

## PAPER DETAILS

TITLE: A Qualitative Study on the Experiences of Volunteer Nurses about After the Elbistan Earthquake

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PAGES: 516-524

ORIGINAL PDF URL: <https://dergipark.org.tr/tr/download/article-file/3592990>



## ORİJİNAL MAKALE / ORIGINAL ARTICLE

Balıkesir Sağlık Bilimleri Dergisi / BAUN Sağ Bil Derg  
Balıkesir Health Sciences Journal / BAUN Health Sci J  
ISSN: 2146-9601- e ISSN: 2147-2238  
Doi: <https://doi.org/10.53424/balikesirsbd.1403378>



### A Qualitative Study on the Experiences of Volunteer Nurses about After the Elbistan Earthquake

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Geliş Tarihi / Received: 11.12.2023

Kabul Tarihi / Accepted: 24.06.2024

#### ABSTRACT

**Objective:** This study was carried out to examine the experiences of nurses working voluntarily in the field after the Elbistan earthquake. **Materials and Methods:** This study was carried out in a phenomenological design by using the qualitative research method. The sample of the study was determined by snowball sampling, one of the purposeful sampling methods, and the study was carried out with 16 nurses who accepted to participate in the study and met the inclusion criteria. The data were collected face to face between April 3 and July 30, 2023 by individual in-depth interview method and a semi-structured interview form was used as a data collection tool. **Results:** This study, nurses stated that they felt emotions such as "anxiety, fear, stress, sadness, restlessness, desire to take action, trauma, uneasiness, helplessness, anxiety, guilt" after receiving the news of the earthquake. The difficulties experienced by nurses were "lack of disaster nursing experience, uncertainty about the condition of the field, concern for safety, challenging psychological environment, concern for competence, fear of making mistakes, concern for harm, bodies with damaged integrity, seeing too many deaths." **Conclusion:** The obtained experiences highlight that disaster nursing should encompass management, organization, coordination, teamwork, and crisis management skills, along with disaster-specific nursing care. Nurses need to be better equipped for disaster nursing.

**Keywords:** Disaster, Disaster Nursing, Earthquake, Nursing Care.

### Elbistan Depremi Sonrası Sahada Gönüllü Çalışan Hemşirelerin Deneyimleri Üzerine Nitel Bir Çalışma

#### ÖZ

**Amaç:** Bu çalışma Elbistan depremi sonrasında sahada gönüllü olarak çalışan hemşirelerin deneyimlerinin incelenmesi amacıyla gerçekleştirilmiştir. **Gereç ve Yöntem:** Bu çalışma nitel araştırma yönteminden yararlanarak, fenomenolojik desende gerçekleştirilmiştir. Araştırmanın örnekleme amaçlı örnekleme yöntemlerinden kartopu örnekleme ile belirlenmiş, çalışmaya katılmayı kabul eden ve çalışmaya dahil edilme kriterlerini karşılayan 16 hemşire ile çalışma gerçekleştirilmiştir. Veriler bireysel derinlemesine görüşme yöntemi ile 3 Nisan 2023-30 Temmuz 2023 tarihleri arasında yüz yüze toplanmış ve veri toplama aracı olarak yarı yapılandırılmış görüşme formu kullanılmıştır. **Bulgular:** Çalışmamızda hemşireler deprem haberini aldıktan sonra "endişe, korku, stres, üzüntü, huzursuzluk, harekete geçme arzusu, şaşkınlık, tedirginlik, çaresizlik, anksiyete, suçluluk" gibi duyguları hissettiklerini ifade etmişlerdir. Hemşirelerin yaşadıkları zorluklar "afet hemşireliği tecrübesinin bulunmaması, sahanın durumuyla ilgili belirsizlikler, güvenlik endişesi, zorlayıcı psikolojik ortam, yeterlilik endişesi, hata yapma korkusu, zarar verme endişesi, bütünlüğü bozulmuş bedenler, çok fazla sayıda ölüm görme" olmuştur. **Sonuç:** Elde edilen deneyimler, afet hemşireliğinin afete özgü hemşirelik bakımının yanı sıra yönetim, organizasyon, koordinasyon, takım çalışması ve kriz yönetimi becerilerini de içermesi gerektiğini vurgulamaktadır. Hemşireler afet hemşireliği konusunda daha donanımlı olmaya ihtiyaç duymaktadır.

