandemic by conducting surveys.

2. MATERIAL AND METHOD

2.1. Study Design

A mixed-method research approach was adopted by using both quantitative and qualitative research methods. The goals of this mixed method research are to examine the post-traumatic stress and secondary traumatic stress among nurses and midwives and how they experienced pandemic process in the individual, organizational and societal levels in the COVID-19 pandemic. A qualitative descriptive design was employed to determine the lived experiences of midwives and nurses in the COVID-19 pandemic process. The interviews were carried out during February 2021 via video communications on Skype, which is recommended for sensitive sample in qualitative studies (Sullivan, 2012). Midwives in Turkey may actively serve as nurses at primary health institutions and inpatient institutions where they are needed (Nursing Act, 2007).

2.2. Selection of participants

The snowball sampling method was used to reach potential participants because snowballing technique was beneficial to increase the diverse sample. In the first phase of this study, questionnaires were applied on a much larger sample. Afterwards, qualitative interviews were conducted with nurses or midwives who were determined to have high stress levels. The inclusion criteria were determined as: (i) being a midwife or a nurse, (ii) providing care for patients directly and (iii) having work experience before the pandemic. Twenty-five midwiferies and nurses participated in qualitative data collection. The quantitative data analysis for this sample was also presented in this study.

2.3. Data Collection Tools

The quantitative data were collected by using a survey form Post-Traumatic Stress Disorder Short Scale, the Secondary Traumatic Stress Scale. Semi-structured interview form was used for qualitative data collection.

Survey Form: The form consisted of questions related to participants' age, education status and unit of work.

Post-Traumatic Stress Disorder Short Scale (PTSD-SS): PTSD-SS is a self-report assessment with good psychometric properties including 9 items. The scale was developed by LeBeau et al. (2014) and tested for validity and reliability in Turkish by Evren et al. (2016). Individuals assess themselves in terms of traumatic stress symptoms in the last seven days. PTSD-SS is four-point Likert-type scoring between 0, representing absence of symptoms, and 4, representing maximal symptoms. The total score ranges from 0 to 36, with scores ≥24 indicating clinical significance. The Cronbach's alpha coefficient for the entire scale was reported as 0.87 (Evren 2016).

Secondary Traumatic Stress Scale (STSS): The scale which was developed by Bride et al. (2004) was created to measure the posttraumatic stress symptoms developed secondarily by members of a profession working with traumatized individuals and through evaluating the individual's reactions in the last 7 days. The validity and reliability study of the scale in Turkish was conducted by Yıldırım et al. (2018). The 5-point Likert-type scale assessing the reactions experienced by individuals in the last seven days consists of 17 items. This scale with three subscales, namely, emotional intrusion, avoidance, and arousal. If the response to one item is "Never" (1) or "Seldom" (2), the existence of posttraumatic stress symptoms is not confirmed. If the response is "Sometimes" (3), "Frequently" (4), or "Very frequently" (5), the existence of posttraumatic stress symptoms is confirmed. Also, at least one item measuring involuntary intrusion, three items measuring avoidance symptoms, and two items measuring arousal should be marked as "Sometimes" or higher to confirm the existence of posttraumatic stress symptoms. These three criteria together indicate the risk of a posttraumatic stress disorder. The possible scores on the scale are between 17 and 85, and higher scores indicate a higher impact level. Its Cronbach's alpha value (0.94) indicates that the scale has high reliability (Yıldırım 2018).

Semi-structured Interview Form: The semi-structured interview questions were designed to explore facilitators and obstacles related to adapting to the pandemic process across four key relationship dimensions. These dimensions encompassed various aspects of the participants' lives, including their work life, interactions with family members, individual experiences, and other social interactions. For a detailed list of the semi-structured interview questions, please refer to the supplementary documents. To formulate the interview questions effectively and comprehensively, we drew upon the socio-ecological theory, which allowed us to investigate both individual and environmental factors shaping participants'

experiences. The interviews, conducted with a total of 25 participants, spanned approximately 30 to 50 minutes each.

2.4. Ethical Considerations

All procedures performed in the study involving human participants were in accordance with the ethical standards of the institutional research ethics committee (IRB: 2020-SBB-0168). The article does not contain any studies involving animals performed by any of the authors. Informed consent was obtained from all individuals participants involved in the study.

2.5. Data Analysis

The demographic data of the participants and their STSS- and PTSD-SS-related data were entered into the Statistical Package for the Social Sciences (SPSS) version 25.0 program and are reported as frequencies, percentages, means and standard deviations.

The thematic analysis was used to report the themes and to achieve in-depth understanding of the experiences of individuals (Braun & Clarke, 2006). Thematic analysis consists of six stages: (1) identifying the collected data and establishing relationships, (2) producing the initial codes, (3) investigating the themes, (4) reviewing the themes, (5) defining the themes, and (6) naming and reporting (Braun & Clarke, 2006). The MAXQDA Software 2020 was utilized to ensure data presentation reliability, and consensus among the research team members was achieved through continued discussion, following a "line by line" coding approach (Squires & Dorsen, 2018). The development of subthemes and themes ensued from repeated comparative assessments of emerging codes, considering their similarities and differences. Likewise, participants' lived experiences were critically analyzed concerning pandemic-induced changes. Extracts from codes with similar themes were consolidated. In the final phase of coding, we examined how codes could coalesce into primary themes and employed separate paper-based mind maps to organize these themes. This phase was instrumental in establishing connections between subthemes and main themes, ensuring adequate data support for each theme. The coherence of subthemes was systematically reviewed throughout the process. The study's design and reporting adhered to the Consolidated Criteria for Reporting Qualitative Research guidelines. (COREQ) (Tong, Sainsbury, & Craig, 2007).

