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Research Article

Effects of February 6, 2023 Kahramanmaraş Earthquakes on Housing Preferences vis-à-vis Sociology of Disasters

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ABSTRACT

On February 6, 2023, two major earthquakes occurred in Kahramanmaraş, Türkiye. This study analyzes the transformations in housing preferences of the earthquake victims. Accordingly, 30 earthquake victims who were in Adana, Hatay, Kahramanmaraş, and Malatya during the earthquakes were reached via snowball sampling, and then semistructured interviews were conducted with them. After transcribing the interviews, the software ATLAS.ti 9 was used to identify the five themes of the study: 1) preferences shifting from vertical to horizontal housing, 2) preferences shifting from comfort-oriented options to those with safety, 3) preferences shifting from urban to rural areas, 4) rising demand for buildings complying with the earthquake legislation, and 5) reasons for not leaving the earthquake zone because of economic or family reasons despite lack of trust in the building/area. The findings revealed that safety needs were prioritized over other needs, supporting Maslow's theory of hierarchical structuring of needs. This study might make a general contribution to the field of sociology of disasters and guide development of public policies postdisaster.

Keywords: Sociology of disasters, Urban sociology, Kahramanmaraş earthquakes, Housing preferences

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1. Introduction

Urban spaces started to carry majority of the population after the Industrial Revolution. However, these spaces also house all kinds of human problems. Disasters are more than mere "natural occurrences" because they affect the flow of life physically, socially, economically, politically, and culturally (Can, 2020, p. 17; Akgüngör, 2010, p. 19), and they highlight the times when urban problems are highly "naked" and visible. Disasters are among the earliest threats witnessed by humanity and have occurred throughout history in the form of earthquakes, floods, droughts, forest fires, avalanches, hurricanes, explosions, and epidemics among others. Many strategies have been devised against these risks. For example, as a precaution against disasters, people have built their settlements far from places where these risks are likely to occur and have constructed durable structures. When subjected to the devastating effects of disasters, people have been forced to develop new strategies to facilitate recovery and ensure a more secure future.

Earthquakes affect various regions worldwide. Challenges related to economy, family, migration and related issues, and anomic situations are some obvious consequences of earthquakes (Fırat, 2020, p. 167). These disasters considerably damage the functioning of daily life in cities so much so that the damage can merely be overcome via efforts of the victims alone (UNDRR, 2023).

On February 6, 2023, two strong earthquakes occurred in Kahramanmaraş, Türkiye, resulting in major losses in the neighboring provinces, namely Adana, Adıyaman, Diyarbakır, Elazığ, Gaziantep, Hatay, Kilis, Malatya, Osmaniye, and Şanlıurfa. The Disaster and Emergency Management Presidency (AFAD) recognized Bingöl, Kayseri, Mardin, Tunceli, Niğde, and Batman as "Disaster Zones with a General Impact on Life" because of the aftershocks (Anadolu Ajansı, 2023). Government officials placed some of the earthquake victims in hotels, guesthouses, and dormitories in the cities that were not affected by the earthquakes, while others were guided to move in with relatives or volunteer families in different cities. All this created a number of life-related difficulties postearthquake.

This study analyzes the transformations in housing preferences of the victims of the February 6, 2023 earthquakes. Hence, a qualitative research design was followed to assess the thoughts and feelings of the earthquake victims. "What kind of transformations occurred in housing preferences of the victims of the February 6 earthquakes" is the problem statement of this study. Before beginning the field research, a permission was obtained from the Aksaray University Human Research Ethics Committee with the decision dated 25.04.2023, numbered E-34183927-000-00000826388 with decree no. 2023/03-20.

2. Materials and Methods

The study group consisted of earthquake victims from Adana, Hatay, Kahramanmaraş, and Malatya, four cities directly affected by the February 6, 2023 Kahramanmaraş-centered earthquakes. These four cities were specifically selected for this study because the researchers had acquaintances in these cities; these acquaintances could both participate as interviewees in the study and guide the researchers. Snowball sampling was employed in this study, and semistructured interviews were conducted with 30 people. Snowball sampling is used when access to potential participants is restricted (Dattalo, 2008, p. 6). Although there was a shared earthquake experience in the field (meaning everyone in the field could have potentially participated), the participants were specifically asked if they could direct the researchers to other potential participants who would be willing to contribute to this study. The interviews were ended upon reaching theoretical saturation.

The first researcher conducted interviews in Adana and Hatay between May 01 and 05, 2023, while the second researcher conducted interviews in Kahramanmaraş and Malatya during the same period. Face-to-face interviews (n = 22) with earthquake victims in the earthquake zone and remote interviews (n = 8) with victims who had left the earthquake zone were conducted. The face-to-face interviews were conducted in the Credit and Dormitories Institution buildings, tent cities, and container areas.

Approximately 40–50 min were allocated for each interview. However, in some cases, the interview was halted for the interviewees who became emotional, and they were allowed to rest. The interview was resumed only after they expressed no problem in continuing with the interview.

