

Principles of Urban Public Spaces Design based on the Social Trust Model and the Enhancement of Social Interaction

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ABSTRACT: Considering the effects of public urban spaces on social interaction and participation, this study aimed to provide guidelines for designing public urban spaces to enhance social interaction and trust in urban spaces. In this research, a quantitative-qualitative research method is applied. Furthermore, the Delphi method was utilized for data collection to construct a content table and questionnaires. Randomized cluster sampling was implemented. The data underwent evaluation using SPSS, employing R factor analysis to generate an analytical model in Amos. The research findings suggest that physical attributes of the space, encompassing sociability, spatial diversity, flexibility, physical comfort, social trust and interaction, pedestrian accessibility, ease of navigation, and psychological comfort, significantly influence alterations in social interaction and trust within public urban spaces. The results demonstrate that social, physical, design, and psychological environmental characteristics in urban spaces establish the requisite conditions for enhancing socialization and pedestrian access, thereby fostering trust and social participation.

Keywords: Public open spaces, Public spaces, Social Interaction, Social trust.

INTRODUCTION

"As communal areas that facilitate interaction and social engagement, public spaces reflect the ethos and values of a community (Carmona et al., 2010). Functional and well-designed public spaces are indispensable to urban centers and the quality of urban living; outstanding public spaces often characterize prominent cities. The role of these spaces has transformed over time, shaped by the impacts of industrial and technological progress, which have modified patterns of access and engagement (Ghel, 2010). Notwithstanding these shifts, public spaces remain critical to social cohesion, encompassing a range of settings from ordinary street junctions to grand urban plazas and even providing tranquil respites from the hectic pace of urban life (Ghel, 2010). The conventional town square has undergone adaptation in its function and patterns of interaction, with thoroughfares, parks, and plazas now accommodating a diverse array of public requirements. The concept once labeled a "non-place" in the 1990s (Auge, 1995) is now acknowledged as a "new place" (Bravo & Guaralda, 2016). Since the 1980s, the consideration of public spaces has gained increasing prominence in urban planning, with a focus extending beyond mere

aesthetics to encompass a broader spectrum of factors."

"Urban planning, as a framework for urban design, is crucial for developing built environments that are aesthetically integrated, appropriately scaled, and address significant political, economic, and cultural dimensions (Madanipour, 2015). Public spaces are central to the character of the urban landscape and are integral to a city's prosperity. Consequently, investment in public spaces is vital for local administrations due to its potential to enhance the quality of life, stimulate economic activity, cultivate a sense of community and civic engagement, facilitate social exchange, and improve safety, health, overall well-being, mobility options, and ecological conditions (Andersson, 2016). Scholarly inquiry has extensively examined both the sociological (Fainstein, 2010; Stauskis & Eckardt, 2011) and socio-psychological (Bell, 2008) dimensions of public spaces, emphasizing that these spaces provide crucial settings for the development and enrichment of individuals and communities (Thomas, 1991)."

"A contemporary study has underscored the importance of participatory approaches to urban planning in the design of public spaces, referencing the IN-HABIT Project in Nitra, Slovakia. This initiative highlights

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the value of collaboratively designing public spaces guided by the United Nations' Sustainable Development Goals (SDGs) principles. Through the involvement of varied stakeholders, these interventions foster the creation of inclusive, sustainable, and community-oriented environments that reconcile ecological considerations with social justice, thereby converting public spaces into hubs of sustainability and community solidarity (Melichová & Hrivnák, 2025)."

Another recent review addressed integrating natural elements into urban planning to harmonize human-nature relationships. By incorporating greenery, water, and climate-sensitive designs, urban public spaces can address environmental challenges while fostering psychological well-being and social cohesion. These biophilic interventions are key strategies for promoting resilience and achieving sustainability transformations in modern cities (Harms et al., 2024).

According to one public spaces project, successful public places are characterized by key features such as providing opportunities for diverse activities, being comfortable and attractive, and offering significant social value. Accessibility refers to the visual and physical connection between a location and its surroundings, while activities highlight the need for varied, inclusive opportunities for engagement. Comfort and image are linked to factors like seating options, cleanliness, safety (Bell, 2008; Fainstein, 2010; Stauskis & Eckardt, 2011), and aesthetic appeal.

Positive interactions and shared experiences in public spaces foster a sense of community and attachment to those places. Effective urban design must address challenges like resilience, sustainable development, and climate change. Integrating natural elements like ground, greenery, water, and climate control is crucial for creating healthy and welcoming living environments (Nyka, 2019; Haupt, 2018).

Urban space is more than just a physical structure; it's a dynamic entity shaped by its citizens' actions, interactions, and activities. It should be understood as a space where social interactions and urban activities occur, fostering social life and enhancing community (Cao, Kang, 2019).

Our understanding of social interactions in public spaces often overlooks the fleeting, spontaneous encounters between strangers and acquaintances. While seemingly casual, these interactions are crucial for developing sociality and civic responsibility. By negotiating differences and accepting diverse perspectives, individuals, initially anonymous, become active participants in the social fabric. (Mehta, 2019, 27; Mehta, 2014, 56; Kohn, 2004, 9).

