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You Are Far Away now! Aftermath of Displacement Processes Induced by 6 February 2023 Earthquakes in Turkey

Şimdi Çok Uzaklardasın! 6 Şubat 2023 Depremleri Sonrasında Türkiye'de Afet Kaynaklı Yerinden Edilme Süreçlerinin Analizi

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ABSTRACT

Recently, Turkey experienced a disaster in Kahramanmaraş on 6 February 2023. Two consecutive earthquakes with magnitudes of 7.8 Mw and 7.5 Mw, spatially and socially affected 11 provinces of Turkey (Kahramanmaraş, Hatay, Adıyaman, Osmaniye, Gaziantep, Şanlıurfa, Malatya, Diyarbakır, Adana, Kilis, and Elazığ). Roughly 2.7 million people have been predicted to be displaced as a result of the earthquakes. Additionally, more than 50,000 people lost their lives. This study focuses on the forced migration movements to Siirt province, Turkey, due to the displacement of earthquake victims. The aim of the study is to reveal the post-earthquake experiences and choice of new settlements in Siirt. Two datasets were utilized to achieve this goal. A list of people who migrated to Siirt after the earthquake was obtained from AFAD. Additionally, interviews were held with 16 people affected by the earthquake. The interviews were transcribed and coded using MAXQDA 2020. The results showed that the majority of people forcefully migrated to Siirt after the earthquakes preferred to settle in urban and central areas. Kinship ties and being born in the area were the main reasons for this choice. Moreover, significant issues were found in the areas of housing, basic needs, and institutional structure after the earthquakes.

Keywords: Earthquake; displacement; forced migration; natural disasters; Siirt; Turkey.

ÖZ

Türkiye, yakın zamandaki doğal afetlerden birini 6 Şubat 2023 tarihinde Kahramanmaraş merkezli yaşamıştır. Sırasıyla 7,8 Mw ve 7,5 Mw büyüklüğündeki depremler Türkiye'nin 11 ilini (Kahramanmaraş, Hatay, Adıyaman, Osmaniye, Gaziantep, Şanlıurfa, Malatya, Diyarbakır, Adana, Kilis ve Elazığ) mekânsal ve toplumsal açıdan etkilemiştir. Depremlerden sonra yaklaşık olarak 2.7 milyon kişinin yerinden olduğu tahmin edilmektedir. Ayrıca 50 binden daha fazla sayıda insan yaşamını yitirmiştir. Bu çalışma Türkiye'de 06 Şubat 2023 depremlerinden sonra gerçekleşen yerinden edilme süreçlerine bağlı gerçekleşen zorunlu göç hareketlerini Siirt ili perspektifinde ele almaktadır. Çalışmanın amacı depremlerden sonra zorunlu olarak Siirt'e göç etmek zorunda kalanların deprem sonrasındaki deneyimlerini ve yer seçim tercihlerini açığa çıkarmaktır. Bu amaca ulaşmak için birincil ve ikincil veri setlerinden faydalanılmıştır. AFAD'dan deprem sonrası Siirt'e göç etmiş kişilerin listesi edinilmiştir. Ayrıca depremden etkilenmiş 16 kişiyle görüşmeler gerçekleştirilmiştir. Elde edilen görüşmeler transripsyon edildikten sonra MAXQDA 2020 programı vasıtasıyla kodlamalara tabi tutulmuştur. Elde edilen sonuçlar Siirt'e deprem sonrasında gelenlerin hâkim çoğunluğunun kentsel merkezi alanları tercih ettiğini göstermiştir. Böyle bir tercihte ise akrabalık ilişkileri ve memleketli olmak ana nedenselliklerdir. Ayrıca deprem sonrasındaki süreçte barınma durumu, acil ihtiyaçlar, kurumsal yapı özelinde birtakım sorunsallıkların oluştuğu da tespitler arasındadır.

Anahtar sözcükler: Deprem; yerinden edilme; zorunlu göç; doğal afetler; Siirt; Türkiye.

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TMMOB Şehir Plancıları Odası

1. Introduction

The incidence of natural disasters such as floods, storms, earthquakes, landslides, droughts, and forest fires has tripled in the last 40 years (Institute for Economics and Peace, 2022), and millions of people experience the loss of their living spaces every year. Natural disasters are therefore one of the major causes of forced migration in the context of displacement (Fussell, 2013; IDMC, 2023a). Moreover, non-natural disasters such as war and conflict can also cause people to leave their current settlements (Becker, 2022). In 2022, a total of 60.9 million people worldwide were exposed to displacement processes due to various reasons. Of these, 32.6 million were caused by natural disasters, while 28.3 million were displaced by human conflicts and wars (IDMC, 2023a).

Meeting the need for shelter after a disaster requires distinct efforts at different stages of the post-disaster period. The period of temporary shelter between the onset of the disaster and the acquisition of permanent housing (Johnson, 2002) is of critical importance. Quarantelli (1995) summarizes post-disaster resettlement as a four-step process. These steps are *emergency shelter* immediately after *the disaster, the temporary shelter* where the family will live for a short period of time until the impacts of the disaster diminish, *temporary housing* where the basic conditions in housing are fulfilled to continue daily activities, and finally reaching a *permanent housing* again as the ultimate goal. What is critical and considered the basis of social recovery is the reestablishment of permanent housing for disaster victims (Boyd et al., 2014) and the length of the reestablishment period (Olshansky, 2005). Ultimately, there are two possibilities during displacement: return to the first (original) pre-disaster settlement or permanent relocation to another settlement.

Turkey is one of the countries located in an active earthquake zone. 1939–1982 Erzincan, 1943 Ladik, 1976 Muradiye, 1999 Marmara-Düzce are some examples of recent earthquakes (Ceylan, 2004). In these earthquakes, many lives were lost and survivors were displaced in addition to property losses. According to the IDMC, 1.1 million people were displaced due to violence and conflict in Turkey between 2008 and 2022. During the same period, natural disasters affected 400,967 people and also forced their displacement. Earthquakes in the country (estimated at around 292,300) are the major natural disasters causing displacement (IDMC, 2023b).