2.6. Trustworthiness

The study's validity and reliability were rigorously ensured through multiple approaches. Firstly, a triangulation method was employed, as recommended by Bloomberg and Volpe (2014), which involved comparing qualitative data from various sources to enhance the study's trustworthiness. Secondly, the research team actively engaged in discussions to validate the identified codes and themes, contributing to the overall reliability of the analysis, as advocated by Maxwell (2013).

Furthermore, a self-reflection technique, as proposed by Bloomberg and Volpe (2008), was applied by the second author, who possessed a background in midwifery. This technique involved the critical examination of personal biases, prejudices, and perspectives. The second author diligently questioned their own biases, made reflective notes, and provided critical comments throughout the research process. These self-reflective practices were instrumental in promoting awareness and mitigating the influence of subjectivity and biases during data analysis (Bloomberg & Volpe, 2008). Additionally, efforts were made to mitigate power imbalances and foster positive rapport between the interviewer-author and the interviewees. Reflexivity techniques were systematically employed for this purpose. These steps collectively contributed to the study's overall validity, reliability, and ethical rigor (DeVault & Gross, 2012; Cohen et al., 2017).

3. RESULTS

Qualitative Finding

3.1. Findings of quantitative data

It was determined that the participants were mostly university graduates (76%), single (64%), midwives (44%), nurses (56%) and had no children (68%). Considering the occupational characteristics of the participants, it was found that 32% worked at intensive care, 28% worked at clinical services, 8% worked at emergency and operating rooms, and 32% worked at delivery rooms. It was observed that, in the process after the COVID-19 pandemic started, 36% of the participants started to work at a different unit, and they mostly transitioned to COVID-19 services (12%) and COVID-19 intensive care units (8%) (Table I). First, the results of the quantitative data were presented, and thematic analysis of the data obtained from the semi-structured interviews was performed. The statements of the participants were included to exemplify each theme.

Table I. Socio-demographic and professional characteristics of midwives and nurses (N:25)

		n	%
Education	High school and associate degree	3	12.0
	Graduate education	19	76.0
	Postgraduate	3	12.0
Marital Status	Single	16	64.0
	Married	9	36.0
Professional Title	Midwife	11	44.0
	Nurse	14	56.0
Child	None	17	68.0
	1	6	24.0
	2 and over	2	8.0
Unit	Intensive care	8	32.0
	Clinical services	6	28.00
	Emergency and Operating Room	2	8.0
	Delivery room, FHC and pregnancy school	8	32.00
Changing of unit during Covid-19 pandemic	Yes	9	36.0
	No	16	64.0
If yes, which unit was switched to?	Unchanged units	16	64.0
	Emergency Triage	1	4.0
	Covid Clinics	3	12.0
	Covid Intensive Care	2	8.0
	Internal medicine	1	4.0
	Palliative	1	4.0
	Supervisor	1	4.0

In the examination of the secondary traumatic stress and posttraumatic stress scores of the participants, it was determined that their mean total STSS score was 56.04±13.25, while their mean scores in the subscales were as 14.44±4.37 for intrusion, 22.96±5.63 avoidance and 18.64±4.95 for arousal. The scores that can be obtained in the scale have a range of 17-85, and higher scores indicate higher levels of affectedness. The STSS total and subscale scores of the participants were above of the average. Similarly, their mean PTSD-SS score was 20.52±7.62, which was again above of the average. These

scores meant that the midwives and nurses experienced above average STS and PTS in the pandemic period (**Table II**).

Table II. The scores of the secondary traumatic stress and posttraumatic stress (N:25)

	Min-max	Mean±SD
STS Total Score	29.00-75.00	56.04±13.25
Emotional violation sub-dimension	6.00-22.00	14.44±4.37
Avoidance sub-dimension	13.00-33.00	22.96±5.63
Arousal sub-dimension	8.00-25.00	18.64±4.95
PTS Total Score	3.00-31.00	20.52±7.62

3.2. Findings of qualitative data

Obstacles and facilitators of the preparedness and adaptation of the participants to COVID-19 were investigated. While all findings were presented in the form of five themes in the first-level analysis, they were summarized in the form of three themes based on codes and categories (Table III).

Table III. Summary of the themes and subthemes

Themes	Sub-themes
The roles of health managers	• Burnout linked to poor organizational issues • The influences of a health manager
Influences of health-care policies	• Problems of supplementary payment • Insufficient infrastructure and preventions
Challenges in interpersonal relations	• Relationship problems with family members • Social distance with friends and neighbors

3.2.1. Theme 1: The Roles of Health Managers on Pandemic Conditions

All participants mentioned the changes and difficulties at the work environment due to the dynamic and new COVID-19 pandemic. Whereas many participants shared obstacles encountered in adaptation, effective management skills were reported as facilitators of their adaptation process. Both challenges and facilitators based on health management system were described. For instance, poor organizational circumstances and heavy workloads were identified as important factors increased stress. On the other hand, health mangers' effective strategies and preparedness of COVID conditions were identified as effective management increased their adaptation of new treatments and dealing with pandemic environment.

