



ORIGINAL ARTICLE

Determining the Opinions of Women Living in the Earthquake Zone on the Physical and Psychosocial Problems after the 2023 Kahramanmaraş Earthquake

2023 Kahramanmaraş Depremi Sonrası Deprem Bölgesinde Yaşayan Kadınların Fiziksel ve Psikososyal Sorunlarına Yönelik Görüşlerinin Belirlenmesi

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Abstract

Objective: This study was conducted to evaluate the opinions of earthquake victims about the physical and psychosocial problems that had affected women's health after the 2023 Kahramanmaraş earthquake.

Method: The study was designed in a qualitative type (semi-structured). The study population consisted of women affected by the 2023 Kahramanmaraş-Pazarcık earthquake. Fifteen women were interviewed.

Results: Among the women who participated in the study, 91% were married and had children. Two were breastfeeding. In this study, it was observed that all the women were socially affected by the earthquake and that there were changes in their lives. Furthermore, all experienced psychological and physiological problems, but most did not receive help. Hygiene (toilet-bathroom) was a common issue. Some women were also concerned about their safety. In terms of physical health, it was found that "mostly vaginitis, fungal and urinary tract infections are experienced, and some of them experience musculoskeletal pain".

Conclusion: Ensuring that women have access to clean and safe hygiene products, such as sanitary pads, tampons and soap, during and after an earthquake is essential. Disasters can disrupt supply, which is crucial for having a contingency plan for women's hygiene needs. In addition to hygiene products, access to safe and clean toilets and bathroom facilities. Disasters can damage infrastructure and create unsanitary conditions, increasing the risk of infection and other health problems. By ensuring proper sanitation facilities, we can help prevent these problems and promote overall health.

Keywords: Disaster, earthquake, gender, women's health, psychosocial health

Öz

Amaç: Bu çalışma, 2023 Kahramanmaraş depremi sonrasında kadın sağlığını fiziksel ve psikososyal olarak etkileyen sorunlar hakkında depremedelerin görüşlerini değerlendirmek amacıyla yapılmıştır.

Yöntem: Çalışma nitel tipte (yarı yapılandırılmış) tasarlanmıştır. Araştırmanın evrenini 2023 Kahramanmaraş-Pazarcık depreminden etkilenen kadınlar oluşturmaktadır. On beş kadın ile görüşülmüştür.

Bulgular: Çalışmaya katılan kadınların %91'i evli ve çocuk sahibidir. İki kadın emzirmekteydi. Çalışmada tüm kadınların depremden sosyal olarak etkilendikleri ve yaşamlarında değişiklikler olduğu gözlemlenmiştir. Ayrıca, tüm kadınlar psikolojik ve fizyolojik sorunlar yaşamış, ancak çoğu bu konuda yardım almamıştır. Kadın olarak yaşadıkları sorunlar arasında hijyen (tuvalet-banyo) hepsinin ortak sorunudur. Kadınların bir kısmı güvenlikleri konusunda da endişe duymaktadır. Fiziksel sağlık açısından "en çok vajinit, mantar ve idrar yolu enfeksiyonları yaşandığı, bazılarının kas-iskelet sistemi ağrıları yaşadığı" tespit edilmiştir.

Sonuç: Kadınların deprem sırasında ve sonrasında temiz ve güvenli hijyen ürünlerine, örneğin; hijyenik ped, tampon ve sabuna erişimini sağlamak çok önemlidir. Afetler normal tedarik zincirlerini aksatabilir, bu nedenle kadınların hijyen ihtiyaçlarını karşılamak için bir acil durum planının bulunması hayati öneme sahiptir. Ayrıca, kadınların güvenli ve temiz tuvalet ve banyo tesislerine erişimini sağlamak da esastır. Afetler altyapıya zarar verip sağlıklı koşullara yol açarak kadınlar için enfeksiyon ve diğer sağlık sorunları riskini artırabilir. Uygun sanitasyon tesislerinin sağlanması, bu sorunları önlemeye ve genel sağlık ve refahı desteklemeye yardımcı olabilir.

Anahtar Kelimeler: Afet, deprem, toplumsal cinsiyet, kadın sağlığı, psikososyal sağlık

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Introduction

Women's health may include social problems both because it forms the basis of public health and because it is in a disadvantaged position with the gender factor (1-5).

There are developments in human rights and women's rights with the increase in socio-cultural level. In both developed and developing societies, legislation is enforced to combat gender-based violence and discrimination. As the level of education, knowledge, and welfare of society improves, gender discrimination is prevented (6-8).

However, in situations such as war, famine, and disasters where social order is disrupted, women are the most affected group. Extraordinary situations disrupt the functioning of laws and social norms. Crime rates increase due to war, famine, and disasters. Problems such as violence against women, women's poverty, and trafficking in women grow because of disruption of order, increased crime rates, and security weaknesses (9-11).

An earthquake is an important natural event that is frequently seen among natural disasters worldwide, and its destructive effects are experienced in many areas. Earthquakes, which are one of the most common types of disasters in Turkey, have caused Turkey to be known as one of the countries located in the earthquake zone (12). Apart from their direct damage, earthquakes also cause secondary disasters such as fires, floods, and landslides (13). Earthquakes, especially when they occur at sudden and unpredictable times, can have chaotic effects that stop social life. In addition to the many injuries and deaths caused by earthquakes, the economic, physical, social, and psychological destruction that occurs after an earthquake creates an important social problem (14).