The most striking disasters experienced in Turkey recently were the earthquakes that struck Gaziantep and Kahramanmaraş on 6 February 2023. Two consecutive earthquakes with magnitudes of 7.8 Mw and 7.5 Mw struck 11 provinces located in the eastern, southeastern, and Mediterranean regions of Turkey and had a huge impact on the housing, business, and education (Sağıroğlu et al., 2023). This area was populated by approximately 14 million citizens, 7.1 million people lived in the areas heavily affected by earthquakes. Although the exact number is not known, it is estimated that 2.7 million people were displaced (IOM, 2023). More than 50,000 people lost their lives as a result of earthquakes (BBC News Türkçe, 2023). From this perspective, the most prominent outcome of the February 6 earthquakes is the displacement of a huge population due to unbearable physical destruction. Although the exact number of people forcefully migrated is not known, such forced migration draws attention to large-scale displacement.

As mentioned above, the effort of natural disaster victims to find temporary shelters constitutes the first of the resettlement steps. Although there are studies that focus on analyzing the decision-making process and intentions of the population during the post-disaster periods, (Goldhaber et al., 1983), there is still a gap in the literature to understand resettlement comprehensively (Badri et al., 2006; Dickinson, 2013; Sridarran et al., 2022). While Dickinson (2013) addresses the presence of a gap in understanding the factors that contribute to the decisions at different stages after a disaster, Badri et al. (2006) point out the scarcity of studies that address resettlement in areas affected by disasters.

This study addresses the gaps in the existing literature on the displacement processes that occurred after the 6 February 2023 earthquakes in Turkey from the perspective of forced migrations towards Siirt. Thus, the study will contribute to the existing literature from the perspective of forced migration and will also inform the implementation of preventive measures for other seismically active regions in Turkey. The primary rationale for the selection of Siirt as the study area is that, despite its proximity to a seismic zone, it has not been significantly affected by earthquakes. The main purpose of the study is to reveal the resettlement preferences of individuals whose homes were heavily damaged or destroyed by the earthquakes in Siirt, as well as the factors that contribute to these preferences. Furthermore, the study aims to discuss whether the need for shelter was met in the first 4 months after the earthquake, the role of institutions in this process, and changes in the economic status of victims of the earthquake in addition to further impacts on their family and neighborhood relations. A variety of sources were used to achieve these goals. First, a dataset containing previous addresses of the disaster victims who settled in Siirt was provided by the AFAD Directorate to determine the distribution patterns of the families migrated to Siirt. Based on this dataset, interviews were held with family members who agreed to be interviewed. These interviews contributed significantly to gathering detailed information on the migration of earthquake victims who settled in Siirt.

The study begins with an introduction and is followed by a literature review discussing the impacts of disasters. The next part of the study is the methodology, which describes how the datasets in the study were obtained and analyzed. This is followed by the results, where the findings are presented in

two main sections. In the first section, the distributions of the forced migrants are mapped. In the second section, in-depth analyses of the conducted interviews are shown. These are followed by a discussion in which the reconstruction is compared with the findings of this study. The discussion and the study are summarized in the conclusion.

2. After The Disaster: Its Impact and Current Debates

Although migration is best known as a voluntary act performed with economic goals, forced and involuntary migrations are receiving more attention every day (Mitchell & Pizzi, 2021). The increasing rate of disasters and destruction of livelihoods is causing a surge in the number of people displaced by disasters on a global scale (Esnard & Sapat, 2018; IDMC, 2023a). Although the devastation caused by disasters is location-independent, underdeveloped or developing countries are often more disadvantaged than developed countries in such circumstances (Smith, 2013; Mitchell & Pizzi, 2021). Smith's (2013) account of the 2015 Nepal Earthquake paints a dramatic picture of how citizens of disadvantaged countries experience the effects more harshly. They report that the community was disadvantaged before the earthquake and therefore more vulnerable to the destruction of their settlements and forced displacement.

Studies focusing on the aftermath of disasters reveal commonalities among affected communities. After disasters, a decline and deterioration in the economic situation (Daley & Karpati, 2001; Jha et al., 2010), health issues due to displacement (Hikichi et al., 2021; Blake et al., 2022; Kothari et al., 2023; Polat et al., 2023), changes in relationships between friends and relatives (Dickinson, 2013) have often been observed. Undoubtedly, the type of the disaster is another important parameter that determines the societal impact. While the effects of long-term disasters such as drought and climate change spread over longer periods of time, the impact of other disasters such as earthquakes, floods, and avalanches surface immediately. For this reason, the impact of these disasters is considered sudden and drastic. It is therefore a challenging task for governments to mitigate the impact of sudden disasters (Mitchell & Pizzi, 2021).

The literature summarized above indicates the complexity of migration and demonstrates the many causes that contribute to the process. It could be argued that migration is a response to the disaster. However, Fernando et al. (2010) discusses the possibility that these movements may not always be a response, focusing on the case of Sri Lanka to explore whether post-disaster displacement is a second disaster or a coping behavior to minimize vulnerability. A second disaster is the failure to start over in the new settlement after leaving the disaster area and thereby the worst case scenario for recovery. The success or failure of starting over depends on many parameters, such as the opinions of the host communities about the migrants' new settlement and the social classes.