Through the ongoing practices of daily life, gatherings, and festivals, sustainable social interaction transforms public space into a vital arena for social connection and societal fulfillment. This public space, crucial to urban culture, fosters collective voices, shared interests, and strengthened social capital. This, in turn, cultivates civic virtues like democracy, good citizenship, civic responsibility, and the social contract (Mehta, 2014, 58; Johnson & Glover, 2013, 190; Hou, 2010, 2; Kohn, 2004, 148).

Public space, in its social essence, is a dynamic entity understood through individuals' interwoven experiences, intentions, and behaviors. The emergence of a "sense of place" – a feeling of social

and spatial belonging – arises from these interactions. This perspective highlights the importance of stable social relations, social capital, civic participation, and a shared understanding of ownership in shaping the public realm (Relf, 1976, 36; Ramlee, Omar, Yunus & Samadi, 2015, 363; Mehta, 2019, 29-31; Madden, 2010).

The interplay between public spaces and social interactions provides a scientifically grounded, quantitative basis for urban designers and policymakers in urban regeneration. Since communication and social interaction are crucial in urban open spaces and can potentially foster social trust, these spaces are ideal for building social capital (Shams Dolat Abadi et al., 2021; Brain, 2019; Mehrotra & Yammyavar, 2013).

Social capital represents the strength of relationships within a community, measured by factors like trust, reciprocity, support, and engagement. Coleman (1990) viewed social capital as aspects of social structure that enable individuals within that structure to achieve certain goals. He saw it as residing in profitable social networks and communication channels, functioning as valuable resources. Building on Coleman's work, Putnam (2000) highlighted social capital's role in fostering social solidarity and the practical benefits derived from these connections. He emphasized that social capital, encompassing the quality and quantity of social relationships within a community, impacts individual and collective efficiency. Harpham et al. (2002) further defined it as the degree of connectedness and the quality of social relationships, while Huang & Fang (2021) emphasized its contribution to trust and harmonious community relations. Su, Zhang, and Chen (2023) added that social capital encourages community participation and fosters collective consciousness.

Studies suggest a strong link between social capital (specifically, trust) and the success of urban projects. Wentink et al. (2017) and Aelbrecht (2016) highlight the need for physical spaces conducive to social interaction – meeting venues for celebrations. – to cultivate desirable social groups and increase social capital. Further research (Müller et al., 2013; Wang, 2019; Yang et al., 2011) confirms that higher public trust correlates with greater project success. This is particularly relevant in areas like renewable energy, where increased trust and public influence over project decisions can lead to greater acceptance (Liu et al., 2019).

Public spaces are the social spaces that enhance social life through social interactions. These spaces include multidimensional social and individual aspects and characteristics (Ryan & Raisanen, 2008). In their study, Cao and Kang (2019) analyzed patterns of public place use by individuals based on various types of social relationships. Their study found that site factors and design had no significant relationship with personal characteristics but did show differences in use patterns based on age and group size. This highlights the importance of designing public spaces tailored to different user groups and social relationships. Also, Ablitt (2020) emphasized understanding the sociology of parks as a public space. Thus, the social and cultural aspects of public spaces have a unique importance and role, demonstrating how urban spaces are integral parts of cities' open and public spaces and showcasing the nature and essence of collective life.

Physical factors that can facilitate and change social relationships act as catalysts, making urban somatic spaces dynamic. Designing

urban spaces with this in mind further encourages social activities and interactions, thereby emphasizing the stability of society and its common affairs and interests (Ijla, 2012). Consequently, it seems that somatic capital, with its spatial characteristics, can effectively enhance

the quality of capital and social trust. Social capital demonstrates a strong sense of belonging to the place and site care via the spontaneous control of public spaces, which Jane Jacobs (1961) called "eyes on the street." The lack or loss of social capital leads to the urban "individualism" theorized in the agent-based model by Robert Putnam