It is known that all these social effects of the earthquake are more severe in women (15-19). Studies conducted on past earthquakes in our country provide strong evidence supporting this (20-24). Women may be at higher risk in terms of pregnancy, childbirth, postnatal care, breastfeeding, and health services. Young women may face different health and hygiene challenges during their menstrual cycles (16). In addition, women may experience problems in social areas such as female violence and economic independence (25,26).

On February 6, 2023, earthquakes with magnitudes of 7.7 and 7.6 occurred in Pazarcık and Elbistan districts of

Kahramanmaraş, respectively. Thousands of aftershocks followed these earthquakes for days (27). The 2023 Kahramanmaraş earthquake severely damaged many cities. Among these cities, Kahramanmaraş, Hatay, Adıyaman, Adana, and Malatya stand out due to experiencing the highest levels of destruction and loss of life. Regarding the Kahramanmaraş earthquake, experts reported that more than 35,000 pregnant women lived in Kahramanmaraş, Hatay and Adıyaman and that they foresee health problems in 20% of them (28). Similar to other earthquakes, women and girls were among the most vulnerable populations in the Kahramanmaraş earthquake. Experts suggest that service provision must be a primary focus.

For this reason, this study aimed to evaluate the opinions of earthquake victims about the problems affecting women's health physically and psychosocially after the 2023 Kahramanmaraş earthquake.

Material and Method

Study Design

The study was designed as a qualitative (semi-structured) study. The study population consisted of women affected by the 2023 Kahramanmaraş-Pazarcık fault line earthquake. The sample comprises women aged 18 years and older who lived in Hatay, Kahramanmaraş, and Adana provinces during and after the earthquake and agreed to participate in the study.

Inclusion Criteria

The criteria for inclusion in the study were as follows: Age >18 years, mental health, Turkish language, and earthquake zone.

The data were collected using the snowball sampling method. The researcher provided preliminary information about the study to the people living in the earthquake zone who they were able to reach. Then, as in the snowball sampling method, the participants recommended other participants. The researcher conducted telephone interviews with the participants to avoid spatial, temporal, and transport constraints. The study "themes" were formed according to the responses to the prestructured open-ended questions.

Study questions:

- What demographic changes have women experienced after the earthquake?
- What physical problems did women experience after the earthquake?
- What psychological/spiritual problems have women experienced after the earthquake?
- What are the needs and difficulties of women after the earthquake?

Main Points

After the earthquake;

- Women have experienced many psychological problems, especially "anxiety, fear, sleep problems, depression, and hopelessness",
- Women's social lives have changed;
- Their responsibilities increased,
- Their roles as mothers and caregivers increased the burden,
- Women in the earthquake zone reported hygiene, safety, and shelter problems.

- What are the difficulties experienced by women in social life after the earthquake?

Data Collection Tools

A semi-structured interview form developed by the researcher through literature review was used as a data collection tool. The form consists of 3 sections: Personal information, changes experienced during the earthquake, and problems related to being a woman during the earthquake.

The first part of the form contains personal information (age, occupation, marital status, number of children, spouse's occupation, educational status, income status).

The second part consists of questions about changes experienced after the earthquake (loss of first-degree relatives, change in income status, living in a house/tent/container).

The third section consists of open-ended questions on opinions about life after the earthquake (changes in life in general; moving, changing jobs, etc.; problems of being a woman; hygiene, etc.).

The interview form comprises 18 questions, the last 5 of which are open questions. During the interviews, the researcher conducted phone conversations in a quiet environment using hands-free mode and wrote down the researcher's statements one by one. The researcher then asked any questions that were not heard or missed. While recording the conversation, the researcher used fast note-taking techniques such as the Cornell note-taking system, abbreviation, and labeling. After the conversation ended, the notes were organized and recorded.

Each interview was conducted individually with each woman, and each interview lasted approximately 40 minutes.

Statistical Analysis

Before the interview, an interview form was created in accordance with the study design. In this study, care was taken to use open-ended general questions that would allow the participant to provide detailed information on the subject and did not require short answers, such as short and clear questions, multiple-choice questions, and yes-no questions.

For the analysis and reporting phase, an introduction was made in the form of a conversation with the participant before starting the interview; the interview was then started if the participant was available. Voice recordings were obtained from participants who consented to have their voices recorded. During the transcription phase, the questions were asked during the interview in such a way as to allow the participant to express themselves in detail without any direction or comment. The interviews conducted individually by telephone. During the interviews, the

researcher transcribed the interviewee's sentences exactly as she expressed them. At the beginning of the analysis phase, the interview data were divided into subthemes according to the main themes determined beforehand in the researcher's notes. The working scheme of qualitative research was applied in the seven stages of the interview technique as defined by Kvale [as cited in Dömbekci and Erişen (29)]. The analysis technique was based on Gürbüz and Şahin's (30) method of "data reduction, data labeling, creating categories and themes, revealing patterns, explaining and interpreting, and reporting", which was created by considering all the literature.