The ability to migrate is considered mobility and is different for each community. In any disaster, low-income households are more likely to migrate greater distances, based on the scale of negative consequences arising due to substandard and unsafe housing (Lampert, 2014; 2015; Costa et al., 2022; Kang, 2023). There are also findings that show those who own their house have a lower likelihood of migrating (Elliot, 2015). Similarly, Costa et al. (2022) confirm that those who need public shelters or are displaced after an earthquake are predominantly renters and low-income households. Therefore, the authors have developed approaches in their model based on the optimal utilization of public shelters. This phenomenon was demonstrated by Lambert (2014, 2015), who focused on the 2011 earthquakes in Christchurch, New Zealand, and found that Māori people had high mobility due to their low socioeconomic status. Low incomes, substandard living conditions, and widespread renting habits are among the main reasons for the high mobility of Māori indigenous communities. On the other hand, the opposite was observed by Thiede & Brown (2013), who focused on victims stayed or left after Hurricane Katrina. Similar to the Māori, the authors state that those most affected by the hurricane were low-income black communities with limited access to education. However, being at the lower end of the socioeconomic spectrum in America was not found to be the determining factor in mobility as in the New Zealand case. On the contrary, the authors reported that these low-income people were the most stationary and reluctant to migrate to a new settlement.

The last point of discussion on post-disaster population mobility concerns the route and duration. Patterns of post-disaster mobility are not single-directional, and victims of disaster do not migrate directly from one point to another. Migrations often occur in a complex sequence with a thread-like fashion in the period they take place (Kothari et al., 2023). This complexity serves as the main obstacle for tracing migrations. Especially in the aftermath of sudden and high-magnitude disasters, people make decisions to flee in hustle, with limited discussion and the urgency of saving their lives (Gibbons & Nicholls, 2006). Fussell (2013) provides a critical reminder of the choice of new settlement, finding that post-disaster mobilities were in the vicinity of the disaster area. In particular, a positive correlation between property ownership and resettlement in the close vicinity was one of the key findings. Conversely, the mobility of the tenants was found to be high due to the low binding effect of not owning the house (Johnson, 2002). Another key point of research is whether those affected by the disaster return (Morrice, 2013; Henry, 2013). Although Morris (2013) reveals a strong trend of return, it is noteworthy that many parameters contribute to the decision. In the study, in addition to socioeconomic variables, the sense of attachment to the area contributed to the settlement choices of Hurricane Katrina victims, revealing the complexity of such preferences.

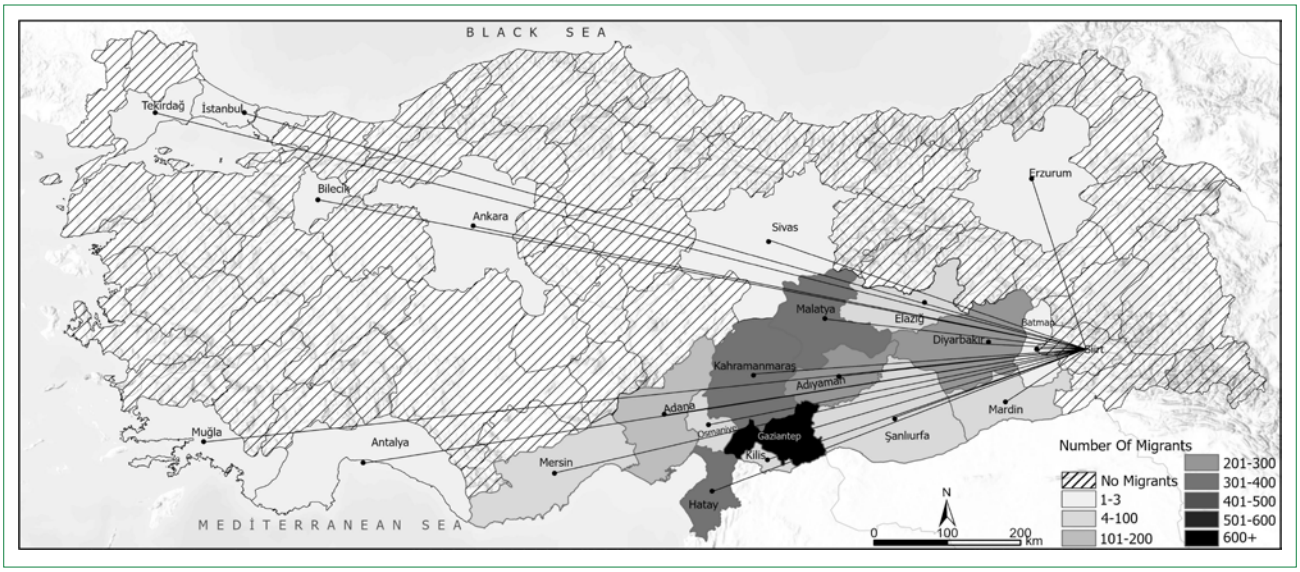

Figure 1. Spatial distribution of forced migrations to Siirt after the 6 February 2023 earthquakes.

3. Methodology

3.1. Study Area

Siirt is located in the Southeastern Region of Turkey and is one of the provinces that underwent migration after two consecutive earthquakes that occurred on 6 February 2023. There are multiple reasons for choosing Siirt as a study area. The fact that it is in the same geographical area as Gaziantep-Kahramanmaraş, the center of the earthquake, while not being affected by the earthquakes as much as these two provinces, provided an advantage of proximity, as Siirt can be reached from the disaster area in an average of five hours by car (Fig. 1). The second reason is related to the number of residents. The current population of Siirt is approximately 330,000. This makes it easier to conduct research on a relatively small city. Finally, identifying the outcomes of forced migration to Siirt is crucial for preparing for the potential Marmara Earthquake in Turkey. The research opportunities available in smaller cities, coupled with the ease of reaching disaster-affected populations, serve as a significant simulation model for larger cities such as Istanbul, where an earthquake is anticipated.

