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The Impact of Earthquake Disasters on Work Life Sustainability: Reflections from Antakya

Deprem Felaketlerinin İş Yaşamı Sürdürülebilirliği Üzerindeki Etkisi: Antakya'dan Yansımalar

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Abstract

This study examines the impact of earthquakes on the sustainability of working life, focusing on the economic survival strategies of earthquake survivors. Conducted through qualitative research in 2024 in the Antakya district of Hatay province in Türkiye, the study aims to understand the working conditions, daily life challenges, and the methods employed by survivors to overcome these difficulties. Disasters can exert adverse effects on social, economic, cultural, and political structures. Earthquakes, in particular, cause extensive devastation resulting in substantial losses, such as loss of life, property damage, displacement, and infrastructure destruction. Within this context, the primary objective of this research is to explore sustainability in work life under the conditions of earthquakes. The research examines the financial survival strategies of earthquake survivors, their experiences of continuity and discontinuity in their work life, their vulnerabilities and the implications of these conditions on household relationships and future

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prospects. Furthermore, the study aims to comprehend the overall experiences and emotions associated with individuals' work and daily life conditions. The study reveals that social and economic security are crucial for sustaining daily life, enhancing cultural resilience after an earthquake, and addressing the material and emotional devastation experienced by survivors.

Keywords: *disaster, earthquake, vulnerability, sustainability, financial resilience*

Öz

Bu çalışma, depremedelerin ekonomik hayatta kalma stratejilerine odaklanarak depremlerin çalışma hayatının sürdürülebilirliği üzerindeki etkilerini incelemektedir. 2024 yılında Türkiye'nin Hatay ilinin Antakya ilçesinde nitel araştırma yöntemiyle gerçekleştirilen çalışma bu kapsamda depremedelerin çalışma koşullarını, günlük yaşam zorluklarını ve bu zorlukların üstesinden gelmek için kullandıkları yöntemleri anlamayı amaçlamaktadır. Afetler, sosyal, ekonomik, kültürel ve politik yapılar üzerinde olumsuz etkiler yaratabilirler. Özellikle depremler, can kaybı, mal kaybı, yerinden edilme ve altyapı yıkımı gibi büyük kayıplara yol açarak geniş çaplı yıkımlara neden olurlar. Bu bağlamda, araştırmanın temel amacı, deprem koşullarındaki çalışma hayatının sürdürülebilirliğini araştırmaktır. Çalışma, depremedelerin finansal hayatta kalma stratejilerini, çalışma hayatlarındaki süreklilik ve kopuş deneyimlerini, kırılganlıklarını ve bu koşulların hane içi ilişkiler ve geleceğe dair beklentiler üzerindeki etkilerini incelemektedir. Ayrıca, çalışma, bireylerin iş ve günlük yaşam koşullarıyla ilgili genel deneyimlerini ve duygularını anlamayı hedeflemektedir. Çalışma, sosyal ve ekonomik güvenliğin, deprem sonrasında günlük yaşamın sürdürülmesi, kültürel direncin güçlendirilmesi ve hayatta kalanların maddi ve duygusal yıkımla başa çıkmasında önemli olduğunu ortaya koymaktadır.

Anahtar sözcükler: *afet, deprem, kırılganlık, sürdürülebilirlik, finansal dayanıklılık*

Introduction

Disasters occur frequently worldwide, causing substantial physical, economic, and social losses on affected populations. In contemporary Türkiye, the increasing frequency and severity of natural disasters-exacerbated by factors such as climate change and urbanization-have increased the vulnerability of at-risk individuals. Earthquakes rank among the most destructive and pervasive natural disasters, imparting profound and lasting impacts on human societies. Severe earthquakes can lead to significant loss of life, property damage, displacement, and disruption of infrastructure and communication networks. Consequently, the economic systems of affected cities may be severely compromised or even collapse, posing substantial threats to the national economy.

Frequently, earthquakes lead to infrastructure disruptions, the collapse of workplaces in residential areas, increased distance between homes and workplaces, road damage, relocation of businesses and workers to other regions, reduced employment opportunities, and significant declines in public transportation, all of which contribute to worsening

economic conditions. Understanding the multifaceted impacts of earthquakes requires not only engineering and environmental analyses but also an in-depth exploration of the human experiences and socio-economic consequences that follow these natural disasters. Ethnography, with its immersive and holistic approach, is essential for revealing the nuanced ways in which communities perceive, respond to, and recover from earthquakes. Through documenting personal narratives, community practices, and local knowledge, ethnographic research offers invaluable insights into the cultural, social, and economic fabric of affected areas. By concentrating, for example, on the economic dimension, ethnography enables researchers to capture the immediate and long-term financial repercussions of earthquakes on individuals, households, communities, as well as the challenges of economic recovery.

Türkiye has encountered numerous catastrophic earthquakes throughout its history. Most recently, the Kahramanmaraş-Antakya centred earthquake on 6 February 2023, caused substantial material and emotional devastation. It precipitated various detrimental effects on workplaces and employees, resulting in significant disruptions to working life and city economy. Besides, it led to loss of life, injuries, and significant losses of workforce, business capital, and resources, all of which affected production and service activities, and consequently, business continuity and inflicted damage upon workplace infrastructures, rendering buildings unusable and severely affecting production facilities, thereby adversely impacting business operations. As such, the earthquake posed threats to the continuity of livelihoods for many individuals and created economic hardship and poverty. As a result, the threats to livelihoods raise critical questions about the conditions and efforts of individuals managing their enterprises – both as business owners and employees – which have not received a thorough examination. In particular, the impacts on business continuity and employment sustainability have largely remained underexplored.

Given the extensive economic repercussions of earthquakes, ethnographic insights are essential to discover how socio-economic status, access to resources, and institutional support can influence communities' capabilities to rebuild themselves and thrive in the post-disaster period. These insights help formulate effective disaster response strategies that are sensitive to the realities of those most affected by earthquakes. Awareness of micro-level impacts cultivates empathy and strengthens disaster management strategies. Social scientists engaged in earthquake ethnographies have a significant responsibility to contribute to inclusive disaster mitigation and risk reduction policies.

This study aims to examine the sustainability of work activity following the earthquake in Antakya, Hatay province through personal accounts of the survivors. Personal narratives play a crucial role in disaster recovery, offering valuable insights into the emotional and practical challenges faced by affected individuals. Although the earthquake did not leave me with personal and material damage, it profoundly affected me as a local inhabitant as I saw the loss of my hometown, close relatives and friends. I believe that documenting the victims' lived experiences is essential for enhancing academic discussions in disaster studies. This approach ensures that recovery efforts directly address the specific needs of affected populations, fostering more equitable and sustainable outcomes.

Methodology

Earthquake-based disasters affect the physical, social, emotional, and economic conditions of society in a multidimensional manner. The earthquakes in Antakya have led to significant losses and transformations. Understanding individuals' conditions, emotions, and expectations requires a comprehensive perspective. As Merriam states, "the fundamental characteristic of qualitative research is that individuals construct reality in interaction with their social worlds" (2009: 22). Therefore, qualitative research methods enable access to detailed information and examination of social processes within socio-cultural contexts (Neuman, 2020; Creswell, 2013).