Table 1: Summary of research background

| Researcher | Year | Main Subject | Explanation |
|-----------------------------|-----------|--|--|
| Carmona | 2010 | the role of public spaces in cities as centers for social interaction and reflections of a society's culture | He highlights that well-designed public spaces are vital for urban life and their quality. |
| Ghel | 2010 | the changing role of public spaces due to industrial and technological revolutions | Notes that despite these significant transformations, public spaces have remained at the core of social life. These spaces can function as serene retreats or lively urban squares. |
| Auge | 1995 | reconsidering non-places | He argues that the so-called "non-places" of the 1990s have evolved into "new places," acquiring fresh significance and roles within urban environments. |
| Andereeon | 2016 | underscores the importance of investment in public spaces | Explaining that such spaces enhance the quality of life, foster social interactions, and contribute to safety, health, and environmental sustainability. |
| Thomas, Fainstein, and Bell | 2010–1991 | characteristics and functions of public spaces | State that public spaces are indispensable for enriching individual and community lives. Their success is contingent upon factors such as accessibility, diversity of activities, and comfort. |
| Nyka and Haupt | 2019–2018 | sustainable development and climate adaptation in designing public spaces | Stressing the necessity of integrating natural elements such as greenery, water, and land to address environmental challenges effectively. |
| Mehta, Kohn, and others | 2019–2004 | the role of public spaces in social interactions | Demonstrate that public spaces promote communication, foster a sense of belonging, and strengthen civic responsibility and social capital. |
| Coleman, Putnam, and others | 2023–1988 | social capital and public spaces | Asserting that social capital—comprising close social relationships, support, and participation—can be improved through suitable physical designs of public spaces. |
| Ryan and Raisanen | 2008 | the social and individual dimensions of public spaces | Highlight the multi-faceted nature of these spaces in fostering social interactions and enhancing societal cohesion. |
| Cao and Kang | 2019 | usage patterns of public spaces | Finding that the design of these spaces should cater to diverse users and groups based on varying social relationships. |
| Ablit | 2020 | the sociology of parks as public spaces | Underscores the significance of public spaces in reflecting the essence of collective life and their role in enhancing social and cultural connections. |
| Ijla | 2012 | the influence of physical factors on social interactions | In conclusion, urban design facilitating social interactions can bolster community stability and shared interests. |
| Jane Jacobs | 1961 | social capital and sense of belonging | Introduces the concept of "eyes on the street," emphasizing the importance of spontaneous care and oversight in public spaces. |
| Robert Putnam | 1988 | urban individualism | Theories that the lack or reduction of social capital contributes to the rise of urban individualism, challenging social cohesion. |
| Sun, De Backer, and Pavoni | 2020–2018 | The influence of spatial design on behavior and communication | Illustrate that the appearance and façade of public spaces significantly impact human behavior and interactions. |
| Mao et al. | 2020 | the role of open urban spaces in social growth and trust | Argue that these spaces contribute to social growth and foster trust within urban communities by facilitating effective social interactions. |
| Su, Zhang, and Chen | 2023 | The role of urban public spaces in improving social relations. | Through mutual trust and collective norms, these spaces significantly enhance social cohesion. |

(1988).

Furthermore, various studies have examined the impact of spatial form on behavior and communication. These studies sometimes focus on specific demographics, such as the elderly (Sun et al., 2020), youth (De Backer & Pavoni, 2018), or individuals with Asperger's disorder (Ryan & Raisanen, 2008). Many of these studies specifically investigated the effect of somatic form – the appearance and façade of public spaces – on human behavior, revealing that the characteristics of a public space can reciprocally influence human behavior and interactions (Mao et al., 2020). It is hypothesized that open urban spaces, acting as catalysts for social interaction, foster conditions conducive to positive social relationships. This, in turn, promotes social growth and enhances social trust among its inhabitants.

Su, Zhang, and Chen's (2023) research indicates that urban community public spaces are crucial for enhancing community relations by strengthening interpersonal trust and the reciprocity norm.

This research investigates the relationship between the physical characteristics of public spaces in the Yousef Abad neighborhood and the level of social trust, a key component of social capital. It builds on previous research highlighting the connection between these two concepts. The study aims to understand how the physical design of

public spaces influences social interactions and trust within the community. This study aims to analyze and explain how urban public spaces' physical characteristics (somatic characteristics) influence social interactions and trust among residents. It explores the impact of spatial design on community dynamics, specifically focusing on the factors detailed in Table 1, which provides the background for the research.

MATERIALS AND METHOD

This study employed a mixed-methods approach, combining quantitative and qualitative data collection and analysis. Ten professionals in architecture, urban design, and social psychology (specifically focusing on social trust and participation) were interviewed using snowball sampling until theoretical saturation was achieved. Open and axial coding were applied to analyze the interview transcripts. A questionnaire derived from the themes identified during the coding process was then developed. Finally, using SPSS software, Q factor analysis was used to analyze the questionnaire data, resulting in the identification of four distinct factors. Building on the initial analysis of professional perspectives, a second questionnaire was designed for space users (residents of Yousef Abad) using the themes

Table 2: Theoretical framework

| Steps | | process | | | |
|---|--|--|---|---|-----------------------|
| primary step | the statement of the problem | explaining the scope of the research | | | |
| | | identifying the research variables | | | |
| step one | collecting and arranging the literature review | using library documents | | | |
| | | searching the net | | | |
| | identifying the related factors and concepts to clarify the subject's scope | | open interview with the professionals | identification of 'social trust' and 'participation' concepts as an outstanding phenomenon in public urban spaces | |
| | | Delphi first round | | | |
| | | Delphi second round | closed questionnaire from professionals | | |
| step two | | | closed questionnaire from space users | | |
| | | | | | |
| designing principles corresponding to social participation and trust | | | | | |
| Finding a model to explain the relationship between social participation and trust with the corresponding design principles | | | | | |
| | | a closed questionnaire with a Likert scale (4 multiple choice) | determining the validity of the questionnaire | face validity | open and axial coding |
| step three | creating research tool | | | content validity | table of content |
| determining the reliability of the questionnaire | | | | | |
| step four | identifying the design components ((factor analysis | identifying eight significant factors | | | |
| step five | classifying the experts' views (q-factor analysis | identifying six classes of thoughts | | | |
| step six | modeling the relationship between the components of social participation and trust in public urban space | | | | |
| conducting path analysis | | | | | |

identified in the previous analysis (the table of contents). The data from this user questionnaire was analyzed using R factor analysis. The results were then compared to the findings from the Q factor analysis of the professionals' opinions. This comparison revealed eight public urban space design factors associated with increased social interaction and participation. A model depicting the relationships between these variables was subsequently developed (Table 2).