Ethical Consideration

Prior to the study, ethical approval was obtained from the Ethics Committee of Maltepe University (approval no:2023/13-13, date:22.06.2023). All procedures involving human participants were performed in accordance with the ethical standards of the institutional and/or national research committee and the 1964 Declaration of Helsinki and its subsequent amendments or similar ethical standards. The participant information was coded. Personal data will be destroyed within maximum 5 years.

Results

Of the interviewees, 5 lived in Kahramanmaraş, 2 in Adana and 8 in Hatay, all of whom had experienced the earthquake. Two respondents were university students. Three women are single; the others are married. The average age of the women was 34 years. The demographic characteristics of the participants are presented in Table 1. All participants stayed in their cars or a relative's car during the first days of the earthquake. Most of them took shelter in relatives' houses, and some of them settled in tents provided with aid.

The main themes of the study and the subthemes that emerged during the interviews are presented in Table 2 and Figure 1.

Theme 1: Changes in Women's Lives

The participants were asked about changes in their social lives after the earthquake. As expected, the participants found that they experienced changes in different areas, such as shelter, business life, and education. As a result of the interviews, sub-themes such as "uncertainty, staying in the car, waiting for help", "moving to another city/town", "changing home", "settling with others", "change in business life" and "change in educational life" were identified.

Sub-theme 1: Early days: staying in a car, poverty and waiting for help

Most participants (n=14) stayed in their cars or in their relatives' cars during the first days. All participants reported that help did not arrive in the first few days, which made it difficult for them to rescue their relatives and meet their needs for food and shelter.

P.4 “No help came for 3 days, looters reached the area before the help. For 3 days 6 of us took turns sleeping in the car. For 5 days we waited by eating only honey and bread, and drinking water slowly so as not to be run out. For 2 days we had no electricity. Our house was damaged, but we still went in and out during the day because we were afraid to go to the toilet.”

P.5 “We stayed in the car for 2 days, there was no reception, and I could not reach my family. On the 2nd day, my brother came and picked us up from the wreckage; we could not go to a safe place, the roads were cracked, and we went to İskenderun Sports Club.”

P.6 “We stayed in the car for 20 days during the earthquake. I gave my daughter and mother a place in the car so that they could sleep comfortably. We had to live a domestic life in the car. We had to go to the toilet in an open area. The helplessness was very bad; we lived on bread and milk for days.”

P.7 “We stayed in the car for 3 days. No one came for 2-3 days, the streets were full of dying people. The markets were looted. I only fed my 1 years old child wet biscuits; my child was in nappies, and the weather was freezing...”

P.9: “Help came late. It was very painful to hear people crying.

Table 1.
Demographics Features

Scale items group		n (15)
Marital status	Married	12
	Single	3
Child	Yes	12
	No	3
Breastfeeding status	Yes	2
	No	13
Houses damaged by earthquake	Moderately/heavily damaged	6
	Destroyed	3
	Slightly damaged	5
	Undamaged	1
Stayed in vehicle after the earthquake	Yes	14
	No	1
Stays in tent	Yes	6
	No	9
Stays at a relative's/ acquaintance's house	Yes	7
	No	8
He stays in his own house	Yes	2
	No	13
Went to another city	Yes	4
	No	11
Working status	Working	5
	Unemployed after the earthquake	3
	She was not working before	7
Husband's employment status	Working	10
	Unemployed after the earthquake	5
	He was not working before	0

Table 2.
Main Themes and Subthemes

Main themes subthemes	
Theme 1: Changes in women's lives	Sub-theme 1: Early days in a car, poverty, and waiting for help Sub-theme 2: Moving to another city Sub-theme 3: Living together in someone else's house Sub-theme 4: Living in a tent Sub-theme 5: Change in business life and economic situation Sub-theme 6: Changes in educational life
Theme 2. Physical problems	<ul style="list-style-type: none"> • Muscle/joint pain • Urinary tract infection • Vaginal infection • Headache/dizziness • Gastrointestinal problems • Skin fungus • Menstruation/menstrual irregularity
Theme 3. Emotional state after an earthquake	<ul style="list-style-type: none"> • Anxiety • Fear • Sleep disorders • Depressive mood • Angry mood • Inability to forget what they saw and the sounds they heard • Inability to experience emotions • Feeling obliged to stay strong • Hopelessness • Being thankful
Theme 4. Women's needs and difficulties experienced as women	Sub-theme 1: Hygiene problems Sub-theme 2: Breastfeeding problems
Theme 5. Difficulties experienced by women in their social life	Sub-theme 1: Increased workload Sub-theme 2: Challenges in caring for a mother or caregiver Sub-theme 3: Difficulty in ensuring privacy Sub-theme 4: Security concerns