For the present study, I employed in-depth interviews and participant observation as data collection techniques and focused on the experiences of individuals affected by the February 2023 earthquakes, who lived in Hatay and worked in Antakya. I conducted both face-to-face and online semi-structured interviews with 15 open-ended questions. Following ethical protocols, I anonymized the participants' names. I gathered data from 20 participants, including 9 women and 11 men aged 20 to 60, selected through purposive sampling on a voluntary basis. I used snowball sampling, with initial participants referring others who met the study's criteria. Additionally, I visited shops and workplaces in Antakya, engaging directly with business owners, employees, and others in their work environments. This approach allowed me to identify a diverse group of participants and gain richer, context-specific data by understanding their experiences in real-life setting. The sample encompasses a people with diverse range of income levels, education levels, age, and occupation. 11 participants are high school graduates, while 3 have completed primary school and 6 hold university degrees. The Table 1 presents their characteristics, including gender, age, and education.

Table 1. Participant Profiles

Participant	Gender	Age	Education	Participant	Gender	Age	Education
P1	M	60	University	P11	F	38	University
P2	M	58	High S.	P12	F	43	Primary S.
P3	F	48	High S.	P13	M	58	University
P4	F	50	Primary S.	P14	F	50	High S.
P5	M	38	High S.	P15	F	51	High S.
P6	M	48	High S.	P16	M	58	University
P7	F	35	High S.	P17	M	55	High S.
P8	M	40	Primary S.	P18	M	40	University
P9	M	35	High S.	P19	M	20	University
P10	F	45	High S.	P20	F	30	High S.

The sample consisted of two groups. The first group included individuals who strived to sustain their work in Antakya, ranging from business owners coming from a higher income stratum—often referred to as middle- or upper-class individuals—to small business owners representing lower-income strata, such as shopkeepers and sales workers. The second group included individuals whose work intersects with the marketplace (*çarşı*), the city centre in Antakya. This group comprised those who had to relocate their businesses to surrounding areas, the unemployed, retirees, and individuals who quit working to care for their relatives. I evaluated the sustainability of their livelihoods and the factors influencing their efforts from a multidimensional perspective, using a grounded theory framework. To enhance validity and reliability, I ensured participant engagement, crosschecked the data, and examined diverse perspectives (Merriam, 2009; Neuman, 2020). Using interpretative approaches, which involve understanding participants' experiences and perspectives within their specific contexts, I analysed the data through the lens of global and national earthquake-related literature to provide a deeper, contextually grounded understanding.

While a broader range of socio-economic groups could provide additional insights into post-earthquake working life in Antakya, focusing on small business owners and financially vulnerable populations is essential for assessing work-life sustainability. Large enterprises in Antakya, such as those in furniture and footwear manufacturing, have managed to sustain their operations relatively better by relocating to safer zones. However, even with these adaptations, they still face labour shortages and financial setbacks. Small businesses encounter greater post-disaster challenges due to limited resources and poor infrastructure, significantly affecting their overall resilience. Therefore, this study sheds light on the immediate and lasting impacts on economically vulnerable groups, emphasizing the need for customized recovery policies.

Theoretical Framework

Disasters are often described as “dramatic” due to their “disruptive nature and the intense emotions” they evoke (Xu & Lo, 2022: 3). The emotional, social, and economic devastation caused by the earthquakes in the Kahramanmaraş-Antakya region left families grieving, disrupted social cohesion, and dismantled livelihoods. Entire neighbourhoods were reduced to rubble, forcing survivors into temporary shelters with inadequate resources, psychological trauma, and uncertain futures. These challenges reveal the need for strategies that address social and economic vulnerabilities while fostering resilience and sustainability. Exploring the interconnected dimensions of vulnerability, recovery, culture, resilience, sustainability, and the revival of business life provides a comprehensive framework for tracing the transition from devastation to recovery.

Resilience and Sustainability in Disaster Recovery

Understanding vulnerability is critical to recognizing why certain populations are disproportionately affected by disasters. The United Nations Office for Disaster Risk Reduction (UNDRR, 2023) defines vulnerability as conditions shaped by physical, social,

economic, and environmental factors that heighten risk. This framework highlights the importance of culturally attuned approaches to disaster risk reduction. The devastating effects of the 6 February 2023 Maraş-Hatay earthquakes reaffirm the need to address vulnerability in disaster preparedness.

These events, alongside the enduring trauma of the 1999 Marmara earthquake and ongoing perceptions of risk, heightened societal anxiety about future earthquakes. They also exposed systemic shortcomings in resource allocation, community inclusion, and infrastructure resilience. A lack of institutional coordination and insufficient integration of local needs further exacerbated vulnerabilities, as seen in the aftermath of the disaster. As Altıntaş (2012) and Özer (2017) argue, post-disaster urban transformation projects have sometimes exacerbated societal mistrust and heightened perceptions of insecurity.

Social constructs significantly influence disaster resilience and vulnerability. Resilience, as a key outcome of sustainable practices, emphasizes a community's ability to adapt and recover. Kendra, Clay & Gill (2018) describe resilience as both a "transformative recovery" and an "adaptive force." Social capital, rooted in cultural practices, strengthens resilience by fostering cooperation, resource sharing, and adaptability during crises (Aguirre et al., 2005; Novikova et al., 2023; Aldrich, 2012). As defined by Putnam (1995) and Woolcock (2001), social capital operates through bonding within close-knit groups, bridging diverse communities, and linking individuals to institutional resources, such as government agencies or NGOs, facilitating collective action and sustainable recovery. Cooke and Kothari (2001) emphasize that participatory development, by involving local communities, ensures context-specific and inclusive recovery strategies, fostering long-term empowerment.

In this context, sustainability plays a vital role in mitigating disaster risks by integrating the "environment, economy and society" (Theis & Tomkin, 2015: 6). By addressing the underlying social, economic, and environmental vulnerabilities, sustainable development enhances disaster resilience. Stable infrastructure and equitable urban planning are critical components of this approach, ensuring that risk-reduction measures are both effective and culturally relevant. To reduce vulnerabilities and build resilience, Türkiye must adopt a coordinated and inclusive disaster management strategy that leverages social capital, fosters trust and collaboration, and incorporates international best practices to guide the development of resilient and sustainable communities.

Rebuilding Business Life After Earthquakes

Earthquakes severely disrupt societies and economies, profoundly impacting business continuity and working life. Effective recovery requires a human-centred approach to public management that prioritizes resilience and collaboration, safeguards critical infrastructure, promotes resource sharing, and fosters disaster awareness and risk reduction (Webb, 2018; Şengün, 2007; Varol & Kırıkçaya, 2017; Erkan et al., 2015). Antakya's historical infrastructure and multi-ethnic composition require inclusive strategies for sustainable economic recovery.

