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Crisis, culture, and connection: developing a relational resilience model for earthquake-affected communities (the case of the 2023 earthquakes in Türkiye)

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ABSTRACT

Türkiye remains highly vulnerable to both natural and human-induced disasters. Despite the devastating impact of the earthquakes on February 6, 2023, no comprehensive sociological study has been conducted to assess the country's level of societal disaster resilience. Therefore, the primary aim of this study is to develop a relational model of disaster resilience by examining the influence of socio-cultural indicators such as relationships, community bonds, institutional interactions, and cultural practices in the context of earthquakes in Türkiye. This research posits that resilience is not only a matter of physical infrastructure but is also deeply rooted in sociological dynamics such as identity, belonging, cultural memory, and social connections. The proposed model aims to explain how individuals interpret their disaster experiences, taking into account the broader historical, cultural, and societal processes that shape them. The study employs a qualitative research design, and in-depth face-to-face interviews were conducted with 114 local residents who directly experienced the disaster in Hatay and 8 representatives from public authorities. The involvement of researchers from Hatay, who also experienced the earthquake, strengthened the authenticity and reliability of the data collection process. The model developed through this research provides a crucial foundation for formulating public policies that enhance disaster resilience. By focusing socio-cultural indicators, the study highlights the importance of implementing inclusive and preventive strategies that minimize potential losses and enhance preparedness for future disasters.

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Introduction

The increasing frequency and intensity of disasters highlight the urgent need to assess communities' resilience levels and recovery capacities, making resilience a continually evolving and context-dependent concept. Early studies on disasters primarily addressed their natural and

geographical dimensions, often framing resilience in ecological, geographical, or infrastructural terms. Over time, however, research has expanded toward social interpretations of resilience, recognizing that recovery and adaptation are shaped not only by physical conditions but also by social and cultural dynamics.

Recent scholarship emphasizes the importance of socio-cultural characteristics, community relationships, traditional knowledge systems, collective memory, and the capacity of local governance in shaping community responses to disasters (Ali and George 2022; Aydın et al. 2025; Cutter et al. 2008). Examples from different regions illustrate this diversity: in Japan, traditional 'tsunami stones' and neighbourhood-based preparedness systems embody cultural resilience, while in Chile, participatory disaster planning enhances social capital (Bronfman et al. 2024; Pooyan and Hokugo 2025).

Understanding disasters from a social perspective therefore provides a vital foundation for analyzing resilience. Nevertheless, most social science studies on resilience remain rooted in psychology, focusing on individual-level constructs such as self-efficacy, awareness, and learning (Paton, Smith, and Millar 2001), while overlooking the collective and relational dimensions of disasters. Sociologically informed approaches are essential for capturing the complex social dynamics that shape resilience, yet such studies remain limited. Lucini's Lucini (2014) multi-layered sociological model, developed in Italy, stands out as a rare and influential attempt to conceptualize disaster resilience across social, cultural, organizational, political, environmental, and communicative dimensions. Other studies in the social sciences adopt diverse conceptual and methodological approaches, ranging from pre- or post-disaster analyses to models encompassing the entire disaster cycle. However, there is no consensus on a single conceptual framework or method for measuring or modeling resilience, nor is one likely to exist given the multidimensional nature of the phenomenon. Contextual factors such as ecology, governance, and local culture render region-specific approaches more meaningful than universal models (Ali and George 2022; Nguyen and Akerkar 2020; Patel et al. 2017).

In this direction, Ainuddin and Routray (2012) emphasized the need for regionally specific resilience studies and proposed a contextually grounded model for the earthquake-prone Balochistan region of Pakistan, arguing that broad, general models are both impractical and costly to implement. Similarly, Nguyen and Akerkar (2020) suggested that resilience can be understood through six interconnected categories: physical, social, ecological, economic, individual, and community. Platt and So (2017) further note that in disaster-prone societies, cultivating a culture of coexistence with disasters requires learning from experience and embedding that knowledge in collective memory and everyday practices.

Building on this perspective, the present study aims to develop a sociological model of disaster resilience from a relational perspective, focusing on one of Türkiye's most disaster-affected regions, Hatay/Antakya. This model explores how individuals interpret their disaster experiences and how these meaning-making processes connect with broader social, historical, and cultural contexts. Drawing inspiration from Lucini's Lucini (2014) multi-layered conceptual approach, the study adapts and reconfigures it to reflect the unique socio-cultural fabric of Hatay and its locally embedded community dynamics. The proposed relational resilience model extends beyond individual coping mechanisms to encompass interactional networks among survivors, neighbours, institutions, volunteers, and local governments. It also integrates emotional bonds, spatial attachments, and collective memory-based practices of mutual aid. Through this framework, the study analyses the intersection of institutional structures and everyday social practices in the post-disaster period, revealing patterns of cooperation, conflict, and reconstruction of social ties. In doing so, it aims to illuminate how community resilience is collectively and relationally built in the aftermath of disaster.

Theoretical framework

Risk, ontological security and vulnerability

Ulrich Beck's Beck (1992) concept of the 'risk society' emphasizes that modernity's promises of welfare and progress also generate systematic risks. According to Beck, these risks may temporarily blur class distinctions while enabling individuals to recognize their disadvantaged positions and strengthen forms of solidarity (Barbalet 2020, 181). Thus, risk is not only a source of danger but also a driver of social transformation.

In modern societies, the perception of risk is closely linked to the individual's ontological security. Ontological security requires that the world be stable, predictable, and meaningful for the individual (Layder 2010). However, this sense of security may be shaken, particularly in the face of sudden and destructive events. Disasters are phenomena that undermine the feeling of safety and confront individuals with existential uncertainty. Giddens (2020, 88) emphasizes that without this sense of trust, social interaction cannot be sustained. Under conditions of uncertainty, people strive to reconstruct their daily routines and social order (Wallace and Wolf 2020). In this process, risk reshapes social vulnerability. Therefore, while individual and collective vulnerabilities increase during risky times, efforts to re-establish ontological security also aim to restore stability and reliability in social life. Social vulnerability refers to a group's exposure to hazards and its capacity to recover from their impacts; it is influenced by factors such as race, class, gender, age, migration, and housing status. At this point, resilience comes into play. As Cutter et al. (2008, 599) note, the vulnerability and resilience of a social system are key determinants of whether risks turn into disasters.

Research indicates that resilience to disasters is closely related to social vulnerabilities. Gökalp Yılmaz (2021) highlights that identifying levels of vulnerability in the pre-disaster period is critical for recovery processes. Çakı et al. (2019) state that disasters emerge as a result of insufficient preventive measures, and their impacts vary depending on the level of vulnerability. The Turkey/Van earthquake illustrates this relationship: women's social status deteriorated after the disaster (Karancı et al. 2011), and economic vulnerability determined the extent of destruction (Aykutalp 2019; Noy and Yonson 2016). Furthermore, in the post-disaster period, socio-cultural context plays a crucial role in reducing vulnerabilities and reconstructing ontological security. James and Paton (2015) emphasize that in the cases of Myanmar and Taiwan, strong community ties helped survivors rebuild their sense of meaning and facilitated the organization of immediate aid efforts.