**Anahtar Kelimeler:** Afet, Afet Hemşireliği, Deprem, Hemşirelik Bakımı.

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**Bu makaleye atıf yapmak için / Cite this article:** Yıldız İçigen, A. & Gemici Metin, Z. E. (2024). A qualitative study on the experiences of volunteer nurses about after the Elbistan earthquake. *BAUN Health Sci J*, 13(3), 516-524. <https://doi.org/10.53424/balikesirsbd.1403378>



BAUN Health Sci J, OPEN ACCESS <https://dergipark.org.tr/tr/pub/balikesirsbd>

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## INTRODUCTION

In contemporary times, disasters, whether derived from human activities or natural occurrences, represent a grave concern, frequently affecting a significant number of individuals both globally and within our nation. These calamities not only precipitate emergency situations but also disrupt the natural flow of life, altering living conditions and negatively impacting individuals in various aspects (Şimşek & Gündüz, 2021; Grochtdreis et al., 2017). Amid the altered living conditions, addressing health needs emerging from the destruction caused by the disaster, and ensuring the continuity of health services uninterrupted, are indeed paramount necessities. Ensuring the sustainability of health services, emergency intervention, and the rehabilitation process in the aftermath of a disaster necessitates that nurses possess specialized knowledge, skills, and experiences in disaster nursing in order to secure the intended benefits.

The systematic and regular application of professional knowledge and skills by nurses while conducting activities with other professional groups to mitigate the physical and psychological risks of disasters has brought forth the concept of “disaster nursing” (Brewer et al., 2020; Chapman & Arbon, 2008). Research indicates that the presence of nurses in disaster response reduces fatalities, and that nurses demonstrate greater flexibility and proficiency in emergency situations, as well as success in team endeavors (Brewer et al., 2020; Şimşek & Gündüz, 2021). Additionally, nurses are reported to frequently assume team leadership roles during disasters (Zarea, 2014).

The complexity of modern-day disasters demands health professionals who can operate at every phase of the disaster process. Recent disasters have revealed that a lack of knowledge regarding intervention and management leads to confusion among responders and delays in assistance responses (Özmen & Özden, 2013). For this reason, nurses' leadership is very important in managing the disaster process.

Engaging in disaster processes must evolve from a voluntary act to a professional obligation. Foremost for professionalism is the necessity for comprehensive education. The World Health Organization (WHO) recommends that all countries ensure health professionals are trained to respond to all disasters at a level that is appropriate to both national and local disasters, regardless of the frequency with which they encounter such catastrophes, due to the increasing incidence of disasters (WHO, 2009).

Nurses, as significant contributors to the healthcare service workforce in disaster management teams, and as stakeholders at every stage of the disaster cycle, have responsibilities towards the community they live in and the institution they serve, to protect human health at all stages of disaster management (pre-disaster, during, and post-disaster). Regardless of

their area of specialization (clinician, educator, researcher, administrator), all nurses must possess the ability to plan and execute disaster care. The International Council of Nurses (ICN) has emphasized that disaster preparedness and response should be a part of nurses' knowledge and skills. All nurses should possess basic competencies to prepare for disasters, protect from disasters, and utilize their knowledge and skills during and after a disaster (Loke & Fung, 2014).

In Turkey, on Monday, February 6, 2023, a large-scale and intense earthquake occurred, firstly in Pazarcık of Kahramanmaraş, and secondly in the Elbistan district, affecting numerous provinces. This study has been conducted with the aim of identifying the experiences of volunteer nurses working and to contribute to the field of nursing in the field after the earthquake in Elbistan.

## MATERIALS AND METHODS

### Study type

This study was conducted utilizing qualitative research methodology, specifically in a phenomenological design.

### Research questions

What are the experiences of nurses before going to the earthquake zone?

What are the field experiences of nurses who volunteered in the aftermath of the earthquake?

What are their experiences in the process after leaving the field?

### Population and sample of the research

The universe of the research consists of nurses who voluntarily came to serve in the emergency service unit of Elbistan State Hospital in the post-earthquake period and worked for at least 5 days. The sample of the research was determined by snowball sampling, one of the purposive sampling methods, and the study was conducted with 16 nurses who agreed to participate and met the inclusion criteria. The inclusion of new participants was terminated upon reaching data saturation, indicated by the absence of new information and repetition of data.

### Inclusion criteria

Participants (nurses) must have worked voluntarily in the field for at least 5 days post-earthquake.

Participants must not have a communication impediment.

Participants' native language must be Turkish.

### Exclusion criteria

Participants have a work duration less than 5 days.

Participants having communication barriers.

Participants having a native language other than Turkish.

### Data collection tools

A semi-structured interview form was used for data collection, providing participants with autonomy, thus enabling the acquisition of more data. The interview form contains 5 questions about participants' sociodemographic information, and a total of 17

questions regarding experiences before, during, and after volunteering post-earthquake. Interview questions were arranged after a literature review and obtaining the opinions of 3 distinct experts. A pilot study was conducted with 2 volunteer nurses using the semi-structured interview form, during which some word corrections were made in the questions.