Sampling Method

For the study's second phase, the Yousef Abad neighborhood was chosen due to its varied socioeconomic profile, serving as a microcosm of Tehran's diversity. Recognized as a traditional Tehran neighborhood, Yousef Abad exhibits a comparatively low immigration rate compared to other areas. This characteristic, it was hypothesized, would lead to a higher likelihood of spontaneous social interaction within its public spaces. Furthermore, the neighborhood's historical significance and established resident base have ensured sustained attention and consideration from urban planning and local government bodies.

Using cluster sampling, the neighborhood was divided into five clusters based on socioeconomic factors, as determined by local real estate experts. These clusters were defined by the streets of Shahid Akbari (Mostofi), Ibn Sina, Asadabadi, Fathi Shaghaghi, and Ashkshahr. Residents from each cluster were then randomly selected for questioning.

Based on Cline (2005), the initial sample size calculation indicated a need for 190 respondents (5 volunteers per question x 38 questions). However, 242 residents ultimately participated in the survey. This exceeds the planned sample size.

The questionnaire's face validity was assessed using open and axial coding. Content validity was examined by reviewing the table of contents, and construct validity was determined through factor analysis. Reliability was analyzed by evaluating question consistency (employing difficulty indices, discrimination indices, and the loop method) and ultimately employing Cronbach's alpha. A reliability coefficient above 0.7 was considered acceptable. After removing

three questions, the final Cronbach's alpha reached 0.878, signifying acceptable internal consistency.

RESULTS AND DISCUSSION

After data collection, the sample size adequacy was assessed using the Kaiser-Meyer-Olkin (KMO) and Bartlett's Test of Sphericity. A Cronbach's alpha value above 0.6 suggested a sufficient sample size. To proceed with correlational analysis, the significance level of Bartlett's Test needed to be confirmed. A significance level below 0.05 ($p < 0.05$) confirmed the correlation among variables, allowing for model creation. Furthermore, a zero significance level for Bartlett's test indicated the appropriateness of factor analysis.

The analysis identified eight factors related to space user perceptions. Importantly, 60.121% of respondents' views aligned with these factors, suggesting a common understanding of the space. Conversely, 39.879% of respondents held differing or unique perspectives. Table 3 likely presents the detailed breakdown of these factors and their associated percentages of respondents.

This research investigates how various factors in public urban spaces influence social trust and interaction. The study examines the interplay between space's sociability, diversity, flexibility, physical comfort, the relationship between social trust and interaction, pedestrian accessibility, recognizability, and psychological comfort.

The research used a statistical significance test (p-value) to determine the strength of the relationships between various factors in urban spaces and social trust and interaction. A p-value less than 0.05 indicates a statistically significant relationship at the 95% confidence level, while a p-value of 0.01 suggests a 99% confidence level. The proposed model (Fig 1) posits that physical comfort, mediated by pedestrian accessibility, sociability, and spatial flexibility, influences social trust and interaction. These latter two (trust and interaction) are the dependent variables, while physical comfort is the independent variable.

This section covers the relationship between the factors in the model structure.

Table 3: Data variance after rotation of the factor analysis

| | rotation sums of squared loadings | | | | rotation sums of squared loadings | | |
|---|-----------------------------------|------------|---------------|--------------|-----------------------------------|---------------|--------------|
| | variance | cumulative | of variance % | % cumulative | cumulative variance | of variance % | % cumulative |
| 1 | 8.295 | | 23.701 | 23.701 | 3.664 | 10.468 | 10.468 |
| 2 | 2.329 | | 6.656 | 30.357 | 3.599 | 10.284 | 20.752 |
| 3 | 2.244 | | 6.410 | 36.767 | 2.283 | 8.093 | 28.845 |
| 4 | 2.168 | | 6.194 | 42.961 | 2.632 | 7.519 | 36.363 |
| 5 | 1.675 | | 4.784 | 47.745 | 2.554 | 7.297 | 43.661 |
| 6 | 1.751 | | 4.488 | 52.233 | 2.277 | 6.507 | 50.167 |
| 7 | 1.460 | | 4.171 | 56.404 | 1.904 | 5.441 | 55.608 |
| 8 | 1.301 | | 3.717 | 60.121 | 1.580 | 4.514 | 60.121 |