Community resilience, recovery and coping capacity

Community resilience, or robustness, refers to the capacity of a society to recover during crises and disasters by reducing vulnerability. It encompasses the abilities of individuals and communities to return to their previous state, adapt, and cope with challenges after a crisis (Adger 2000). Tierney (2003) explains resilience through four structural elements: robustness, redundancy, resourcefulness, and rapidity. Brockie and Miller (2017) consider resilience as the capacity to cope, incorporating individuals' experiences, beliefs, attitudes, and behaviours.

A resilient community is built through awareness, participatory community development, a holistic approach to life, and the development and implementation of disaster plans. This structure allows individuals to manage security concerns, maintain social relationships, and strengthen collective capacity during times of risk and crisis (Delibaş 2017, 297). Lucini (2014) proposes six operational categories to understand a society's disaster resilience: the social category (trust, solidarity, and social capital), cultural category (shared history and subcultures), organizational, infrastructural, and political category (institutional cooperation and public policies), financial category (material resources), environmental category (physical context and local belonging),

and communicational category (effective risk and emergency communication). These categories enable the measurement of societal resilience and help identify strategies to enhance it.

Studies examining post-disaster community resilience emphasize the importance of the socio-cultural context. For example, Imperiale and Vanclay (2016) report that following the 2009 earthquake in L'Aquila/Italy, solidarity, cooperation, mutual assistance, and social responsibility played a critical role in rural communities' recovery processes. The researchers highlight that disasters do not turn individuals into panicking or helpless victims; instead, they foster social awareness and promote community-oriented thinking. Similarly, a study in China found that social support following earthquakes strengthened the relationship between resilience and quality of life, highlighting the crucial role of social support in post-disaster recovery (Xu and Ou 2014).

During disasters, social capital also plays a significant role in how communities cope and build resilience. Bourdieu (1986) defines social capital as actors' access to resources through social networks, while Putnam (2000) emphasizes the role of trust, norms, and networks in facilitating collective action. In this sense, neighbourhood relations, mutual trust, and solidarity networks can ease access to resources that mitigate disaster impacts. Akçakaya and Him (2021) note that such social networks can transform into social capital during disasters. James and Paton (2015) highlight that communities with strong social capital recover more quickly. Partelow (2021) emphasizes that social capital provides individuals with social, psychological, and economic resources and facilitates collective action after disasters. Cox and Perry (2011), examining large fires in Colombia and Canada, underscore the critical role of space in linking social capital and community recovery, demonstrating the importance of contextual and cultural factors in post-disaster recovery. Therefore, social capital influences recovery processes during crises and disasters, contributing to social resilience and serving as a crucial disaster coping strategy.

Collective memory also holds particular importance in disaster coping strategies and recovers process, especially in earthquake-prone regions. Lessons learned from past disasters occupy a significant place in societal memory, affecting behaviours and recovery in future events. According to Halbwachs (1992) concept of collective memory, communities remember and interpret past experiences through cultural narratives. For instance, in Türkiye/Hatay, the saying 'the Hatay/Antakya city rebuilt seven times after seven destructions' links disaster experiences both to fatalistic acceptance and hope for recovery. While these narratives do not translate risk perception into behaviour before disasters, they function post-disaster to strengthen social recovery, resilience and belonging. Colten and Sumpter (2009) highlight the importance of societal memory following the Betsy and Katrina hurricanes in the USA, noting that it provides guidance for future generations and planners. Wilson (2013) emphasizes that in Christchurch, New Zealand, prior disasters stored in societal memory cumulatively influence the post-disaster recovery process.

The social construction of disasters: social identity and relationships

Although Berger and Luckmann (2008) do not directly address disaster and resilience concepts, their work lays the sociological foundation for understanding these concepts by explaining how social reality is constructed. Everyday life is internalized by the individual as the ultimate reality, yet extraordinary events can disrupt this structure. Symbolic universes emerge as a set of narratives that preserve social order and individual meaning, attributing significance to crises or traumatic events to re-establish the continuity of everyday reality.

Chipangura, Van Niekerk, and Van Der Walddt (2016) emphasize that disaster risk can be examined through two fundamental ontological and epistemological frameworks: objectivism and social constructionism. The objectivist approach views risk as an external and measurable reality, typically focusing only on hazards and dangers, thereby often neglecting vulnerability and social dimensions. In contrast, the social constructionist perspective provides a more

comprehensive explanation by considering the processes through which risk arises, power relations, economic inequalities, and societal perceptions.

Sun and Faas (2018) highlight that disasters are not solely the result of natural events; rather, social structures, political power relations, economic processes, and social interactions play a decisive role in both their occurrence and impact. Authors distinguishing between social production and social construction argue that 'social production' treats disasters as products of societal processes, whereas 'social construction' explains how disasters are defined, the meanings attributed to them, and the cultural or cognitive frameworks through which they are interpreted. Thus, how society conceptualizes a disaster is as significant as the disaster itself. The authors note that the categorization and definition of events labelled as 'disasters' are shaped by the discourses of actors such as the state, media, and aid organizations, making disaster perception and response priorities socially constructed.

The social construction of disasters views community resilience as a social reality shaped by community members' social perceptions, norms, and shared meaning-making. In this context, Cvetković and Šišović (2024) examines the resilience of communities in Serbia from a social identity perspective, systematically demonstrating that social identity is a decisive factor in both pre-disaster preparedness and post-disaster response processes. Drury (2012) argues that individuals act based on group rather than personal identities during crises, enhancing cooperation and mutual support. This new social identity, formed through the shared experience of a common fate, enables community members to support one another and act in a coordinated manner. Drury et al. (2016) emphasize that post-disaster solidarity is not merely an individual process but a social one, highlighting the importance of social identity-based interactions. Accordingly, their study on 1,240 adults affected by the 2010 Chile earthquake shows that observing others' supportive behaviors increases individuals' likelihood of providing emotional and coordinated support.

From social constructionist perspective, disasters are not limited to physical destruction. They can be understood as processes in which social relationships, structural inequalities, and trust in institutions become visible, are re-evaluated, and contribute to the reproduction of social order. Therefore, disaster management should be seen not merely as a technical intervention, but as a mechanism that helps reconstruct social meaning and order. For example, Doğulu, Karancı, and İkizer (2016) found in their study of the 2011 Van earthquake that participants most frequently emphasized the role of governance institutions. Well-planned risk and disaster management, along with equitable service distribution, directly affect the recovery process and individuals' sense of security. However, lack of coordination among institutions in the region led to decreased public trust in state agencies, undermining social trust and solidarity (Karancı et al. 2011, 42-44). Çakı et al. (2019), in their study in Balıkesir, observed that while the public trusted the state and followed measures implemented by it, local authorities demonstrated significant weaknesses in disaster preparedness.

