



Received: 23 /09/2025
Review: 01/11/2025
Accepted: 11 /12/2025

Journal of Electronic Commerce Management
Vol(1), 1-8.
ISSN: 1234-5678

Explaining The Social Dimensions Of Resilience In Promoting Citizens' Interactions With An Emphasis On Urban Open Spaces Ahvaz Metropolis

Fatemeh Ghareh Chamani ^{*1}, Maryam Ghaderi ²

1*- PhD Candidate in Urban Planning, Islamic Azad University, Ahvaz Branch, Iran

2- ICT Engineer, Islamic Azad University, Yadegar-e-Imam Branch, Tehran, Iran.

ARTICLE INFO

Keywords:

Resilience, Social interactions, Urban space, Resilient city, Ahvaz metropolis

ABSTRACT

The metropolis of Ahvaz, due to its geographical location, specific climatic conditions, and socio-economic challenges, is exposed to numerous pressures and stresses. In this context, social resilience, as the capacity of a community to adapt, learn, and recover in the face of these challenges, plays a key role in improving quality of life and enhancing citizen interactions. This study aims to explain the social dimensions of resilience and its role in strengthening social interactions in urban open spaces of Ahvaz. The research method adopted is mixed (qualitative-quantitative). The findings indicate that dimensions such as social capital, citizen participation, social cohesion, sense of place attachment, and collective creativity are key components of social resilience, which, if properly planned within urban open spaces, can act as catalysts for positive and sustainable citizen interactions. Finally, strategies are presented to operationalize these dimensions in the design and management of public spaces in Ahvaz.

How to Cite: Ghareh Chamani, F., & Ghaderi, M. (2025.). Explaining the social dimensions of resilience in promoting citizens' interactions with an emphasis on urban open spaces: Ahvaz metropolis. Journal of Electronic Commerce Management, 1(3), 1–8.

doi: [bumara. 3.2.11235564.354846](https://doi.org/10.3211235564.354846)



Electronic Commerce Management in Development and Evolution is licensed under a Creative Commons Attribution-Non Commercial 4.0 International License.

© Authors

* Corresponding Author: f.gharehchamani@iau.ir

1. Introduction and Problem Statement

Resilience refers to returning to an initial equilibrium or reaching a higher level of balance in a threatening situation, and thus provides successful adaptation in life. It should be noted that positive adaptation may both be considered an outcome of resilience and, as an antecedent, lead to higher levels of resilience. Resilience is not always a system of returning to the past or equilibrium; rather, it involves the possibility of adaptation and transformation in the existing situation, as well as the possibility of survival and changes in the future. Explaining resilience against threats, in fact, involves understanding how social, economic, institutional, political, and executive capacities, as well as urban communities, influence the enhancement of resilience and identifying the various dimensions of resilience in cities. In this regard, the type of perspective toward the concept of resilience and the way it is analyzed, on the one hand, plays a key role in understanding the resilience of the current situation and its causes, and on the other hand, fundamentally affects policies and actions related to risk reduction and how to *مواجهه* with it. Therefore, explaining the relationship between social resilience and individuals' interactions in urban open spaces, and increasing its effects, considering the outcomes it will entail and the emphasis this analysis places on the social dimension of resilience, is of great importance. In fact, the aim of this approach is to express the social dimensions of resilience in order to increase citizens' interactions in urban open spaces and to strengthen citizens' presence in these spaces. In general, resilience is considered as a combination of common disciplines such as sustainable ecosystems, psychology, engineering infrastructure, behavioral sciences, and disaster risk reduction (Amiri Fahlani, 2018). Community resilience is the ability to predict the risk of disasters, limit their impacts, and return to the pre-crisis condition while remaining safe, adapting, and transforming and growing when facing change. Therefore, a resilient city is one that has the capacity to tolerate and accept risks before the system collapses. The system of such a city is dynamic and adaptable. At the time of a hazard, it absorbs changes and returns again to a state of equilibrium. This city has the ability to bounce back and accept threats. These characteristics lead to a resilient city being both sustainable and dynamic (Nikmard et al., 2014). Although resilience is a relatively new term in the field of urban planning, since human nature is based on survival, the concept of resilience has always been a concern, engaging the thoughts of classical theorists such as Ibn Khaldun, Spengler, and Patrick Geddes. All of them have considered the role of social and cultural factors in urban resilience. With the emergence of modernity and in conditions where the informational city is emerging and social fragmentation is increasing daily in societies, enhancing social interactions in urban open spaces has become one of the major concerns for cities. Social resilience includes the conditions under which individuals and social groups adapt to environmental changes. In general, the capacity of social resilience is the ability of a community to return to equilibrium or respond positively to adversities (Partovi et al., 2016). Considering the physical, economic, social, and cultural differences in various urban spaces, it seems that social interactions also differ across urban areas. Therefore, this study seeks to measure these differences in various urban open spaces of the Ahvaz metropolis and, with a resilience approach, identify the key factors of social resilience in Ahvaz and provide strategies. The Ahvaz metropolis, as the administrative-political center of Khuzestan Province and the center of the southwest region of the country, with a population of over 1.3 million in 2016, has a special political and economic position, such that it accommodates about one-fourth of the urban population of Khuzestan Province. This city is located on a plain, and its climate, like other parts of Khuzestan Province, is hot. The current city of Ahvaz, located on both sides of the Karun River and along the national railway route, is relatively a newly built city constructed on the ruins of the old city. This city faces various problems. The massive migration of people from surrounding towns and villages with different customs, cultures, and social ethnicities on the one hand, and the lack of proper supervision over its physical development on the other hand, have led to the unbalanced expansion of the Ahvaz metropolis and the formation of marginal areas and informal settlements throughout it, to the extent that currently informal settlements are significantly observed in all parts of the city. Considering the various urban open spaces across the Ahvaz metropolis and the numerous problems affecting this city, such as environmental, managerial, social, economic, and other issues, this study seeks to identify key factors in enhancing social interactions in urban open spaces with a social resilience approach in the Ahvaz metropolis. Given these problems, there is a need for a comprehensive perspective and a revision of existing approaches to increase citizens' social interactions and social resilience and to anticipate it in the Ahvaz metropolis. Therefore, studying urban resilience in the Ahvaz metropolis, identifying the key factors shaping it in this city, and answering the question of how, by explaining the dimensions of social resilience, we can enhance citizens'