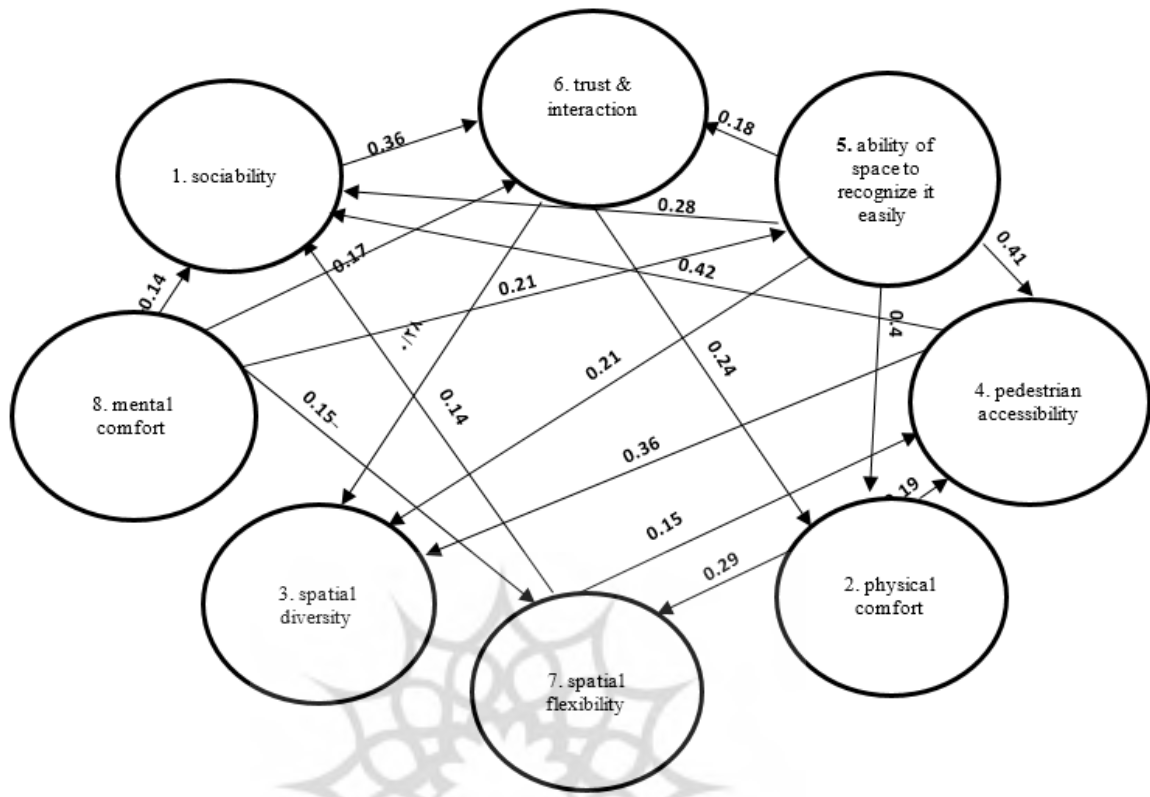


Fig 1. Final model with path coefficients *

This section discusses the type of relationships between variables and then gives a general conclusion based on the interpretation of the proposed model (Fig 1).

Physical comfort increases the possibility of social interactions and communications by encouraging people to walk through the urban environment. As a result, greater trust and social ties are created among the residents, and the improved ties and trust again affect physical comfort.

Social comfort encourages the citizens to walk in the urban environment through natural forms with free lines, different types of vegetation for visual or functional discrimination of the space or absorption of the sound energy, the visual relationship of public spaces or their adjacency with natural green space, environment readability, spatial proportionality, use of porches and porticos adjacent to open spaces, the introduction of varied natural colors and materials to the environment, the combination and interference of open and closed spaces by increasing walls with the natural spaces, the order and readability of the walls, multi-functional spaces, and creation of visual distinctions and hierarchy in the physical and functional organization of space. In other words, pedestrian accessibility concerning the

distance of the pedestrian to provide social and daily needs, safety and security, environment readability, and creation of spatial justice to take advantage of the space by people of different ages provide the conditions for forming sociable spaces.

The sociable spaces allow for the creation of participation space and trust through interesting spaces, the creation of spaces with different functions for activity at different ages, the application of multi-functional spaces with various uses, the changeability via changeable, movable, and flexible walls for space flexibility, the interaction of exclusive group spaces, the provision of the possibility of active presence, group furniture, attention to the dimensions of participatory space, and semi-open spaces like porches and balconies adjacent to open public spaces. Therefore, the cycle of participatory space and trust (Fig 2) is formed by the catalysis of pedestrian accessibility and sociability, which is developed over time.