Methodology

This study is based on a relational resilience framework adapted from Lucini's Lucini (2014) research to the context of the 2023 earthquakes in Türkiye. While Lucini's model was developed in the Italian context, it serves as a valuable analytical lens for this study. However, rather than applying the framework in a universalist manner, the model was adapted relationally and contextually to reflect the unique socio-cultural, historical, and spatial specificities of Hatay/Antakya. This adaptation is addressed on the basis of theoretical convergence and analytical differentiation. In line with Lucini's Lucini (2014) approach, resilience and recovery processes in the face of disasters are conceptualised not as static outcomes but as relational and dynamic processes shaped through interactions between individuals affected by the disaster and institutional actors. This approach has been guiding in the determination of the

dual sampling structure and in the construction of the semi-structured interview guides. Accordingly, the sampling design of the study consists of two main groups: the first group comprises individuals directly affected by the disaster, while the second group consists of institutional actors.

However, the study also diverges from Lucini's Lucini (2014) approach in certain respects. The influence of religion in social life and the reflection of this influence on resilience and recovery processes in the face of disasters were addressed as an active subject in the field interviews. In the context of Hatay in particular, and Türkiye more generally, belief in fate, which is widely encountered in Islamic societies, emerges as a powerful cultural metaphor in the interpretation of disaster experiences. In the pre-disaster period, when the construction of resilient individuals and societies is concerned, belief in fate appears as a factor that negatively affects resilience by weakening risk perception and limiting preventive behaviours. By contrast, in post-disaster recovery processes, meaning-making practices based on beliefs in fate and the afterlife facilitate individuals' acceptance of experienced losses without self-questioning and play a supportive role in promoting psychosocial well-being, particularly among individuals who have lost close relatives. For this reason, the study extends the relational resilience approach by also examining how faith-based meaning-making practices intersect with social relations and institutional dynamics.

Thus, the study not only considers Lucini's Lucini (2014) research as a theoretical foundation but also extends its applicability through empirical reinterpretation and regional contextualisation.

Methodologically, the study is grounded in the view that research design is not solely about data collection; it also involves a theoretical construction of the research object and its embedded social relations, cultural meanings, spatial patterns, and historical contexts (Sayer 2017). In this context, this study adopts a qualitative and interpretivist approach in line with its aim to explore the relational and cultural dynamics of disaster resilience in the aftermath of the February 6th, 2023 earthquakes.

The interpretive paradigm allows for an in-depth understanding of how individuals make sense of collective trauma and mobilize resilience through relational and symbolic mechanisms. A qualitative research method was chosen because the study focuses on the experiences of earthquake victims in Hatay, as well as those of public authorities, in order to reveal the complex and often invisible meanings that people attribute to the concepts of disaster, solidarity, and recovery. (Creswell 2015; Denzin and Lincoln 2005).

The main research problem of this study is how the community, consisting of local residents, public authorities, and civil society, demonstrated resilience in response to the impacts of the February 6th earthquakes in Hatay. To address this main research problem, the following sub-problems have been formulated:

- What are the experiences of local residents during and after the earthquake, and how do they make sense of these experiences?
- How have Hatay's cultural, social, economic, and identity structures, as well as its collective memory, influenced the resilience shown against the earthquake?
- How did the community respond to the difficulties they faced during and after the earthquake, and what strategies did they develop?
- What role does the social capital of local residents play in mobilizing collective action to meet the needed aid and services after the disaster?
- What forms of social interaction, such as cooperation, conflict, competition, and coordination, exist among local residents, public institutions, civil society, and volunteers, and how do these interactions affect the recovery process?
- In what forms of solidarity has community resilience manifested following the earthquake?

Study setting and participants

On February 6, 2023, Türkiye was struck by two major earthquakes: the first at 04:17, centered in Pazarcık (Kahramanmaraş) with a magnitude of 7.7, and the second at 13:24, centered in Elbistan (Kahramanmaraş) with a magnitude of 7.6. The events have been described as the 'Disaster of the Century' due to their impacts and consequences. The February 6, 2023 earthquake caused destruction in 11 provinces. The total population living in these provinces was 14 million. In the aftermath, more than 3.5 million people were forced to migrate to other cities, leaving the disaster zone. Over 53,000 people lost their lives, and more than 115,000 were rescued with injuries.

The research was conducted in Hatay, particularly Antakya, one of the most severely affected regions of the 2023 earthquakes. Although 11 provinces were directly impacted, Hatay stood out due to its scale of destruction, historical vulnerability, and multicultural composition. With over 6,000 buildings collapsed and approximately 20,000 deaths in Hatay/Antakya alone (AFAD 2023), the region presented a critical case for exploring localized disaster resilience.

Data collection

Data were collected through in-depth interviews with survivors and community actors who directly experienced the earthquake. Field observations, visual documentation, archival materials, and local narratives supplemented the interview data. The research team included scholars from Hatay who also experienced the earthquake, enhancing the contextual sensitivity and empathetic depth of the fieldwork. As is typical in qualitative research, the researchers' presence, questions, and emotional engagement were integral to the co-construction of knowledge (Glesne 2013; Merriam 2013). Being an insider to the field and having familiarity with Antakya's cultural, identity-based, and religious context facilitated smoother interviews and more focused questioning. The direct earthquake experience of the research lead further supported careful interview management, empathetic communication, and a more sensitive handling of the psychosocial process.

Thus, in the in-depth interviews conducted using a semi-structured questionnaire, 114 participants from the local community were interviewed. Purposeful sampling was employed to ensure diversity concerning socio-economic status, age, gender, and cultural background. Interviews continued until thematic saturation was achieved, and the data collection process followed the principle in qualitative research of continuing until thematic saturation was reached (Denzin and Lincoln 2005). Data were collected from container settlements in central Antakya. Each settlement is overseen by an administrative coordinator affiliated with the Ministry of National Education. After the researchers introduced themselves and presented the necessary permissions, coordinators shared an informational notice *via* the settlements' WhatsApp groups, and interviews were conducted with volunteers who were available to participate. With the approval of the deputy governor responsible for AFAD, the administrative coordinators of the container settlements acted as gatekeepers in the research process. This phase of the data collection process was conducted between 1 June 2024 and 30 August 2024.

In the second field phase of the study, interviews were conducted with disaster-response officials working at various levels of government in order to analyze the effects, causes, and consequences of the earthquake, shedding light on events that occurred both before and after the disaster. Interviews were conducted with a total of eight (8) officials: the Deputy Governor, the Deputy Governor responsible for debris removal, urban planning, and climate change, the AFAD (Disaster and Emergency Management Authority) Director, the Hatay Provincial Director of National Education, the Provincial Health Director, the Directorate of Family and Social Policies, the Gendarmerie Regiment Commander, and the AKOM (Disaster Coordination Center) Director. Based on these interviews, the emerging themes are discussed under specific

headings. The government officials interviewed are referred to in the text as G1, G2, G3, and so on. This phase of the data collection process was conducted between June 2024 and April 2025.

Ethical considerations

The procedure prepared for the fieldwork component of the study was reviewed and approved by the Hatay Mustafa Kemal University Social and Human Sciences Scientific Research and Publication Ethics Committee, with decision number 21 dated 14 July 2023.