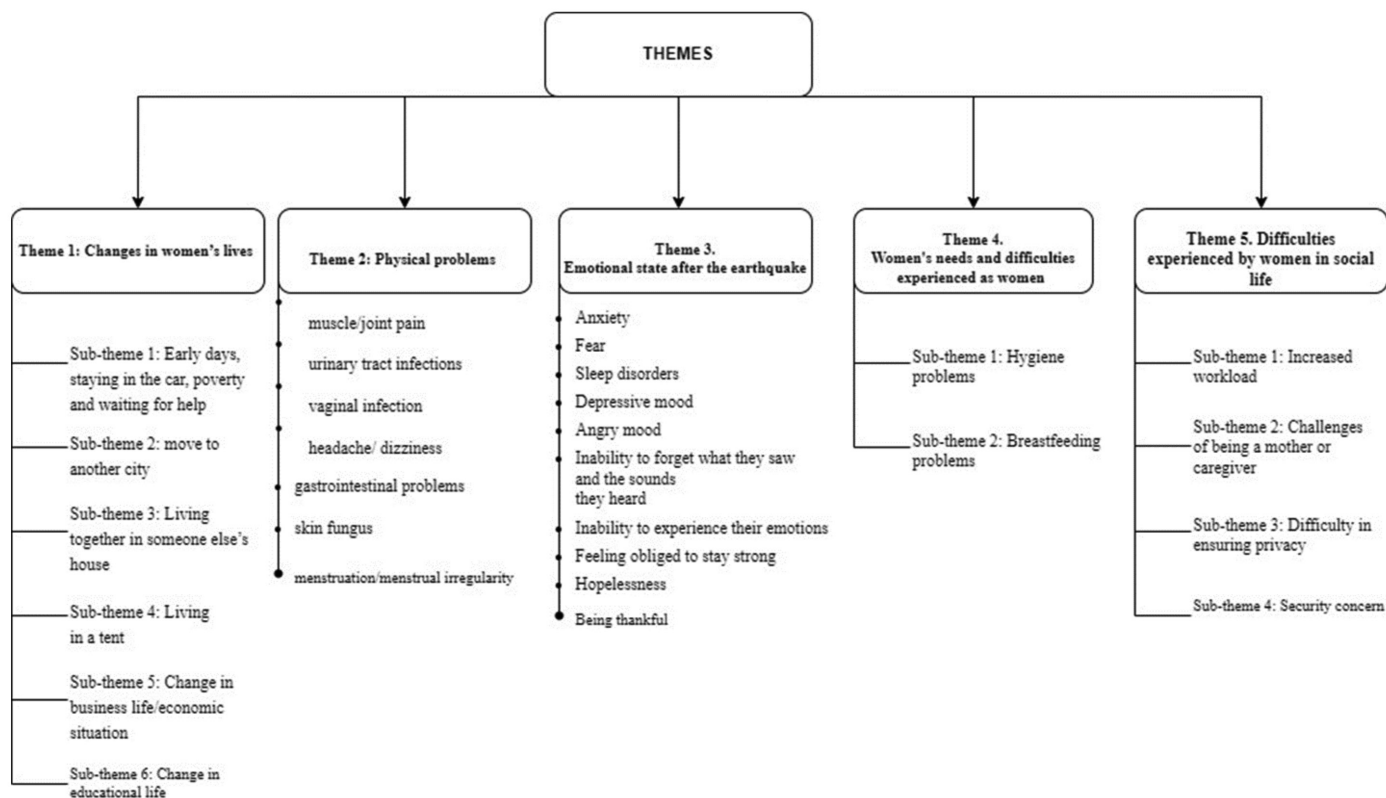


Figure 1.
Themes and Subthemes

P.12 "We were caught in an earthquake in Adana, our house was damaged, but my sisters lived in Kahramanmaraş. My brother-in-law died while holding my sister's hand. There was no AFAD (Disaster and Emergency Management Authority), there was a nation before the state. Syrian migrants also helped us."

The participants who made the above and similar statements explained them with sadness as if they were reliving those moments. The participants' statements noted that in the first days, they experienced a lack of telephone communication, food, toilets, transport, shelter, and help.

Sub-theme 2: Moving to another city

Among the participants, 4 families had to move to another city. P.1, who moved to Ankara, expressed with a sad expression the difficulty of finding a house to rent in the neighboring cities due to the increasing migration and rising rental prices.

P.1: "We have no other choice; we came to Ankara. There is no house. We were looking for a house for 4 families at the same time, isn't that a shame? Appointments should have been made at different times, and there was no proper respect. We moved for the children; we would have stayed if it wasn't for them. I could not let a 4-year-old child live in that cloud of dust. It hurts me to leave, as if I were running away without saying goodbye to my home where I live. I don't feel that I belong here now."

P.7: "We moved for the children. Hatay was very nice. We could not stay at someone else's house. I looked for a detached house because I was afraid of an earthquake, but I could not find one. We are condemned to the apartment again."

P.3: "Our family split up, my parents moved to a summer house, I was left alone, my workload increased."

P.4 said: "We didn't want to leave our home town; we just wanted to go with the children. We wanted to travel to the hospital. Nobody wants to leave Hatay, they have to. It is like falling in love with your executioner (Stockholm syndrome); we will come back one day."

Sub-theme 3: Living together in someone else's house

Seven participants moved in with a relative or acquaintance. 3 participants were still living in the houses of their relatives. There are usually several families living together in the houses, which makes life difficult for them. The following statements made by the participants.

P.1 "First we lived in my father's house with 6 people, then in a house with 8 people. We have now rented a house in Ankara. For 1 week, we had to stay with friends and relatives".