Sustainable business practices play a crucial role in post-disaster recovery. Griggs et al. (2013) emphasize that aligning with Sustainable Development Goals (SDGs) fosters economic stability and environmental health, addressing present challenges and preventing future vulnerabilities. Small and medium enterprises (SMEs), which constitute 99.7% of Turkish businesses (TÜİK, 2022), face significant post-disaster challenges such as limited financing. Tierney (2007: 294) identifies this as the “liability of smallness,” making SMEs particularly vulnerable, a reality echoed in studies on flood disasters in Bangladesh (Sharif, 2021) and Malaysia (Taib & Jaharuddin, 2019).

Effective recovery frameworks integrate risk management, resilience awareness, and collaborative efforts. Public-private initiatives, community-driven programs, and partnerships with NGOs enhance stability (Pisano, 2012; Peeling, 2003). Global models like the Sendai Framework’s “Build Back Better” approach emphasize the importance of resilient infrastructure (Cosson, 2020: 2). Inclusive development, fostering social connections, equal legal protections, and strong social networks (Narayan, 1999), is essential for achieving sustainable recovery. By building resilient businesses and fostering inclusive practices, communities can secure long-term financial and social stability. This need for inclusive development and resilient recovery is especially critical in Antakya, a city located on Türkiye’s southern border with Syria, where economic instability, regional disparities, and the aftermath of the earthquake are compounded by the complexities of the ongoing Syrian conflict. Building on the theoretical framework of resilience, sustainability, and business recovery in disaster settings, the following findings explore the real-world challenges faced by Antakya’s workforce and business community in the aftermath of the disaster.

Work life and business adaptation in Antakya post-earthquake

Similar to other cities in Türkiye, small businesses play a crucial role in Antakya’s economy. However, both small businesses and larger enterprises in industrial areas have been severely impacted by the earthquake (Ministry of Industry and Technology of the Republic of Türkiye, 2023), with many reporting staff shortages and reduced operational capacity due to outward migration (Yeni Şafak, 2023). This migration has put them at a competitive disadvantage compared to businesses in other cities. Despite these challenges, larger enterprises have recovered more quickly than small-scale businesses, either by establishing new industrial zones or leveraging their available capital. Fatih (P1) explained the situation of large-scale enterprises as follows:

In Antakya, there used to be several key industrial sectors, such as shoemaking, furniture, and leatherwork. Now, some of the shoe factories have moved to Reyhanlı (a town neighbouring Antakya) because their manufacturing places were completely destroyed. Currently, unskilled Syrian labourers constitute the largest workforce here. The biggest challenge right now is the lack of skilled and qualified craftsmen and personnel for existing businesses. For instance, a skilled shoemaker in Istanbul earns up to 50,000 TL in salary. The shoemaking industry has mostly left Antakya. It used

to be the first in Türkiye, but now it's fourth or fifth (...) The furniture sector is more fortunate; it has moved to a new furniture site in a village of Antakya (...) The primary export industry here is fresh fruits and vegetables. Exporters haven't faced major issues; their warehouses have suffered minor damage. However, there are few farmers left who produce. There is a problem with production. Agricultural workers are also in a difficult situation. If they have no home or land, how can they stay and work here? (P1).

Highly educated individuals and professionals from the middle or upper classes have faced significant losses due to the earthquake. Some have relocated to other cities, while others strive to continue their work with reduced budgets. The extent of financial loss varies widely, influencing their resilience strategies based on the capital they have retained. Narratives by Kazım (P10) and Ali (P17) illustrate this variability through their experiences:

My architecture firm was operating in Antakya, but the main office and commercial branch structures were severely damaged and demolished. This disruption led to the complete loss of our work environment. Since the office has moved to the homes of the remaining partners, we now only accept design projects and have exited from construction and material sales. Our revenue has plummeted from 50 million TL to just 200,000 TL. (P10)

While Kazım's story illustrates the significant financial loss faced by many professionals, Ali's experience demonstrates how family support can be essential in managing such difficulties.

I had a three-story shop in the industrial area selling machine spare parts, but it collapsed. My house was demolished too (...) My spouse and I hurried to collect the remaining parts until sunset. We loaded them into a truck and transported them to a warehouse in our village. Thankfully, my father-in-law and sister-in-law helped me rent a truck. Had I waited for the bank's assistance, I would have lost everything—most of my inventory was already stolen. Then, I purchased a container to establish a temporary workspace. I had some capital, which allowed me to construct a steel-structured building to replace the shop. I managed to continue my business; of course, we have a significant loss. (Ali, P17)

Renderings by Kazım and Ali exemplify the drastic downsizing of their businesses due to the losses they incurred during the earthquake. Despite these hardships, Ali's access to family support networks signifies the importance of family-based resilience. Both financial capital and bonding capital—whether they are short- or long-term—strengthen economic resilience. His relatives' assistance with tasks like transporting goods illustrates how bonding capital can bolster economic recovery. In contrast, Aslı, despite having similar social bonds, describes the complete financial loss in the following manner:

We had a well-functioning hotel that I ran with my son. We lost everything; our business and home are gone. I had some savings, so I bought a new house with what remained. Now, I only have my pension, which we live on (...) My relatives also lost their homes, so we all live together. (Aslı, P14)

The survivors I interviewed revealed that while some participants strived to maintain their professions, others, unable to find work, either stayed at home or opted for retirement. Additionally, many earthquake survivors with financial means sought refuge in other provinces during the winter months to minimize the health risks posed by post-earthquake conditions and to find solutions for their children's educational needs. Those who could secure essential jobs stayed in the region, while many skilled workers found living and working conditions inadequate and thus, they decided to relocate themselves in other locations.

Some business owners had no choice but to relocate their enterprises to nearby towns. For example, Hülya (P15), who operated a water shop with her husband, explained, "After the earthquake destroyed our shop and home in Antakya, we had to build a storage unit in my garden and move our business there." Similarly, Lale (P20), who assists her husband in a textile shop, opened an alternative shop under her house, which also allows her to watch over her children. On the other hand, Taner (P16), who once operated a small art studio in Antakya, shared that he no longer has the means to open another studio. Ümit (P18), a grocer and unemployed teacher, reopened a small grocery store just outside Antakya but says, "If I pay the excessive rent they are asking, based on the rate charged to a nearby chain supermarket, I won't make any profit and might be forced to close down."

Amid the ruined city, only the damaged but resilient principal marketplace remains. It consists of three crosscutting narrow streets. Some business owners managed to pay rent or repair their shops to continue operating. Some sales assistants had been in such positions before the earthquake, while some had started working for others as sales assistants after losing their shops. The market traders described the near impossibility of finding workers for skilled jobs and how challenging it was – and still is – to keep their businesses running as well as the many obstacles they continually face. Ahmet explains the challenges of reopening the market in unsafe conditions, illustrating how artisans are relying on their own efforts to persevere.