During the fieldwork phase of the study, prior to the start of the interviews, participants were first provided with detailed information about the purpose of the research, the researchers, and how the research would be conducted *via* an informed consent form. Considering the recent and potentially traumatic nature of the disaster-related experiences discussed in the interviews, the possibility of emotional distress for participants during the research process was anticipated in advance. For this reason, participants were clearly informed that participation in the interview was entirely voluntary and that they could withdraw from the interview at any stage if they wished. Participants were also informed that they had the right to terminate the interview at any time or to skip any question they did not wish to answer. In cases where participants displayed noticeable emotional distress during the interview or expressed that they were struggling, a break was taken, or the interview was completely terminated in accordance with the participant's request. As a result, 13 interviews were terminated before completion for these reasons and were not included in the analysis.

In addition, it was explained that the research was conducted solely for scientific purposes, that their personal information would be used anonymously, and that the data collected *via* audio recording devices would be securely destroyed after transcription and upon completion of the research. These measures ensured that voluntary participation was maintained in a safe and ethical manner by protecting the rights of the participants. Accordingly, interviews were initiated with participants who volunteered to take part in the study and constituted the first group of the sample (residents), and in order to preserve anonymity during data reporting, these participants were assigned codes such as K1, K2, and so forth.

Within second group, interviews were conducted with 8 disaster-response officials working at various levels of government. As these actors occupy unique and identifiable positions in decision-making and organisational processes due to their roles and positions, full anonymity could not be ensured, although their names were not used. This situation was clearly communicated to participants prior to the interviews, informed consent was obtained.

Although direct psychosocial support was not provided within the scope of the research, participants were informed, when deemed necessary, about psychosocial and mental health support services available at the local level. The entire research process was conducted in accordance with ethical research principles, and verbal consent was obtained from participants prior to the data collection phase.

Data analysis

Data analysis was conducted concurrently with data collection. Interview transcripts, observation notes, and related documents were systematically coded using MAXQDA MX24. Following Creswell's Creswell (2015) model, the process included organizing and transcribing the data, coding emergent patterns, developing thematic categories, and interpreting them through visual displays and narrative synthesis. This allowed for the abstraction of key concepts related to relational disaster resilience, grounded in both participant accounts and the socio-cultural context of the field.

Findings

A total of 114 individuals participated in the study, comprising 67 women and 47 men. Most participants had completed primary education, with 73 of them married. After the interviews, the data were coded and analysed. The table below presents the sociodemographic characteristics of the participants (Table 1).

This study reveals that relational resilience in the context of the February 6, 2023 earthquakes unfolds across multiple temporal and social layers. Based on the thematic analysis of survivor narratives, the findings are organized into three interconnected phases: pre-earthquake, during the earthquake, and post-earthquake, each reflecting specific vulnerabilities, relational dynamics, and emerging forms of coping and adaptation.

Pre-earthquake: cultural identity, social memory, and belief systems

This phase reveals that resilience is deeply embedded in the relational, social, and cultural fabric of communities. Codes such as social awareness, mobilization, and family dynamics reflect the role of social capital in fostering collective preparedness, while collective memory and cultural identity anchor risk perception within historically and symbolically meaningful narratives. Themes like earthquake preparedness, urban security, and lack of audit point to the critical influence of institutional trust and governance in shaping pre-disaster resilience. Spatially grounded codes such as spatial integrity and structural security awareness highlight the importance of place attachment and perceptions of environmental safety. Additionally, the presence of rational thought and individualism suggests competing emotional and cognitive logics in disaster anticipation. Taken together, these themes illustrate that pre-earthquake resilience is not only a matter of individual readiness or physical infrastructure but rather a relationally constructed capacity shaped by interconnected social meanings, institutional dynamics, emotional solidarities, and cultural memory.

Based on the data obtained from participant interviews, a Hierarchical Code-Subcode Model (Figure 1) was developed to represent the coded thematic structure of participants’ views regarding the pre-earthquake period:

Hatay is a unique region that has been able to sustain multiple cultures together from ancient times to the present. As a result, the society of Antakya possesses a strong collective identity shaped by a culture of coexistence. This identity has contributed to the city being recognized as a city of civilizations in terms of space. Participants describe this identity through the social fabric created by different religious and ethnic groups, while also demonstrating how multicultural life in Antakya is intertwined with social solidarity:

The city of civilizations- in the neighborhood where I grew up, whether Jewish, Christian, Armenian, Alevi, or Sunni, we are all intertwined. When you live so closely together, you don’t discriminate. If you are hungry, your neighbor, knowing that you are hungry, will apologize and then cook first and bring the plate to you. We have this love. Whether Jewish or Christian... Whether Jewish, Christian, Alevi, or Armenian, whoever it is, we are living human beings-I can never deny this. (K51, Male)

Table 1. Demographic characteristics.

Variable	Category	Frequency (n)
Gender	Female	67
	Male	47
Educational level	Primary school	62
	High school	21
	University	20
	No formal education	4
Marital status	Married	73
	Single	19
	Widowed	9
	Divorced	8

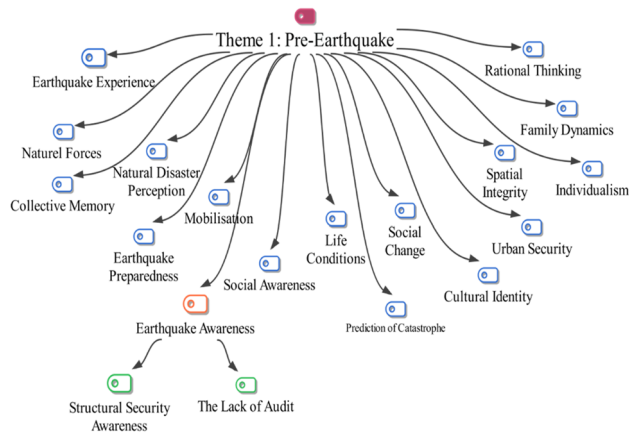


Figure 1. Pre-earthquake hierarchical code-subcode model.

With its architecture, cultural fabric, churches, and mosques, Antakya symbolizes a historical and multicultural urban identity. However, the city's value stems not only from these physical spaces but also from the communities that inhabit them. In the eyes of the participants, Antakya is not merely a city but also holds meaning as a cultural entity. Therefore, the sense of belonging to the city is understood through the connection established with its spaces:

...the old streets of Antakya, the houses there... the covered bazaar, the churches there, the mosque there, all in the same area-what comes to my mind is still the museum, the Hatay Assembly. These, in my opinion, were the heart of Antakya... Maybe the Orontes River, we almost forgot it, the very presence of the Orontes itself. These are essentially the foundational elements. The core values that make Antakya what it is, symbolically, are these; of course, fundamentally it is the people themselves-the people of Antakya. And if you take the people of Antakya somewhere else, you detach them from Antakya, and of course they would no longer be the same people. In short, Antakya is inseparable from its people. (K1, Male)

The sense of belonging to Antakya is so profound that disaster survivors who were forced to be away from their culture, even for a short time due to the earthquake, experienced a traumatic rupture, and those who had to migrate described this bond as a kind of loss of identity:

This is my homeland. I would struggle a lot elsewhere. Even the air here feels different to me. My surroundings are here. Of course, you can build a social circle elsewhere, but at this age, your roots are here. No matter what happens, your roots are here. (K29, Female)

This emotional disconnection was not only symbolic but also manifested in everyday habits:

We really struggled with food there. The food culture here is very different, and it felt completely different there. We couldn't find what we have here... For example, during Ramadan, our hummus is very famous here, but it wasn't available there. (K54, Female).