P.2 "We stayed with relatives for a while. We were in a house with a stove with my little baby. My baby got sick and was taken to the hospital. My older daughter was with relatives, and we were in the hospital; we were separated."

P.6 "We are staying at my mother's summer house. My sisters are also here. The house is very crowded. I do not feel comfortable. Crowded living difficult."

P.7 "We stayed in a relative's house for two months. We have now moved to Mersin. It was very difficult to stay in someone else's house. The landlords wake up late; my children wake up early. I was embarrassed that my children woke them up. I always gave them the phone to play with so they wouldn't make a sound. We lived in a house with 9-10 people. I thought that with 3 children we were a burden on them and that we were disturbing their order. I was even ashamed to take a shower in someone else's house."

Sub-theme 4: Living in a tent

Six participants lived in tents. All those living in tents are generally uncomfortable sharing toilets and bathrooms. One person stated that he lived in a tent in his village rather than in a tent city because of security reasons and other reasons. The women living in Tent City said that they were satisfied with the social activities and the opportunity to socialize as a result of living together.

P.8 "The tents built by the Kyrgyz were far from the toilet. We moved to tents near the mosque. We used the mosque toilet here. It is safer. It doesn't feel like a home; our house was destroyed, and our belongings are gone. You just can't let go of life".

P.9 "My house is slightly damaged, but we are still living in the tent because I am afraid to go inside. I go to knitting classes, and that helps me. The presence of security forces makes us feel comfortable. Because there is a very conducive environment for fights, for example, during meals. We use the toilet in the mosque".

P.10 "Staying with strangers made me feel uncomfortable at first. Then I got used to it. The tent door is open, and it is not clear who goes in and out, which is also a problem. But we have made new friends; everyone is in the same situation; the richest and the poorest are in the same place."

P.11: "We went to the tent city and found a tent with great difficulty. A girl was raped in a tent city, and we did not want to stay there. We applied for a container, but it was refused. We moved our tent into the village. We already have 2 cows left alive in the village, and we have a garden although our house was destroyed. If we do not take care of it, strangers will come."

Sub-theme 5: Changes in business life and economic situation

Among the participants, those who are civil servants and those whose workplaces were not demolished are able to continue their work. However, there has been a change in the business life or income status of 6 families among the participants. Since P.1's workplace was closed and the workplaces of P.7's and P.13's spouses were destroyed, their

incomes decreased. P.3 explained that she worked extremely hard and did not sleep because she was a nurse.

P.2 said: "My husband continues to work. My workplace was closed down, and my salary was not paid for a while."

P.11 said: "My family was working in the fields, now they are unemployed. The shop where I worked was demolished. I applied to an employment office, but there is no work."

Sub-theme 6: Changes in educational life

After the 6 February earthquake, university dormitories throughout the country were decided to house earthquake victims. For this reason, formal education in universities was canceled and distance learning was started. Then, with a new decision, education was started in a hybrid system (without compulsory attendance) was started (20). There have also been changes in primary and secondary education due to damaged schools, roads, or relocation of families to other regions (21-24).

Two participants were university students, while five participants expressed concern about their children's education.

P.1 "The children's kindergarten changed because we moved".

P.2 "When my daughter started school, I was very afraid that the earthquake would happen again while she was at school."

P.8 "Children cannot go to school. A child who studies in İstanbul cannot go to school; therefore, schools are closed. They could not get education during the pandemic; they cannot receive any education now. So I am worried.

P.10: "I am a university student. I cannot access online courses. There is no mobile phone signal. I don't have a computer."

P.11 "I was studying at the university, now I have suspended my studies. I have to take care of my family. My brothers and sisters are young, my parents are old. I have to find a job and work."

Theme 2. Physical problems

After the earthquake, 10 women experienced physical and mental health problems. These problems were listed as follows:

- Muscle/joint pain
- Spinal problems
- Urinary tract infection
- Vaginal infection (vaginal fungus, vaginitis)
- Headache/dizziness

Table 3.
Physical Problems Experienced by Women

Physical problems	Participant	Problem feature
Muscle-joint problems	K.1	"On the eighth day, I could not feel my left arm, and there was edema and infection. I went to the hospital and took antibiotics. I removed the cupboard that had fallen on my baby's bed."
	K.2	"I have numbness and pain in my right side. My arm and leg. I went to physical therapy, X-rays were taken; it may be psychological."
	K.7	"We jumped from the 3 rd floor to escape the earthquake. I have sore feet. I was embarrassed to go to the doctor for this."
	K.12	"During the earthquake, and after my nephew ran around the hospital for surgery, my knee ligament was torn. I went to the emergency room. I'm using drugs. It doesn't help."
	K.14	"I have aches and tremors in my feet."
Spinal problems	K.3 K.6	"I had a fracture in my spine, and I carried many patients after the earthquake; my lower back pain increased. I received neural therapy."
Urinary tract infection	K.11	"I have a herniated disc, and my pain has increased. I did not go to the doctor. In this case, the pain feels simple."
Vaginal infection	K.6 K.4	"I've had vaginitis, but it hasn't gone away."
Gastrointestinal problems	K.6	"I and many women around me have had vaginal fungus."
Headache/dizziness	K.8 K.1	"I experienced diarrhea and vomiting from stress and fear in both earthquakes."
Skin fungus	K.7	"Headaches become forgetfulness, 10 minutes." I forgot to mention it before. I didn't go to the doctor; I'm taking painkillers."
Menstruation/menstrual irregularity	K.1 K.11	"I feel dizzy all the time, there is a constant feeling of an earthquake."