An interview form including demographic questions and questions regarding the earthquake and postearthquake experiences and housing preferences was prepared within the scope of this study. The participants were first allowed to see the interview form, and interviews were conducted only if they provided their consent. After autorecording the interviews, , they were transcribed and the themes of the study were identified using the software ATLAS.ti 9:

1. Preferences shifting from vertical to horizontal structuring,
2. Preferences shifting from comfort-oriented options to those prioritizing safety function,
3. Rising demand for earthquake-legislation-compliant buildings,

4. Preferences shifting from urban to rural areas, and
5. Reasons for not moving out of the earthquake zone/city despite lack of trust in the building/ area: economic conditions and family ties.

The main reason for using the qualitative research method was to attempt to collect in-depth data from the participants without the aim of prediction and generalization. This method is inquisitive and interpretative and aims to understand the problem in its natural environment (Denzin & Lincoln, 2005, p. 3). Accordingly, during the face-to-face interviews with the earthquake victims, observations were made in the field and notes were taken.

3. Conceptual Framework and Literature Review

The conceptual framework of this study involved housing as one of the basic human needs: The American psychologist Abraham Maslow's hierarchy of needs provides a basis for this study. In addition, the main arguments of this study were shaped via literature on sociology of disasters.

3.1. *Housing and Living Spaces*

In 1943, Maslow published his work "A Theory of Human Motivation" and argued that human decision-making processes are determined by a hierarchy of psychological needs. Maslow mentioned five needs as the source of motivation for human behavior. Considering these needs with respect to a pyramid, they progress from the pyramid's bottom to top as physiological needs, safety needs, love and social belonging needs, esteem needs, and self-actualization needs in the same order. The higher needs, i.e., esteem and self-actualization needs, cannot be met without meeting the basic needs, i.e., physiological, safety, and social belonging needs.

In Maslow's classification, physiological needs include those such as breathing, nutrition, sexuality, and sleep and shelter needs, while safety needs include those such as employment safety, resources, family, health, and property needs. Maslow asserted that physiological needs are essential ones because living beings strive to fulfill these needs throughout their lives. The safety needs become a priority after physiological needs are met. In this study, shelter need represents physiological needs and property safety need represents safety needs.

Humans have always needed shelters to protect themselves from threats of the outside world. Shelters, which provide rest and protection from weather and wild animals, is one of the most essential needs along with nutrition and clothing (Shelter, n.d.). With time, houses made of straw were replaced by adobe-styled houses, reinforced concrete houses, and eventually by today's multistory houses. In today's society, residential buildings differ in terms of form, function, and visuality according to socioeconomic and sociocultural demands of the user. Hence, spatial designs of settlements vary by geography, climate, belief system, lifestyle, and economic conditions.

People with shifting sociocultural and socioeconomic preferences frequently change housing types, which are an important factor in shaping the urban space. A city's potential to grow and develop like a living organism also causes it to produce new residential areas with various types of housing structures. The recent residence-type housing production is equipped with shopping areas on residential floors, as well as spaces supporting cultural and sporting activities. Noteworthily, a common label for these high-rise housing types is "secure living spaces." This new type of housing has considerably changed the skylines of cities. Abandoning low-rise building types has created a distinction between new and old urban settlements in cities.

Safety of the house is an important issue in urban life. Accordingly, gated buildings are particularly preferred by the upper middle class. Gated buildings or multistory buildings can be considered "safe" against external threats of modern life, but we must discuss whether they are "safe" in the case of disasters too.

3.2. *Sociology of Disasters*

Notwithstanding Voltaire's examination of the earthquake in Lisbon in 1755, the first real sociological analysis of natural disasters was Samuel Henry Prince's doctoral dissertation "Catastrophe and Social Change" completed at Columbia University in 1920. Prince analyzed the Halifax explosion, which occurred in 1917 in Halifax, Canada after the explosive-laden cargo ship SS Mont-Blanc collided with SS Imo, within the framework of social theory. His thesis examined the intricate relationship between disasters and social structure.

A more systematic sociological study of disasters dates to the 1940s and 1950s. The US military formed a research team to study the manner in which the American public reacted to emergencies and disasters such as tornadoes, fires, and chemical releases. These disasters were considered natural experiments to examine individual and collective behaviors. Enrico Quarantelli at the National Opinion Research Center (NORC), University of Chicago focused on

social dimensions of panic behavior (1954) and examined folk myths in disaster response (1960). Other students at NORC addressed issues such as the blame society places on the communities it perceives as having caused or worsened the disaster. NORC's director, Charles Fritz, summarized the results of the project in a 1961 text edited by the prominent sociologists Robert Merton and Robert Nisbet. Fritz emphasized the commonality of phenomena, such as people finding a common ground, people directly moving to a disaster area postdisaster, and development of norms emerging from altruistic motivations (as cited in Drabek, 2017, p. 140). These observations contrasted with the widespread perception at the time of mass hysteria and the need for the government to direct and control the process, prevent looting and consider other public safety measures.