social interactions in urban open spaces, is essential. The Ahvaz metropolis has always faced environmental problems and crises, lack of infrastructure in this sector, and absence of coherent planning to address these disruptions and alleviate the resulting concerns. In fact, in resilience, we come to understand how social capacity influences the enhancement of resilience and flexibility and identify its various dimensions in urban open spaces. In this regard, the type of perspective toward resilience and the way it is analyzed, on the one hand, plays a key role in understanding the resilience of the current situation and its causes, and on the other hand, fundamentally affects policies and actions for risk reduction and how to deal with it. Therefore, explaining the relationship between the dimensions of social resilience against threats and reducing their effects, considering the outcomes it will entail (increasing social interactions in urban open spaces) and the emphasis this analysis places on the social dimension of resilience, is of great importance.

2. Research Background / Literature Review

- International Background:

Pamukcu Albers et al. (2023), in a study titled “Urban Resilience through Green Infrastructure”, examined urban resilience with components such as ecological, climatic, water, and social resilience, emphasizing urban green spaces in making cities resilient, and highlighting the importance of integrated management and interconnected urban systems.

Irani and Rahnamaei (2021), in a study titled “A Review of Urban Resilience: Dimensions, Components, and Approaches”, examined theoretical and research literature on urban resilience. The results indicate that the socio-ecological model of urban resilience provides a coherent and dynamic approach for studying resilience, highlighting the importance of the present study and its emphasis on social components of resilience.

Pinehart (2021), in a study titled “Resilience through Placemaking: Public Spaces in Climate Adaptation in Rotterdam”, examined urban public spaces as key components of a city and emphasized strengthening and utilizing their existing potentials to enhance resilience. The findings highlight the importance of informing and raising citizens’ awareness to improve conditions for successful and powerful placemaking in crises.

Christine Trine et al. (2020), in an article titled “Enabling Strategies and Barriers for Implementing Urban Resilience”, examined the scope of evidence and insights from empirical studies. The findings cover dimensions of urban resilience including health and well-being, economy and society, infrastructure and environment, and governance and strategy, and identify integrating risk into planning as a promising strategy across all dimensions of resilience.

Frantzeskaki (2016), in her research titled “Urban Resilience: A Concept for Co-Creating Future Cities”, examined urban resilience as a concept for integrating future cities and concluded that enhancing resilience across economic, social, cultural, psychological, and environmental dimensions leads to greater integration of cities in various disasters. This study is mostly theoretical, while field observations could significantly contribute to improving resilience.