With the mediation of "flexibility" and "sociability," the "social comfort" affects the "interaction and trust," and then, the "social comfort" itself is affected. Providing a favorable environment, "social comfort" helps spatial flexibility. The spatial flexibility influences the space's capability to create social interactions and associations,

Table 4. Direct, indirect, and total standard effects

| The relationship between two variables | | estimate | standard error | standardized total effects | standardized indirect relation* | standardized regression weights |
|--|---------------------------------------|----------|----------------|----------------------------|---------------------------------|---------------------------------|
| mental comfort | the ability to recognize space easily | .371 | .056 | .206 | .000** | .042 |
| the ability to recognize space easily | sociability | .637 | .069 | .518 | .240*** | .268 |
| the ability to recognize space easily | pedestrian accessibility | .057 | .057 | .522 | .115*** | .272 |
| the ability to recognize space easily | physical comfort | .398 | .053 | .489 | .087*** | .239 |
| the ability to recognize space easily | trust and interaction | .826 | .064 | .363 | .188** | .131 |
| mental comfort | sociability | .306 | .053 | .060- | .080** | .003 |
| mental comfort | trust and interaction | .453 | .050 | .189 | .014** | .035 |
| mental comfort | flexible spaces | .425 | .069 | .115- | .037* | .013 |
| trust and interaction | space diversity | .224 | .059 | .306 | .024*** | .093 |
| pedestrian accessibility | space diversity | .288 | .067 | .411 | .047*** | .168 |
| the ability to recognize space easily | space diversity | -.258 | .064 | .506 | .292*** | -.256 |
| physical comfort | pedestrian accessibility | .261 | .066 | .238 | .045** | .056 |
| pedestrian accessibility | sociability | .316 | .075 | .427 | .005*** | .182 |
| sociability | trust and interaction | .220 | .053 | .368 | .004*** | .135 |
| trust and interaction | physical comfort | .270 | .054 | .243 | .003*** | .059 |
| physical comfort | flexibility of space | .110 | .087 | .292 | .004*** | .085 |
| flexibility of space | pedestrian accessibility | .040 | .040 | .151 | .004** | .022 |
| P > 0.05 | | | | | | |
| *** p < 0.001 | | | | | | |
| ** p < 0.01 | | | | | | |
| * p < 0.05 | | | | | | |

which helps create social trust. The presence of social trust in a social environment helps with environmental comfort. Hence, the cycle of "spatial flexibility and interaction" (Fig 3) is formed with the mediation of "sociability" and "flexibility."

This statement suggests that the model, showing the relationships between physical comfort, participation, and trust, demonstrates how these factors act as catalysts or mediators to explain the interconnectedness of humans and their environment in physical, social, and conceptual ways. In other words, the model provides a framework for understanding how these elements influence the human experience within a built environment.

CONCLUSION

The study aimed to identify the key design principles for open public spaces, focusing on fostering social trust and enhancing interpersonal interactions. The findings suggest that incorporating social, physical, design, and psychological elements within public environments creates favorable conditions for increased sociability and pedestrian accessibility, ultimately encouraging trust and community engagement. By promoting pedestrian movement and social connectivity, these spaces facilitate interaction and participation, reinforcing social trust. Additionally, previous research highlights the influence of spatial dynamics on human behavior, interactions, and space utilization,

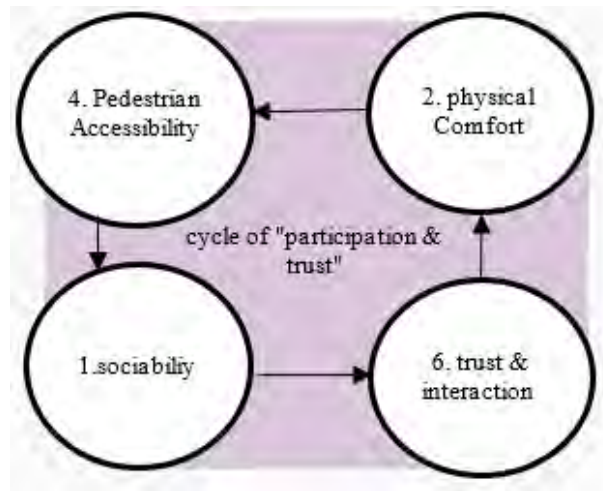


Fig 2. The relationship in the cycle of participation & trust

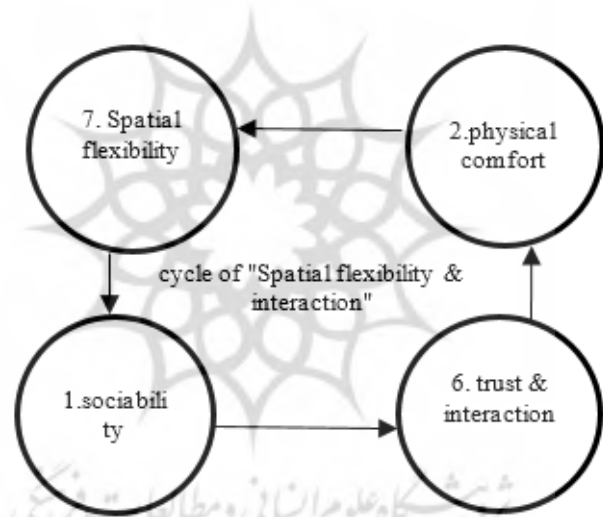


Fig 3. The Relationships in the Cycle of Spatial Flexibility & interaction

demonstrating how spatial communication can contribute to stronger community bonds and elevated social trust within public areas.