Sociologists studying disasters noted that social processes become more visible in times of disasters because they occur in a dramatic fashion in a short period. These processes, which are veiled in less stressful times, become conspicuous in times of disasters (Peek et al., 2021, p. 222). In this context, the early studies on sociology of disasters particularly focused on the reflexes of society in the process immediately following a disaster. Drabek (2017, pp. 141-144) asserted that most disaster sociology studies today referred to one of the four stages of disaster response: preparedness, response, recovery, and mitigation.

Sociology of disasters, as a field, is in a relatively understudied state because the research requires occurrence of a disaster, following which only sociological discussions can be built. Alkın (2020, p. 73-76) concludes that the contemporary discussions in the field of sociology of disasters can be grouped as risk, disaster management, emergency, and recovery. He also notes that the literature in the Turkish context is lacking in both theory and methodology, and that most recent studies are on disaster management. Hence, regarding theoretical discussions, this study notably contributes to the literature by providing in-depth insights from inside the field.

3.3. *Literature on Postearthquake Housing*

The literature on settlements after disasters consists mostly of architectural studies published as macroscale reports on shortcomings of the damaged or destroyed buildings (Comerio, 2013; Hamideh et al., 2018; ABAG, 2000). However, studies employing a human-based perspective have been less than those based on technical issues. A literature review on postearthquake housing revealed that studies should focus on issues such as extent to which resettlement projects are acceptable to the people they house, whether the houses provided meet the needs of occupants, and whether resettlements built to be safe remain safe in future disasters. Postearthquake housing is frequently considered an important aspect of disaster recovery. The literature shows the following: horizontal housing is preferred to vertical housing, safety becomes more important than comfort, and active involvement in the community is preferred postdisaster (Aysan, 1987; Habitat, 1994; Kronenburg, 1995; Fallahi, 2007; Bozkurt, 2023). However, limited space is an issue for occupants of temporary shelters (Ekinci, 2000; Yüksel & Hasırcı, 2012), which could have implications for preferences for permanent settlements.

This study fills the aforementioned gap in the literature by analyzing the transforming effects of disasters as experienced in the February 6 earthquakes. It also contributes to the relevant literature, which seems to be predominated by macrolevel quantitative studies, through a qualitative research design, providing in-depth insights into the earthquake experience. The findings, which originate from people who experienced the February 6 earthquakes, could guide future construction policies.

4. Results and Discussion

Table 1 presents the demographic information of the interviewees.

Table 1. Demographic information of the interviewees

Interviewee no	Gender	Age	Occupational status	Educational status	Province, district during the earthquakes
(I)nterviewee 1	Male	26	Software Specialist	Bachelor's	Adana
I2	Male	54	Teacher	Bachelor's	Adana
I3	Female	28	Architect	Bachelor's	Adana
I4	Male	37	Self-employed	Bachelor's	Adana, Kozan
I5	Female	33	Teacher	Bachelor's	Adana
I6	Male	26	Architect	Bachelor's	Adana
I7	Female	18	Student	Middle School	Adana
I8	Male	59	Engineer	Master's	Hatay
I9	Female	24	Nurse	Bachelor's	Hatay
I10	Female	25	Architect	Bachelor's	Hatay
I11	Female	18	Student	Middle School	Hatay
I12	Female	39	Housewife	Middle School	Hatay
I13	Male	25	Unemployed	Middle School	Hatay
I14	Male	24	Paramedic	Associate Degree	Kahramanmaraş, Nurhak
I15	Male	25	Architect	Bachelor's	Kahramanmaraş
I16	Male	35	Worker	Middle School	Kahramanmaraş
I17	Male	31	Academic	Master's	Kahramanmaraş
I18	Female	33	Academic	Doctorate	Kahramanmaraş, Pazarcık
I19	Male	23	Student	Middle School	Kahramanmaraş, Elbistan
I20	Female	25	Architect	Bachelor's	Kahramanmaraş
I21	Male	24	Graphics Designer	Bachelor's	Kahramanmaraş
I23	Male	46	Police Officer	Bachelor's	Malatya
I24	Female	44	Housewife	Bachelor's	Malatya
I25	Male	30	Engineer	Master's	Malatya
I26	Female	42	Worker	Elementary School	Malatya
I27	Female	52	Housewife	Elementary School	Malatya
I28	Male	21	Graphics Designer	Bachelor's	Malatya
I29	Female	38	Teacher	Bachelor's	Malatya
I30	Female	26	Engineer	Master's	Malatya

The researchers observed the emotional state of the people in the field. The urban fabrics had been considerably damaged in Adana, Hatay, Kahramanmaraş, and Malatya; the earthquake victims still maintained their ties to the city because they had been living in that city for a while, their relatives resided there, and settling in another city was economically difficult. The researchers also observed that the earthquake victims struggled for existence and survival with feelings of helplessness and obscurity. The participants frequently used words that can be grouped under the concepts of structure, family, and feelings. The following word cloud was obtained from the transcriptions:

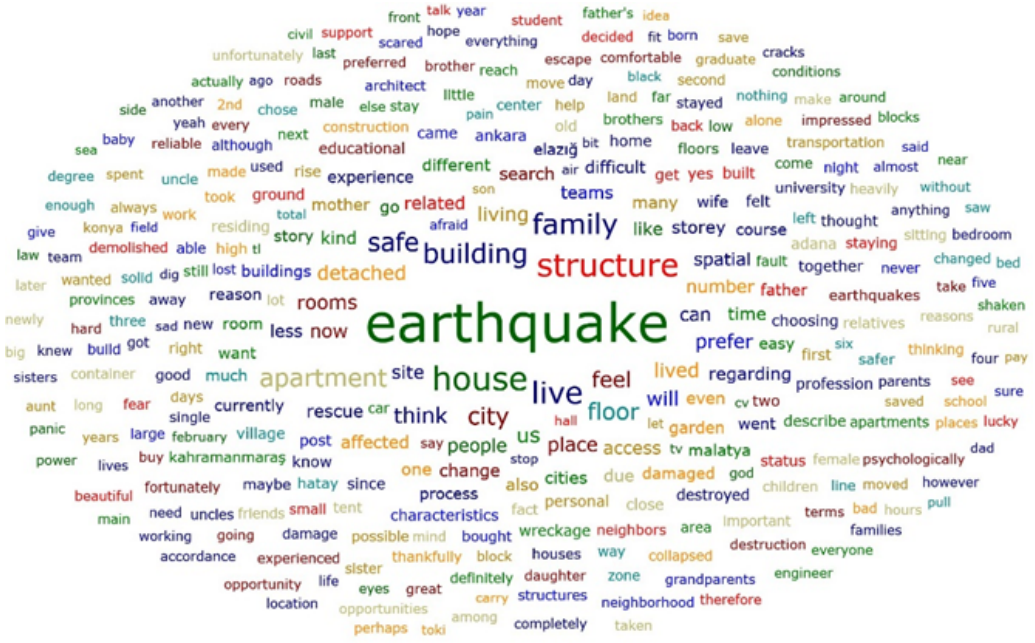

Figure 1. Word cloud

The identified themes are evaluated in the following.

4.1. *Preferences Shifting from Vertical to Horizontal Structuring*

The interviewees frequently mentioned that living in high-rise buildings was not as safe as they had previously thought. They expressed their changing attitudes by indicating their preferences for vertical structuring (apartment buildings [apartman], housing estates [site], residences [rezidans]) rather than horizontal structuring (detached houses [müstakil ev], houses with gardens, floors close to the ground in multistory buildings). They frequently stated that they had become hesitant to live in multistory buildings and would prefer to live in buildings with at most two or three stories. A total of 21 interviewees stated that they prefer horizontal constructions to vertical ones. Some of them stated that the earthquake would not have victimized them as much if they had lived in detached houses:

> If I had lived in a single-story house, I would have been shaking considerably less than on the fifth floor and I could even have escaped by jumping out of the window. This would definitely have made me feel less affected (I7).
> If we had lived in a single-story house, we would have been more composed during the earthquake and perhaps would have felt safe... Fortunately, our house did not collapse during the first tremor until we left, but it was heavily damaged and collapsed after the second earthquake. If I had lived in a detached, single-story house, I would not have been psychologically affected so much (I23).

Some interviewees expressed their interest in low-rise buildings made with light steel or prefabricated building materials rather than concrete:

> I definitely want a building with a garden similar to the one I live in now. I will purchase a plot of land as per my means. I will build a detached house made of light steel or perhaps prefabricated materials. I will hold the same preference even if the house is far from the center. The house can be in one of the districts of Ankara; I am currently seeking a plot of land in Polatlı. (I4).
> I definitely prefer to stay in a low-rise or detached house. The house can even be made of light steel or prefabricated materials because the idea of being stuck in concrete piles is frightening (I25).

Some stated that they would have been considerably less affected by the earthquake if they had lived in an apartment building with fewer stories:

> Everything would have been completely different if we had been in a different structure. We would have been affected considerably less if it had been a low-rise building, perhaps with two or three stories, and if the apartment buildings had not been so contiguous. The apartment buildings were wrecked because they were both high-rise and adjacent (I12).
> I probably would have panicked less in a building with fewer floors. You do not know at the time if the building is strong and can withstand an earthquake; we learned by experience. But how do you move down from the sixth floor? Should I go downstairs? Should I go upstairs to the attic? These questions cross your mind. I experienced considerable fear (I17).

We understood from the interviews that the interest had shifted from vertical to horizontal architecture. Horizontal architecture was one of the most important architectural topics in the 19th and 20th centuries. Le Corbusier, a pioneer of the modernist architectural movement, found vertical construction reasonable vis-a-vis enabling urban green spaces and rational use of land. However, the thinkers Frank L. Wright, Ebenezer Howard, and Catherine Bauer supported horizontal architecture asserting it was more humane and unifying than vertical construction (as cited in Bıçkı & Kırkan, 2022, p. 290). The horizontal construction strategy, also approved in ecological and sustainable urban designs, is preferred for reasons such as enabling both urban and rural users to live in harmony with nature and interacting with the outside world in a faster manner. In this context, we observed that the earthquake experience brought the victims closer to the ground and nature and, followed by an understandable preference shift from vertical to horizontal architecture.