The phenomenon of earthquake and related narratives occupy a place in the collective memory of the people of Hatay not only as a physical disaster but also as a symbol of historical recurrence. Both public awareness of earthquakes and their reactions are shaped within the framework of these narratives:

Our elders used to say something like this: Hatay will sink 40 years before or after the apocalypse. It is a city that has already sunk seven times in history. Even now, in the ongoing excavations, remnants from the past constantly emerge-sunken cities appear. So perhaps this is the fate of these lands; they say it has sunk seven times before. This earthquake was actually our eighth sinking. Our elders always talked about this. We heard it a lot. (K10, Female)

Our families always told stories, and I remember well that Antakya might be one of the first cities to be destroyed in the near future. They even spoke of apocalyptic signs, saying that the first end of the world would begin with Antakya's destruction. We always listened to it like a story, like a tale. (K1, Male),

The historical narratives that participants heard from their elders clearly demonstrate how individual perceptions of and responses to disasters are shaped. Participants framed disasters not only as natural events but also through religious prophecies and folk beliefs. These narratives are transmitted across generations, keeping collective memory alive. Such beliefs provide a culturally grounded explanatory model that remains influential among the public despite modern knowledge. Echoing the social memory theories of Connerton (1999) and Halbwachs (1992), these stories function to produce a collective identity that transcends individual memory. However, these narratives also reinforce a sense of 'fatalism' and inevitability, weakening preventive behaviors. The historically persistent narrative that Hatay will sink 40 years before the apocalypse, combined with the recent 2023 earthquake in the region, shows that apocalyptic imaginations among participants have led to a fatalistic acceptance.

Despite the historical disaster experience of the people of Hatay, it was observed that their level of preparedness is inadequate. In the interviews, most participants stated that they had not prepared an earthquake kit or had 'not taken it seriously':

We didn't have an earthquake kit at home. I mean, we thought about preparing one, but we never actually did. It's not that we didn't feel the need, but we didn't take it seriously-perhaps that's a more accurate way to put it. (K1, Female)

The public's disaster awareness, level of preparedness, and forms of religious belief are closely interconnected. Most participants perceive earthquakes not merely as natural events but as a divine test or warning:

A disaster is a moment when humanity is powerless, even when states are powerless. Helplessness. It is a situation that occurs by God when nothing can be done. (K38, Male)

A disaster means catastrophe. It's as if an apocalypse has occurred. It's truly a very difficult situation, yet the people still haven't learned their lesson, really. (K80, Male)

As observed, disaster awareness in Antakya is not based on scientific knowledge but on cultural memory, religious beliefs, everyday practices, and symbolic language. In the face of catastrophes, the natural, the sacred, and the social are intertwined. While people attempt to make sense of the present through narratives inherited from the past, unfortunately, these stories overshadow preparedness behaviors. Consequently, the greatest barrier to resilience is not a lack of information but the way their world of meaning is constructed. Thus, it can be said that the approach to coping with disasters relies more on acceptance than on prevention, and more on faith than on planning.

During-earthquake: trauma, meaning-making process, and institutional vulnerability

The 'During Earthquake' Hierarchical Code-Subcode Model highlights the intensely relational and affective dimensions of disaster experiences as they unfold. Core themes such as traumatic earthquake experiences, feelings of helplessness, and the struggle for survival emphasize the emotional and existential rupture caused by disaster, foregrounding the role of emotional solidarities and shared vulnerabilities in real time. Social strain, social sensitization, and social vulnerability point to the disruption of everyday relational structures and the emergence of improvised support networks, while also revealing inequities in exposure and capacity. Meanwhile, a lack of crisis management, insufficient resources, and systemic problems reflect institutional shortcomings that erode trust and challenge the legitimacy of formal response systems -key

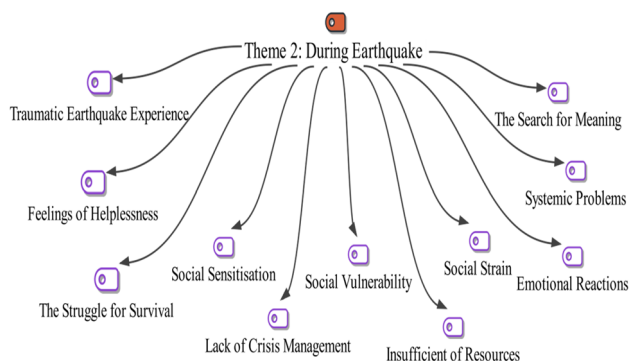


Figure 2. During-earthquake hierarchical code-subcode model.

concerns in the governance and institutions dimension of the relational resilience model. Emotional reactions and the search for meaning suggest that, beyond physical survival, individuals engage in cognitive and affective processes to make sense of the chaos, linking to collective memory and the early formation of post-traumatic narratives. Altogether, these findings underscore that resilience during a disaster is shaped not only by access to material resources but also by the quality of relational ties, institutional responsiveness, and the emotional landscapes activated in moments of extreme uncertainty (Figure 2).

Based on data gathered from interviews with participants, a Hierarchical Code-Subcode Model was developed to illustrate the coded thematic structure of participants' perspectives on the during-earthquake period:

The impact of a traumatic earthquake experience extends beyond physical destruction and material loss, affecting the social structure, relationships, and sense of identity. An earthquake is not merely an individual experience; it also influences the meanings and social bonds within the community. During crises like earthquakes, social ties intensify, and societal roles are observed to activate more rapidly:

...My sister was lying next to me; she immediately covered my head and laid me on the ground, getting on top of me. Then we called my father right away -'Dad, get up', we said. My mother had a nervous condition and was taking medication, so she had difficulty waking up during sleep; it was very hard. Then my sister tried to wake her, but it didn't work, so we went back inside. Then my father got up and came immediately to get us. And the most beautiful part was feeling my family's presence. For example, I collapsed to the ground, my father held my head, my mother held me by my jacket, and we held my sister by her hair; we saw that we were together at that moment. We thought, if we die... my sister and mother said, 'Ayhan, we're dying now', death came to our minds then. Later, my father shouted, 'If there's an earthquake, never let go of each other'. (K3, Female)

Participants who experienced the earthquake reflected not only the struggle for physical survival but also the vital role of social solidarity practices. Individuals who managed to exit potentially collapsing buildings were observed helping others still inside to get out as well.

The sense of helplessness experienced by disaster survivors during and after the earthquake is a multi-layered phenomenon that extends beyond individual reactions, intertwining with social structures, cultural values, and institutional functioning. Institutional inadequacies and delays in aid processes reinforced feelings of vulnerability and distrust among participants. The moral burden of being unable to assist those trapped under rubble is closely linked to individuals' norms of solidarity and perceptions of social roles. Participants reported that even when they knew what should be done, physical conditions and organizational shortcomings prevented them from taking action.