#### **Data collection**

Data were collected face-to-face using the individual in-depth interview method between 03.04.2023-30.07.2023 utilizing the semi-structured interview form as a data collection tool. The interviews, approximately 30 minutes each, were conducted according to a work calendar, structured based on the participants' availability and preferred locations. Interviews were conducted in two steps to build trust: an initial meeting for general conversation and acquaintance, followed by the research-related semi-structured interview. To prevent data loss, both immediate notes and audio recordings were taken during data collection. Two researchers involved in the study participated in both the data collection phase and subsequent stages (transcription of audio recordings, creating codes and themes, description-interpretation, analysis).

#### **Data analysis**

In the analysis of the data, the data collected with the voice recording and instant notes were transferred to a text file, followed by the formation of themes and codes from this text to conduct the analysis.

#### **Validity and reliability**

To enhance the validity of the research, participant verification method was used (Lincoln & Guba, 1985). In participant verification, transcripts containing participant's views were read and approved by the participants. To ensure external validity, inclusion of detailed participant introductions (Braun & Clarke, 2013) utilization of purposive sampling method, and specification of inclusion and exclusion criteria (Başkale, 2016) were emphasized. Within this context, a detailed introduction of the participants is shown in Table.1, the purposive sampling method was used, and inclusion-exclusion criteria were specified.

#### **Ethical considerations**

Prior to commencing the research, ethical approval was obtained from the local ethics committee (Date: 27.03.2023, Approval no: E-64577500-050.99-44185). Informed consents were obtained from the participants.

### **RESULTS**

The results derived from the research are reported under four headings: sociodemographic data, data related to the process before going to the field after the earthquake, data related to the process of volunteering in the field, and data related to the process after leaving the field. The study was completed with 16 nurses, and the names of the nurses have been anonymized and coded as N1, N2...N16.

#### **1. Sociodemographic data of the participants**

The ages of the nurses participating in our study range from 23-45, and their nursing experiences are distributed between 2-23 years. It has been determined that the nurses worked in the National Medical Rescue Team (NMRT), operating room, neurology, intensive care, cardiology, pediatrics, dialysis, surgery, emergency, internal medicine and administrative units. The distribution of the nurses' sociodemographic features is shown in Table 1.

#### **2. Data related to the process before going to the field after the earthquake**

Based on the data obtained from interviews with the nurses after the earthquake, two themes have been identified through the experiences gained by the nurses: "emotions felt" and "deciding to volunteer".

##### **Theme 1. Emotions felt**

Nurses expressed that after hearing the news of the earthquake and learning about its magnitude and impact, they felt emotions such as "worry, fear, stress, sorrow, unrest, desire to act, astonishment, nervousness, helplessness, anxiety, guilt". Some exemplary statements regarding the emotions felt by the nurses are as follows:

N1: "Upon learning about the earthquake, I initially thought it was limited to a city or a smaller region. When I followed the media news, I saw that the destruction was immense. My family was in the earthquake region, and I was extremely worried for them. I experienced intense fear and stress."

N2: "I wanted to contribute and practice my profession, or help in other ways, but I could not set out on the journey, especially on the first day due to transportation issues. Therefore, in the ensuing twenty-four hours, I felt guilty because I knew the benefits my profession could provide but was internally distressed about not being able to be there at that moment."

N6: "I had fear, helplessness, and significant anxiety. I wanted to do something but did not know what to do or how to do it. I was afraid of being unable to do anything even if I went."

##### **Theme 2. Deciding to volunteer**

Nurses declared that they decided to go to the earthquake region and work voluntarily in the field due to issues such as "Organizations in communication channels, being experienced in emergencies, being fast and practical, having developed application skills, being clinically experienced, the presence of a large number of people affected by the earthquake, international calls for help, and disaster victim nurses working in the field". Examples of statements related to nurses' decision-making processes are below.

N1: "When I saw the crowds of health teams waiting to enter our country to help at the airports, I could not believe my eyes. I thought, as a nurse serving this country, I must be in the field and work. If I hadn't gone to the field, I couldn't continue my daily life and would have felt much worse."

N5: "I thought I absolutely had to be in the field to find spiritual peace. Because I can touch a person, be useful to a person, or save people's lives. I decided to go to the

field, acting with the sense of responsibility imbued in me by my profession."