Poor organizational issues linked to burnout

Burnout and chronic fatigue symptoms were associated with poor organizational issues and heavy workloads. These symptoms were also linked to the increased death rates, feelings of inadequacy at work, fear, and tensions due to a complex and new disease, absence of administrative leave and a stressful environment, and difficult interactions with patients' relatives. For example, participants stated that they experienced challenges in using extra apparatuses to protect themselves from infection with the disease. Obstacles of using new equipment for protection also related to the poor health management which increased their stress and burnout levels.

'*'We started using shields, goggles and n95 masks. We used to use our normal coats and masks, but in fact, overalls, etc. affected us a lot. We always approached patients in overalls for 2-3 months, again, we had face shields and all… Naturally, so much exhaustion happened among us. You sweat inside the overalls, and we constantly change gowns. That is, these things affected us a bit. It should have affected psychologically, too, naturally.*" (P3, Nurse, Intensive care)

Inadequate masks, supplies and staff were related to the poor health management and mostly influenced the degree of stress nurses and midwives experienced. When the number of patients and the need for new supplies increased, hospital authorities experienced difficulties in meeting these needs. Therefore, many participants shared how they struggled for having enough masks and other protective supplies to protect themselves. This issue was also an important element related to their burnout and fatigue.

'*Of course, we experienced equipment shortage in this process. We cannot find the equipment, we request it, but it does not arrive. Somehow, we cannot manage this. We say, even though we are not working at the COVID-19 service, after all, we are looking after suspected patients, we also want equipment. So, we have had such discussions and conflicts to protect ourselves and our families.*' (P5, Nurse, clinical services)

Participants stated how their workloads increased during the pandemic. Furthermore, they mentioned how they spent extra efforts to protect themselves from infection. Heavy workloads were also interconnected with approaching patients with suspicion, as well as fear of contamination. Therefore, the participants highlighted how they spent efforts not to infect patients.

'*At the hospital, normal patients on the one hand, and we take COVID-19 patients to different rooms. That is, concerns started in terms of both protecting ourselves and trying to not carry the disease to other patients. To be honest, the concern levels are very high right now. Before treatment, too, we do our best to not introduce the patient to this virus.*' (P4, Midwife, Delivery room)

'While we were normally on watch duty 7-8 times, the number of our watch duties increased up to 14-15 suddenly. We were mostly at the hospital. They would not even be any time for resting. We were leaving work, sleeping, and going back to the watch duty again. So, such negativities have occurred.' (P3, Nurse, Intensive care)

The influences of a health manager

While difficulties of adopting different treatments were mostly linked to the poor organizational system, having an effective health manager was identified as positive influences of adaptation pandemic process. Most participants experienced some obstacles to adopting different treatments in the period of a new disease. For example, many participants stated uncertainty and ambiguity around the treatments of COVID-19. This ambiguity was strongly interconnected with their burnout as they often felt inadequate in their work. Moreover, changing their positions and responsibilities increased their fatigue.

'Let me say, intubated patients are monitored at the service. I also pity them, the nurses there do not know how to monitor intubated patients, what to do or which drug is given at what does, but they say they must do it. How should I put it… Alright, you are a nurse and have to know many things, but experience is needed in many things in this profession'. (P6, Nurse, intensive care)

A few participants shared how their manager was efficient to deal with a new situation by highlighting the appropriate practices. However, these practices were not stable, so, they raised questions around how effective strategies may be applied during the pandemic.

'Well, they were also highly attentive in the administrative sense. Whenever we did something, they corresponded. They did not leave anything missing for us. They separated the cafeteria, for example. Our food comes here, now we eat here. We do not go out for the cafeteria, they say do not go out, if possible, do not talk to people from the outside. That is, administratively, they have always supported us, indeed." (P3, Nurse, Intensive care)

Similarly, a few participants mentioned how health authorities dealt with the pandemic by providing adequate supplies at the beginning of the pandemic.

''I believe the process was managed well at the first stage. It was managed very well at first." (P7, Midwife, clinical services,)

3.2.2. Theme 2: Influences of Health Policies

Participants mentioned the effects of the new health policies based on COVID-19 difficult conditions. Healthy authorities decided to pay supplementary payments for some health-care workers. However, this healthy policy included some problems and this was a barrier to adaptation to the pandemic. The

problems were associated with unjust payments as the government attempts to motivate healthcare workers were not well organized. The second was about the insufficient infrastructure and precautions for the pandemic.

Problems of supplementary payment

Whilst the government tried to provide incentive allowance to healthcare workers, some injustice issues were raised among the healthcare workers. For instance, the participants claimed that they did not receive any additional payment, and only doctors received it. However, many people among the public perceived that all healthcare workers received such payments. Unfair statements from the public regarding payment were also important elements in understanding how health policies impacted the relationships between health-care workers and patients and community members. For example, some participants faced unfair statements about this payment from the community.

''Additionally, there was this situation, there were financial difficulties, in fact. People are saying, you are a healthcare worker, you are getting additional money, etc. We see it in many places, including television and press." (P6, Nurse, intensive care)

Importantly, a few participants shared their requests of having fair and appropriate work hours and stated that this problem increased their burnout and stress levels.