- Gastrointestinal problems

- Skin fungus

- Menstruation/menstrual irregularity.

Half of the women (n=5) applied to the health center for physical problems. The most common problem (n=5) was muscle and joint pain. Data on the problems experienced by women are presented in Table 3.

Theme 3. Emotional state after an earthquake

In the interviews, the women were asked about changes and problems they experienced in their mental health after the earthquake. The intense emotions experienced by the women were reflected in their voice and expressions. The general psychological problems experienced by the women were as follows.

- Anxiety (n=9; P.1, P.2, P.3, P.7, P.8, P.11, P.13, P.14, P.15)
- Fear (n=5; 6, P.8, P.10, P.11, P.15)
- Sleep disorders (n=11; P.2, P.3, P.4, P.6, P.7, P.8, P.11, P.12, P.13, P.14, P.15)
- Depressed mood (n=3; P.3, P.12, P.13)
- Angry mood (n=2; P.4, P.13)

- Inability to forget what they saw and the sounds they heard (n:4; P.7, P.9, P.10, P.12)

- Inability to experience their emotions (n=3; P.5, P.12, P.14)

- Feeling obliged to be strong (n=3; P.5, P.10, P.12)

- Feeling hopeless (n=1; P.1)

- Feeling grateful (n=2; P.7, P.10).

Most women reported insomnia (n=11) and anxiety (n=9). Five women reported feeling of "fear" about their emotional state. The causes of the women's anxiety were as follows: "fear of the future, uncertainty, fear of something bad happening again/earthquake etc. and general anxiety disorder". In addition, the reasons for anxiety were as follows: "fear of earthquakes, fear of heights, fear of re-entering the house, fear of loneliness, fear of losing a loved one, and fear of safety."

P.1: "I have no enthusiasm for the future. I have no enthusiasm for opening my office and continuing with the online training I have acquired. I live to live; I have no enthusiasm for tomorrow. I don't feel like making a future with my spouse. We're not secure. Nobody has to take care of you. Those who were rich and had summer residences had a more comfortable life after the earthquake. It was easier for them to cope with the situation."

P.2 *"I feel anxious all the time. I have a constant fear of loss. I feel insecure. Even though my house is undamaged, I cannot trust it. I wanted to run away from Adana. But I can't. My husband has a job, and my child is at school. When the earthquake struck that day, I woke up at 04:07 a.m. to breastfeed my daughter. I looked at my phone. I wake up at 04:00 a.m. every day at the same time. My little daughter was in my arms as I ran away. I cannot remember whether I took my older daughter with me or left her behind. I think about the time."*

P.3 *"My anxiety increased; I have a depressive mood. I could not sleep until 4-5 in the morning for the first month. I could not experience my grief. I lost 20-25 friends and acquaintances. I often cry now."*

P.5 *"When we traveled to Mersin, we had no clothes. Someone brought things into a suitcase. The clothes were old and dirty. That day started to cry because of my clothes. I thought, 'What did we become one night when we were a wealthy family?'" I said, "Are we so helpless?" We were even in need of a vest. The thing that upset me the most was that my child had to wear old clothes."*

P.6 *"There is significant fear and panic. I am psychologically and physically affected by every episode. I cannot leave my daughter alone. I cannot go to the toilet or bathroom alone. I have someone waiting at the door when I go to the bathroom. My sleep is very irregular. It was raining that day; now I feel very uncomfortable in rainy and stormy weather."*

P.12 *"My psychology is breaking." I couldn't cry over my sister's death. I ran to my nephew; I couldn't sob; I cried secretly. When my nephew was put to intensive care, I was devastated when they told me that he could die at any moment. My 18-year-old nephew's leg was amputated twice. I couldn't find a blanket for my nephew in the hospital, so I apart took the hospital curtain and made a blanket. I don't know if it was a sin. I don't know if it was a sin or not. I cannot sleep, my head is confused, and I have nightmares when I fall asleep. I can't forget what I saw in the rubble and in the hospital. I had no sense of time; everything was like a dream. My sister came out of the rubble alive; she was badly hurt. I gave her a sip of water. Then, her arm was amputated in the hospital. Then we couldn't find my sister in the hospital. They told us to look in the intensive care unit, but she was not there. Everything was chaos at the hospital. The patients were lying on the floor. I looked at the morgue list and found no names. There were nameless dead people in the morgue. I looked at the faces of the dead in succession. Then I recognized my sister by her birthmarks."*

Theme 4. Women's needs and difficulties experienced as women

Women have specific needs due to their physiological processes (menstruation, breastfeeding, postpartum). The

results of the interviews showed that women expressed their needs related to menstruation and breastfeeding during the earthquake process.

Sub-theme 1: Hygiene problems

Most women (n=13) suffered from having to use open defecation facilities within the first few days. Then they bothered by the lack of hygiene in the public toilets. They stated that they experienced problems with accessing clean water and finding sanitary pads and clean underwear (P.2, P.3, P.4, P.5, P.6, P.7, P.9, P.10, P.11, P.12, P.13, P.14, P.15).