**Table 1. The distribution of the nurses' sociodemographic features.**

Nickname	Age	Sex	Education	Nursing Experience	Units served
N1	31	Female	University Graduates	7 years	Pediatrics, Emergency
N2	23	Male	University Graduates	2 years	Emergency
N3	39	Male	Master degree	13 years	Operating Room, Neurology, Intensive Care, Cardiology
N4	30	Male	Master degree	4 years	Operating Room, Neurology, Intensive Care
N5	33	Male	University Graduates	11 years	NMRT, Emergency
N6	45	Female	Doctorate degree	23 years	Intensive Care, Administrative
N7	27	Female	University Graduates	6 years	Emergency, Dialysis, Internal medicine
N8	32	Female	University Graduates	8 years	Pediatrics, Emergency, Internal medicine
N9	43	Female	University Graduates	20 years	Pediatrics, Surgery, Administrative
N10	42	Male	University Graduates	20 years	Emergency, NMRT
N11	26	Female	University Graduates	3 years	Emergency
N12	28	Female	University Graduates	5 years	Emergency
N13	31	Male	University Graduates	6 years	Intensive Care
N14	27	Female	University Graduates	4 years	Emergency
N15	32	Female	University Graduates	5 years	Emergency
N16	43	Female	University Graduates	10 years	Neurology, Intensive Care

N9: "When I saw on the media that the earthquake affected 11 provinces and that international help was being requested, I immediately packed my bag. I wanted to keep myself ready both psychologically and physically as if I would hit the road at any moment; my profession, nursing, would require this anyway."

N10: "I have been nursing in the emergency room for a long time, and I also have NMRT experience. I knew I was quite fast and practical in emergency interventions. When I saw that the earthquake affected many places, I wanted to volunteer directly. I knew I could save people's lives by using my knowledge, experience, and skills, these thoughts influenced my decision."

### 3. Data pertaining to the volunteer work period on the field

The data derived from the experiences of nurses during the process of their voluntary fieldwork have formed themes of "initial impressions, disaster-affected nurses, patients cared for, and challenges encountered."

#### Theme 1. Initial impressions

Upon reaching the earthquake-stricken area, the nurses articulated their initial impressions as "collapsed buildings, traffic, people attempting to provide help, cold, darkness, roads blocked by debris, and people abandoning the city." Illustrative statements related to initial impressions are exemplified below.

N3: "When I first entered the city, all the buildings within sight were demolished, and those that appeared standing were sunk at least 1-2 floors into the ground.



Most buildings were unusable. People were waiting by the debris in the cold. The weather was frigid. It was unbearable to stay outside under normal circumstances, but people were waiting in desperation."

N12: "There was heavy vehicle traffic trying to enter the city to provide aid. On the other side, there was a long queue of vehicles departing from the city. What I witnessed deeply affected me. Life seemed to have halted."

N7: "Most of the buildings were destroyed; those that were not were unusable; roads were blocked by debris; getting from one place to another took a very long time; the weather was incredibly cold."

N13: "While heavy vehicle traffic was delivering aid on the one hand, on the other, people were leaving the city in droves. The abandonment of the city saddened me the most. At that moment, I thought it would be a long time before this city could return to its former state. Thinking about the people who needed help was very distressing."

### **Theme 2. Disaster-affected nurses**

Volunteer nurses indicated that their colleagues worked under extremely difficult conditions and the fact that the nurses were "disaster-affected" themselves was overlooked. It was expressed that disaster-affected nurses "had been working almost non-stop for approximately 48-72 hours, could not rest sufficiently, were unable to meet their hygiene needs, experienced issues accessing food and water, continuously received bad news and learned about their losses, were psychologically worn, were worried about the safety of their loved ones, experienced fear and burnout, were anxious about the future, and found it hard to continue working." Example sentences related to the status of the volunteer nurses are as follows:

N4: "My colleagues in Elbistan, who were victims of the earthquake, were working on their 3rd day post-earthquake when I reached the field. They had worked almost non-stop, were unable to find hot water and hygiene supplies to meet their hygiene needs. They experienced problems accessing food and water. On the other hand, they continuously received bad news/death news about their friends and loved ones and had to keep working."

N6: "All the nurses seemed very scared, worn, and exhausted; they said they went to the hospital just about five minutes after the earthquake, and for a long time, they couldn't hear from their friends and relatives, their minds were very occupied, yet they didn't stop to rest even for a moment in order to be of help."

N8: "The weather was very cold; most didn't have uniforms, shoes, or jackets. They had come to the hospital in the clothes they were wearing during the earthquake, having lost everything. Their initial needs were in the order of secure space, ensuring the safety of their loved ones, and then physical needs."

N9: "Nurses were hugging each other, crying in a corner, then wiping their tears and coming to attend to their patients. We experienced very emotional moments; it's really hard to describe."