It should be noted that while these open public spaces are urban and social spaces, they are also considered physical places. They are the places for pedestrian communications, landscaping, and locations of sculptures and works of art. Therefore, an open urban environment is a conceptual product of superior art and a reflection of humane art in constructing space. Where social learning, like social trust, occurs, the mindset interacts with social and participatory space. It is also associated with cultural spaces formed through the senses of space users.

The importance of public spaces and their influence on improving the quality of urban life as the most accessible urban spaces are understood

and revealed more than ever. The findings of this research, aligned with the previous ones, can be useful for city managers and policymakers in designing and planning urban neighborhoods to increase social trust.

AUTHOR CONTRIBUTIONS

H.S. Shams was responsible for designing the experiment, analyzing and interpreting the data, and drafting the initial manuscript. K. Etemadi conducted the literature review and oversaw the manuscript's compilation. E. Parvizi contributed to the literature review, assisted in manuscript preparation, and handled the editing process.

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CONFLICT OF INTEREST

There are no conflicts of interest related to the publication of this research.

REFERENCES

- Ablitt, J. (2020). Walking in on people in parks: Demonstrating the orderliness of interactional discomfort in urban territorial negotiations. *Emotion, Space and Society*, 34, 100648. <https://doi.org/10.1016/j.emospa.2019.100648>
- Andersson, C. (2016). Public space and the new urban agenda. *The Journal of Public Space*, 1(1), 5–10.
- Auge, M. (2016). *Non-places: Introduction to an anthropology of super modernity* (J. Howe, Trans.). Verso.
- Bell, P. A. 2008. *Environmental Psychology*. Lawrence Erlbaum Associates. London.
- Brain, D. (2019). Reconstituting the urban commons: Public space, social capital and the project of urbanism. *Urban Planning*, 4 (2), 169–182. doi: 10.17645/up.v4i2.2018
- Bravo, L., & Guaralda, M. (2016). An open-access forum for discussing and advancing research about public space. *The Journal of Public Space*, 1(1), 1-4.
- Carmona, M., Tiesdell, S., Heath, T., & Oc, T. (2010). *Public places urban spaces: The dimensions of urban design* (2nd Edn). Architectural Press.
- Coleman, J. S. (1988). Social capital in the creation of human capital. *American Journal of Sociology*, 94, 95-120.
- De Backer, M., & Pavoni, A. (2018). Through thick and thin: Young people's affective geographies in Brussels' public space. *Emotion, Space and Society*, 27, 9-15. <https://doi.org/10.1016/j.emospa.2018.02.005>
- Fainstein, S. S. 2010. *The Just City*. Cornell University Press. New York.
- Forrest, R., & Kearns, A. (2001). Social cohesion, social capital, and the neighborhood. *Urban Studies*, 38(12), 2125–2143.
- Ghel, J. (2010). *Cities for people*. Island Press.
- Harms, P., Hofer, M., & Artmann, M. (2024). Planning cities with nature for sustainability transformations — A systematic review. *Urban Transformations*, 6(9), 98-112. <https://doi.org/10.1186/s42854-024-00066-2>
- Harpham, T., Grant, E., & Thomas, E. (2002). Measuring social capital within health surveys: Key issues. *Health Policy and Planning*, 17 (1), 106-111.
- Haupt, P. (2018). Design with nature and design for the people: The principles of architectural education. *World Trans. on Engng. And Technol. Educ.*, 16 (1), 70-74. <https://doi.org/10.1016/j.cities.2019.05.003>
- Hou, J. (2010). (Not) your everyday public space. In J. Hou (Ed.), *Insurgent public space, Guerilla urbanism and the remaking of contemporary cities*. New York: Routledge.
- Huang, J., & Fang, Y. (2021). Income inequality, neighborhood social capital, and subjective well-being in China: Exploration of a moderating effect. *International Journal of Environmental Research and Public Health*, 13, 6799. Jian, X., Han, X. L., Li, G. C., & Ceng, H. (2011).
- Ijla, A. M. (2012). Does public space create social capital? *International Journal of Sustainable Architecture*, 4(2), 48–53.
- Jacobs, J. (1961). *The death and life of great American cities*. Random House.
- Johnson, A. J., & Glover, T. D. (2013). Understanding urban public space in a leisure context. *Leisure Sciences*, 35(2), 190-197.
- Kohn, M. (2004). *Brave New Neighborhoods, The Privatization of Public Space*. New York: Routledge.
- Li, A. X., Chen, J. P., & Zhen, M. H. (2017). How can social capital improve farmers' credit? Empirical analysis based on the three dimensions of network, trust and norm. *Finance and Economics*, 49–59, 03.
- Li, W. J., Yang, S. J., Li, J., Li, Z. X., Yan, C., Gui, Z., & Zhou, C. C. (2021). Social capital and self-rated health among Chinese rural empty nesters: A multiple mediation model through sleep quality and psychological distress. *Journal of Affective Disorders*, 298.
- Liu, L.B., Thijs, P. G., & Steg, L. (2019). Effects of trust and public participation on acceptability of renewable energy projects in the Netherlands and China. *Energy Research & Social Science*, 53, 137-144.
- Liu, Y. Q., Cao, L., Yang, D. D., & Anderson, B. C. (2022). How social capital influences community resilience management development. *Environmental Science & Policy*, 07.028.
- Madanipour, A. (2015). *Urban design and public space*. International Encyclopedia of the Social and Behavioral Sciences (2nd Ed.).
- Madden, D. J. (2010). Revisiting the end of public space, assembling the public in an urban park. *City & Community*, 9(2), 187-207.
- Mao, Y., Qi, J., & He, B. (2020). Impact of the heritage building façade in small-scale public spaces on human activity: Based on spatial analysis. *Environmental Impact Assessment Review*, 85(5), 106457. DOI:10.1016/j.eiar.2020.106457.
- Mehrotra, N., & Yammiyavar, P. (2013). Facilitating social interaction in public space. In A. Agrawal, R.C. Tripathi, E. Y. Do, & M.D. Tiwari (eds), *Intelligent interactive technologies and multimedia* (Vol. 276). Springer.
- Mehta, V. (2019). Streets and social life in cities, a taxonomy of sociability. *Urban Design International*, 24(1), 16-37.
- Melichová, K., & Hrivnák, M. (2025). Co-designing urban interventions through the lens of SDGs: Insights from the IN-HABIT project in Nitra, Slovakia. *Urban Planning*, 10(2), 123-145. <https://doi.org/10.17645/up.9133>
- Mehta, V. (2014). Evaluating public space. *Journal of Urban Design*, 19(1), 53-88.
- Müller, R., Andersen, E. S., & Kvalnes, Q. (2013). The interrelationship of governance, trust, and ethics in temporary organizations. *Project Management Journal*, 44 (4), 26–44.
- Nyka, L. (2019). Bridging the gap between architectural and environmental engineering education in the context of climate change.