''Colleagues who did not have overtime in their contracts or those who did not want to work overtime had to work much more overtime. I also worked that way. There were months where we almost saturated the overtime limit." (P15, Midwife, Delivery room)

Insufficient infrastructure and precautions

Many participants shared how the inadequate infrastructure and insufficient precautions about the pandemic impacted their practices and their wellbeing. They mostly emphasized the insufficient practicing of wearing masks and social distancing in public as they recommended that health authorities should have applied strict rules that encourage people to follow these important measures.

''I think the general precautions were also insufficient. Stricter precautions could be taken much before and enforced more strictly. (P18, Midwife, Delivery room)

A few participants also stated their needs of protection as they were at risk of infection all the time at work. They emphasized the importance of having COVID-19 tests as a routine due to their contact with patients.

'Maybe not routinely, but they should also check us if we have any contact with a COVID-positive patient. This is because that patient passed through our service, they entered the personnel room, we had

a form of contact, and so, we are under risk. I think they should test us, too. As you said, it could also be a routine, at certain intervals. …because even if we do not go anywhere or go outside the home, we have much contact with patients and our families. (P16, Midwife, Delivery room)

3.2.3. Theme 3: Challenges in Interpersonal Relations

Participants mentioned how being a healthcare worker during pandemic crisis impacted their relationship with their family members, friends, and neighbors. Fear of contamination in family members, conflicts in family relationship, loneliness, social distance with friends and neighbors, and insufficient self-care practices were experiences identified among midwives and nurses during pandemic.

Relationship problems with family members

Most of the participants stated difficulties of being separated from family regarding social distancing and fear of contamination in family members. The fear of family members getting sick increased social distancing at home. They also spent more time to tell family members how they could protect themselves. Therefore, participants experienced anxiety of contamination in family members.

''You feel bad, because someone can get ill because of you, with a disease that can result in death, and the emotions raised by this in you are very bad. You know, maybe it is not the same for my spouse or child, but it is about the concern of transmitting the disease to the parents, as well as the remorse of that. Maybe, I was not able to keep myself distant from my spouse or child, but we had to keep away from our elders. We have already ended our own social lives. (P18, Midwife, Delivery room)

Therefore, the constant fear of contamination was one of the greatest barriers to adapting to the pandemic. To reduce infections, some participants started to think about moving to a guesthouse or moved to a guesthouse at the beginning of the pandemic.

''I stayed at the guesthouse for about 6 weeks, I did not go home. I have a daughter, she is a nurse at the school of medicine, she also stayed at the guesthouse. My spouse and children stayed home. Then we thought the pandemic was not ending, there was no end to this, and we came home'. (P9, Midwife, pregnant school)

Similarly, most of the participants felt psychological difficulties when they were not able to visit their family members in a long time. A few participants (7) who had (a) child(ren) started to live away from their child at the beginning of the pandemic. They often stated how difficult living away from their child was.

''It affected [me] a lot, I felt very helpless at first, I thought about how long I would not be able to see my child. They are crying there, and I am crying here. It is a distance I can reach, but I cannot go, I cannot access it.' (P11, Nurse, intensive care)

Lack of social policies for women who had kids regarding childcare impacted on dealing with stress. The participants shared difficulties of childcare as many childcare centers were closed during the pandemic period. While they experienced greater obstacles living away from their child, they also mentioned their parents as support systems.

'Before this, of course, we had to send our child to their grandmother. ...because we were both working under difficult conditions, there was risk, and we could not find time to take care of our child. Thus, we sent [our child] to their grandmother.' (P12, Nurse, Operating Room,)

Social distance with friends and neighbors

While health policy and organizational management issues were important to recognize obstacles of encountering the pandemic stress, barriers to adapting to the pandemic were also linked to the shared depression based on the social isolation.

'First of all, of course, our social lives outside are completely over. So, we could just go to work and go home due to the pandemic, and we could not go anywhere else additionally. We could not take part in any social activity. We could not gather with friends, close ones, relatives. '(P12, Nurse, Operating Room,).

Similarly, the participants mentioned how other people perceived them as a potentially infected person, and they practiced distancing with them. The lack of a social life increased their loneliness and depression that were key obstacles to living with the pandemic conditions.

'They look at you as a potential carrier. They are right, too. Then you also take a step back to not harm them; therefore, healthcare workers have been made completely lonely. Indeed, people working somewhere else could continue seeing people in some way by minding their distance and protecting their limits, but I think healthcare workers have been the occupational group that minimized in-person meetings most and became the loneliest.' (P18, Midwife, Delivery room)

Many participants felt that neighbors and other people who knew their position often put an extra physical and social distance with them. Even though most of them perceived these acts reasonable and appropriate due to fears of getting infected, a few participants felt excluded.

'There are a few healthcare workers in the building. They put a sign like 'healthcare workers should use the elevator on the right'. (P5, Nurse, clinical services,)

4. DISCUSSION

This study revealed the importance of health management, organizational and political issues on the obstacles and facilitators of the adaptation among nurses and midwives during COVID-19 pandemic. Both challenges and facilitators related to the health management system within participants' individual, interpersonal, organizational, and social levels interactions were described. For instance, poor organizational circumstances and heavy workloads mostly increased participants' stress and coping skills of the new pandemic environment. On the other hand, health mangers' effective strategies and preparedness of COVID conditions were identified as facilitators of their adaptation of new treatments and dealing with challenging work conditions in pandemic. Therefore, it was determined that most of the participants were psychologically worn out, and they encountered difficulties on the individual, work-related and social levels reaching up to burnout levels. Psychological effects on employees create negative outcomes for organizations. Similarly, excessive pressure imposed on healthcare workers during a pandemic may increase the risk of burnout, and this creates negative outcomes not only individual health but also patient care and the healthcare system (Patel et al., 2018; Blake et al., 2020). For instance, negative psychological outcomes are often associated with work overload, long working hours, inadequate PPE, overambitious media news and feeling insufficiently supported. Importantly, Karataş et al., (2022) pointed out that the intense work environment, the risk of infecting family members, and stigmatization may cause burn-out symptoms in health workers. While the adversities of the pandemic may lead to burn-out among health workers, post-traumatic stress disorder might also be the risk for health workers (Özışık, 2020).