### **Theme 3. Patients under care**

During the period wherein nurses voluntarily rendered their services on the field, they provided care to individuals extricated from the rubble or to the team operating on the site. Clinical characteristics that emerged within the on-site team have been delineated as "nausea, vomiting, diarrhea, common cold, injuries, fever, voice hoarseness, frostbite, and psychological trauma." The clinical features of patients rescued from the rubble were listed as "hypothermia, crushing injuries, edema, fractures, semi-conscious state, open wounds, psychological trauma, respiratory difficulty, disorientation, dehydration, hypoglycemia, anuria, limb amputation, internal bleeding, and Crush syndrome."

Nursing interventions implemented in the care of patients extracted from the debris were enumerated as "establishing and maintaining communication with the patient, informing the patient about their condition, providing psychological support, administering fluid therapy, placing a bladder catheter, monitoring urine output, using heaters and blankets to elevate body temperature, taking samples for blood tests, wound care, physical examination, cardiopulmonary resuscitation, administering oxygen therapy, ensuring the monitoring of vital signs, meeting hygiene requirements, providing appropriate positioning, and monitoring input and output."

### **Theme 4. Encountered challenges**

The challenges encountered by the nurses included "lack of disaster nursing experience, uncertainties related to the field conditions, security concerns, a demanding psychological environment, concerns about proficiency, fear of making mistakes, anxiety about causing harm, dealing with mutilated bodies, witnessing numerous deaths, and impairment in thinking and decision-making processes." Below are exemplified situations in which the nurses found difficulty.

N14: "The fact that I had never practiced disaster nursing before and that I didn't have direct training on the subject frightened me. Of course, we learned many interventions during our undergraduate education and have experiences from our working environment, but a disaster is different. Seeing limbs severed, bodies crushed and mutilated, especially being sensitive about pediatric patients, challenged me."

N15: "I have worked in disaster areas before; perhaps I was anxious about what I would encounter because I was familiar with the disaster environment. I worked during fires and floods. I particularly struggled with interventions related to children; my eyes often filled with tears because I have my own child, and they constantly flashed before my eyes."

N7: "I experienced thoughts like how I could digest what I would see, how much I would be affected, and how I would cope. Some of the patients I saw lingered in front of my eyes. Nevertheless, considering my purpose no matter what, I tried to prepare myself for what would happen."

N8: "Having no experience in disaster nursing previously psychologically challenged me. Because we, nurses, do not engage in something we are not sure about; we cannot undertake an intervention that will harm the patient. The unknowns and safety hazards—contemplating these were professionally difficult."

N9: "Throughout my professional life, I had not seen so many deaths in such a short time; the hospital morgue was full, and there were continuous queues of bodies forming in the hospital garden. People were waiting for autopsy procedures. This was what challenged me the most."

N4: "There were moments when we could not think and make decisions. It was as if our ability to think and make decisions was frozen. Sometimes we couldn't even speak."

#### **4. Data concerning the period following departure from the field**

A theme of "adaptation to daily life" has been formulated through the experiences narrated by nurses upon their return to their daily lives after leaving the field.

##### **Theme 1. Adaptation to daily life**

After leaving the field, nurses have expressed their experiences related to adapting back to daily life. They have stated "thinking about the earthquake zone, blaming themselves, contemplating staying longer, feeling insufficient, struggling with engaging in entertainment and social activities, continuously following news about the region, and changes in sleep patterns." Examples of the nurses' expressions are as follows:

N3: "Upon returning home and observing my city, everything being in its place and people continuing their normal lives seemed very strange to me. Sometimes, when I was in a building, I found myself thinking about how it stays upright and how life goes on."

N5: "After coming from the earthquake zone, I began sleeping for periods exceeding 10 hours. There were people, including my family and close ones, who wanted to see and talk to me, but I didn't want to meet anyone. Approximately 15 days passed like this, and I experienced crying fits. I questioned the purpose of life."

N16: "I felt feelings of inadequacy thinking that I should have helped more people. My mind stayed with my colleagues in Elbistan. I closely followed what was happening in that region for a long time."

N8: "It was as if there were more things I should have done but couldn't; I felt inadequate. I couldn't get out of its impact for a week. I continuously blamed myself, thinking I wish I could have gone there and done this and that. I struggled to participate in social activities and entertainment environments; I always felt guilty."

#### **DISCUSSION**

Disasters, through the transformative impacts they generate, affect societies in the short, medium, and long term. Post-disaster losses can foster various

adverse effects on survivors (Wang et al., 2020). Studies have reported that the traumatic situations emerging from these events can result in fear, guilt, anger, despair, anxiety, hopelessness, and mental distress (Altuntaş et al., 2023; Düzgün et al., 2023; Harmanci Seren, & Dikeç, 2023; Wang et al., 2020). Our study also revealed that nurses experienced emotions such as anxiety, fear, stress, sorrow, unrest, the urge to act, confusion, apprehension, despair, anxiety, and guilt after the earthquake. It is plausible to suggest that the emotional responses of the nurses post-earthquake are in line with the literature.