Arnold and DeCosmo (2015), in a study titled “Building Social Resilience Capacity: Protecting and Minimizing Risks for the Most Vulnerable”, examined the structure of social resilience, security provision, and empowerment of vulnerable individuals. The results indicate that supporting community empowerment approaches, such as enhancing social capital, increasing citizen participation in risks, and understanding gender dimensions in disaster situations, are priorities. This study has focused only on social indicators and is one-dimensional.

Jabareen (2014), in his research titled “Planning the Resilient City”, discusses concepts and strategies of resilient cities, stating that increasing sustainability in the urban ecosystem, strengthening infrastructure, and enhancing social indicators, especially among urban managers, are fundamental principles for making cities resilient.

Weichselgartner and Kelman (2014), in a study titled “Geographies of Resilience: Challenges and Opportunities of a Descriptive Concept”, examined the concepts and characteristics of resilience and argue that transforming resilience from a descriptive concept into a normative agenda creates both challenges and opportunities. This article suggests that both perspectives are necessary to enhance resilience. It also states that resilience can be explained in different regions based on spatial characteristics. This study is considered one of the most important and scientific works in resilience research.

Olazabal (2012), in his research titled “Why Urban Resilience?”, addressed what resilience is and why urban resilience is necessary. He demonstrated that the modern world is increasingly urbanizing, with more than 70% of the world’s population living in urban areas, and due to the various problems arising from this

urban growth (such as the formation of informal settlements, class conflicts, spatial inequalities in access to basic services, degradation of natural systems, etc.), making cities resilient in different dimensions is an unavoidable necessity. This study is mainly theoretical and has neglected spatial experiences.

Alexander (2011), in his research titled “Resilience to Earthquakes”, presented practical suggestions for managers and planners. He states that enhancing resilience requires collective action, participation of all stakeholders, integration of urban management and planning, and a neighborhood-oriented, bottom-up approach.

Kafe (2008), in his study titled “Risk, Resilience of Environmentally Sustainable Cities”, examined security indicators in resilience and planning, and with findings on potential synergies between security and environmental issues, outlined policies related to planning, design, and engineering of the built environment.

Buckle (2006), in his article titled “Assessing Social Resilience”, examined this dimension and concluded that there is a significant relationship between place and social resilience. Furthermore, increasing awareness and participation of all stakeholders leads to enhanced resilience, particularly social resilience, in disasters across different urban areas. This study has examined only one dimension of resilience and is aligned with the present research.

- Domestic Background:

Izadbin (2020), in his study titled “Explaining the Dimensions of Social Resilience in Urban Neighborhoods”, examined social resilience using a descriptive-analytical method. The findings show that the components of trust and social cohesion are significant.

Aslani (2020), in his research titled “A Resilience Model for Enhancing and Managing Earthquake Risk at the Neighborhood Level with Emphasis on Physical and Social Dimensions”, examined resilience in urban neighborhoods as a primary priority in planning. The main objective was to present a model for evaluating and enhancing neighborhood resilience against earthquakes. The results indicate a conical model that begins with a specific goal and progresses toward a more resilient neighborhood through five stages: conceptual framework, field observation, resilience assessment, analysis and decision-making, and implementation and monitoring.

Mehrdanesh and Azadizadeh (2020), in a study titled “The Concept of Urban Resilience: Management and Future Planning of Cities”, examined the destructive consequences affecting cities and residents. The results indicate the impacts of social distancing and social participation in urban planning.

Khwarazmi et al. (2019), in an article titled “Examining the Challenges of Enhancing Urban Resilience”, identified indicators and factors affecting resilience. The results indicate that the current state of resilience in the sample neighborhoods, in social, institutional, and physical-environmental dimensions, is not satisfactory and shows a significant gap from the desirable condition.

Amiri Fahliani (2018), in his research titled “Application of Foresight Approach in Spatial Evaluation and Analysis of Social and Institutional Resilience Dimensions in Metropolitan Areas”, examined and assessed social resilience and developed scenario-based strategies. The results show that among various factors, population growth is the most influential key factor in social resilience, while security indicators and weak participation have the highest indirect effects on other variables.

Rezaei et al. (2016), in their research, explained and analyzed the concept of “resilience” and its indicators and frameworks in natural disasters. According to this study, all definitions of resilience emphasize the importance of continuing research to develop empirical operational definitions, recognizing resilience as a complex structure in which individuals, families, and organizations, depending on spatial and temporal conditions as well as the level of development and culture of a society, possess different levels of resilience. Among conceptual approaches, sustainability and recovery approaches provide a definitive understanding of resilience, considering it as an inherent characteristic that enables a community (individual or ecological system) to adapt to stressors. However, in the third approach, resilience as transformation, the distinction between social and ecological resilience becomes clear.