3.2. Data Collection and Processing

A common obstacle in post-displacement research is the difficulty of tracking migrating populations. This is often cited by many researchers when collecting data to determine the number of displaced people. A lack of comparative data that can reveal features of post-disaster mobility is observed in numerous studies (Blake et al., 2022). In this study, a secondary data set was initially utilized to track large population masses in the earthquake areas comprised of 11 provinces. Lists of households that moved out of the earthquake zone in Siirt were obtained from the AFAD (Ministry of Interior Disaster and Emergency Management Presidency of the Republic of Turkey). During the 51-day period between 06.02.2023 and 27.03.2023, 8202 people in a total of 2576 households migrated to Siirt due to the earthquakes. The list obtained includes the cities of origin of the earthquake victims, in addition to their current addresses in Siirt and further demographic information.

According to the available data set, 8202 people migrated to Siirt after the earthquake. As family members migrated together, the absolute number of people was not taken into account in the construction of the distribution maps. Instead, one individual from each household is considered representative of the household, and 2571 households were mapped in total. Thus, the challenging task of obtaining in-depth information from a large and scattered population by means of surveys was overcome by narrowing down the targets. Qualitative research is often preferred to reveal the causality of events and circumstances due to its structure (Brinkmann, 2017). Hence, structured interviews were held to understand how the necessity for shelter was fulfilled during the 4-month period after the earthquake, the role of institutions, the change in socioeconomic status, and the change in family and neighborhood relations. Due to the poor morale of people who were forced to migrate after sudden earthquakes and time limitations, the interviews were conducted in a constructed fashion. Extra care was taken when conducting the interviews since these were held shortly after the earthquakes and negative effects were persistent at the time. Therefore, the formulation of questions for the interviews was undertaken with great care. As the interviewer has the room to add questions based on the course of the interview in semi-structured or unstructured interviews, these types of interviews were avoided to not generate hurtful questions. Therefore, a predetermined set of questions was used.

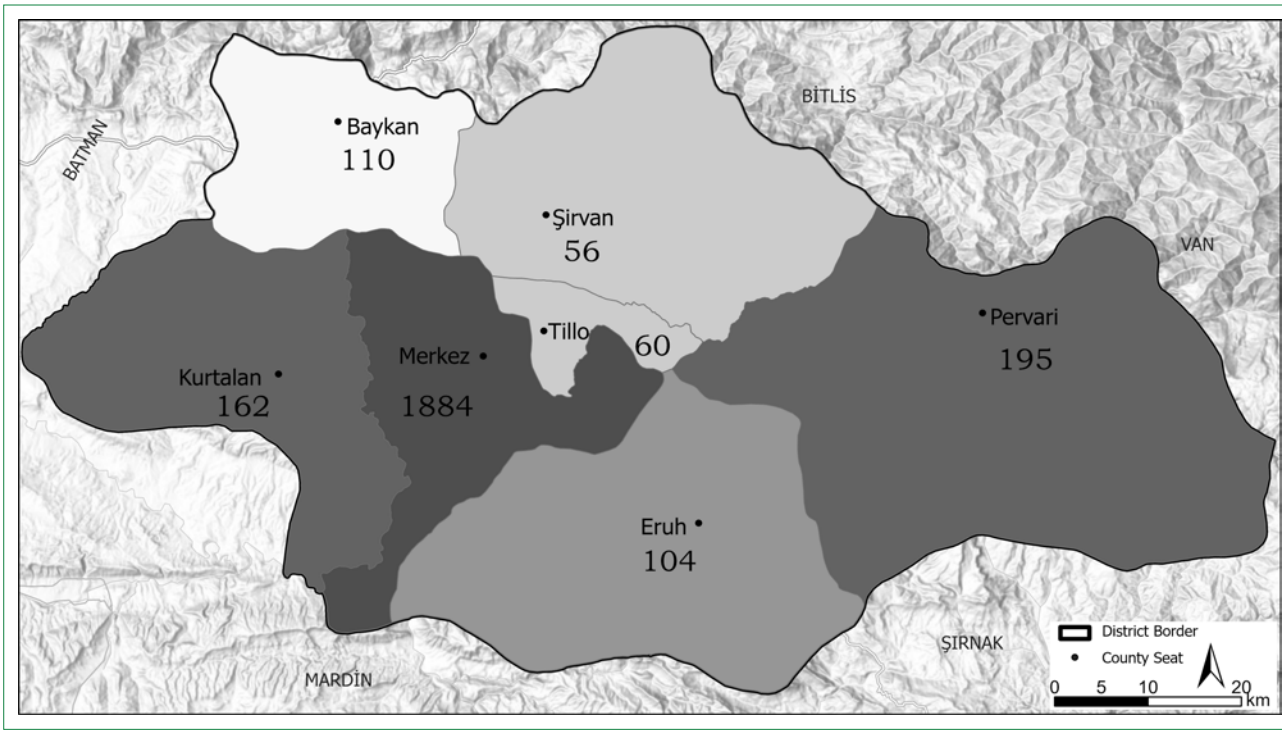

Figure 2. Spatial distribution of forced migrations to Siirt after the 6 February 2023 earthquakes.

Snowball sampling was preferred to determine the people who were going to be interviewed. Snowballs were used to identify people who want to share their experiences (Atkinson & Flint, 2001). In this technique, each individual is a member of the network of victims and thus connected to others (Neuman, 2014). Although the researchers had a list of people who came to Siirt, it was not possible to pick the people who were willing to interview solely based on the list. Only a few of the people who were randomly selected from the list consented to participate in an interview. For this reason, the researchers reached out to other people based on their connection to the few people who already agreed to be interviewed.