4.2. *Preferences Shifting from Comfort-oriented Options to Safety-function Prioritizing Options*

Stating that their perspectives on life have changed after the earthquake experience, the interviewees revealed that they have evolved to prefer not comfort-oriented settlements but safety-prioritizing minimalist spaces. A total of 8 interviewees stated that a house that is functional (safe) in a crisis is more important than a large or comfortable one. The comfort in question includes interior architectural features of the building, as well as the perception of its location in the city. Some of the statements are as follows:

> Of course, I would have been safer and less affected by the earthquake if I had lived in a detached, open-air, single-story house compared with an apartment building. . (I1).
> After this experience, I would prefer a minimal, prefabricated structure that meets our needs rather than a fancy, reinforced concrete structure that I had opted for only because it had an elevator. (I18).

Some interviewees stated that the safety function of their settlements became more important than comfort:

> Yes, we feel safe in this place, which meets our needs, even if it is as small as a container. This is because we are less affected by the aftershocks. Hence, we desire to live in a single-story building (I14).
> My mother was psychologically deeply affected after the earthquake and is undergoing treatment. I believe she will considerably benefit from living in a house with garden. Previously, I would insist that my father took us to live in attractive housing estates where I could quickly meet my friends and easily reach shopping malls and cafés in the city. However, now, I do not have any issues living in settlements where my mother will be more comfortable and my family safer. (I21).

"Function" in architecture means that each part/unit of the whole fulfills the task expected of it, serves the system, and contributes to the functioning of the whole (Gür, 1996, p. 98). Formation of a specific action or task involves several goals, of which usefulness, safety, social harmony, and comfort are most important (Cronberg, 1972, p. 13). The concept of luxury, however, involves conditions that provide an individual a sense of comfort, happiness/satisfaction, and perception of convenience, but the individual really does not need it (Kıray, 2005, p. 15). Hence, we might say that an individual's luxury consumption behavior, that is, his/her understanding of comfort, is parallel to his/her "identity formation experience" rather than quality and performance qualities (Kıyan, 2013, p. 57). In this respect, the February 6 earthquakes damaged both the urban (i.e., city dweller) identity of the inhabitants of these cities and the urban fabric, which had almost disappeared. In addition, the need to ensure minimum safety took precedence over accessing the opportunities (or comfort) offered by the city.

4.3. *Rising Demand for Earthquake-legislation-compliant Buildings*

Disasters, which often raise awareness by serving as "wake-up call" for society, transform the relationship of city dwellers with the city. In this study, the statements of the interviewees hinted as to how they entered a phase in which they had started to inquire about the inspection certifications in buildings. A total of 17 interviewees emphasized the importance of these kind of inquiries. Some statements by the interviewees are as follows:

> We would have been affected considerably less had our house been a newer, two/three-story, earthquake-resistant apartment building. Our house would not have collapsed, and perhaps my father would have survived (I11).
> We should discuss the ground of the building and the control mechanism employed during construction rather than the building itself. An earthquake can be survived with less anxiety if buildings are built as per the regulations and legislations. I would like to live in a country

where constructions are built by earthquake-conscious professionals and where earthquake regulations are strictly enforced and inspections conducted. It is not the earthquake that kills, but the building (I30).

Several interviewees indicated that some measures should be implemented at the macro scale, i.e., at the citywide scale, (such as compliance with zoning legislation, expansion of earthquake-resistant, low-rise building constructions) rather than at the micro building scale:

Currently, any building that I will not reside in is the most comfortable one. It is highly sad, perhaps frightening, but, as an architect, I have ignored many issues such as design, comfort, usability, and sustainability, i.e., many issues we should consider when designing a building... My only desire is to build safe and low-rise buildings. If the city zoning does not allow for this, we need to expand the number of buildings and create new settlements on the periphery of the city (I6).

No aid reached Malatya for the first two or three days. However, this had nothing to do with the state's means because the Erkenek Tunnel had collapsed on the roads leading to Malatya. Consequently, the aid trucks reached late. Let alone the buildings, the city itself is not safely built. Imagine, the tunnel collapses! Now the entire city should be rebuilt as per the legislation (I28).

Vertical construction agrees with urbanization because of the following: 1) the changing housing types in line with structural and technological innovations in the construction sector, 2) land limitations in urban spaces, and 3) high construction costs. However, several ethical rules vis-à-vis the inspection mechanism have been compromised because multistory residences are built by large companies. Notably, these large companies inspect buildings via their own inspection companies, encouraging ethical violations and presenting obstacles in construction of earthquake-legislation-compliant buildings. The building legislation and inspection rules in Türkiye are generally considered comprehensive (Akyıldız, 2020, p. 28). However, they are violated because the contracting professional does not possess any certification or offer professional supervision, resulting in construction of inappropriate structures. The information on disaster-resistance, manufacturing quality, and materials of the buildings is revealed only postdisaster. Considering the raised collective awareness seen after disasters, one can understand why the interviewed earthquake victims prefer earthquake-legislation-compliant buildings.