Zarghami et al. (2016), in a study, assessed and evaluated the level of resilience of urban neighborhoods against earthquakes. The results indicate that the central part of Zanzan city is not in a desirable condition in terms of resilience and is at a relatively below-average level. Furthermore, the social dimension has the

greatest impact on increasing resilience, while the environmental dimension has the least impact on reducing vulnerability across all studied neighborhoods.

Partovi et al. (2016), in a study, examined the relationship between urban design and social resilience in the Jolfa neighborhood of Isfahan. Based on this research, all social events occur within a geographical and spatial context; therefore, there is a close relationship between social resilience and place characteristics. The results also indicate that attention to components such as environmental quality improvement, identity, flexibility, inclusiveness, educational spaces, and social interactions in neighborhood design enhances social resilience.

Behtash et al. (2013), in a study, evaluated and analyzed the dimensions and components of resilience in the Tabriz metropolis. The results indicate that the socio-cultural, risk reduction, environmental, infrastructural, managerial, structural-physical, and economic dimensions, respectively, have the highest levels of resilience in Tabriz. However, overall values for all dimensions, as well as total resilience, tend toward vulnerability. The socio-cultural dimension shows the highest average resilience, indicating that Tabriz has the least vulnerability in this dimension.

3. Novelty and Innovation

The innovation and originality of this research lie in the application of social resilience dimensions to assess individuals' interactions in different urban open spaces. Therefore, the novelty of this research can be summarized as follows:

- Utilizing social components of urban resilience and identifying factors influencing the increased presence of users in urban open spaces
- Evaluating and analyzing urban open spaces based on social resilience dimensions to achieve an appropriate model for implementation across different urban areas
- Comparing the level of resilience in urban open spaces in different parts of the city with the optimal level of resilience for those areas

4. Research Limitations

- Lack of familiarity of the majority of the statistical population with resilience knowledge and its related concepts
- Lack of willingness among some users of the spaces to allocate sufficient time and motivation to cooperate with researchers
- Time limitations for completing the research process, writing, and defending the present study
- Costs incurred during the research process and field surveys

5. Theoretical Foundations

Cities, as centers of population concentration and activity, are constantly exposed to various shocks (such as floods and severe pollution) and slow stresses (such as unemployment and inequality). The Ahvaz metropolis, due to multiple factors including extreme heat, environmental problems caused by industry, ethnic and social challenges, and unbalanced urban development, requires a resilience-oriented approach. In this framework, resilience is not only limited to physical resistance, but its social dimension, as a platform for the community's ability to absorb disturbances, reorganize, and maintain essential functions, is vital. Urban open spaces (such as parks, sidewalks, green spaces, and squares), as arenas for interaction and encounter among citizens, have extraordinary potential to strengthen this social dimension.

Social Resilience: Social resilience is the capacity of groups or communities to cope with external stresses and disturbances resulting from social, political, or environmental changes. This concept emphasizes social capital, communication networks, collective identity, and the community's ability to learn and adapt.

Urban Open Spaces: These spaces, as public places accessible to all citizens, provide a platform for the formation of social relationships, cultural exchange, collective activities, and the strengthening of citizenship.

Citizen Interactions: Refers to the set of positive and meaningful actions and reactions that occur among citizens within the urban social context, leading to the strengthening of trust, cohesion, and social capital.

Table 1: Conceptual Definitions of Terms

Path coefficient	
Conceptual Definition: Resilience	The measurable ability of any urban system with diverse functions and its interaction mechanisms with the environment to maintain continuity and sustainability of performance at an مطلوب level during all stresses and crises after the changes caused by them
Operational Definition: Resilience	The ability of cities to respond in a timely manner and remain resilient under natural and human-made hazards, such that, while adapting and coordinating with new conditions, and without collapsing, and provided that citizens learn, they continue their urban functions more powerfully than before
Conceptual Definition: Social Interactions	Any type of relationship between two or more individuals. Social relationships, derived from individual agency, form the basis of social structure and the main focus of analysis for social scientists
Operational Definition: Social Interactions	Social interactions refer to establishing a relationship between two or more individuals that leads to a reaction between them, and this reaction is recognized by both parties
Conceptual Definition: Urban Space	Open and unbuilt areas of the surrounding environment that are observable and perceptible in cities and serve as places for movement, use, and activity of the general public and citizens, and have the capacity to accommodate all urban activities and services
Operational Definition: Urban Space	The open space existing in its surrounding environment that is legally considered part of the city is referred to as urban space

Source: Authors

6. Methodology

The present study is descriptive-analytical in terms of method and applied-developmental in terms of objective. The method of data collection is both library-based (including documents, books, articles, theses, and the use of maps of the Ahvaz metropolis) and field-based (including visits to different areas of the Ahvaz metropolis, surveys of residents, and users of urban open spaces).