Interviews were conducted with 16 people affected by the earthquake and held between June 8 and July 3, 2023. The average duration of the interviews was 25 minutes, and they were conducted in houses, guesthouses, and student dormitories. Although the age range of the interviewed people spanned from 18 to 61 years old, with the majority falling within the 30–40 age bracket. 10 males and 6 females were interviewed, and the average monthly income of the respondents was 14,000 Turkish liras (equivalent to 514 US dollars at the August 2023 exchange rate), indicating an income slightly above the minimum wage. Lastly, half of the interviewed people were landlords while the other half were tenants. The interviews were transcribed using Microsoft 360 to be followed by qualitative analysis using MAXQDA 2020. Inductive coding was performed to reveal post-earthquake mobility, decision-making processes, and socioeconomic conditions. The interviews yielded four primary themes: Status of Housing, the Moment of Earthquake, the Effects of Earthquake, and Institutional Structure.

4. Findings and Analysis

4.1. The Post-Earthquake Patterns of Movement: Where Did We Come From? Where We Are Now?

Despite being located in the Southeastern Anatolia Region geographically, Siirt was not directly affected by the earthquake. This provides a clue on how different distribution patterns of populations may occur in the city due to huge extents of displacement. When distribution patterns of those who migrated to Siirt after the earthquakes were studied, an obvious pattern of forced migrations emerged. Especially from Gaziantep, Hatay, Kahramanmaraş, and Malatya, where the impact of the earthquake was high, a noteworthy sum of forced migrations occurred. On average, 500–700 people from each of these provinces migrated to Siirt (Fig. 1).

The second noteworthy finding in the distribution patterns of forced migrations is the distribution of the migrations within Siirt. Based on these findings, it is possible to make inferences from the distribution patterns at the district level to a general scale. Among all, the Merkez (Central) district stands out the most. The number of people migrating to the Merkez district corresponds to almost three times the total migrations to all other districts (Fig. 2). There are two main reasons for such a pattern of distribution. The first of these relates to the post-disaster resettlement policies

of the government, since the government allocated dormitories, guesthouses, hostels, and residences belonging to the university and other public institutions as temporary housing, and these accommodations are more abundant in the Merkez district compared to other areas. The second cause is related to the high population density in the Merkez district. According to the population data of 2022, the total number of residents in the Merkez district was 174,467. This number is higher than the sum of all other district residents. Interestingly, the majority of those who migrated to Siirt were also born here. This indicates that their organic bond to Siirt as their place of birth was a compelling force in the decision-making process favoring migration. Relatives or acquaintances resident in the Merkez district were the primary causes for the concentrated distribution.

4.2. The Moment of the Earthquake: Panic, Fear, and Urgent Needs

Two main emotional expression patterns emerged during the interviews conducted with people who had experienced the earthquake intensely. These were identified as fear and panic. The narratives converge on the point that the earthquakes were events that were completely unexpected and uncalled for in the region. Therefore, being caught by the first earthquake at 04.17 in the morning was considered too sudden and accompanied by impotency in the moment. Mehmet, a resident of Adıyaman, (38 years old, married) stated that the panic he experienced during the earthquake resulted in the act of escape.

> *"I was asleep when the earthquake started. At first, I felt a terrible shaking in the apartment. The whole building was almost laying to right and left. There was an incredibly loud noise. The time almost stopped and noises were combined with cracking sounds coming from the walls. All the furniture in the apartment was completely knocked over. I awaited behind the door of the room until the shaking was over, and then I jumped over the things and ran towards the outer door. After opening the door, I heard the neighbors screaming and trying to get down the stairs. Everyone was having a massive panic. When I came out of the apartment I lived in, I felt that the apocalypse was happening at that moment and that it was the end of everything I knew. People were shouting in the street. Many buildings had collapsed, I wanted to run, but it was not possible with the crowd."*

Once a secure environment was found and fear and panic faded, trying to make sense of the disaster and meeting urgent needs began. At this stage, the survival instinct is triggered to meet vital needs draws attention. Interviews revealed that those who had experienced the earthquake united to meet vital needs after the earthquake. Among these vital needs, finding nutrition for sustenance came first. Interviews with Hatice, who was from Hatay, (35 years old, married) demonstrated the necessity for water and bread in the immediate aftermath of the earthquake. The difficulty in finding bread, especially in the first two days in the earthquake region, was one of the profound difficulties in terms of accessing the most fundamental food sources.

> *"For a period of two days, we were unable to access even bread and water and desperately waited for help just for a piece of bread. Everyone was coordinating to find something, anything."*

Urgent needs are not limited to finding nutrition that will ensure the continuation of vital functions after the earthquake. The fact that the earthquake occurred in the winter when the temperature was low worsened the conditions further. People who went out without their basic belongings in panic during the earthquake were helpless in the face of cold weather. For this reason, clothing appropriate for cold winter conditions and tools for outdoor heating have emerged as urgent needs specifically in these earthquakes. Difficulties in providing these needs quickly were one of the findings. The descriptions of Büşra (27 years old, single), who was residing in Malatya at the time of the earthquakes, support the above-mentioned findings. Büşra expressed an urgent need for blankets due to harsh winter conditions in Malatya (-3°C accompanied by snowfall). It is therefore evident that there is a necessity for blankets and clothing that are designed to withstand the harsh outdoor conditions that were present during the earthquakes.

> *"Once the shaking was over, we went downstairs. The first thing I noticed was an intense snowfall with snow accumulating on the ground, so what I needed most badly was something to warm myself up like blankets."*

4.3. The Big Question: Shelters After the Earthquake

The earthquakes caused extensive physical damage to existing buildings, rendering a significant proportion of the housing stock uninhabitable. The first step was to meet the urgent need for housing. Individuals whose residences had sustained significant or moderate damage, or who were unable to access their homes due to the fear of being exposed to post-earthquake collapses, started to seek out emergency shelters. The urgent need for shelters after the earthquakes was met by cars, empty spaces, cemeteries, and barns. Of these, cars, empty spaces, and cemeteries were of an urban character, while barns were unique to rural areas. Interviews of Burak, a resident of Kahramanmaraş, (37 years old, married), who preferred his car as an emergency shelter immediately after the earthquake, thought that the car was the safest and most preferable option available.