This market is the only one still standing. There was no institutional initiative to reopen it. People with capital said, 'We will open our shops here.' At first, there was no security here. Every evening, we would gather our goods and leave. For example, spices were more expensive than jewellery stores. Now, there are police and guards at night, making it safer. This happened through the strength of the community, the unity of the merchants, and their determination. Of course, there was fear. You restart by borrowing money. Will you be able to repay that debt? You could end up embarrassed, lose what you have, or accumulate significant debt. The merchants took a big risk to rebuild the market. (Lale, P2)

Ahmet strongly emphasized that the shopping district (*çarşı*, the traditional marketplace, where local goods, services, and trades are exchanged) "evoke continuity." This continuity, for him, became crucial for the sustainability of urban life, as the historic market serves as the engine for the complex socio-cultural dynamics of Antakya. It is embedded in the daily lives of working people with

dynamic business interactions, promoting interethnic and intercultural exchange among diverse communities (Doğruel, 2005).

However, many residents living outside the city faces economic challenges that compel them to seek work in urban businesses. They often reside in sturdy houses, container cities, or tents, striving to make a living through various jobs in others' businesses. Participants reveal how precarious the continuity of work life is under disaster conditions, with job security always uncertain. This precariousness undermines efforts to start new businesses and threatens the sustainability of existing ones. For example, Canan (P4) describes the difficulties of transitioning from running her own business to being unemployed.

Previously, my brother and I had rented a kebab shop near the city centre, which we were running together. I had invested my savings, which I accumulated from baking and selling bread in the *tandır* [a traditional oven], into that shop. With the earthquake, the shop was destroyed, my capital disappeared. My brother then opened a new shop in Defne town, and I assisted him with it. Unfortunately, this kebab shop also did not succeed; it was insufficient to cover both our living expenses and the rent. He closed it down and started setting up a stall on the sidewalk to sell fruits and vegetables. Now, I am unemployed and have no savings left. (P4)

This financial instability extends beyond economic loss, as it often triggers psychological distress. Mustafa (P5) emphasizes the stress of working for others after losing his own business:

Our house collapsed in the earthquake. I was trapped under the rubble for three days (...) I had a shoe shop in the market, but it was destroyed, and I couldn't salvage any goods from it. There was also looting (...). Psychologically, it affected me deeply because I used to enjoy working in my own store, earning money. Working for others stresses you out inevitably; if customers don't come, you stress, thinking the shop might not make money, or there might be misunderstandings. (P3)

These economic challenges contribute to broader social tensions, particularly within families. Scholars such as Kalaycıoğlu (2018), Şengün (2007), Guo & Matsuda (2023), and Hewitt (2016) have observed that disasters reshape living arrangements and influence gender norms, exacerbating stress and uncertainty. Mustafa (P5) connects these issues to family dynamics:

Divorce has increased. Everyone is stressed, everyone is experiencing issues with their spouses, and privacy is non-existent, causing frequent conflicts. Children's discipline is deteriorating. Living in close quarters without choosing neighbours impacts their education negatively. (P5)

Similarly, Seval (P3) emphasizes the psychological toll of living in temporary housing:

Living in containers or tents without work leads to stress, tearing families apart. Economic struggles and helplessness increase domestic conflicts and violence against women. (P3)

These testimonies reveal the interconnectedness of economic hardships, psychological stress, and shifting family dynamics. Participants' experiences demonstrate how disaster conditions challenge traditional gender roles and social cohesion, intensifying domestic tensions. As economic deprivation persists, these pressures manifest in heightened family conflicts, sometimes escalating into fatal violence. Such findings emphasize the urgent need for targeted interventions to address both immediate survival needs and long-term social stability in post-disaster recovery efforts.

In these constrained circumstances, both men and women face difficulties in fulfilling the expectations imposed by gender norms. Here, the economic deprivation that prevents them from improving their living conditions is significant. Everyone needs help, but no one can provide it as each is dealing with their own issues. The focus is on short-term survival needs, but these conditions are not changing. When people lose hope, they inevitably direct their stress towards one another. Incidents of fatal violence began to make headlines in container cities (Milliyet, 2023).

Earthquake survivors face a relentless battle for survival amidst immense challenges such as trauma, loss of life, illnesses, caregiving responsibilities, and emotional burdens. They endure both material and spiritual devastation in the aftermath of the earthquake, as evidenced by disaster studies (Murakami, Takebayashi, Ono, Kubota & Tsubokura, 2020; Nagai, Hikichi, Shiba, Kondo, Kawachi and Aida, 2022). Economic hardship exacerbates their anxieties and deepens their sense of helplessness as also reflected in Kenan's (P8) narrative:

We had to leave immediately after the earthquake. Winter conditions were harsh, and the children had school. First, we tried to rescue my mother and brothers from the rubble. We saved my injured brother and his wife alive but unfortunately retrieved my deceased mother and nieces three days later from under the rubble. Before the earthquake, I ran a school bus service in winter and sold ice cream in summers (...) We moved to Ankara and shared a house with my other siblings, three families together. I couldn't find work there. When summer came, we returned home. My house had minor damage. In summer, I resumed making ice cream. That's how we are trying to get by. But it's not enough, of course (...) We are in a state of financial and emotional collapse. (P8)

After any disaster – as well in the earthquake in Antakya – “it is not only the buildings and infrastructure that collapse, but also the economic system” (Şengün, 2007: 49). In the wake of the earthquake, survivors are battling immense challenges. Many strive to keep their businesses or jobs afloat despite these obstacles. Yet, the resilience demonstrated by those in the ‘Çarşı’ marketplace illustrates the broader determination of city dwellers to rebuild while grappling with ongoing struggles for economic stability and emotional recovery. In this context, the necessity for institutional support for the ‘awareness of resilience’ among city dwellers (McManus et al., 2008) within structured resilience-building frameworks becomes evident. To facilitate this recovery and enhance the well-being of earthquake victims, it is essential to address financial constraints and develop adaptive resilience measures that consider evolving socioeconomic and natural conditions (Ishiwatari, 2020; Tachiya, 2015). Therefore, comprehensive planning and support are vital for the recovery of affected communities.

Challenges of sustainability in work life

Natural disasters strikingly reinforce vulnerabilities among marginalized populations like the poor, minority groups, women, and the elderly, exacerbating existing social inequalities (Aldrich, 2010; Bacon & Hobson, 2014; Novikova et al., 2023). Access to economic security remains unequal, even in affluent countries, stratifying vulnerability (Tierney et al., 2001). Pre-existing economic insecurities intensify the financial impacts of disasters, particularly in economically unstable regions (Duignan, 2013; Hobson, 2014). In Türkiye, where a significant portion of the population is already impoverished and experiencing economic stagnation, Antakya's economic decline as a result of the Syrian war has further exacerbated this situation.