The existence of nursing originates from the point of aiding individuals (Coatsworth et al., 2017). The altruistic approach, associated with helping, denotes the nurse's willingness to prioritize the needs of others over their own, acting predominantly to meet the needs of others (Batson et al., 1991; Twemlow, 2001; Valsala & Menon, 2023). Our study similarly suggests that the nurses exhibited an altruistic approach. Nurses have decided to go to the earthquake region and voluntarily work on the field, motivated by factors like international teams going to the earthquake region, calls for international aid, being clinically experienced, and the presence of disaster-affected nurses working in the earthquake region. This approach of the nurses implies a thoughtful and selfless perspective.

The Turkish Nurses Association announced that nurses working in the area should be granted administrative leave following the earthquake (TNA, 2023). However, the disaster-affected nurses in the region continued to work, attending to patients and their relatives. Literature reveals studies showcasing that disaster-affected nurses worked long hours in the post-disaster period, encountering fatigue due to lack of rest, experiencing scattered attention and psychological impacts, and facing difficulties in meeting their needs (Altuntaş et al., 2023; Banerji & Singh, 2013; Bektaş Akpınar & Aşkın Ceran, 2020; Dixit et al., 2023; Labrague et al., 2018; Nakayama et al., 2019). In our study, volunteer nurses also voiced that disaster-affected nurses in the earthquake region experienced similar issues and continuously received distressing news about losses, experienced fear and burnout, had anxieties about the future, and struggled with working.

Post-earthquake issues faced by patients can be categorized as renal damage, musculoskeletal injuries, chest injuries, neurological problems, mental issues, infectious diseases, and hematological problems (Bartels & VanRooyen, 2012; Hu et al., 2022; Sever et al., 2002). Our study also reported that volunteer teams mainly encountered infectious diseases on the field, while patients rescued from the rubble manifested renal function impairments and injuries. The clinical characteristics of the post-earthquake patients appear to align with the clinical situations classified in the literature.

Nurses, who might assume roles such as rescue, care, education, counseling, and management in the post-disaster process, need to be fully trained and prepared in disaster management (Taşkıran & Baykal, 2019). Real-life experiences are crucial for nurses to learn and draw conclusions in these training (Harmanci Seren & Dikeç, 2023). Studies investigating the readiness of nurses in disasters reveal that nurses do not feel prepared, adequate, or confident against disasters (Altuntaş et al., 2023; Banerji & Singh, 2013; Labrague et al., 2018; Putra et al., 2020). Additionally, it is reported that nurses face professional difficulties in the post-disaster period (Altuntaş et al., 2023; Banerji & Singh, 2013; Labrague et al., 2018; Putra et al., 2020). In our study, volunteer nurses conveyed that they experienced lack of experience, uncertainty, safety concerns, fear of making mistakes and causing harm, witnessing a large number of deaths, and disruptions in thought and decision-making processes while working on the field. These challenges for the nurses may arise due to working in an extraordinary environment. Nurses might experience a range of adaptation problems when they return to their normal lives after disasters, and some psychological and physical effects might persist even years after the event (Bektaş Akpınar & Aşkın Ceran, 2020; Nukui et al., 2018). It is reported that due to the disaster nursing experience, differences might arise in nurses' world views, prompting questioning about the meaning and purpose of life (Altuntaş et al., 2023; Janoff-Bulman, 1992). In our study, volunteer nurses expressed difficulties in adjusting back to normal life, and conveyed feelings of unrest due to leaving the disaster area, feelings of inadequacy, the desire to help more people, curiosity about those in the region, and a desire to follow the news. This situation may stem from the inability to swiftly alleviate the effects of the disaster and from its consequences, which continue to impact thousands of individuals.

### Limitations

This study is the first to examine the field experience of volunteer nurses after the Elbistan earthquake. Our study was conducted with nurses who worked voluntarily in a single district hospital in the post-earthquake period. The findings obtained through the field experiences of volunteer nurses can be improved by adding nurses from different regions to the sample group.

### CONCLUSION

Following the Elbistan earthquake, nurses who voluntarily worked in the field experienced emotions that prompted them to volunteer even before heading to the area, being driven to assist as part of the nursing profession's mandate. It has been determined that the volunteer nurses garnered significant experiences during their fieldwork and encountered various professional challenges.

The obtained experiences highlight that disaster nursing should encompass management, organization, coordination, teamwork, and crisis management skills, along with disaster-specific nursing care. Therefore, to strengthen and develop disaster nursing, it is recommended to conduct mentorship, implement learning-based studies on life experiences, gain experience through case studies, organize disaster-specific training, establish disaster teams and conduct drills, follow up-to-date approaches, embed disaster nursing education within undergraduate education, enhance psychological approaches and communication skills during the disaster period, and facilitate foreign language learning.