> *"Since I had a car, we first took shelter there. After spending some time in the car, we calmed down. We only realized the magnitude of the incident after stopping and resting for a while. My children and my wife, we were all in shock inside the car."*

Conversely, if the victims of the earthquake did not own a car, open areas were taken as emergency shelters. However, owning a vehicle provides an advantage for evacuating the earthquake zone, in addition to meeting the emergency shelter. Otherwise, delays were observed when an action needed to be taken. As an extreme example in extreme cases, the utilisation of cemeteries came forth as shelter areas.

After finding an initial shelter, the second phase starts. This phase may be categorized as seeking temporary shelter areas. During this period, tents were the most prevalent type of temporary shelter we came across in the study. Tents acquired by individual efforts or by governmental support after earthquakes allowed temporary shelter for a few days in some cases and a few weeks in other cases. In cases where a tent cannot be obtained, going to relatives, going to village houses, or to the dormitories were other options. For Cansel, a resident of Gaziantep, (36 years old, married) who was living in a tent for temporary shelter after the earthquake, the tent was the first option of temporary shelter. The most noteworthy aspect of this interview was the interviewee's stated objective of improving the situation in a relatively short period of time. While losing an apartment and being forced to live in a tent corresponds to a loss of comfort, this was accompanied by a will to improve and indicates a survival reflex emerging under tough conditions. Furthermore, it is important to consider that this effort may be more pronounced in families with multiple dependents.

> *"After the earthquake, we waited in the tents. I can say that I changed about three shelters. In fact, in these situations, people apparently look for better places and when they find it, they actively switch, which was an unexpected experience for us."*

The act of moving to a new settlement due to the difficulties of living in a tent or other temporary shelters corresponds to forced migration. Afterwards, the third phase of restructuring starts. In this study, the migratory dynamics to Siirt were investigated as a distinctive phase in seeking temporary shelter. This includes the effort to improve living conditions. It is revealed that there are two means for migrating to Siirt, of which, individual efforts were observed more commonly while being transferred by the government was observed less. The driving force behind migrating here with individual efforts was the organic bond to Siirt. The findings indicate that previous experience with Siirt was one of the major dynamics that determined the route of forced migration. This is followed by parameters such as familial support and a sense of security arising from being a small city. The reason why Hatice (35 years old, married, Hatay), who was born in Siirt, chose here as a destination highlights reasons mentioned above. The desperation in the aftermath of the earthquake and the sense of the family as a lifeline to hold on to in desperate times constitute a good example of the moral dynamics that determine the course of forced migration.

> *"Yes, the reason I came to Siirt was actually a bit of desperation, and my family being here was also a big influence, but when I think about it, I don't see any other option. There was an earthquake and I was looking for a shelter here, my preference was obviously Siirt because my family is here."*

The last phase in taking shelter after the earthquake is achieving a new permanent settlement. The duration of this phase is longer and more undefined than the previous phases. This is due to the varying success or failure of the victims undergoing displacement. However, the ultimate goal of this phase can be defined as a return to permanent housing and the restoration of previous neighborhood conditions. The findings of this study demonstrate that the victims interviewed have been significantly impacted by the earthquake, yet they also exhibit a notable proclivity towards returning. With the exception for two cases, the major tendency observed in the interviews was to return to the earthquake-affected area if conditions were restored. Many of the phrases written on the walls of the cities after the earthquake stand out by exhibiting an emotional state, hoping to return one day (Fig. 3).

Two aspects of return need to be explored further. The first is the drivers behind the desire to return. The findings of the study show that the major contributor to returning is the sense of belonging. Kemal (61 years old, married), who was born in Adıyaman, thinks that he will be back in Adıyaman in a few years. He bases his reason for returning on the desire to meet with his loved ones in the neighborhood where he was born and grew up. Therefore, the strong bonds of belonging assume the basic mechanism of re-establishing old relationships in the same place again. In some cases, the return is not for obvious reasons, and in others it is due to socioeconomic factors related to the search for employment.

> *"After a while, I want to repair my damaged house and live in the same house again. I was born in my neighborhood, I grew up there so I want to go back there. All my neighbors, relatives, business partners, friends are all there. It is not possible for me to live anywhere else after all this time. All the memories are there, so of course I want to go back, and as soon as possible."*

Figure 3. A graffiti reflecting the sentimental tendency of a person who was forced to migrate from Adıyaman, one of the most affected areas by the earthquake, to return one day. The statement on the wall: "This is not a goodbye, my beloved Adıyaman, we will meet again!"

4.4. Three Vital Consequences of the Earthquake: Economy, Society, and Health

Instantaneous natural disasters have a more immediate effect than those that spread over a longer period of time. These developments, which occur at an unexpected time, cause disruption of daily life and have dramatic social and spatial effects. Physical destruction, depending on the magnitude of the earthquake, and loss of life, depending on the level of destruction, are the most obvious impacts. In this study, the effects of the earthquakes that occurred on 6 February 2023 were observed in three main dimensions of life: social, economic, and health. The most important of these is the social impact. Social changes after the earthquake can be evaluated under two separate categories based on neighborhood and kinship. The developments in both categories were shaped on a positive axis after the earthquake. This is supported by an interview with Memet (38 years old, married, Adıyaman) with the dynamics specific to the region. According to him, being a Southeasterner means having close social relations. Therefore, the fact that the emphasis in his statements after the earthquake is on praising neighbors and relatives shows his respect and trust in social relationships.