An exploration of post-earthquake sustainability in working life encompasses various dimensions, including workplace recovery, crisis management, business strategies for damage mitigation, infrastructure improvements, social solidarity, and support for business reconstruction from family, institutions, and NGOs, all of which impact continuity. This inquiry also investigates whether the earthquake disaster instilled feelings of uncertainty and anxiety in participants' professional lives, as well as the financial threats they faced in the aftermath. Antakya's infrastructure and superstructure issues contribute to significant uncertainties in future planning, compounding economic devastation and stress. Challenges in sustaining work arise from regional policy uncertainty, including "reserved area policies," which create fear of potential future losses of homes or businesses due to unpredictable policies in the near or distant future. According to the decision made by the Council of Ministers under the Law No. 7471 on the Transformation of Areas at Risk of Disasters, published in the Official Gazette dated 9 November 9 2023 and numbered 32364, areas determined by the Ministry can be designated as 'reserved construction areas' (Official Gazette, 2023). Following this decision, people worry about the fate of their homes and shops that were demolished or destroyed by the earthquake, as well as their remaining properties.

Seval (P3) and her husband Mahmut (P6) encountered significant challenges after the earthquake, including housing instability, financial hardships, and health issues. They relocated multiple times, faced difficulties finding work, and coped with emotional hardships. They express their experiences in the following manner:

Our house was heavily damaged in the earthquake, we could hardly get out of the house, the wall fell on my daughter's foot, her leg was broken. We moved to Mersin. We looked for a job there for a few months. I babysat for a while. My husband was sick, he has a chronic disease. Then we came back here and stayed in a tent with my father for 3 months. I asked for a container, but nothing came of it (...) We lost a lot. It had been only 4 months since we bought our new house, it is now demolished. We had sold our old house and car for that. (...) My daughter and son are in university. At first, they worked and supported us for a few months. We rented a house outside Antakya." (P3)

Seval (P3) also emphasizes the vital role of family solidarity as an essential element of social capital, which has become crucial for getting by—even if it means being hosted in a tent. We also see how roles shift over time, with children stepping up to support their parents as they struggle

to cope with the earthquake's impact. Both Seval and Yasemin (P7) discuss their efforts to restart their businesses amid uncertainty and economic challenges, facing high rent, inconsistent income, and damaged infrastructure that undermine their financial stability. Though they have set up temporary workspaces, they continue to grapple with these financial pressures and difficult working conditions. Though they have set up temporary workspaces, they continue to grapple with financial pressures and difficult working conditions. As one shop owner describes:

At first, there was nowhere to shop, and dust was everywhere. We cleaned what we could save. We had opened the shop only three months before the earthquake. The shop owner was helpful with the rent, but some doubled it. Everything operates on debt. I buy supplies with debt. We are under economic pressure. Unemployment is high, and nobody wants to hire. Every day, many job seekers ask if there is a job. When it rains, the shop floods, and the furniture gets damaged. Although the shop is heavily damaged, we continue to work. A huge piece of debris fell on my husband. I spent 40-50 thousand liras on renovations. You cannot plan for anything; we don't know what will happen tomorrow. Now they are telling us the shops will all be demolished. What will I do if they evict me tomorrow? Everything is uncertain. (P3)

Despite setting up temporary workspaces, business owners continue to face severe economic and operational challenges. As one respondent describes the struggle to maintain stability is compounded by financial pressures, uncertainty about the future, and the ongoing need to rebuild amidst the devastation.

My large store was destroyed. I spent the winter in Mersin, setting up stalls at fairs. I recently rented a small shop here, but the rent consumes my entire income; it's not sustainable. I stay at my grandparents' place to save on rent. My husband, normally a shoemaker, took up electrical and painting jobs. There's no time to rest. I salvaged what I could from my old shop's debris; merchants feared bringing in new stock. With Eid approaching and assurances that the market wouldn't collapse, we cautiously resumed stocking. My husband insists on leaving; he says there's no future here. It's like the feeling of routine is somewhat lost. I'm doing this today, but I don't know what will happen tomorrow. (P7)

Seval's (P3) and Yasemin's (P7) experiences illustrate how sustainability is threatened not only by physical loss but also by prolonged economic and psychological strain. Yasemin's remark about having "no time to rest" indicates a shift from career continuity to simply "getting by" day by day. Yet, despite constant pressures, both women demonstrate remarkable resilience, pushing forward amid instability. On the other hand, Yasemin describes the collaborative spirit among shopkeepers, emphasizing how their support and cooperation enable them to offer a diverse range of products, allowing customers to fulfil all their needs in one visit. This collaboration enhances the resilience of the marketplace. Ultimately, their stories reveal the larger economic struggles that families face as they work to rebuild and adapt in such a precarious environment:

My shop's upper floor leaks in the rain, causing significant damage. Merchants here support each other, rebuilding independently (...) They'll temporarily move the

merchants who own a shop at the Long Market (*Uzun Çarşı*) to new container shops built at the head of the bridge this place might be demolished within a year. Yet, container shops aren't viable for business. In our market all merchants benefit when customers buy various goods. For example, when a customer comes to buy cheese, they may also end up buying shoes if they need them. (P7)

Although signs of community solidarity and mutual aid are present, as Yasemin notes, not everyone benefits from them. These efforts remain insufficient in the absence of institutional support, as container shops and temporary solutions fail to offer long-term stability. Adnan (P9) is unable to rent or purchase new items because the earthquake demolished his business. Once a shop owner, he now works as a street vendor, selling inexpensive products like plastic children's toys, insulated bands, and razors from a dust-covered stall. When I asked him about his future plans, he expressed little hope for any expectations. Given these challenging financial conditions, living in an apartment with his married siblings, he feels that envisioning a future that includes marriage is simply out of reach.

I used to have a shop in a passage in the market. Three months after the earthquake, the building had not yet collapsed, so we took out the goods. Now, I sell toys and items at the stand (...) I'm single, staying in a house outside Antakya with my siblings, trying to help my family (...) There's no recovery, business is very slow, it's bad (...) I can't buy new goods to replace the old ones. When the shops collapsed, I couldn't get a new one. The shop was mine. They built prefab shops here, but the shoe sellers from the long market are coming here. There's no plan for us. Everyone is trying to find individual solutions. The rich went to Adana and Mersin; those with no assets continue to struggle here. (P9)

The earthquake devastated both wealthy and poor people indiscriminately. Interestingly, while some old, seemingly fragile buildings withstood the impact, newer and more opulent buildings – supposedly built to code – collapsed. However, as many scholars highlight (Aldrich, 2010; Bacon and Hobson, 2014; Tierney et al., 2001), post-disaster recovery mechanisms tend to disadvantage the less privileged.

Many people who are impoverished or who have lost their assets find it difficult to recover without support. They lack bridging, bonding, or linking capital (Bourdieu & Wacquant, 1992; Putnam, 1995; Woolcock, 2001) essential for effective assistance and in this regard, institutional support appears notably insufficient. In Adnan's (P9) case, since his shop was in a building outside the traditional market, he remains without guidance or hope regarding what will happen to the structure that housed his business. He had an asset that has now vanished, with little prospect of restoration.