World Trans. on Engng and Technol. Educ., 17(2), 204-209.

Patricia Simões Aelbrecht (2016) 'Fourth places': the contemporary public settings for informal social interaction among strangers, *Journal of Urban Design*, 21:1, 124-152, DOI: 10.1080/13574809.2015.1106920

Putnam, R. (1993). *Making democracy work: Civic traditions in modern Italy*. Princeton University Press.

Putnam, R.D. (1998). Social capital in the creation of human capital. *American Journal of Sociology*.

Ramlee, M., Omar, D., Yunus, R. M. & Samadi, Z. (2015). Revitalization of urban public spaces, An overview. *Procedia-Social and Behavioral Sciences*, (201), 360-367.

Relf, E. (1976). *Place & Placeness*. London: Pion.

Ruca, M., Kloeckner, Christian A., Bengt, L., & Monica, L. (2016). The impact of neighborhood social capital on life satisfaction and self-rated health: A possible pathway for health promotion? *Health & Place*, 11, 09.

Ryan, S., & Räisänen, U. (2008). It's like you are just a spectator in this thing: Experiencing social life the 'aspie' way. *Emotion, Space and Society*, 1 (2), 135-143. <https://doi.org/10.1016/j.emospa.2009.02.001>

Shams Dolat Abadi, H., Etemadi, K., Rabbani, T., & Porfatollah, M. (2021). Characteristics and elements of urban open spaces based on social trust model to enhance social interactions from citizens'

perspective (The Case Study of Yousef-Abad Neighborhood). *Journal of Sustainable City*, 4 (5). "Persian"

Stauskis, Gintaras & Eckardt, Frank. (2011). Empowering Public Spaces as Catalysers of Social Interactions in Urban Communities. *Town Planning and Architecture*. 35. 117-128. 10.3846/tpa.2011.14.

Sun, X., Wang, L., Wang, F., & Soltani, S. (2020). Behaviors of seniors and impact of spatial form in small-scale public spaces in Chinese old city zones. *Cities*, 107.

Thomas, M. (1991). The Demise of Public Space. In V. Nadin & J. Doak (Eds.), *Town Planning Responses to City Change*, Avebury: Aldershot.

Wentink, C., Vaandrager, L., Van Damb, R., Hassink, J., & Salverda, I. (2017). Exploring the role of social capital in urban citizens' initiatives in the Netherlands. *Gaceta Sanitaria*, 32(6), 539-546. <https://doi.org/10.1016/j.gaceta.2017.05.011>

Yang, Z., Zhou, C., & Jiang, L. (2011). When do formal control and trust matter? A context-based analysis of the effects on marketing channel relationships in China. *Industrial Marketing Management*, 40(1), 86.

Su, Y., Zhang, X., Chen, X., (2023). How to alleviate alienation from the perspective of urban community public space—Evidence from urban young residents in China, *Habitat International*, Volume 138.



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