We could only pray there. We did what we could, just prayed. We saw the new buildings on the main street, buildings that hadn't even been occupied yet, collapse. And people were shouting for help... Since most of Antakya was damaged, I personally couldn't run to help. I tried to protect my own family. People were screaming, 'Get them out, help!' but we couldn't do anything, and I feel very sad about that. (K22, Male)

You can't make an effort because there are stones and debris too heavy for you to lift, and while you struggle, the person on the other side is pleading, and the more they plead, the more your conscience hurts. After a while, you give up -you don't want to hear their cries because it pains your conscience, so you step away from the scene. Honestly, I experienced this myself... (K62, Male)

In times of crisis, individuals tend to make sense of events through religious rituals to cope with pain and uncertainty. Behaviors such as calling the ezan or praying to God during an earthquake reflect religious-cultural patterns embedded in collective memory. Echoing Durkheim's Durkheim (2011) view that religion strengthens social solidarity, participants' practices of prayer and submission emerged not merely as individual faith but as expressions of collective consciousness and a shared sense of security:

We started to pray. I mean, I said, I prayed this prayer: 'My God', I said, 'if I have any sins, then at least let me get these children-the sick children-out today...' I prayed for the protection of my children... (K94, Male)

The difficulties in accessing basic needs after the earthquake not only fostered a sense of individual helplessness but also led to questioning the functionality of social order and institutions. Groups with limited economic and social capital experienced deeper vulnerabilities during this period. Participants' accounts clearly highlight structural deficiencies, communication breakdowns, and lack of coordination in crisis management during the 2023 Kahramanmaraş-centered earthquakes. Delays in aid, limited access to healthcare services, and organizational shortcomings amplified the destructiveness of the disaster, with many participants emphasizing that the deaths resulted not only from the earthquake itself but also from inadequate response:

The second day, aid started to arrive... On the first day, there was none at all. (K105, Male)

Because it happened in many provinces... aid was delayed... Especially the first three days, we hadn't even heard the name Hatay. (K2, Female)

The aid and the disruptions were very delayed. And I heard something that really upset me. A friend of mine called me-actually, my husband's friend. When they couldn't reach him, they called me. The first thing they said was, 'What's happening in Hatay?' I was crying while answering, and my phone was out of charge, and it was raining. I said, 'What do you mean, what's happening?' They said no one is talking about Hatay. Yes, that's true. I mean, it was a Kahramanmaraş-centered earthquake. Ten provinces are mentioned, but not Hatay. I said the greatest destruction happened in Hatay. Yes. Aid started arriving only after the third day. (K43, Male)

Participants' accounts indicate that during crises, public awareness is shaped not only by official information channels but also by interventions from recognized social figures. In particular, calls made by celebrities through the media contributed to making the destruction in Hatay visible. This suggests that in disaster communication, alternative social actors can play a crucial role in raising awareness and fostering solidarity when traditional information flows are insufficient:

Let me put it this way: in terms of making our voices heard, I think Fenerbahçe's coach, Fenerbahçe's former goalkeeper, and Hatayspor's coach-Volkan Demirel-did what was necessary. Thanks to him and Gökhan Zan, the destruction in Hatay was recognized. Because the earthquake was called the Maraş earthquake, there was a perception that nothing had happened in Hatay. Through the videos they posted online and their statements, I think people understood the situation in Hatay. We are definitely grateful to them for this. (K113, Male)

Post-earthquake: survival, displacement, and the expectation of social justice

This phase illustrates how relational resilience continues to evolve in the aftermath of disaster through the interplay of structural challenges, emotional needs, and social reconstruction. Themes such as institutional inefficiency, failures in the social assistance system, and bureaucratic barriers reflect significant governance deficits that can undermine community trust and hinder the restoration of social order. Meanwhile, the presence of social solidarity, a sense of belonging, and hope and expectations signal the emergence of emotionally anchored recovery processes, aligning with the model's emphasis on emotional solidarities and cultural identity as resources for healing and meaning-making. Persistent issues like housing troubles, financial difficulties, and the inability to access basic needs reveal the material dimensions of post-disaster life; yet, their impact is relationally mediated through communication challenges, temporary solutions, and institutional bottlenecks.

Furthermore, social unrest, spatial segregation, and safe areas indicate reconfigured spatial and social boundaries that directly influence spatial attachment and perceptions of community cohesion. Lastly, resilience and durability emerge not as fixed traits but as negotiated outcomes of everyday struggles for stability, dignity, and relational repair. Thus, this phase demonstrates that post-earthquake resilience is a dynamic and contested process shaped as much by institutional responses and spatial politics as by collective memory, emotional investment, and social cooperation. Based on data gathered from interviews with participants, a Hierarchical Code-Subcode Model was developed to illustrate the coded thematic structure of participants' perspectives on the post-earthquake period (Figure 3).

The dispersion of family members to different cities after the earthquake, along with losses and communication breakdowns, increased the sense of loneliness among survivors and undermined their sense of belonging. Physical separation turned into a psychological and social trauma, temporarily shaking family unity. Unplanned and scattered migrations, inadequate temporary housing conditions, and lack of social support deepened this fragmentation. However, it was observed that religious-symbolic events such as Eid al-Adha brought families back together and strengthened their sense of belonging. This situation points to the unifying role of socio-cultural values in fostering social solidarity and cohesion after disasters.

As I remember, we stayed like that for at least a week, and then we gradually began to disperse... We spent about one and a half months in tents, and another month outside, staying in cars. (K22, M)

When the religious holiday came, everyone decided to return. Those who came back for the religious holiday never left again. (K45, M)

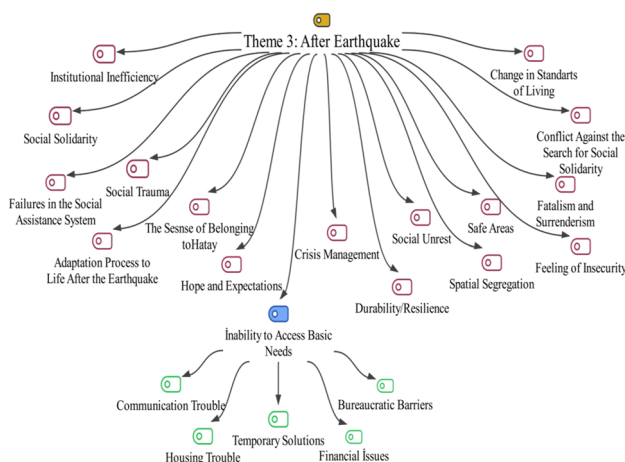


Figure 3. Post-earthquake hierarchical code-subcode model.