Many youths in Antakya echo this sentiment, expressing a sense of disillusionment. Sinan (P19) a university student, remarked that “most young people are seriously feeling lost in Antakya. The environment is very suffocating. The city's old social structure is gone.” He explained that many young people in the centre of Antakya have also found little job availability, with those employed turning to neighbouring towns that are in better condition and seeking work outside the city. He expressed the change in Antakya: “In the past, there were many butchers and spice shops in the market, and a lot of friends

were apprenticing in cafes and restaurants... but now they are gone... if you get a job somewhere, you will earn below the minimum wage, and you won't have insurance." This statement reflects the stark reality many young people face, feeling trapped in a stagnant environment and unable to find meaningful employment. The departure of youth from the city reflects broader economic challenges and a potential shift in the labour force due to delays in implementing lasting sustainability measures, which gradually may alter the demographic landscape.

Nurhan's words (P12) also exemplify this struggle, facing financial and emotional hardship and limited opportunities, much like many other residents in the aftermath of the disaster. She returned to her family's house after divorcing and moved into the basement because she couldn't afford to reopen her hair salon under current economic conditions. During the earthquake, her house collapsed, trapping her only brother, uncle, and cousins under the rubble along with her salon income and car. Now, she has set up a makeshift canopy between two tents in a neighbour's empty yard, earning money by doing women's hair outdoors and carrying jerry cans of water for washing. Because of these hardships, her mother suffers from a serious heart condition and an infection that has swollen her leg like a drum, while her sister battles cancer. Nurhan (P12) needs a supportive living environment and financial support to continue her work, including persuading her mother – who refuses treatment and wishes to die – to seek medical care, and frequently taking her sister to Adana for a check-up.

Nazan's (P10) story exemplifies the struggles of a single-parent family striving to stay afloat amidst challenging circumstances. Like Adnan and many other city dwellers, she appears to have little hope for the future beyond surviving day-to-day. This situation not only affects her but also has significant implications for her daughters' futures. The risk of intergenerational poverty is evident, as the cycle of deprivation could extend to the next generation, impacting many urban residents facing similar challenges.

I reluctantly commute to work. I used to leave home eagerly. Now everyone around lives in tents, leading unhappy lives. Life has become difficult for women in my vicinity, affecting everyone's mental health. Before the earthquake, I lost my husband to a heart attack. I am fighting alongside my daughters; one is in high school, the other works as a hairdresser (...) We strive to stay on our feet. Job loss and fear of not finding work have always been present. Unemployment is a reality. No one is hiring anymore; everyone is on their own. Now, employers need to work themselves to be able to hire others, and it's crucial to understand them too. I live in a rented place. It's very difficult to make ends meet (...) Can I afford to educate my daughter? Only time will tell. We leave it to fate. (P10)

Nazan (P10) continues by expressing how challenging working conditions can be for women. The collapse of public transportation systems, along with long distances, loss of relatives, inadequate wages, and a lack of job opportunities, significantly discourages women from working in the market, where the number of female workers is typically limited to just five or six.

I'm leaving work late. I can't find transportation. Initially, there was none; now, it runs every hour until 7, but I can't catch it, so I walk back and forth. It takes about half an hour. The road is empty. Naturally, I'm scared, but there's nothing I can do. It's exhausting; I'm on my feet all day. (P10)

On the other hand, the inability of women to leave behind their dependent children, elderly, and sick parents, even when unemployed and without money, poses challenges to sustaining their jobs. This shift has notably increased household chores and caregiving burdens for women, creating a double disadvantage for those seeking employment.

I used to work in a restaurant, uninsured, in the kitchen. When everything fell apart in Antakya, there were no jobs left (...) I can't leave; someone suggested working in a resort town. My brothers took their families to other cities. I stayed behind. I can't leave my mother. It's suffocating economically and psychologically. Maybe if my old workplace reopens, I can work part-time." (Nuray, R15)

This personal account reflects the deep emotional and economic struggles faced by women, particularly in balancing caregiving responsibilities with the need to earn a livelihood. Similarly, other participants describe how the combined challenges of caregiving and economic instability have forced them into difficult situations.

I am a primary school teacher with two children. My husband works in Saudi Arabia. While my house didn't collapse, my parents' and in-laws' did, so they now live with me (...) I couldn't secure a government school position. Before the earthquake, I was earning money through private lessons. Now, there's no demand for lessons. I'm tied at home caring for children, elderly, and a disabled sibling. If I don't care for them, who will? (...) My husband planned to return from Saudi Arabia after saving, but now it's impossible; we live apart. Many families face this situation, with women and children here while husbands work abroad. Survival depends on foreign sources of income, but feeding and caring for everyone is challenging. (P11)

The participants have identified various barriers to sustainability both in their professional life and daily life. The collapsed infrastructure, the absence of the city centre, the insufficient transportation for linking towns to the city centre, the failure to fairly reconstruct the market and the connecting towns. These barriers combined with people's traumas, illnesses, and poverty dim hopes and the sustainability of the future. The residents' volatile feelings are exacerbated by the lack of clarity on city restructuring, as Fatih (P1), a merchant carrying on a family business, points out:

Previously, within a 1 km radius of the market centre, there were around 5,000 shops. Now, they don't exceed 200-250, some are badly damaged or operating in containers (...) There is tremendous sense of uncertainty about our future. With all buildings collapsed, these 'reserve areas' could become significant social problems, potentially disrupting Hatay's future peace as people try to profit from properties inherited from their ancestors. There are concerns over the collapse of 150-200 shops in the market which poses a major threat. This means I am abandoning 85% of the development plans; let's develop 50-60%, let's evacuate. (P1)

Participants reported discontent with their current working and living conditions and crisis management, emphasizing uncertainty about the future and their consequent feelings of hopelessness and unhappiness, all of which are indicative of diminished well-being. Uncertainty keeps people in the liminal situations often observed after earthquakes, diminishing city dwellers' resilience.

Where will my shop be in the new restructuring? What will the cost be? Will they offer the same place, or will it be somewhere else? How will I make a living? I don't know the answers to these questions. Suppose I retire with an 11,000 TL pension. There is a lot of uncertainty. Decisions change very frequently (...) Only historical sites like Habibi Neccar, the Orthodox Church, and the Great Mosque are somehow being granted zoning. Even the worst program is better than no program. If we could see a way forward, we wouldn't experience this hopelessness and stress. It also disrupts our living standards. May God help and assist us. (P1)

Later, in another conversation, Fatih (P1) noted that the situation had evolved, with authorities showing greater determination to repair the marketplace, though it could take up to five years, while rebuilding the entire city might require at least a decade. However, he emphasized ongoing uncertainty over who would regain ownership or acquire new shops in the process and noted that, Despite repeated inquiries from shop owners, the authorities kept the current zoning plan undisclosed and did not share it with citizens in an objective or transparent manner.

The experiences of Antakya residents illustrate how both financial resilience (Ishiwatari, 2020) and community cooperation are essential yet strained amidst post-disaster uncertainties. Residents face increased vulnerabilities as bureaucratic delays and infrastructure challenges impact their livelihoods; this signifies the necessity for resilience efforts in the built environment to be closely aligned with community-centred support system (Webb, 2018; Griggs, et al., 2013). These systemic failures in planning have intensified individual burdens and left residents disempowered without a clear recovery framework. "To further democratize access to information" (Kasapoğlu, 2024: 21) transparency is essential.