> *"I am from the Southeast. Here, relations between relatives and neighbors are close, everyone is a family. The terrible things that happened to me were felt equally by my relatives and neighbors, as if they were going through the same thing with me. They still bring food to my shelter and have even helped me financially without expecting anything in return. They also know that if they were in a similar situation, I would do the same. May God be pleased with them."*

A similar perspective also emerges in kinship relationships. An intriguing detail here was that the victims of the earthquakes saw these extreme conditions as an opportunity to let go of their resentments and unite. Similarly, the earthquake revived the relationships that had been broken or forgotten for a long time. The thoughts of Ömer, who was from Diyarbakır, (30 years old, single) reveal the unifying power of the earthquake. In this sense, it could be argued that the only positive outcome of earthquakes is the rekindling of old relationships.

> *"Because of the earthquake, I called to check if some of my relatives and friends that I had not seen for a long time were okay. This inevitably led to the re-establishment of the contact that I had not had for a long time, and that is a good thing after all. At some point you actually feel that the sincerity is even greater. In a very short time, I was able to get in touch with many of my relatives and old neighbors, and I can say that this was perhaps the only positive effect of the earthquake."*

The impacts of the earthquake on the other two dimensions, health and economy, were not as positive as

those on social relations, and apart from a few outliers, the majority of interviews found the impacts on these dimensions to be highly negative. The economic impact is a double negative, with direct economic loss and additional costs. The health impact is characterized by fear and anxiety, leading to emotional disturbance. Hatice (35 years old, married, Hatay) experienced huge losses after the earthquake, similar to other people interviewed. Both her living and working environment became uninhabitable. Another layer of financial loss stems from being forced to use savings. In these cases, financial support from relatives or government assistance is crucial. In terms of health impacts, psychological factors are the biggest contributors. The feeling that an earthquake will happen at any moment and the inability to forget the earthquake increases anxiety over time. Hence, the implementation of effective treatment methods plays a key role in coping with anxiety.

> *"We lost a lot of things after the earthquake. After a while we ran out of our savings. For months it was very difficult to make a living. I was unemployed. After coming to Siirt, we tried to survive with the support of philanthropists. It was the financial and moral support that kept us going, so I would like to thank the people of Siirt. Without their help, this process would have been much more difficult for us."*

4.5. Source of Problem or Solution: Institutional Structure

Formulating an effective policy after a natural or man-made disaster is a critical test for governments. Delays in responding to disasters or inaccuracies in resettlement policies can lead to deterioration rather than recovery. In particular, the test given by the governors during disasters plays a key role in determining the expectations of large bodies of society. This test, which determines institutional success, is particularly evident in the process of aid distribution. These aids ranged from support in the immediate aftermath of the earthquake to the provision of payment facilities for the acquisition of permanent housing in the final phase. Within the scope of the study, a number of grievances were expressed during the interviews with regard to provision of the necessary assistance and support to the victims. The weakness of communication at the institutional level and the disruptions in the delivery of vital necessities to urban and rural areas, especially in the first days of the earthquake, outline the problematic structure. Özgür, who was Şanlıurfa, (37 years old, married) stated, "We bought our tent ourselves, and tent prices skyrocketed afterwards", and composed a clear example of the possible negative developments that can arise when there are institutional weaknesses. In parallel, Hüseyin (29 years old, single, Diyarbakır) stated, "We met our water and food needs after the earthquake from oil stations", revealing the lack of government support for the affected areas. In the absence of institutional assistance, proposals for solutions could lead to chaos, turmoil, and ultimately insolvency.

Within the scope of the study, the coding that supports the above-mentioned findings emerged under the management of the process. Almost all the participants state that there are structural deficiencies in the management of the process after the earthquake. The management of the process shows that all the organizations, whether private or public, have failed to give a successful test after the earthquake. For example, Deniz, a resident of Malatya, (25 years old, single) states that after the earthquake she could not get the help she needed for her mother, who has epilepsy, and that she was aggrieved by the government. Memet (38 years old, married, Adıyaman), who expressed his dissatisfaction with the management in a softer tone, attributed the disruption to the panic and chaos caused by the earthquake.

> *"Of course, we were not able to contact the government here. There was a lot of panic. No one knew what to do, we just waited. As far as I understand, this situation of surprise and waiting also happened in the government, and therefore I think that this was the reason why aids came late."*

Positive understandings of the management of the process are embodied in the presence of the state. While some interviewees accept that there are disruptions and mistakes in the process, they also state that the presence of the state is crucial. The usage of terms Allah, content, and nonetheless indicates that expectation from state was high and that the state could still compensate for the disruptions in the process. Perhaps the best example of this view is the statements of Hatice (35 years old, married, Hatay), who stayed in the barn as an emergency shelter. "God bless our state, extending a helping hand to us. But of course, our first stay in the cemetery and our stay in the barn were quite difficult," Hatice said, indicating that she acknowledges the hardships, but she could feel the support of the state.

5. Discussion

The earthquakes that occurred on 6 February 2023 and affected 11 provinces in the region left significant traces in different parameters such as forced migration and physical destruction. In accordance with the immense destruction (IOM, 2023), it was reported that 2.7 million people were displaced and more than 50,000 people lost their lives (BBC News Türkçe, 2023). Undoubtedly, it is difficult to track every post-displacement process of 2.7 million people. However, as can be seen from the findings of this study, it is clear that the first two of the four stages of post-earthquake shelter restructuring characterised by Quarantelli (1995)

were distinctly experienced. Emergency shelters and temporary shelters are shaped by the unique dynamics of Turkey after earthquakes. In the immediate aftermath of the earthquake, emergency shelters were personal vehicles in addition to large and open spaces. Following these, temporary shelters were tents, and containers set up in different areas of the affected cities. It should be underlined that, on average, the sheltering after the earthquake is currently at this stage. The events beyond the scope of this study, such as the status of the temporary housing and the process of acquiring permanent housing as described by Quarantelli, should be further investigated in future studies. The tendency to rebuild permanent housing, which is the main recovery criterion for functional reconstruction after the earthquake, will determine the success of reconstruction efforts in Turkey after the earthquake. The phase of creating permanent housing is still in its infancy, with the exception of a few individual rural settlement efforts.