In this present study, depressive symptoms were observed due to the continuous nature and high levels of the nurses' and midwives' fears of getting infected with the disease or carrying the disease to others. Similarly, factors associated with fears of being infected and infecting loved ones, heavy workloads, limited material and reduced social support, anxiety, depression symptoms and a higher mental health risk were reported (Lai et al., 2020; Tan et al., 2020). Furthermore, the fast spread of COVID-19 from person to person, constant exposure to the virus, the virus' high morbidity and potential death risk may intensify perceptions of danger and cause secondary traumatization (Chen et al., 2020; Lai et al., 2020; Wang et al., 2020). Similar findings were reported in our study as the STSS and PTSD-SS scores of the participants were found to be above of the average. COVID-19 pandemic may also lead to several psychological effects such as anxiety, fear, depression, and stress in people, especially healthcare workers (Ahmed et al., 2020; Bao et al., 2020; Lai et al., 2020; Shigemura et al., 2020). Considering the many female healthcare workers treating COVID-19 patients are midwives and nurses, these individuals

may have a higher risk in terms of mental health due to close and frequent contact with patients and working hours that are longer than normal (Chen et al., 2020; Lai et al., 2020).

Even though the government was trying to give incentives to health workers, some problems of injustice among health workers came to the fore in Turkey. Unfair statements from the public regarding payment were also important elements in understanding how health policies impacted the relationships between health-care workers and patients and community members. Policy makers, interdisciplinary partners, and other critical stakeholders need to support changes that allow midwifery and nurses to innovate, lead, and maximize their contribution to society. The far-reaching consequences of COVID-19 have shown that we need widespread, rapid, and intelligent investment in midwifery and nursing through informed action that fully leverages the healthcare workforce. Our communities and the health of populations worldwide depend on these urgently needed policy reforms and increased investment in midwifery and nursing now more than ever (Rosa et al., 2020)

Consequently, the health conditions of healthcare workers also affect the quality and safety of the service that is provided (WHO 2020). As the need for intensive care and ventilator support has increased in all countries, and intensive care beds are occupied with a short-term circulation (Remuzzi and Remuzzi 2020, Lai et al., 2020), it is vitally important to provide support such as protocols for food supply, resting breaks and sufficient leave permits and provision of protective equipment (Shanafelt et al., 2020; Adams and Walls 2020). As much as the characteristics of the patient and the urgency of the case, healthcare workers are also directly or indirectly influenced by the healthcare system and the attitudes of administrators (Abuhanoğlu et al., 2013). Epidemics affect countries without an information flow regarding health and with inadequate resources and infrastructures rapidly and deeply (Iyengar et al., 2020). At this stage, a critical duty falls upon both local and national institutions in terms of planning and intervention (Hick et al., 2020). According to the results of this study, news on the media about midwives and nurses increased the social pressure on them, and the participants were negatively affected by this. On the other hand, the presence of an effective administration was a significant finding that made adaptation to change among the participants easier. Constant change of workplaces among the healthcare workers and their work at clinics they were not familiar with induced more stress in them and increased their risk of making mistakes. In this study, the clinic of work of 36% of the participants was changed, and they worked at clinics where they had not worked at all before. This led the midwives and nurses to experience adaptation problems, as well as having even more stress due to feelings of lack of knowledge and inadequacy in their job.

In our study, most of the healthcare workers stated their anxiety and stress in their individual and interpersonal relationships with their ending socializing activities and reduced or completely ended

gatherings with family and friends. Likewise, Xiao et al. (2020) stated that social support provided to healthcare personnel led to a reduction in their anxiety and stress levels and increased their self-efficacy. Cai et al. (2020) identified concerns about personal safety, concerns about families and concerns about patient deaths as significant factors triggering stress in healthcare workers. These findings have confirmed that the effect of the pandemic on the psychological health of healthcare workers is vast. In our study, it was determined that the participants also experienced stigma and deeply felt loneliness.

Participants in this study shared their experience of stigma from a range of sources: including family, neighbors, colleagues, and administrators. These findings are consistent with a recently published study conducted from Nepal which revealed considerable stigma across the health care workforce (Khanal et al., 2020; Basnet et al., 2022). Providers of health services experienced a constant fear of infection due to the contagious nature of the disease, its unknown modes of contagion, close contact with patients and infections in their colleagues (Liu et al., 2020). Although the midwives and nurses were afraid of infection with COVID-10 and against unpredictable risks, and they were concerned about their families, they still participated in the fight in the frontlines, took responsibilities, focused on their duties and showed a spirit of unity and professionalism. n this study, there were various enabling and complicating factors that influenced the participants' ability to work during the pandemic. In line with other work (Eftekhar Ardebili et al., 2021, Basnet et al.,2022), our study has identified a strong sense of professional duty that has driven health workers to continue their work despite the circumstances.