Comprehensive regional planning is essential for improving disaster management effectiveness and resilience (Özden, 2007). The plan must adapt to accommodate diverse regional conditions, and the specific risks associated with earthquakes. While volunteers— including scientists, architects, and urban planners—are working within NGOs to rebuild Antakya authentically, it remains uncertain whether the government will choose to cooperate with them. Financial and social capital, as well as targeted employment assistance, are pivotal for fostering post-disaster resilience (Murakami et al., 2020; Aldrich, 2010), as financial constraints and instability significantly affect survivor well-being (Tachiya, 2015; Marmot & Wilkinson, 2005). Addressing these systemic gaps is crucial to restoring health, safety, and resilience, emphasizing that the people of Antakya urgently need attention and care.

Conclusion

This study explored the financial survival strategies and work-life challenges faced by earthquake survivors in Antakya, emphasizing how these struggles reshape urban demographics and household dynamics. Post-disaster uncertainty, exacerbated by human actions, deepens social strain and emotional hardship. Effective recovery efforts must address both the economic and social dimensions of these challenges, focusing not only on physical reconstruction but also on rebuilding social cohesion and cultural resilience.

Financial disruption also has a gender dimension, as women face additional hardships, such as forced exits from the workforce and increased caregiving responsibilities. Recovery measures should prioritize the creation of diversified income opportunities, job retraining programs, and facilitating women's reintegration into the workforce. Strengthening infrastructure and expanding family care support systems will help stabilize households and contribute to economic revitalization.

The mass migration of approximately 100,000 people from Antakya has exacerbated already inadequate living conditions, severely affecting key economic sectors like small businesses and agriculture. Rebuilding public spaces, particularly traditional markets, is essential for restoring community cohesion and supporting economic activity. Equally important is addressing the risks of expropriation faced by residents in "reserved construction zones," ensuring long-term sustainability and preventing further displacement.

A sustainable recovery for Antakya must balance rebuilding physical infrastructure with preserving the city's cultural identity, which is deeply rooted in its multi-ethnic diversity and historic marketplaces. Traditional marketplace has long served as venues for ethnic communities to connect, strengthening their bonding and bridging capital, expanding networks, and promoting inter-ethnic cohabitation. In this context, restoring these spaces requires policies that protect heritage, reinforce community ties, and encourage intercultural exchange. Such efforts will not only safeguard civic cohesion but also support vulnerable populations and promote social equity.

Recovery efforts must involve an inclusive process with active local participation and transparent government communication. Inspired by successful models like Japan, a comprehensive framework should streamline efforts, prioritize small business revitalization through loans and grants, and emphasize earthquake-resistant infrastructure. Additionally, policies that encourage displaced residents to return and rebuild their homes and businesses will foster regeneration.

Gender-sensitive policies are crucial for ensuring women's active participation in recovery. Providing women with access to vocational training, entrepreneurship programs, and diversified income opportunities will enable their involvement in the rebuilding process. Additionally, addressing the educational needs of children and youth, as well as the social and medical challenges faced by the elderly, should be prioritized. Offering childcare facilities and flexible training options will help women re-enter the workforce while balancing caregiving responsibilities.

Future research should examine the long-term effects of recovery interventions on social cohesion, urban regeneration, and economic resilience. Key areas of exploration include migration's impact on community rebuilding, the effectiveness of gender-specific recovery policies, and the integration of cultural heritage preservation into urban planning. Interdisciplinary collaboration among urban planners, economists, social scientists, and public health experts will be crucial for developing integrated recovery strategies.

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References

- Aguirre, B. E., Dynes, R. R., Kendra, J. & Connel, R. (2005). Institutional resilience and disaster planning for new hazards: insights from hospitals. *Journal of Homeland Security and Emergency Management*, 2(2), Article 1. <https://doi.org/10.2202/1547-7355.1156>
- Aldrich, D. P. (2010). The power of people: Social capital's role in recovery from the 1995 Kobe earthquake. *Natural Hazards*, 56(3), 595–611. <https://doi.org/10.1007/s11069-010-9492-5>
- Aldrich, D. P. (2012). *Building resilience: Social capital in post-disaster recovery*. University of Chicago Press.
- Bacon, P. & Hobson, C. (Eds.). (2014). *Human security comes home: Responding to Japan's triple disaster*. Routledge, pp. 1–22.
- Bourdieu, P. & Wacquant, L. J. D. (1992). *An invitation to reflexive sociology*. University of Chicago Press.
- Xu, B. & Lo, M. M. (2022). Toward a cultural sociology of disaster: Introduction. *Poetics*, 93, 101682. <https://doi.org/10.1016/j.poetic.2022.101682>
- Cooke, B., & Kothari, U. (Eds.). (2001). *Participation: The new tyranny?*. Zed Books.
- Cosson, C. (2020). "Build back better": Between public policy and local implementation, the challenges in Tohoku's reconstruction. *Architecture and Urban Planning*, 16(1), 1–4. <https://doi.org/10.2478/aup-2020-0001>
- Cresswell, T. (2013). *Geographic thought: a critical introduction*. Wiley-Blackwell.