### Acknowledgement

We are grateful to the volunteer nurses who participated in the research.

### Conflict of Interest

The author declare no potential conflicts of interest with respect to the research, authorship and/or publication of this article.

### Author Contributions

**Plan, design:** AYİ; **Material, methods and data collection:** AYİ, EZMG; **Data analysis and comments:** AYİ, EZMG; **Writing and corrections:** AY, EZMG.

### Funding

None.

### Ethical Approval

**Institution:** Cappadocia University Non-Interventional Clinical Ethics Committee

**Date:** 31.03.2023

**Approval no:** E-64577500-050.99-44185

### REFERENCES

- Altuntaş, S., Çiçek Korkmaz, A., Efe, N., Demirtaş, H., & Kuleyin, B. (2023). Problems experienced by nurses serving in the region affected by kahramanmaraş earthquake in Turkey and nurses' risk reduction recommendations. *Social Science Research Network*, 4484912. <http://dx.doi.org/10.2139/ssrn.4484912>
- Banerji, P., & Singh, N. (2013). Comparative analysis of disaster management between Japan & India. *Journal of Business and Management*, 13(6), 62-74. <https://doi.org/10.9790/487X-1366274>
- Bartels, S. A., & VanRooyen, M. J. (2012). Medical complications associated with earthquakes. *The Lancet*, 379(9817), 748-757. [https://doi.org/10.1016/S0140-6736\(11\)60887-8](https://doi.org/10.1016/S0140-6736(11)60887-8)
- Başkale, H. (2016). Determination of validity, reliability and sample size in qualitative studies. *E-journal of Dokuz Eylul University Nursing Faculty*, 9(1), 23-28.