Limitations

This study encountered several limitations that should be considered. Firstly, due to the lockdown in Turkey during the study period, all interviews had to be conducted via Skype. This remote interview format led to some participants declining to participate, possibly affecting the diversity of perspectives included in the study. Additionally, conducting interviews via Skype presented challenges in building rapport with participants, as non-verbal cues, which can be crucial in qualitative research, were not readily available.

Secondly, the composition of the sample was uneven, with 14 nurses and 11 midwives. While this uneven distribution was not intended to facilitate comparisons between the two groups, it may have inadvertently influenced the depth and breadth of the insights gathered. Despite these limitations, the study's primary aim was not to make direct comparisons between nurses and midwives. Rather, it aimed to explore and understand the experiences of healthcare professionals during the specified context.

5. CONCLUSION

This study has shed light on the challenges faced by midwives and nurses during the COVID-19 pandemic. It became evident that these healthcare professionals grappled with burnout and chronic fatigue symptoms. Their work environment was significantly impacted by the pandemic, characterized by heavy workloads, inadequate supplies of masks and materials, and staffing shortages. Additionally, they encountered obstacles when adopting new treatments and therapies.

Participants in this study also highlighted the shortcomings of healthcare policies in providing sufficient infrastructure and preventive measures. The inherent risks associated with the pandemic, coupled with the ongoing threat of contagion, took a toll not only on their psychological well-being but also on their ability to engage in self-care activities. The management of COVID-19 patients requires both comprehensive and specialized care, particularly in critical care medicine. Many healthcare providers from various departments had limited prior experience in managing contagious intensive care cases. When healthcare systems are unprepared for a contagious disease epidemic, there is a pressing need for improved education, instruction, and communication, as underscored by Vranas et al. (2021).

This study underscores the importance of minimizing the perceived infection risk for healthcare workers and advocates for the implementation of comprehensive psychological support strategies. These strategies should be an integral part of early pandemic planning and encompass a diverse range of programs, including financial incentives, education, personal counseling, and training. By proactively addressing these issues, healthcare systems can better support their frontline workers and improve their overall preparedness for future health crises.

Sources of Support:

Conflict of Interest:

The authors do not have any conflict of interest.

Acknowledgements:

REFERENCES

Abuhanoğlu, H., Teke, A., Demir, C., Çelen, Ö., Karadağ, M., Cankul, İ. H. (2013), "An assessment of physician' attitudes and behaviors on cost-effectiveness during medical treatments", *Gulhane Medical Journal*. Vol. 55 No.4, pp. 288-296, DOI:10.5455/gulhane.34620.

Adams, J. G., Walls, R. M. (2020). "Supporting the health care workforce during the COVID-19 global epidemic", *JAMA,* Vol. 323 No.15, pp. 1439-1440, doi:10.1001/jama.2020.3972.

Ahmed, M. Z., Ahmed, O., Aibao, Z., Hanbin, S., Siyu, L., Ahmad, A. (2020), "Epidemic of COVID-19 in China and associated psychological problems", *Asian Journal of Psychiatry,* Vol. 51 No. 102092, doi:10.1016/j.ajp.2020.102092.

Bao, Y., Sun, Y., Meng, S., Shi, J., Lu, L. (2020), "2019-nCoV epidemic: Address mental health care to empower society", The Lancet, Vol. 395, No.10224, pp. e37–e38, doi: 10.1016/S0140-6736(20)30309-3.

Basnet B, Chapagain P, Subedi S, Dahal T, Neupane S, et al. (2022), "Experiences of nurses providing maternity care in a public hospital during the COVID-19 pandemic in Nepal: A qualitative study", PLOS Global Public Health Vol. 2, No. 5: e0000322, https://doi.org/10.1371/journal.pgph.0000322

Blake, H., Bermingham, F., Johnson, G., Tabner, A. (2020), "Mitigating the psychological ımpact of COVID-19 on healthcare workers: A digital learning package", Int. J. Environ. Res. Public Health, Vol. 17, No. 9, pp. 2997, doi:10.3390/ijerph17092997.

Bloomberg, L. D., & Volpe, M. (2014), "Presenting methodology and research approach. In Completing your qualitative dissertation: A roadmap from beginning to end", SAGE Publications. doi: https://dx.doi.org/10.4135/9781452226613.n3.

Braun, V., Clarke, V. (2006), "Using thematic analysis in psychology", Qual Res Psychol, Vol. 3 No. 4, pp.77–101, doi: 10.1191/1478088706qp063oa.

Bride, B.R., Margaret, M., Yegidis, B., Figley, C. R. (2004), "Development and validation of the Secondary Traumatic Stress Scale", Research on Social Work Practice, Vol. 14 No. 1, pp. 27-35, doi: 10.1177/1049731503254106.

Bronfenbrenner, U. (1981), "The ecology of human development: experiments by nature and design", Cambridge, MA: Harvard University Press.

Cai, H., Tu, B., Ma, J., Chen, L., Fu, L., Jiang, Y., Zhuang, Q. (2020), "Psychological impact and coping strategies of frontline medical staff in Hunan between January and March 2020 during the outbreak of coronavirus disease 2019 (COVID19) in Hubei, China", Medical science monitor: international medical journal of experimental and clinical research vol. 26 e924171, 15 Apr. 2020, doi:10.12659 / MSM.924171.