- Doğruel, F. (2005). *Hatay'da çoketnili ortak yaşam kültürü: "İnsanîyetleri benzer..."*. İletişim Yayınları.
- Duignan, R. (2013). Has 11 March 2011 ushered in a new sense of fiscal responsibility? In D. Al-Badri and G. Berends (Eds.), *After the Great East Japan Earthquake: Political and policy change in post-Fukushima Japan* (pp. 67-88). NIAS Press.
- Erkan, B. B., Karancı, A. N., Kalaycıoğlu, S., Özden, A. T., Çalışkan, I., & Özakşehir, G. (2015). From emergency response to recovery: Multiple impacts and lessons learned from the 2011 Van earthquakes. *Earthquake Spectra*, 31(1), 527-540.
- Griggs, D., Stafford-Smith, M., Gaffney, O., Rockström, J., Öhman, M. C., Shyamsundar, P. & Noble, I. (2013). Sustainable development goals for people and planet. *Nature*, 495(7441), 305-307. <https://doi.org/10.1038/495305a>
- Guo, Y. & Matsuda, T. (2023). Study on the multi-criteria location decision of wide-area distribution centers in pre-disaster: Case of an earthquake in the Kanto district of Japan. *Asian Transport Studies*. <https://doi.org/10.22260/ATS.2023.01.01>
- Hewitt, K. (2016). Foreword. In E. Enarson and B. Pease (Eds.) *Men, masculinities and disaster* Routledge, pp. xvii-xxi.
- Ishiwatari, M. (2020). Evolving concept of resilience: Soft measures of flood risk management in Japan. *Connections QJ*, 19(3), 99-107. <https://doi.org/10.11610/Connections.19.3.07>
- Kasapoğlu, A. (2024). Analysis of the 6 February 2023 Turkey earthquake as a challenge in disaster sociology under the guidance of Bruno Latour and Terrestrial. *Journal of Infrastructure, Policy and Development*, 8(8), 6382. <https://doi.org/10.24294/jipd.v8i8.6382>
- Kendra, J. M., Clay, L. A. & Gill, K. B. (2018). Resilience and disasters: Social capital in disaster research. In H. Rodriguez, W. Donner & J. E. Trainor (Eds.) *Handbook of disaster research*. Springer, pp: 87-108.
- Marmot, M. & Wilkinson, R. (Eds.). (2005). *Social determinants of health*. Oxford University Press.
- McManus, S., Seville, E., Vargo, J. & Brunson, D. (2008). Facilitated process for improving organizational resilience. *Natural Hazards Review*, 9(2), 81-90. [https://doi.org/10.1061/\(ASCE\)1527-6988\(2008\)9:2\(81\)](https://doi.org/10.1061/(ASCE)1527-6988(2008)9:2(81))
- Merriam, S. B. (2009). *Qualitative research: a guide to design and implementation*. John Wiley & Sons.
- Meyer, M. A. (2018). Social capital in disaster research. In H. Rodriguez, W. Donner and J. E. Trainor (Eds.), *Handbook of disaster research* Springer. pp: 263-288.
- Milliyet. (7 November 2023). Konteyner kentte korkunç olay: Kayınbiraderini öldürüp eşini ağır yaraladı. <https://www.milliyet.com.tr/gundem/konteyner-kentte-korkunc-olay-kayinbiraderini-oldurup-esini-agir-yaraladi-7042566>
- Ministry of Industry and Technology of the Republic of Türkiye. (2023). *Deprem bölgelerinde sanayi yeniden canlanacak*. <https://www.sanayi.gov.tr/medya/haber/deprem-bolgelerinde-sanayi-yeniden-canlanacak>
- Murakami, M., Takebayashi, Y., Ono, K., Kubota, A. & Tsubokura, M. (2020). The decision to return home and well-being after the Fukushima disaster. *International Journal of Disaster Risk Reduction*, 47, 101538. <https://doi.org/10.1016/j.ijdr.2020.101538>
- Nagai, M., Hikichi, H., Shiba, K., Kondo, K., Kawachi, I. and Aida, J. (2022). Long-term trend in the association between disaster damage and happiness before and after the Great East Japan Earthquake. *International Journal of Public Health*, 67, 1604901. <https://doi.org/10.3389/ijph.2022.1604901>

- Narayan, D. (1999). Bonds and bridges: social capital and poverty (*Policy Research Working Paper 2167*). The World Bank. <https://doi.org/10.1596/0-8213-4526-1>
- Neuman, W. L. (2014). *Social research methods: qualitative and quantitative approaches*. Pearson.
- Novikova, N., Gerster, J and Hartwig, M. G. (Eds.). (2023). *Japan's triple disaster: pursuing justice after the Great East Japan earthquake, tsunami, and Fukushima nuclear accident*. Routledge.
- Official Gazette. (2023). 32364. <https://www.resmigazete.gov.tr/eskiler/2023/11/20231109.htm>
- Özden, A. T. (2007). Constituting a sustainable community after disasters: The role of architect(ure). *Alam Bina*, 3(9), 1-17.
- Perry, R. W., Lindell, M. K. & Tierney, K. J. (Eds.). (2001). *Facing the unexpected: Disaster preparedness and response in the United States*. Joseph Henry Press.
- Pelling, M. (2003). *The vulnerability of cities: natural disasters and social resilience*. Earthscan Publications Ltd.
- Pisano, U. (2012). Resilience and sustainable development: Theory of resilience, systems thinking, and adaptive governance. *ESDN Quarterly Report*, 26, 1-20.
- Putnam, R. D. (1995). Bowling alone: America's declining social capital. *Journal of Democracy*, 6(1), 65–78. <https://doi.org/10.1353/jod.1995.0002>
- Sharif, M. B. A. (2021). The impact of natural disasters on small and medium enterprises (SME) in Bangladesh. *Open Access Library Journal*, 8(6), 1-15. <https://doi.org/10.4236/oalib.1107303>
- Şengün, H. (2007). *Afet yönetimi sistemi ve Marmara depremi sonrasında yaşanan sorunlar* [Unpublished Doctoral Thesis] Ankara University.
- Tachiya, H. (2015). Dealing with disasters of unprecedented magnitude: The local government's tribulations and the road to reconstruction. In *Agricultural and forestry reconstruction after the Great East Japan earthquake: Tsunami, radioactive, and reputational damages* (pp. 3-18). The Graduate School of Global Environmental Studies, Kyoto University.
- Taib, Z. M. & Jaharuddin, N. S. (2019). Disaster preparedness and community resilience: A systematic literature review. *International Journal of Disaster Recovery and Business Continuity*, 10(1), 171-182. <https://doi.org/10.21467/ijdrbc.10.1.171-182>
- Theis, T. & Tomkin, J. (2015). *Sustainability: A comprehensive foundation*. OpenStax CNX
- Tierney, K. J., Lindell, M. K. & Perry, R. W. (2001). *Facing the unexpected: Disaster preparedness and response in the United States*. Joseph Henry Press.
- Tierney, K. (2007). Businesses and disasters: Vulnerability, impacts, and recovery. In H. Rodriguez, E. L. Quarantelli, R. Russell and R. Dynes (Eds.) *Handbook of disaster research*. Springer, pp. 275–296.
- UNDRR. (2023). GAR special report 2023: Mapping resilience for the sustainable development goal. United Nations Office for Disaster Risk Reduction. <https://www.undrr.org/gar/gar2023-special-report>
- Varol, N., & Kırkkaya, E. B. (2017). Afetler karşısında toplum dirençliliği [Community resilience in the face of disasters]. *Dirençlilik Dergisi*, 1(1), 1–9.
- Webb, G. R. (2018). The cultural turn in disaster research: Understanding resilience and vulnerability through the lens of culture. In H. Rodriguez, W. Donner and J. E. Trainor (Eds.), *Handbook of disaster research*. Springer, pp. 109–122.

- Woolcock, M. (2001). The place of social capital in understanding social and economic outcomes. *Canadian Journal of Policy Research*, 2(1), 11-17.
- Woolcock, M. & Narayan, D. (2000). Social capital: Implications for development theory, research, and policy. *The World Bank Research Observer*, 15(2), 225-249. <https://doi.org/10.1093/wbro/15.2.225>
- Yeni Şafak (6 November 2023). *Fabrikalar ayakta ama göç yıkabilir: Antakya OSB'deki işletmeler düşük kapasiteyle üretime başladı*. <https://www.yenisafak.com/gundem/fabrikalar-ayakta-ama-goc-yikabilir-antakya-osbdeki-isletmeler-dusuk-kapasiteyle-uretime-basladi-4510976>.



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