It is understood from the participants' accounts that many of them experienced not only physical loss but also a deep existential rupture and a sense of meaninglessness after the earthquake. The losses they endured weakened their connection to life and rendered their plans and goals for the future meaningless. Especially among those who lost everything later in life, the question of 'why go on living?' began to overshadow any possibilities life might still offer:

I have no goals. To have goals, one must have a zest for life - and I lost everything I had in just one and a half minutes. (K46, M)

In order to cope with the difficulties following the earthquake, participants also developed various temporary solutions. In the initial phase, basic needs were attempted to be met with the support of relatives and close acquaintances. This support was particularly critical for life-sustaining necessities such as charging electrical devices, obtaining water, and accessing ready-to-eat food. One participant described this situation as follows. Across participants' accounts, the most frequently mentioned source of motivation and resilience was family ties and the focus on children. Therefore, being together emerged as another dimension of the effort to hold on to life after the earthquake:

Our children. Right now, what keeps us holding on to life, our source of hope, are my children, my spouse, my family - especially my core family. The fact that they are alive gives us comfort. (K22, M)

In the post-earthquake recovery process, the perception of social justice is of critical importance in terms of the experiences and expectations of disaster survivors. Participants reported observing injustice, favoritism, and discrimination in the distribution of aid, emphasizing that assistance was not distributed equally due to differences in economic status. This situation created a deep sense of grievance and distrust among individuals and within the community. Some participants noted that among those receiving aid, there were people who did not genuinely need it, and that assistance did not reach those who deserved it, expressing the perception that personal connections and privileges often took precedence over official procedures.

Participants' accounts reveal that the public needed not only physical assistance but also an organized response system that reinforces a sense of security. At the same time, some participants found it understandable that the government could not reach every affected area simultaneously, given the wide geographic impact of the disaster. In the interviews, it was noted that despite initial difficulties, services improved over time -especially with the transition to container cities, aid increased, and the presence of military personnel in the field strengthened the sense of security.

There were difficulties in the first days, during the initial period of the earthquake, but then the government, I mean AFAD, got things a bit organized. Our phones were working. (K107, M)

So, we managed with the government's aid, as well as through our own efforts - both the assistance and our own initiatives. As soon as I arrived here, I started working. My spouse somehow began to organize their tasks, but the government really supported us a lot during this process. I can't deny that. (K23, F)

Additionally, in post-disaster response processes, not only government institutions but also non-governmental organizations (NGOs) play a critical role. Especially in crises such as large-scale earthquakes, when the capacity of state mechanisms is limited in the initial days, NGOs quickly reach the field, providing both aid to meet basic needs and psychosocial support. Participants noted that various NGOs were actively present on the ground after the earthquake and made significant contributions.

Ultimately, the sense of 'we' that individuals develop toward their community from childhood emerges as an important factor motivating participation in the post-disaster recovery and revitalization of Hatay. This feeling is concretely reflected in behaviors such as staying in Hatay and not leaving the city.

Just as it was rebuilt seven times before, the same will happen again. But, as I said, we can't fully embrace it. Still, we haven't given up on it either. Even if it's destroyed or in ruins, Hatay is still our Hatay, our hometown. (K10, F)

Photograph taken by official disaster and emergency agencies of the February 6, 2023 earthquake

Within the scope of the interviews, two dimensions were focused on. The first concerns measuring resilience prior to the earthquake, while the second relates to the post-earthquake recovery process and planning. For this purpose, focusing on the period before the earthquake and analyzing the factors and processes that caused the destruction emerge as the most important aspect-parameter in disaster management:

We need to focus on the period before the earthquake. What did we do back then that led to this? We added too many floors, didn't pay attention to the ground, didn't do our work properly. After the earthquake, we had no major problems. I witnessed the response during the earthquake itself. There were storms all over the country; I've never seen a storm like that before. (G2)

During the earthquake, 12,000 buildings collapsed -not counting those heavily damaged. Just the buildings that collapsed immediately. In a single search and rescue operation, if 25 people work per building in 3 shifts, that makes 75 people per building; multiplied by 12,000 buildings, that totals 900,000 people. This number of search and rescue personnel does not exist anywhere, even in the world. Worldwide, the total number of licensed search and rescue teams is 350,000. The weakness we showed was not in search and rescue, but in the pre-earthquake period. Buildings should not have collapsed; zoning plans should have been proper, soil surveys properly conducted, and construction inspection firms should have done their job correctly. These are all links in a chain, and all have been neglected for years. In this respect, the pre-earthquake process is crucial. (G1)

After the earthquake, the resumption of the education process is seen as an important part of the normalization and recovery process. Restarting education serves a significant function socially, economically, and within the community:

Education accelerates normalization. It is seen that 585,000 people migrated, which amounts to 120,000 students. The number of 430,000 students dropped to 320,000. Education needs to recover for the population to return; otherwise, it won't happen. Starting from April, schools reopened in Hatay, except for some regions. At that point, the focus was on normalization rather than exam preparation. Later, in September, education resumed in all schools; in some schools, double shifts were implemented, and lessons were shortened to 30 minutes. Currently, there are 400,000 students. The reopening of schools brought the population back and increased social interaction and normalization. Education directly affects 27 sectors -restaurants, transportation, school buses, etc.- so the functioning of education essentially means the functioning of life. (G4)

When examining students' high school and university entrance exam results, it is noteworthy that performance has improved compared to the period before the earthquake:

When we reopened schools on September 11, there was criticism from all sides. Due to double shifts, our children were receiving 10 minutes less instruction, and there were concerns that they would fall behind. There was also much discussion about new teachers being inexperienced. However, in the high school and university entrance exams, students achieved higher scores than before the earthquake. This reflects both skill and effective management.

Hatay, located at the crossroads of Mesopotamia, Anatolia, and the Eastern Mediterranean, has historically hosted many civilizations. Antakya was considered one of the largest cities in the East during the Roman period. Before joining Türkiye, it was under the French Mandate, a period that strengthened Hatay's multicultural character. Hatay has been home to various communities, including Alawite Arabs, Sunni Arabs, Turks, Christians, and Armenians; the Jewish community has significantly declined today. Mosques, churches, and synagogues stand side by side, and religious observances such as Ramadan, Muharram, Easter, and Christmas are celebrated by different groups. Residents mostly identify themselves as 'Hataylı', a unifying identity that transcends ethnic or religious affiliations. However, developments such as the Syrian civil war and migration have occasionally strained these delicate balances. After the earthquake, the effects of political discourse and identity differences were also observed. This issue was discussed

with officials in the management hierarchy to explore its causes. Although some projects were meticulously planned, it was emphasized that a false or negative perception arose in the public, and that despite the effort and work invested, a fair assessment was not made. On the other hand, the Gendarmerie Command stated that, following the February 6 earthquakes, an unprecedented situation occurred since the Çanakkale (Gallipoli) Wars, with training suspended in some units. At the JGSA (Gendarmerie and Public Safety Academy) and training centers, training was halted for the first time in 108 years, since the Çanakkale Wars.

After the February 6 earthquake, there was a consensus among authorities that government institutions had done their best on the ground and carried out all necessary interventions. It was noted that, compared to the 1999 earthquake, there was a clear improvement in search and rescue operations in terms of both manpower and technical equipment. At the same time, it was emphasized that the public acted with extraordinary solidarity, cooperation, and self-sacrifice, and in this sense, the people's contributions were seen as even greater than those of the state.

