

Structural Equation Modeling of Satisfaction with the Living Environment in Tehran and Its Associated Social Factors

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Article type: Research Article Article history: Received: 12 - 02 - 2026 Received in revised form: 02 - 03 - 2026 Accepted: 02 - 03 - 2026 Published online: 18- 03 – 2026 Keywords: <i>Residential Satisfaction, Perception of Neighborhood Social Pathologies, Objective Participation, Factor Analysis, Structural Equation Modeling.</i>	Objective: Satisfaction with the living environment is considered one of the fundamental indicators of urban quality of life, reflecting individuals' subjective evaluations and lived experiences of their residential surroundings. This multidimensional concept not only influences psychological well-being and mental health but also plays a critical role in social sustainability, neighborhood cohesion, and the effectiveness of urban policies. In metropolitan areas such as Tehran—characterized by rapid population growth, spatial inequalities, environmental pollution, high density, and socio-cultural diversity—examining residents' satisfaction with their living environment becomes particularly important. Despite the expansion of international research in this field, studies in Iran, especially in Tehran, have largely focused on physical and spatial dimensions, with limited attention to the sociological aspects of environmental satisfaction. Therefore, the present study aims to assess the level of citizens' satisfaction with their living environment in Tehran and to analyze the influence of key social factors, including perceived social disorders in the neighborhood, objective participation, institutional trust, and sense of place attachment, in order to provide a more comprehensive understanding of this phenomenon. Methodology: This study adopts a quantitative approach with a descriptive-correlational design and is conducted using a survey method. Data were collected through a researcher-made questionnaire whose validity was confirmed through expert judgment, and its reliability was verified using Cronbach's alpha coefficient (0.82). The statistical population includes all residents aged over 18 living in the 22 municipal districts of Tehran during the winter of 2021. The sample size was determined to be 660 individuals based on Cochran's formula, of which 600 valid questionnaires were retained for final analysis after excluding incomplete responses. A combined stratified and multi-stage cluster sampling method was employed to ensure adequate representation of different geographical areas of the city. Data analysis was carried out using Structural Equation Modeling (SEM) with a covariance-based approach through AMOS software. Initially, the conceptual model of the study was developed based on theoretical



foundations and previous research. Subsequently, first-order confirmatory factor analysis was performed to assess construct validity, followed by second-order factor analysis to examine the hierarchical structure of the dependent variable (satisfaction with the living environment). Finally, the structural model was estimated to test the research hypotheses and to analyze the relationships between independent and dependent variables.

Findings: Descriptive findings indicate that the level of satisfaction with the living environment among Tehran citizens is moderately high. Similarly, sense of place attachment and institutional trust were found to be at moderate levels with a positive tendency, while objective participation in social activities was reported to be relatively low. This suggests that although citizens may possess a certain level of willingness or positive attitude toward participation, this does not necessarily translate into actual behavior. The perception of social disorders within neighborhoods was also evaluated at a moderate level, reflecting a general awareness of social issues among residents.

The results of first-order factor analysis confirmed that all measurement items had significant and acceptable factor loadings, indicating satisfactory construct validity. The second-order factor analysis revealed that satisfaction with the living environment is a multidimensional construct composed of three main dimensions: health, economic and administrative affairs, and cleanliness. All three dimensions significantly contribute to explaining the overall construct, with the economic and administrative dimension exerting the strongest influence. The structural model results demonstrate that all independent variables—except for the relationship between perceived social disorders and objective participation—have significant effects on satisfaction with the living environment. Among these, perceived social disorders in the neighborhood exert the strongest direct and total effect, and this effect is negative. In other words, higher levels of perceived social disorders are associated with lower levels of satisfaction. In contrast, sense of place attachment, institutional trust, and objective participation all have positive and significant effects on environmental satisfaction. Another important finding is the presence of indirect effects of perceived social disorders on satisfaction with the living environment through mediating variables such as place attachment. This highlights the complexity of social relationships and the intermediary role of certain constructs in shaping environmental satisfaction. Overall, the findings underscore the crucial role of social factors in influencing citizens' perceptions of their living environment.

Conclusion: The results of this study emphasize that satisfaction with the living environment is a multidimensional and socially constructed phenomenon that cannot be adequately explained solely by physical or spatial indicators. Social factors—particularly perceptions of social disorders, sense of place attachment, and institutional trust—play a central role in shaping environmental satisfaction. Among these, perceived social disorders emerge as the most significant determinant,



highlighting the importance of addressing social and security-related issues in urban policy-making.

In conclusion, this research contributes to the existing literature by highlighting the importance of social dimensions in understanding satisfaction with the living environment. By moving beyond narrow spatial perspectives and situating the concept within a broader socio-cultural context, the study provides valuable insights for participatory and citizen-centered urban policy-making. The findings can serve as a basis for bridging the gap between physical planning initiatives and the actual needs and perceptions of urban residents, ultimately fostering greater social sustainability in metropolitan contexts.

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