P.2: *"I was postpartum during the earthquake; I was bleeding, and I could not find a pad"*

P.3: *"I had my period on the second day of the earthquake, and I could not find any pads except 1-2 pads in the car. The markets are closed. I couldn't go to the toilet. While in the car, we used the field as a toilet."*

P.7: *"It took a week for the tents to arrive. The men go to the toilet on a comfortable side. The women have to find a secret place..."*

P.10: *"I prayed not to be in my period. Those who stayed in the villages could not find pads."*

P.11: *"There is no sink, no bathroom. We fill water in canisters in the garden and take a bath. We bathe in the dark and cold at night so that no one else can see us. My brother and sister are small and cold. We use the field we find empty as a toilet. We do not go to the toilet at night because we are afraid..."*

Sub-theme 2: Breastfeeding problems

Among the women interviewed, there were 2 breastfeeding women. Women experienced difficulties related to a decrease in their milk supply, lack of breastfeeding supplies (bras, breast pads), and the absence of a private environment for breastfeeding.

P.2: *"I did not wear a bra because I was breastfeeding. When I went out that night, I felt like I was naked without a bra."*

P.5: *"My milk dried up because of stress. I had to give a formula. I have a 4-5 months old baby."*

Theme 5. Difficulties experienced by women in their social life after the earthquake

Sub-theme 1: Increased workload

Most women (n=9) mentioned in their statements "children, care for injured or elderly relatives, increased workload in a crowded family environment" (P.3, P.4, P.5, P.6, P.7, P.8, P.9, P.11, P.13).

P.3 "Women are the only ones responsible for all tent tasks." We rented a house, and it was left to the women to clean, carry, and unload things. There are no laborers to works. There is no lift. As female health workers, our workload has increased even more..."

P.4 "We have moved to my in-laws' house and I am doing more work. I can't eat when I want or drink coffee when I want. I am even embarrassed to do laundry. It is like being a guest and a host in the same house..."

P.5 "My husband stayed in the earthquake zone to work. I took care of 2 injured elderly people and my little baby, 3 people by myself. It made me very tired. Everyone depends on me."

P.7 "We are in a crowded house, preparing the table, and taking care of the children. All the work is still done by the woman. My husband takes care of his work."

P.8 "Apart from the work I normally do as a woman, I also worked in the rubble removal."

P.9 "My husband is ashamed to stand in line for food and tea, I always wait there."

P.11 "My parents are old. I have to take care of my siblings. My aunt is disabled. I help her. My family has no work; our field is gone. I have to find a job."

P.13: "Being a woman in Turkey was already difficult, but now it has become even more challenging. As women, we work; we come home in the evening and work again, cooking, washing up, childcare, tea service, cleaning."

Sub-theme 2: Challenges in caring for a mother or caregiver

During the interviews, statements from women with children indicated that their only thoughts during and after the earthquake were their children. They stated that they felt that they had to hide their fear and sadness and to appear strong.

P.1: "I had numerous emotional troubles in my inner world, but I have to stay strong because I am a woman. I don't have time to mourn; I can't feel sorry for the earthquake. I am a mother, and I have to laugh with the children..."

P.2: "I couldn't cry, there was an indescribable situation inside me. If I didn't have children, I would have screamed and shouted. My arm where I hold my baby is numb all the time now..."

P.5: "I had to look after my little baby, my mother-in-law and my father-in-law all by myself. My husband was away working in Hatay. My mother-in-law's foot was broken in the earthquake, and my father-in-law's finger was cut-off. For 2 months, I looked after them, took them to the toilet, and

fed them. I didn't have time to think about myself; everyone needed me".

P.6: "My mother is chronically ill and experiences panic attacks. I have a baby. I felt I had to be strong both as a mother and as my mother's child. I kept my feelings inside."

P.7: "I didn't think about anything except saving the children. I threw them from above, and they caught them. Then I thought I might die. Motherhood is very tiring..."

It was observed that being a mother or carrying injured people led women to have "intense feelings of responsibility, keeping everyone together, being a collector, being strong, and hiding their emotions".

Sub-theme 3: Difficulties in ensuring privacy

Women reported a lack of privacy for various reasons, such as using the toilet in open areas and dressing in tents (P.3, P.6, P.8, P.15).

P.6: "Using the toilet in open areas was very bad. My husband held a blanket in front of me. It is impossible to have privacy."

"We take turns getting dressed in the tent."

P.15 "Hygiene was very bad, we used the same toilet and bathroom, which caused significant issues with privacy."

Sub-theme 4: Security concerns

Two women expressed concern about security.

P.7 "I would like to see someone in uniform. There is a security problem. There were men we had never seen before in our neighborhood. I was afraid there theft was widespread. There were healthy, mischievous young men in their pockets. I never left my husband's side."

P.11 "My brother is 18 years old, and I cannot sleep without him. There are some people in the village who take drugs, and I am afraid of them. After the earthquake, they found money by looting everywhere. One girl was raped in the tent center. This incident affected me a lot."