Chen. Q., Liang. M., Li. Y., Guo. J., Fei D., Wang. L., He L., . . . Zhang. Z. (2020), "Mental health care for medical staff in China during the COVID-19 outbreak", Lancet Psychiatry, Vol. 7 No. 4, pp. 15–16, doi:10.1016/S2215-0366(20)30078-X

Cohen, L., Manion, l., Morrison, K. (2017). Research Methods in Education, 8th Edition, London, pp. 36, ISBN: 9781315456539, https://doi.org/10.4324/9781315456539.

DeVault, M. L., & Gross, G. (2012), "Feminist qualitative interviewing: Experience, talk, and knowledge", In S. N. Hesse-Biber (Ed.), Handbook of Feminist Research: Theory and Praxis. Sage Publications.

Evren, C., Dalbudak, E., Aydemir, Ö., Köroğlu, E., Evren, B., Özen, S., & Coşkun, K. S. (2016), "Psychometric properties of the Turkish PTSD-short scale in a sample of undergraduate students", Bulletin of Clinical Psychopharmacolog, Vol. 26, No. 3, pp. 294-302, doi: 10.5455/bcp.20151205113132

Eftekhar Ardebili, M., Naserbakht, M., Bernstein, C., Alazmani-Noodeh, F., Hakimi, H., Ranjbar, H. (2021). Healthcare providers experience of working during the COVID-19 pandemic: A qualitative study. Am J Infect Control. Vol. 49, No. 5, pp. 547–54. doi:https://doi.org/10.1016/j.ajic.2020.10.00.

Häussl, A., Ehmann, E., Pacher, A., Knödl, K., Huber, T., Neundlinger, L., Osmanovic, A., Plank-Straner, A., Walter, P., Schüssler, S., & Schoberer, D. (2021), "Psychological, physical, and social effects of the COVID-19 pandemic on hospital nurses", International nursing review, Vol. 68 No. 4, pp. 482–492, https://doi.org/10.1111/inr.12716

Heise, L. L. (1998), "Violence against women: an integrated, ecological framework, Violence Against Women", Vol. 4 No. 3, pp. 262–290, doi: 10.1177/1077801298004003002.

Hick, J.L., Hanfling, D., Wynia, M. K., Pavia, A.T. (2020), "Duty to plan: health care, crisis standards of care, and novel coronavirus SARS-CoV-2", NAM Perspectives, pp.2-13, doi:10.31478/202003b.

Iyengar, K., Mabrouk, A., Jain, V. K., Venkatesan, A., Vaishya, R. (2020), "Learning opportunities from COVID-19 and future effects on health care system", Diabetes & Metabolic Syndrome: Clinical Research & Reviews. Vol. 14, No. 4, pp. 943-946, doi:10.1016/j.dsx.2020.06.036.

Karataş, M., Pak Güre M. D., & Duyan, V. (2022). Apparently We cannot live, we are like infectious zombies: a qualitative research on personal and familial experiences of health workers in the filiation teams in turkey during the covid-19 pandemic, Social Work in Public Health, Vol. 37, No. 7, pp. 692-701, doi: 10.1080/19371918.2022.2084196

Khanal P, Devkota N, Dahal M, Paudel K, Joshi D. (2020), "Mental health impacts among health workers during COVID-19 in a low resource setting: a cross-sectional survey from Nepal", Globalization and health, Vol. 16, No. 1 pp. 89, doi:10.1186/s12992-020-00621-z

Lai, J., Ma, S., Wang, Y., Cai, Z., Hu, J., Wei, N., et al. (2020), "Factors associated with mental health outcomes among health care workers exposed to coronavirus disease 2019", JAMA network open. Vol. 3 No. 3, pp. 203976-e. doi.10.1001/jamanetworkopen.2020.3976.

Liu, Q., Luo, D., Haase, J. E., Guo, Q., Wang, X. Q., Liu, S., Xia, L., et al. (2020), "The experiences of health-care providers during the COVID-19 crisis in China: a qualitative study", Lancet Glob Health, Vol. 8: pp. 790–98, doi:10.1016/S2214-109X(20)30204-7

Ma, Y., Faraz, N. A., Ahmed, F., Iqbal, M. K., Saeed, U., Mughal, M. F., & Raza, A. (2021), "Curbing nurses' burnout during COVID-19: The roles of servant leadership and psychological safety", Journal of nursing management, Vol. 29, No. 8, pp. 2383–2391, https://doi.org/10.1111/jonm.13414

Marshall, B. (2020), "Impact of COVID-19 on Nurses' Mental Health, Issues in Mental Health Nursing, Vol. 41 No.10, pp. 853-854, doi: 10.1080/01612840.2020.1819083

Maxwell, J. A. (2013). Qualitative research design: An interactive approach (4th ed.). SAGE Publications.

Nguyen, L. H., Drew, D.A., Graham, M.S., et al. (2020), "Risk of COVID-19 among front-line health-care workers and the general community: a prospective cohort study", Lancet Public Health, Vol. 5, pp. e475–83, doi:10.1016/S2468-2667(20)30164-X

Nursing Act. (2007). https://www.mevzuat.gov.tr/MevzuatMetin/1.3.6283.pdf

Özışık, L. (2020). COVID-Burnout syndrome in healthcare workers in the 19 epidemic. In G. Sain Güven & O. A. Uyaroğlu (Eds.), Internal Medicine and COVID-19, Türkiye Klinikleri, pp.110-120.