- Batson, C. D., Batson, J. G., Slingsby, J. K., Harrell, K. L., Peekna, H. M., & Todd, R. M. (1991). Empathic joy and the empathy-altruism hypothesis. *Journal of Personality and Social Psychology*, 61(3), 413-426. <https://doi.org/10.1037/0022-3514.61.3.413>
- Bektaş Akpınar, N., & Aşkın Ceran, M. (2020). Current approaches about disasters and role and responsibilities of disaster nurse. *Journal of Paramedic and Emergency Health Services*, 1(1), 28-40.
- Brewer, C. A., Hutton, A., Hammad, K. S., & Geale, S. K. (2020). A feasibility study on disaster preparedness in regional and rural emergency departments in New South Wales: Nurses self-assessment of knowledge, skills and preparation for disaster management. *Australasian Emergency Care*, 23(1), 29-36. <https://doi.org/10.1016/j.auec.2019.12.005>
- Chapman, K., & Arbon, P. (2008). Are nurses ready? Disaster preparedness in the acute setting. *Australasian Emergency Nursing Journal*, 11(3), 135-144. <https://doi.org/10.1016/j.aenj.2008.04.002>
- Braun, V., & Clarke, V. (2013). Successful qualitative research: A practical guide for beginners. Sage Publications.
- Coatsworth, K., Hurley, J., & Miller-Rosser, K. (2017). A phenomenological study of student nurses volunteering in Nepal: Have their experiences altered their understanding of nursing? *Collegian*, 24(4), 339-344. <https://doi.org/10.1016/j.colegn.2016.07.003>
- Dixit, S., Peter, D. S. R., & Arya, S. (2023). A review on the role of nurses in disaster management in India. *Journal of Pharmaceutical Negative Results*, 14(3), 1644-1647. <https://doi.org/10.47750/pnr.2023.14.03.214>
- Düzgün, G., Polat, G., Yönt, G. H., & Aykar, F. Ş. (2023). Izmir earthquake experience of healthcare professionals during pandemics: a qualitative study. *Health Academy Kastamonu*, 8(2), 230-238. <https://doi.org/10.25279/sak.1141607>
- Grochtdreis, T., de Jong, N., Harenberg, N., Görres, S., & Schröder-Bäck, P. (2017). Nurses' roles, knowledge and experience in national disaster pre-paredness and emergency response: A literature review. *South Eastern European Journal of Public Health*, 7(1) 1-19. <https://doi.org/10.4119/seejph-1847>
- Harmançi Seren, A. K., & Dikeç, G. (2023). The earthquakes in Turkey and their effects on nursing and community health. *International Nursing Review*, 70(3), 262-265. <https://doi.org/10.1111/inr.12851>
- Hu, H., Lai, X., Tan, C., Yao, N., & Yan, L. (2022). Factors associated with in-patient mortality in the rapid assessment of adult earthquake trauma patients. *Prehospital and Disaster Medicine*, 37(3), 299-305. <https://doi.org/10.1017/S1049023X22000693>
- Janoff-Bulman, R. (1992). Shattered assumptions: Toward a new psychology of trauma. New York: Macmillan.
- Labrague, L. J., Hammad, K., Gloe, D. S., McEnroe-Petite, D. M., Fronda, D. C., Obeidat, A. A., ... & Mirafuentes, E. C. (2018). Disaster preparedness among nurses: a systematic review of literature. *International Nursing Review*, 65(1), 41-53. <https://doi.org/10.1111/inr.12369>
- Lincoln, Y. S. & Guba, E. G. (1985). *Naturalistic inquiry*. Newbury Park, Sage Press.
- Loke, A. Y., & Fung, O. W. M. (2014). Nurses' competencies in disaster nursing: Implications for curriculum development and public health. *International Journal of Environmental Research and Public Health*, 11(3), 3289-3303. <https://doi.org/10.3390/ijerph110303289>
- Nakayama, Y., Kato, I., & Ohkawa, T. (2019). Sustaining power of nurses in a damaged hospital during the Great East Japan earthquake. *Journal of Nursing Scholarship*, 51(3), 271-280. <https://doi.org/10.1111/jnu.12482>
- Nukui, H., Midorikawa, S., Murakami, M., Maeda, M., & Ohtsuru, A. (2018). Mental health of nurses after the Fukushima complex disaster: a narrative review. *Journal of Radiation Research*, 59(2), ii108-ii113. <https://doi.org/10.1093/jrr/rry023>
- Özmen, B., & Özden, T. (2013). A critical evaluation related to disaster management system of Turkey. *Journal of Political Sciences*, (49), 1-28.
- Putra, D. G. S., Putra, K. R., & Noorhamdani, A. S. (2020). Factors related to disaster preparedness among nurses: A sytematic review. *The Malaysian Journal of Nursing*, 12(2), 71-79. <https://doi.org/10.31674/mjn.2020.v12i02.010>
- Sever, MS, Ereğ, E., Vanholder, R., Akoğlu, E., Yavuz, M., Ergin, H., ... & Lameire, N. (2002). The Marmara Earthquake Epidemiological analysis of the victims with nephrological problems. *Kidney International*, 17(11), 1942-1949. <https://doi.org/10.1046/j.15231755.2001.0600031114.x>
- Şimşek, P. & Gündüz, A. (2021). Disaster Nursing in Turkey. *Journal of Uludağ University Medical Faculty*, 47(3), 469-476. <https://doi.org/10.32708/utufd.981301>
- Taşkıran, G. & Baykal, U. (2019) Nurses' disaster preparedness and core competencies in Turkey: a descriptive correlational design. *International Nursing Review*, 66(2), 165-175. <https://doi.org/10.1111/inr.12501>
- Turkish Nursing Association (2023). A formal application has been made to the Council of Higher Education regarding the grievance of our colleagues working in University Hospitals living in the earthquake zone. Retrieved March 23, 2023, from: <https://www.thder.org.tr/deprem-bolgesinde-yasayan-universite-hastanelerinde-calisan-meslektaşlarımızın-magduriyetiyle-ilgili-yok-e-resmin-basvuru-yapilmiştir>
- Twemlow, S. W. (2001). Modifying violent communities by enhancing altruism: A vision of possibilities. *Journal of Applied Psychoanalytic Studies*, 3(4), 431-462.

- Valsala, P., & Menon, P. (2023). Psychospiritual basis of altruism: A review. *Journal of Humanistic Psychology*, 63(3), 344-363. <https://doi.org/10.1177/0022167819830517>
- Wang, Y., Xu, J. & Lu, Y. (2020) Associations among trauma exposure, post-traumatic stress disorder, and depression symptoms in adolescent survivors of the 2013 Lushan earthquake. *Journal of Affective Disorders*, 264(1), 407-413. <https://doi.org/10.1016/j.jad.2019.11.067>
- World Health Organization and International Council of Nurses (2009). ICN framework of disaster nursing competencies. Retrieved January 5, 2023, from: [https://www.icn.ch/sites/default/files/inline-files/ICN\\_Disaster-Comp-Report\\_WEB.pdf](https://www.icn.ch/sites/default/files/inline-files/ICN_Disaster-Comp-Report_WEB.pdf)
- Zarea, K., Beiranvand, S., Sheini-Jaberi, P., & Nikbakht-Nasrabadi, A. (2014). Disaster nursing in Iran: Challenges and opportunities. *Australasian Emergency Nursing Journal*, 17(4), 190-196. <https://doi.org/10.1016/j.aenj.2014.05.006>