Discussion

The effects of unexpected disasters, such as earthquakes, vary according to the level of preparedness. Depending on the society in which the earthquake occurred, post-earthquake problems also vary (36,37). Factors such as the country's post-earthquake contingency plans, organizational capacity and economic power can affect the level of difficulties experienced by people after the earthquake (38,39). Although Turkey is an earthquake-prone country, the 6 February Kahramanmaraş earthquake was a devastating earthquake that affected many cities at the same time (25). After the 7.8 magnitude earthquake, thousands of buildings collapsed, and more than 50,000 people died (41).

Our study examined the physical, social, and psychological problems experienced by women after the devastating earthquake. People's "demographic, socio-economic, and urban/housing" characteristics are changing after an earthquake (42). In our study, the participants' employment, education, income status, and city/residence have changed. There will inevitably be changes in the psychosocial status of the people due to both the direct effects of the earthquake and the indirect effects of these changes (43-45).

In our study, problems related to the arrival of aid in the first days after the earthquake mentioned by all participants. Similarly, in a qualitative study conducted with 20 people after the 2011 Van earthquake 13 years ago, "problems experienced in aid and service delivery" were expressed (38).

In some societies, fatalistic beliefs are seen as obstacles to pre-earthquake seismic preparedness and are effective in easily accepting post-earthquake events (39). A study conducted in İzmir, Turkey, found that people with high levels of fatalism were less prepared for earthquakes (46). In our study, we observed that the fatalistic approach in our society was reflected in the feelings of some of the earthquake victims in the form of being thankful for their situation.

In our study, the problems of the female participants were investigated because women are more sensitive to conditions such as pregnancy, breastfeeding, and childcare. It was found that the workload and responsibilities of the participants increased since they were caregivers due to their social position; they moved to collective living spaces with others; and housework was their responsibility. Similarly, a study conducted after the Elazığ earthquake in Turkey found that women were more affected by the negative effects of the disaster because of their gender roles (47). After the 2011 Tohoku earthquake in Japan, women's workload increased because of their social roles (48).

In our study, women expressed problems related to hygiene. They had problems accessing clean toilets, bathrooms, and feminine hygiene products (such as sanitary pads and clean underwear). In other earthquakes, women were also found to have problems with such issues. In the 2012 Haiti earthquake, it was noted that women's specific needs were ignored in the aftermath of the disaster (49). Similarly, during the 2015 Nepal earthquake, women expressed difficulties with menstruation and problems with using communal toilets (50). In our study, women reported that they were uncomfortable to having to use toilets in open areas, both in terms of hygiene and privacy. In a study conducted after a cyclone and flood disaster in Odisha, India, women were found to suffer from the same problem (51). In general terms, "water, sanitation, hygiene" are considered important issues related to disasters worldwide (20,51,52). Issues such as lack of access to clean water, hygienic environment, and sanitary pads caused "vaginal and urinary tract infections and skin diseases" among women in our study. Studies

have also reported that a lack of sanitation leads to health problems (50,53).

In our study, some women expressed concerns about privacy and safety issues. The two murders of women in the tent city also raised security concerns. In countries with high levels of gender discrimination, such as Haiti and Nepal, rape, trafficking, and domestic violence increased after the earthquake (33,34). A systematic review focusing on 12 paper highlighted that women in low- and middle-income countries are more vulnerable to natural disasters (54). A study found that women experience increased socio-economic health problems such as "psychological stress, chronic fatigue, malnutrition, physical injuries, lack of education, unemployment, poverty, early marriage, domestic violence, inadequate housing and unhealthy living conditions, communicable and non-communicable diseases, inadequate access to feminine hygiene products and increased mortality rates" (54).

Study Limitations

This study was conducted with a sample of 15 women, which limits the generalizability of the results. The snowball sampling method may have reduced participant diversity. Conducting interviews by telephone limited the opportunity to gather in-depth data that could be obtained through face-to-face communication and resulted in the loss of important cues such as body language. Conducting interviews only in certain provinces excluded the experiences of individuals from other regions. Additionally, the psychological state of participants after the trauma may have affected the depth of the data and their freedom of expression. Although open-ended questions were used, the interview form being limited to predefined themes may have prevented unexpected issues from emerging. Staying in collective living spaces such as tent cities heightened concerns about privacy and security, which may have restricted some participants from fully sharing their experiences.

Conclusion

As in all other studies, our study shows that women are more sensitive and more vulnerable to health problems due to their special conditions such as "pregnancy, childbirth, lactation, menstrual cycle" after the earthquake. In addition, in patriarchal societies like ours, women are responsible for childcare, care of the sick, elderly, and injured relatives, and play the role of "caregiver". The increased need for care during disasters increases the responsibility of women in disaster areas. This sense of responsibility was also seen to cause psychological effects, such as suppressing women's emotions and enhancing their need. In addition, women's responsibilities at home, such as cleaning and tidying up, increased. They also participated in labor-intensive activities in the earthquake zone because of delays in relief efforts after the earthquake. It was observed that privacy and security issues in collective living spaces, such as tent cities, after the earthquake caused a sense of anxiety for some women. As many studies have shown, women are

the most disadvantaged group in terms of “health, shelter, economic and security” in disasters (15,16,48-50). For this reason, women should be considered a privileged group for social assistance to be provided in the region after the earthquake.

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