Patel, R.S., Bachu, R., Adikey, A., Malik, M., Shah, M. (2018), "Factors Related to Physician Burnout and Its Consequences: A Review", Behav. Sci, Vol. 8 No. 11, pp. 98, doi:10.3390/bs8110098.

Peña-Ramos, J. A., Recuero-López, F., Sánchez-Bayón, A., & Sastre, F. J. (2021), "Evaluation of Spanish Health System during the COVID-19 Pandemic: Accountability and Wellbeing Results", International journal of environmental research and public health, Vol. 18 No. 24, pp. 12907, https://doi.org/10.3390/ijerph182412907

Remuzzi, A., Remuzzi, G. (2020), "COVID-19 and Italy: what next?", The Lancet, Vol. 395 No. 10231 pp. 1225-1228, doi:10.1016/S0140-6736(20)30627-9

Riedel, B., Horen, S. R., Reynolds, A., & Hamidian Jahromi, A. (2021), "Mental Health Disorders in Nurses During the COVID-19 Pandemic: Implications and Coping Strategies", Frontiers in public health, Vol. 9, No. 707358. https://doi.org/10.3389/fpubh.2021.707358

Rosa, W. E., Binagwaho, A., Catton, H., Davis, S., Farmer, P. E., Iro, E., Karanja, V., Khanyola, J., Moreland, P. J., Welch, J. C., & Aiken, L. H. (2020), "Rapid Investment in Nursing to Strengthen the Global COVID-19 Response", International journal of nursing studies, Vol. 109, No. 103668, https://doi.org/10.1016/j.ijnurstu.2020.103668

Shanafelt, T., Ripp, J., Trockel, M. (2020), "Understanding and addressing sources of anxiety among health care professionals during the COVID-19 pandemic", JAMA. Vol. 323 No. 21, pp. 2133-2134, doi:10.1001/jama.2020.5893.

Shigemura, J., Ursano, R. J., Morganstein, J. C., Kurosawa, M., Benedek, D. M. (2020), "Public responses to the novel 2019 coronavirus (2019-nCoV) in Japan: Mental health consequences and target populations", Psychiatry and Clinical Neurosciences, Vol. 74 No. 4, pp. 281–282, DOI: 10.1111/pcn.12988

Sullivan, Jessicai R. (2012), "Skype: An appropriate method of data collection for qualitative ınterviews?", The Hilltop Review, Vol. 16 No. 1, pp. 53-60.

Sullivan, D., Sullivan, V., Weatherspoon, D., & Frazer, C. (2022), "Comparison of Nurse Burnout, Before and During the COVID-19 Pandemic", The Nursing clinics of North America, Vol. 57 No.1, pp. 79–99, https://doi.org/10.1016/j.cnur.2021.11.006.

Squires, A., & Dorsen, C. (2018). Qualitative Research in Nursing and Health Professions Regulation. Journal of Nursing Regulation, Vol. 9, No. 3, pp.15-26. https://doi.org/10.1016/S2155-8256(18)30150-9

Tan, R., Yu, T., Luo, K., et al. (2020), "Experiences of clinical first-line nurses treating patients with COVID-19: A qualitative study", Journal of nursing management, Vol. 28, No. 6, pp. 1381–1390, DOI:https://doi.org/10.1111/jonm.13095

Tong, A., Sainsbury, P., & Craig, J. (2007), "Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist: for interviews and focus groups", International Journal for Quality in Health Care, Vol. 19 No. 6, pp. 349-57. DOI: https://doi.org/10.1093/intqhc/mzm042.

Wang, D., Hu, B., Hu, C., et al. (2020), "Clinical characteristics of 138 hospitalised patients with 2019 novel coronavirusinfected pneumonia in Wuhan, China", JAMA, Vol. 323 No. 11, pp. 1061–1069, DOI:10.1001/jama.2020.1585

World Health Organization. The World Health Report 2006 – Working Together for Health. Available at: http://www.who.int/whr/2006/en/.Accessed 11 January 2020.

Vranas, K. C., Golden, S. E., Mathews, K. S., Schutz, A., Valley, T. S., Duggal, A., Seitz, K. P., Chang, S. Y., Nugent, S., Slatore, C. G., Sullivan, D. R., & Hough, C. L. (2021), "The Influence of the COVID-19 Pandemic on ICU Organization, Care Processes, and Frontline Clinician Experiences: A Qualitative Study", Chest, Vol. 160 No. 5, pp. 1714–1728, https://doi.org/10.1016/j.chest.2021.05.041

Xiao, H., Zhang, Y., Kong, D., Li, S., Yang, N. (2020), "The effects of social support on sleep quality of medical staff treating patients with coronavirus disease 2019 (COVID-19) in January and February 2020 in China", Medical science monitor : international medical journal of experimental and clinical research, Vol. 26 No. 3, pp. 923549-1, DOI: 10.12659/MSM.923549.

Yıldırım, G., Kıdak, L.B. & Yurdabakan, İ. (2018), "Secondary Traumatic Stress Scale: an adaptation study", Anatolian Journal of Psychiatry, Vol. 19 No. 1, pp. 45-51, DOI: 10.5455/apd.247563.