The statistical population consists of individuals present in selected urban open spaces across the Ahvaz metropolis. The sample size was determined using Cochran's formula, and sampling units were selected through random sampling.

For the initial assessment of the study area, field observations and interviews with trusted local individuals and space users were conducted. Additionally, SPSS software was used for extracting statistical data, analysis, and testing.

The statistical population included citizens residing in different areas of the Ahvaz metropolis who use urban open spaces. The sample size was determined as 385 individuals using Cochran's formula, and sampling was conducted through random cluster sampling.

Two methods were used for data collection:

1. **Library Studies:** To review the literature and develop theoretical foundations.
2. **Researcher-Made Questionnaire:** A questionnaire based on social resilience dimensions (including components such as social trust, participation, cohesion, place attachment, etc.) and measuring the quality of interactions in urban open spaces was designed. The validity of the questionnaire was confirmed by experts, and its reliability was verified using Cronbach's alpha (0.87).

Quantitative data were analyzed using SPSS software and through correlation and regression tests.

7. Findings

Data analysis showed that the social dimensions of resilience have a positive and significant relationship with the enhancement of citizen interactions in urban open spaces of Ahvaz. The most important dimensions are as follows:

- **Social Capital:** This dimension, which includes components such as interpersonal trust, norms of cooperation, and social networks, showed the strongest relationship with interactions. Urban open spaces that provide opportunities for dialogue, informal meetings, and the formation of friendship groups offer a suitable platform for strengthening this dimension.
- **Citizen Participation:** Participation was identified as the active involvement of citizens in the design, management, and maintenance of public spaces. The findings indicated that in areas of Ahvaz where participatory projects (such as community-based park development with the help of residents) have been implemented, the sense of responsibility and positive interactions among residents have significantly increased.
- **Social Cohesion and Solidarity:** This dimension becomes particularly evident in مواجهه with common challenges (such as dust storms or extreme heat). Urban open spaces that function as collective shelters or resource distribution centers during crises can strengthen solidarity and the sense of belonging to a unified community.
- **Sense of Place Attachment:** Creating emotional attachment to a place through meaningful design (using cultural elements of Khuzestan, public arts, and collective activities based on local traditions) leads citizens to feel responsible toward the space and other users, thereby deepening their interactions.
- **Collective Creativity and Innovation:** Urban open spaces can act as stimuli for collective learning and the development of local solutions to problems. For example, creating community gardens using plants adapted to the climate of Ahvaz can both enhance ecological resilience and provide a platform for interaction and knowledge exchange among citizens.

8. Conclusion and Recommendations

The Ahvaz metropolis faces unique challenges that have made social resilience a necessity. The findings of this research show that urban open spaces are not merely physical elements but can serve as powerful tools for strengthening social foundations and enhancing citizen interactions.

To achieve this goal, the planning and design of these spaces in Ahvaz must be based on the dimensions of social resilience. Measures to improve current conditions, based on the conducted analyses, are presented below:

- **Strengthening Social Capital:** Designing spaces with appropriate urban furniture for informal gatherings, creating cafés and local kiosks in parks, and allocating spaces for voluntary activities.
- **Promoting Participation:** Establishing “local advisory councils” for public spaces with citizen involvement, implementing “participatory park development” projects, and engaging residents in the maintenance of spaces.
- **Enhancing Social Cohesion:** Planning festivals and local ceremonies (such as Nowruz and ethnic festivals) in large urban open spaces, and designing these spaces in a way that they can function as safe and cool shelters during crises (such as dust storms).
- **Creating a Sense of Place Attachment:** Using design and artistic elements inspired by the culture and history of Khuzestan (such as woven patterns and local music), naming spaces after local figures, and creating “memorial gardens” for collective events.
- **Encouraging Collective Creativity:** Allocating walls for graffiti art with positive social themes, creating “community-based gardens” for cultivating climate-adapted crops, and organizing local markets for handmade products.