Another indicator of the post-earthquake restructuring process, which runs parallel to the permanent housing acquisition process, is the frequency of occurrence and tendency to return (Morrice, 2013; Henry, 2013). It should be borne in mind that Morrice (2013) stated that the tendency of disaster victims to return after Hurricane Katrina was strong. The author emphasizes that return is not only linked to the economic situation but is also closely related to the sense of place. The findings also indicate that the strong tendency of those affected by the earthquake to return is due to a high sense of belonging. It should not be forgotten that the place of residence creates a collective memory in people. While the physical destruction of buildings may cause the destruction of memory in the short term, in the long term the collective memory is reinforced by the desire to return. Another indicator of the return trend in the study emerges from the secondary data set. 759 of the 8202 people had returned by the time the data was received from AFAD. Later observations confirmed that the number was increasing rapidly with each passing day.

It is understood that the changes in health (Hikichi et al., 2021; Blake et al., 2022; Kothari et al., 2023), economic status (Daley & Karpati, 2001; Jha et al., 2010) and social relations (Dickinson, 2013), which are the three main parameters questioned by the researchers after the disaster, have occurred on the positive and negative axis as of 6 February 2023. The most obvious output is regarding health conditions. Consecutive earthquakes in the region have led to the emergence and persistence of a fear of earthquakes, resulting in excessive anxiety. Hence, it is essential to establish effective and sustainable health policies for the earthquake region. However, the occurrence of economic losses or additional expenditure items, which are the obvious output of large and sudden earthquakes, has also surfaced. In terms of shaping social relations, the contact with relatives and neighbors after the earthquake is described in simple terms as the disappearance of resentment.

One of the findings of the study that differs from the relevant literature relates to the class features of mobility. In disaster research, it has been reported that the mobility levels and distances of the homeowners and tenants after disasters are different from each other. From one point of view, it is common for homeowners do not move in order to protect their property (Elliot, 2015). Lambert's (2014, 2015) research on earthquakes in Christchurch, New Zealand, which supports the class content of mobility, offers a different perspective and refers to the limited agency of Māori natives due to their low socioeconomic status. The class difference in mobility is thought to be not observed in this study because the earthquakes of 6 February 2023 had massively destroyed buildings by force, regardless of tenant/landlord or rich/poor. For this reason, analyzing the class outputs of mobility through different parameters will be a fruitless endeavor. The upper or lower class, the tenant or landlord, acted in a similar pattern and moved out of the earthquake zone. In the trend of return in the future, comparisons based on these indicators will be able to produce healthier results.

As stated by Kothari et al. (2023), post-disaster movements are not unidirectional. Migrations often occur in a complex sequence with a thread-like fashion in the period in which they occur. After sudden and powerful disasters, people make their decisions to flee or leave a place in a hurry, with limited discussion under pressure to save their lives (Gibbons & Nicholls, 2006). The study's findings on mobility patterns revealed a trend in favor of movements toward the place of birth. In this sense, the place of birth became a place of refuge. Thus, the findings offer the potential to add a different dimension to the mobility causalities in the international literature.

6. Conclusion

Studying the aftermath of disasters and tracking the mobilities triggered by disasters is not a straightforward endeavor. Although there are pioneering studies that focus on analyzing the decision-making process and intentions of the population after disaster (Goldhaber et al., 1983), there is still a considerable gap in the literature to fully understand resettlement (Badri et al., 2006; Dickinson, 2013). While Dickinson (2013) addresses the presence of a gap in terms of understanding the factors that contribute to the decisions made at different stages of post-disaster reconstruction, Badri et al. (2006) points out the scarcity of studies that address resettlement and post-disaster resettlement in disaster-affected areas. This study contributes to this gap in the literature with findings that overlap and differ from the literature.

The most important of these findings is that a large population of 6 February 2023 earthquakes moves from one point to another for different reasons. These movements do not occur directly from point x to point y in a single line. Within the scope of the study, the most important causality of the forced migration to Siirt is the connection with Siirt. After the earthquake, the state of Siirt was transformed from a place of birth to a place of shelter for people who were forced to relocate. This situation provides concrete evidence in the literature that temporary asylum should be discussed not only in vehicles such as tents and containers but also in cities.

The second main finding of the study relates to the formation of economic losses, health, and social relationships after disasters. In this study, which discussed the early effects of the 6 February 2023 earthquakes, it was determined that the earthquake caused an economic loss due to destruction. In addition, similarly, it was determined that health problems such as fear and excessive anxiety occurred after the earthquake. These two main findings provide outputs that overlap with the literature. The formation of the social structure is manifested itself in the course of neighborly and kinship relations. A positive outcome can be described as the reestablishment of forgotten relationships after the earthquake and the letting go of resentments.

The findings of this study, which discusses the early effects of the 6 February 2023 earthquakes from the perspective of Siirt, show the importance of investigating the aftermath of the earthquakes, especially for countries with high seismicity such as Turkey. Additionally, Turkey's recent disaster experience shows that there are significant organizational and governmental weaknesses in disaster management, indicating that concrete efforts should be made not only to respond effectively to earthquakes, but also to change old habits in sudden disasters such as forest fires and floods. In this study, the disruptions experienced by institutions were expressed as dissatisfaction with the crisis management by earthquake victims. In order for Turkey to be better prepared for the next earthquakes, particularly the expected Marmara earthquake, the weakness of the governmental needs to be addressed, and institutional restructuring should be taken as seriously as the physical reconstruction after earthquakes. It is therefore essential to cooperate with the macro-scale national governments and the micro-scale local governments to improve the current situation.

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