There was an intense effort in the background to come here and provide help. Our people are greater than our state; this nation is exceptional. I witnessed this after the earthquake. At every level and in every stage, our citizens made us feel this. (G2)

Conclusion

This study examines the sociological dimensions of the disaster experiences following the February 6, 2023 earthquakes in Hatay/Antakya, demonstrating that resilience in Türkiye is not a fixed capacity but rather a relational process shaped by social, cultural, and emotional bonds. Participants emphasized the role of family and close social networks in providing psychological support and survival motivation, while highlighting that civil solidarity and volunteer networks were critical for survival and recovery in the face of institutional shortcomings and limited state interventions. Local knowledge, cultural memory, and a sense of belonging to place emerged as important resources for coping with loss and trauma, showing that post-disaster resilience cannot be explained solely by technical preparedness or infrastructure capacity. Instead, resilience arises from a complex network of dense relational ties, emotional resources, cultural connections, responsibilities, and temporary practices that shape how people survive, adapt, and reconstruct meaning after a disaster. Within this framework, the study proposes a relational sociological resilience model grounded in the experiences of affected individuals and sensitive to the interactions between personal, social, and institutional dynamics.

Proposal: the relational resilience model (RRM)

In recent years, resilience has gained prominence in disaster risk reduction, understood as a process encompassing pre-disaster preparedness, disaster response, and post-disaster recovery, which are interconnected rather than discrete phases (Manyena 2006; Norris et al. 2008). There are some models developed after disasters in the literature.

Nguyen and Akerkar (2020) highlight six core dimensions of resilience -social, ecological, economic, physical, individual, and community-based -that shape a system's capacity to withstand shocks. Many frameworks group these dimensions into broader categories for clarity (Béné et al. 2012). For example, the EmBRACE project (European Commission 2015) proposed a community-based model with three interrelated components: resources and capacities, actions, and learning, influenced by disaster governance and wider contextual factors. Similarly, the DROP Model (Cutter, Burton, and Emrich 2010; Cutter et al. 2008) emphasizes place-based resilience emerging from interactions among social, built, and natural systems, focusing on community-level dynamics and the socio-spatial concept of 'place'.

Economic resilience is another critical domain. Zou et al. (2025) developed a regional economic resilience model based on the financial aftermath of Typhoon Mangkhut, illustrating how regional economies recover at varying rates depending on their pre-disaster capacities and external dependencies.

Taken together, these studies emphasize that resilience is not merely a matter of infrastructure or economic strength. Rather, it is fundamentally shaped by social relationships, collective memory, cultural identity, social capital, community awareness, and environmental sustainability. Accordingly, this study proposes a relational model of disaster resilience that highlights the intersubjective and interinstitutional dynamics that arise in the aftermath of a disaster. This model focuses on the relational patterns between disaster-affected individuals, local institutions, civil society, and the state, analyzing how resilience is constructed, negotiated, and maintained through social interactions, emotional connections, spatial attachments, and memory-based practices. By integrating structural, cultural, and affective dimensions, the relational model provides a comprehensive lens for understanding not only recovery but also the deeper processes of social repair and transformation in post-disaster contexts.

Therefore, this study introduces the Relational Resilience Model (RRM) as a conceptual and empirical framework for understanding disaster resilience not as a purely technical or individual phenomenon, but as a multilayered process shaped by interactions among actors, everyday practices, and embedded cultural structures. Developed in response to the social, emotional, and institutional dynamics that emerged following the February 6, 2023 earthquake in Hatay/Antakya, the model identifies the collective strategies and relational patterns that underpin survival and recovery during crises.

In contrast to conventional, individual-centric frameworks, relational resilience posits that individuals depend not just on personal capacities but also on social networks, emotional attachments, and shared memories to cope with and rebuild after disasters. In this view, resilience is an inherently social process- co-constructed through interpersonal, institutional, and symbolic relations.

The RRM is structured around five key dimensions:

1. **Family and Proximal Social Networks:** Families act as the primary emotional and moral anchors in the immediate aftermath, providing both physical security and psychosocial support.
2. **Horizontal Solidarity Networks:** These include neighborly relations, local volunteerism, and civil society initiatives. Such networks were pivotal when formal institutions failed or responded slowly.
3. **Institutional Friction and the Dilemma of Partnership:** Interactions between state institutions, local governments, and citizens were marked by tension alongside forced collaboration. Resilience was dynamically negotiated along this conflict-cooperation continuum.
4. **Cultural Memory and Spatial Attachment:** In Antakya's diverse cultural landscape, historical disaster experiences and place-based identities shaped resilience practices. Spatial meaning thus becomes central to fostering resilience.
5. **Emotional Resilience and Everyday Resistance:** Humor, faith, caregiving, and adaptive problem-solving emerged as unassuming yet critical resilience strategies woven into daily life.

The RRM is particularly relevant to contexts like Türkiye, where centralized governance coexists with vibrant local and communal crisis responses. It advocates for a bottom-up resilience framework, centering and institutionalizing the knowledge, experiences, and practices of local communities -particularly women, volunteers, and grassroots organizations. The model proposes reinforcing these relational infrastructures, arguing that effective disaster resilience requires not

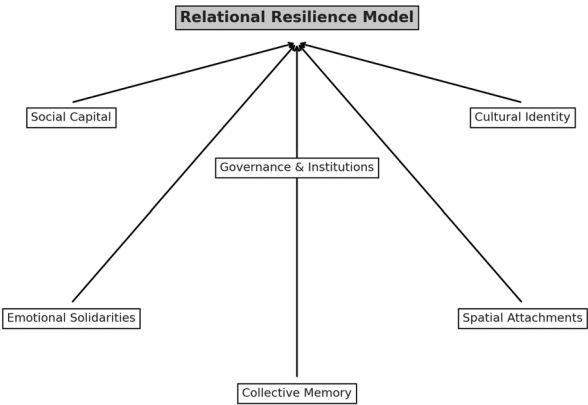


Figure 4. Relational model of disaster resilience.

only policy and planning but also the cultivation of everyday social relations, trust, and shared meaning.

In summary, the Relational Resilience Model (Figure 4) calls for a paradigmatic shift in disaster management, from a top-down, technocratic approach to a community-grounded, sociologically informed model that prioritizes relational interdependence, cultural context, and the collective agency of affected communities.

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Author contributions

Designing of the study: First Author, Second Author, Third Author, Fourth Author, Fifth Author. Literature research: First Author, Second Author, Third Author, Fourth Author, Fifth Author. Fieldwork, collection/compilation of data: First Author, Second Author, Third Author, Fourth Author, Fifth Author. Processing/analysis of data: Fourth Author, Fifth Author, Sixth Author. Preparation of figures/tables/software: Fourth Author, Fifth Author, Sixth Author. Interpretation of findings: Fourth Author, Fifth Author, Sixth Author. Writing, editing and checking of manuscript: First Author, Second Author, Third Author, Fourth Author, Fifth Author, Sixth Author.

Ethics statement

Official permission has been obtained from the Scientific Research and Publication Ethics Committee of Hatay Mustafa Kemal University to collect research data and conduct interviews with participants (Ethics Committee Approval No: 14/07/2023 5–21).

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