Ultimately, it can be concluded that social resilience in Ahvaz is not an option but a fundamental strategy for urban sustainability. Investment in urban open spaces as a platform for achieving this resilience can lead to the formation of a cohesive, active, and empowered community capable of maintaining and enhancing the quality of interactions and collective life when facing any challenge.

References

- Pourahmad, Ahmad; Kamandari, Mina; and Habibi, Keyumars. (2021). Analysis of social resilience in worn-out urban fabrics (Case study: Ain Do neighborhood, Ahvaz). *Urban and Regional Planning Studies*, 2(4), 1–24.
- Rezvani, Mohammadreza; and Shayan, Siavash. (2019). Measuring the level of social resilience in urban neighborhoods (Case study: District 4 of Ahvaz Municipality). *Geography and Urban Space Development*, 6(2), 1–20.

- Ziyari, Keramatollah; Mardani, Marzieh; and Asgari, Ali. (2020). An analysis of the role of public spaces in enhancing social resilience of cities (Case study: Shiraz). *Environmental Planning*, 13(51), 1–29.
- Sharifzadegan, Mohammad Hossein; and Ali-Hosseini, Seyed Mehdi. (2018). Designing urban resilience strategies against environmental crises with emphasis on the Ahvaz metropolis. *Applied Research in Geographical Sciences*, 18(50), 71–92.
- Ghaderi, Mohammad; and Tolaei, Simin. (2017). Measuring social capital components and their relationship with social resilience in urban neighborhoods (Case study: Naziabad neighborhood, Tehran). *Urban Sociological Studies*, 7(24), 1–30.
- Habibi, Seyed Mohsen; and Maqsoudi, Maliheh. (2013). *Public Space and Collective Life*. Tehran: University of Tehran Press.
- Madanipour, Ali. (2014). *Public and Private Spaces: The City in the Mirror of Social Life*. Translated by Farshad Nourian. Tehran: ICT Organization Press, Tehran Municipality.
- Navidnia, Mansour; and Pourkhabaz, Hojjat. (2021). Analysis of the role of urban parks in enhancing citizens' social interactions (Case study: Dowlat Park, Ahvaz). *Environmental Science and Technology*, 23(8), 1–14.
-
- Aldrich, D. P. (2012). *Building Resilience: Social Capital in Post-Disaster Recovery*. University of Chicago Press.
- Cutter, S. L., Barnes, L., Berry, M., Burton, C., Evans, E., Tate, E., & Webb, J. (2008). A place-based model for understanding community resilience to natural disasters. *Global Environmental Change*, 18(4), 598-606.
- Keck, M., & Sakdapolrak, P. (2013). What is social resilience? Lessons learned and ways forward. *Erdkunde*, 67(1), 5-19.
- Magis, K. (2010). Community resilience: An indicator of social sustainability. *Society and Natural Resources*, 23(5), 401-416.
- Norris, F. H., Stevens, S. P., Pfefferbaum, B., Wyche, K. F., & Pfefferbaum, R. L. (2008). Community resilience as a metaphor, theory, set of capacities, and strategy for disaster readiness. *American Journal of Community Psychology*, 41(1-2), 127-150.
- Carmona, M., Heath, T., Oc, T., & Tiesdell, S. (2010). *Public Places-Urban Spaces: The Dimensions of Urban Design*. Routledge.
- Gehl, J. (2011). *Life Between Buildings: Using Public Space*. Island Press.
- Jacobs, J. (1961). *The Death and Life of Great American Cities*. Random House.
- Leyden, K. M. (2003). Social capital and the built environment: The importance of walkable neighborhoods. *American Journal of Public Health*, 93(9), 1546-1551.
- Oldenburg, R. (1999). *The Great Good Place: Cafés, Coffee Shops, Bookstores, Bars, Hair Salons, and Other Hangouts at the Heart of a Community*. Marlowe & Company.
- Al-Mohannadi, A. S., Furlan, R., & Grosvald, M. (2022). The role of urban design in enhancing community resilience to climate change: The case of Doha, Qatar. *Urban Science*, 6(1), 12.
- Sharifi, A., & Yamagata, Y. (2016). Principles and criteria for assessing urban energy resilience: A literature review. *Renewable and Sustainable Energy Reviews*, 60, 1654-1677.
- Yigitcanlar, T., & Teriman, S. (2015). Rethinking sustainable urban development: Towards an integrated planning and development process. *International Journal of Environmental Science and Technology*, 12(1), 341-352.