4.4. *Preferences Shifting from Urban to Rural Areas*

Cities not only offer social, economic, cultural, and technological advantages but also those associated with education and health. Waves of migration from rural to urban areas continuously occur because the demands of different social classes are met in the heterogeneous urban space. However, shocking experiences such as disasters "shake," change, and transform even the deeply ingrained preferences of individuals. In the immediate aftermath of the February 6 earthquakes, the reflex to seek shelter in detached houses in rural areas (villages, towns, or surrounding districts) owned by relatives is revealed from the transcriptions of 11 interviewees. The interviewees preferred these settlements as safe living spaces, even if for a short time. We understood, within the confines of this study, that there was a general tendency to move from metropolis to the countryside. Some examples from the interviews are as follows:

Of course, the fear of earthquakes deeply affects our lives... It has traumatized many people, my relatives. Now, even at the slightest tremor, we think it is an earthquake, following which we look upward and check if the chandelier is shaking. The fear is permanent... Hence, I prefer rural, quiet settlements in cities without fault lines (I1).

We will continue to live in Kahramanmaraş but in a rural area. We have decided to live in a single-story building because it seems more reliable. We will live in a safe structure, even if it is simple and has only two rooms. I want to keep my family safe when our baby is born (I14).

Actually, I had wanted to live in İstanbul, but now an earthquake is expected there too... Therefore, I would like to live in a place with employment opportunities and solid ground, but in a village, in the countryside (I16).

However, some interviewees stated that rather than living in the countryside, they would prefer to live in a quiet area that is not considerably far from urban space. The statements of some interviewees preferring to live in the urban periphery are as follows:

Safety of the house is more important even if it is slightly far from the city... I was thinking of changing house before the earthquake. However, upon seeing the buildings that collapsed due to the earthquake, I realized that even the new buildings do not guarantee any safety. Hence, I left the idea of shifting to a luxury house. I want a house with garden, near to the city but not excessively near the center... a house where my children and I will be safer (I24).

Actually, it has always been our dream; I own a small piece of land slightly far from the city, which I had purchased by working myself. I advise you too to save and invest while working... Two months before the earthquake, I was sufficiently fortunate to have bought this highly needed piece of land. It is a small place but is sufficient for us. I plan to live there in a small prefabricated house... This is what I have always wanted: to work with trees and soil, to be close to the ground... God willing, I plan to live such a life (I29).

Although rural–urban migration, which mostly began in the 1950s, determines the main conceptual framework of rural–urban interaction in Türkiye, the reverse migration processes experienced in the recent years as a result of different dynamics also warrants discussion. Recently, the contributions of rural areas to the economy of the city have become

increasingly visible with their sociocultural, spatial, and natural attraction points, thereby creating discussions vis-a-vis rural tourism. In addition to the horizontal architectural strategy of rural areas intertwined with natural life, the potential of a calm, quiet life offered by these areas has become more visible with increase in the repulsive aspects of urban space (such as air and noise pollutions and urban stress). Thus, rural areas have emerged as an important living space alternative for urban users.

The responses received in this study show that earthquake victims tend to move away from high-rise urban silhouettes because of the physical, psychological, and social impacts of the destruction of housing in urban spaces postearthquake and seek a new, safer life in rural areas in which horizontal construction is dominant. Some interviewees who could not abandon the city revealed that they prefer living on the city's periphery rather than in the center, revealing a change in preferences from urban toward rural.

4.5. *Reasons for not Moving Despite Lack of Trust in the Building or Area: Economic Conditions and Family Ties*

The earthquake victims who had not known whether their houses had been safe against earthquakes until the earthquake experience stated that they realized the importance of this issue and considered the possibility of moving postearthquake. The interviewees whose houses were moderately damaged stated that changing their house/city would not be possible because of economic reasons and/or family ties. In this respect, 12 interviewees stated that either economic conditions tied them to their house/region or that they would not migrate even if they had the means because of having established their spatial belonging via their extended families living in that region. In this direction, some interviewees stated that they could not leave their settlements in the cities because of family ties despite having had experienced the earthquake:

> Perhaps, I was not in the settlements where the earthquake was most severe, but I would not think of living in a city other than Adana. After all, most of my family is here and I cannot leave them. That is why, I did not think of such a thing (I2).
> After the earthquake, I did not think about changing cities. However, if my family was not here and if I had to change, I would prefer regions where there was no earthquake. Even if I do not change the city, I want to change the house (I24).

Some interviewees stated that they could not leave their provinces where they experienced the earthquake because of insufficient economic conditions:

> No, we do not have the means to change cities anyway. Where should we go? We are in a tent; we are helpless. We do not have a closed place. Sometimes we stay in the tents of our neighbors. Women stay in one tent and men in another (I16).
> I would like to live in my village. I want to stay in Malatya because I have a garden here, and we have animals. We pick apricots, dry them, and sell them. This is a big part of our livelihood. We also have animals; eggs, milk... I took care of our garden for years. I made considerable effort here, and our means are limited anyway... I have worked on every inch of this land. Perhaps the earth was angry with us because of which it cracked, but we cannot leave it, we cannot abandon it (I27).

The Turkish saying "Home is not where you were born, but where you are fed" reveals the determinant role of economy in formation of spatial belonging. The main reasons for the participants who wanted to change their residence and/or region after the earthquake were economic opportunities or their workplaces being in the region in question. The participants with insufficient economic means mentioned the impossibility of shifting to a new residence. However, earthquake victims who were provided with free/temporary settlement opportunities in different provinces decided not to benefit from these opportunities so as not to break away from the labor force in the region. Family ties in the earthquake zone were another reason cited for not leaving the region.

In the transition from an agrarian society to an industrial one, the family largely lost its role as an economic unit but did not lose its function of providing support to its members; on the contrary, this function was only strengthened. Shanas (1979, p. 5) indicated that the modern family is the first source of emotional and social support and crisis intervention. Although the 21st century has seen a considerable amount of disengagement and dissolution from traditional family models, the family today is the most fundamental gateway of switching from individual existence to social existence. Thus, one's spatial ties are largely established through one's family. Considering that the Turkish family structure is based on close relationships, expectedly the interviewees would not want to live far from their families even if they had the means to do so.

5. Conclusions

This study analyzed the transformative impact of the February 6, 2023 Kahramanmaraş earthquakes, which resulted in major devastation in the surrounding provinces, on housing preferences of the earthquake victims. In-depth interviews with 30 participants revealed that the postearthquake preferences of the victims tended to shift from vertical to horizontal

construction and from comfort-oriented options to safety-prioritizing ones. The earthquake victims stated that they would feel safer by living nearer to the ground in low-rise buildings. In this context, basic needs such as those relating to shelter and safety of property, as in Maslow's hierarchy of needs, took precedence over the need for comfort, luxury, or prestige. Similarly, the preferences shifting from urban to rural areas showed that the opportunities offered by the city and the status of "city dweller" were "shaken" by the earthquake experience, and that the priority was not comfort or ease of access to opportunities but safety and survival. Therefore, we understood that while compliance with the earthquake legislation had not been the primary priority when selecting a house before the earthquake experience, this changed postearthquake. However, a lack of trust in the building or region did not necessarily mean that one would move out of that building or region at first opportunity. This is because economic conditions and/or family ties also played a role. Furthermore, the findings were valid for all irrespective of age or gender. However, occupational status indicated a difference, as architects considered building their own settlements postearthquake. In addition, the higher the level of education (bachelor's degree and higher), the more was the perceived importance of earthquake-legislation-compliance inquiries.

Table 2 summarizes the changes in housing preferences of the interviewees.

Table 2. Changes in housing preferences of the interviewees

Interviewee no	Residence during the earthquakes	Residence immediately after the earthquakes	Current residence	Preferred settlement
I1	Third floor of a seven-story building, 3+1 apartment	Although the structure was sound, they stayed outside because of fear	Third floor of a three-story apartment building	Living in the countryside of a city that is not a fault line/earthquake zone
I2	Second floor of a six-story building, 3+1 apartment	Took refuge in brother's detached house with a garden	In a tent with family	House in the village/rural area, living in a single or a house with at most two or three stories
I3	Second floor of an eight-story building, 4+1 luxurious apartment	Took shelter in a garden house with relatives	In a container	Living in Ankara, in a house with gardens in the front and backyard, with at most three stories
I4	Third floor of five-story residential blocks, 1+1 apartment	Was taken to Elazığ after being in the rubble for 12 hr	Moved home and business to Ankara, garden floor of a three-story apartment building	Buying a plot of land and living in a detached house if possible
I5	Ground floor of a three-story building floor, 3+1	Stayed in the car, outside	Family stays in a tent	Living in a single-story prefabricated building in the same city
I6	Ground floor of a four-story building	In the second earthquake, stayed under the rubble for 3 hr while helping	First 25 days in a tent, then in a container with family	Living in a one- or two-story building
I7	Fifth floor of an eight-story building, 4+1 apartment	Moved to the summer house in Mersin	In their current home	Living in a one- or two-story detached building outside the earthquake zone/fault line
I8	Ground floor of an eight-story	Outside	In a container	Living in a one- or two-story house with garden

Table 2. Continued

I9	Ground floor of a six-story building floor, 3+1 apartment	Moved to Ankara with family to live with relatives	Three-story apartment building in Ankara, on the first floor.	Living in a detached one- or two-story building with large garden
I10	Second floor of a six-story building, 3+1 apartment	First in the car, then in their grandfather's three-story village house	In a single-story village house	Living in a single-story building with garden in a city with no earthquake risk
I11	Ground floor of a five-story building, 3+1	20 hr under the rubble	In the outbuilding of a detached house in Ankara, Ahlatlıbel	Satisfied with the area lived in, does not want anything different
I12	Third floor of a six-story building, 2+1 apartment	Was pulled from the rubble 12 hr later and brought to Konya	On the 1st floor of a three-story family apartment building	Living in a one- or two-story detached building
I13	Ground floor of a six-story building, 3+1	Stayed in the vehicle for two days and then went to Ankara with uncle	Ground floor of a two-story building, 3+1 apartment in Ankara, Öveçler	Living in a low-rise, detached house with garden in a fault-free city
I14	Second floor of a six-story building	Wife is out of town; he is on ambulance duty	In a container	Living in rural Maraş in a one- or two-story house or in light-material structures such as containers
I15	Third floor of a twelve-story, two-block complex	Returned to Tunceli to join family	With family in a two-story village house in Tunceli	Living in a single or two-story detached house
I16	Two-story masonry adobe building, 3+1 apartment.	Tried to save family, parents died.	In a tent	Living in a new solid adobe house in the village or countryside
I17	Sixth floor of eleven-story TOKİ blocks, 3+1 apartment	Remained in the structure despite initial uneasiness	At home because the building is undamaged	Living in a safe structure in compliance with technical legislation

Table 2. Continued

I18	Fourth floor of a six-story building, 2+1 apartment	Went to Kahramanmaraş and then to Ankara	On the second floor of a three-story building in Elazığ	Living in a prefabricated structure in Konya or Ankara
I19	First floor of a two-story detached building, 2+1	Scared but stayed in at home	In the same structure.	Living in a new two-story building in the same city
I20	Fourth floor of a seven-story three-block complex, 3+1	Stayed out on the first day	At home with minor damage	Living in the same city but in a low-rise building
I21	Second floor of a ten-story two-block complex, 3+1 apartment	Took relatives from Hatay and went to Ankara	On the second floor of a two-story building in Bursa	Living in a single-story building with garden
I22	Second floor of a three-story, three adjoining blocks	Stayed in the car with family.	In Elazığ Ahmet Kabaklı Student Dormitory	Living in a safe single-story house in hometown
I23	Sixth floor of a twelve-story complex with six blocks, 3+1 apartment	First stayed in the car and then went to Elazığ to their relatives.	In father's house in Elazığ, which is on the 3rd floor of a 4-story building, 2+1 apartment	Living in a safe structure not in earthquake zone
I24	Second floor of an eight-story apartment building	Moved to sister's detached house with a garden	In their old house with small damage	Living in the countryside of the same city in a building with two stories at most
I25	Third floor of an eight-story complex with four blocks, 3+1 apartment	Stayed in the car on the first day	In a tent in the hospital garden	Living in low-rise/detached housing or light steel/prefabricated construction
I26	Single-story village house, 3+1 apartment	Back to the same house	In the same house	Living in the same house.
I27	Single-story village house, 3+1 apartment	Back to the same house	In a tent with family	Living in a rural area in the village
I28	2nd floor of a four-story building, 3+1 apartment	First to relatives' place, then to Sivas	In Sivas Binali Yıldırım Dormitory	Living in a low-rise building in a town without fault line
I29	1st floor of a nine-story building, 4+1 apartment	Stayed in the car and then went to the Akçadağ district	In Elazığ Ahmet Kabaklı Student Dormitory	Living in a prefabricated house on a small plot of land in rural Malatya
I30	4th floor of a five-story building	Stayed in the car	In the same city and home	Living in the garden house bought with savings

As previously mentioned, sociological discussions on disasters usually occur only after a "wake-up" disaster experience. In this context, clearly, the February 6 earthquakes alerted on other possible earthquake experiences such as the expected Marmara/İstanbul earthquake. This study analyzed the process from the perspective of the earthquake survivors. Whether it is the wrong and/or inadequate decisions taken thus far, or the "earth being angry with us" as quoted by one of the participants, the importance of taking positivist measures in future has emerged once again for all kinds of disasters. The needs for shelter and the safety of property must be first ensured, only after which human beings can progress on the path of "self-realization." The statements of the interviewees revealed that they have changed their preferences in this direction. However, in the context of the sociology of disasters, we must remember that individual changes and transformations create a meaningful impact only when they gain a wide social scale and involve the decision-making authorities as well. Therefore, policymakers should prioritize vertical structuring and more strictly check whether the buildings are earthquake resistant.

Speaking of limitations of this study, the findings could become more meaningful upon conducting follow-up visits to the earthquake zone and encouraging further studies. Furthermore, determining whether the change in preferences from vertical to horizontal structuring, from comfort-oriented options to safety-prioritizing ones, or from urban to rural areas is temporary or permanent is difficult based on a single study. Only a few months following the earthquakes, the earthquake victims who had to relocate to rural areas for work, education, etc. seem to have returned to the city. Thus, a follow-up study seems necessary to determine if the findings of this study still hold or if the changing preferences of the victims were merely a temporary result of the disaster experience.

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Informed Consent: The participants were first allowed to see the interview form, and interviews were conducted only if they provided their consent.

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