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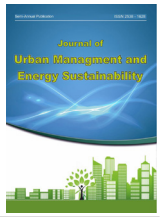

ORIGINAL RESAERCH PAPER

Exploring the Relationship between Urban Environmental Quality and Quality of Life Based on the Lived Experience of Ethnic subcultures

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ABSTRACT

This study aims to investigate the relationship between urban environmental quality and quality of life among various ethnic subcultures in Tehran City, Iran. A mixed-methods approach was used, combining theoretical research, in-depth interviews, and statistical questionnaires. The study focused on ethnic groups as subcultures and identified several factors that contribute to the relationship, including integration with nature, sensory-cognitive interaction, historical meaning of the environment, functional public facilities, urban management and governance, and respect for citizens' needs and desires as well as macro-policies. The questionnaire analysis using Smart-PLS revealed that accessibility, mobility, ecological, visual-physical, functional-activity quality, social, management-economic infrastructure, semantic and mental worldviews, integrations with quality and cultural elements, and mental quality of life are the most important concepts. The study found that citizens' quality of life is significantly influenced by how they perceive cultural concepts and elements. The study examined the opinions of various ethnic groups, including Turkish and Azerbaijani, Lur, Kurdish, Gilaki, and Mazandarani subcultures, revealing differences in accessibility and mobility, as well as social and economic quality. The study concludes that cultural elements and qualities influence individuals' meaning, worldviews, and subjective perceptions, resulting in a higher quality of life. Future research could explore the potential impact on quality of life in various subcultures of specific urban design interventions.

Running Title: Urban Environmental Quality and Quality of Life Based on the Lived Experience of Ethnic subcultures

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INTRODUCTION

Urbanization is a global phenomenon that has induced significant transformations in the environment and the quality of life of city inhabitants (Yang, et al., 2014; Fatati, et al., 2022). Notwithstanding the pivotal role of improving quality of life for individuals worldwide, accurately gauging and attaining this objective continues to be a challenge (Cusack, 2019). The surge in urban populations, triggered by rapid population growth and urbanization processes, has amplified the relevance of urban quality of life for a burgeoning number of people (Mouratidis, 2021).

The quality of life within a city and its environment are intrinsically entwined (Diener and Suh, 1997; UNECE, 2009). The quality of the urban environment profoundly influences city life (Psatha, et al., 2011; Štreimikienė, 2015), rendering the achievement of a superior level of quality in urban planning as crucial. However, realizing this goal has emerged as one of the foremost challenges of today (Parfect, & Power, 1997; Abd Elrahman, & Asaad, 2021). Numerous studies underscore the importance of enhancing the urban environment's quality in multicultural cities to foster an inclusive city and boost the citizens' quality of life (Yu et al. 2019; Hajduova et al. 2014; Murgaš, & Petrovič, 2020; Keles, 2012).

The quality of life of ethnic subcultures residing in urban areas is a critical issue, as they often face unique challenges and opportunities associated with their cultural identity and social status. While some studies have explored the diversity of ethnic groups in cities in relation to quality of life and the urban environment, few have ventured into assessing this relationship based on the lived experiences of these groups. This study addresses this gap by adopting a mixed method, combining theoretical studies, qualitative interviews with citizens, and quantitative interpretations and analyses, to unearth the relationship between environmental quality and quality of life. The study aims to discern the influential factors shaping the perception of environmental and urban quality, and how the worldviews and subjective meanings of ethnic groups influence this mechanism on the specific context of Tehran, a multicultural city teeming with diverse ethnicities, By embracing this comprehensive approach, the study endeavors to offer a deeper understanding of the intricate interplay between urban environmental quality and the quality of life experienced by ethnic subcultures in urban areas. Comprehending the unique challenges and opportunities encountered by ethnic subcultures in Tehran is integral for urban planners, policymakers, and designers to create inclusive, sustainable urban environments that uplift the quality of life for all citizens.

Tehran, Iran's capital and largest city, has witnessed significant transformations and developments over the past two centuries (Hamdi, Amir Entekhabi, 2010), resulting in the emergence of a metropolis rich in cultural and ethnic diversity. Diversity is considered as an important component of a good human settlement, among the various qualities of urban spaces (Ghalamro, Bandarabad, & Shahabian, 2022). Numerous individuals from different cultural, social, economic, and ethnic backgrounds migrated to Tehran during the periods 1991-2006 and 2011-2016 (Ghazaei, 2020). The exploration of how various subcultures or ethnic groups perceive and relate to the quality of life and urban environment in Tehran is of paramount importance in this context. The objective of this study is to scrutinize the perspectives of different ethnic groups living in Tehran regarding the effective criteria for evaluating the quality of the urban environment and urban life. In this study, "subcultures" denote groups with distinctive beliefs diverging from the mainstream culture (Pourjafar et al., 2015). The ethnic groups in any society represent some of the most prominent subcultures within it (Khani, et al., 2014). In order to examine the subcultures of Tehran, various ethnicities residing in the metropolitan area have been classified as subcultures.

In conclusion, this study addresses theoretical gaps in studies of subcultures and seeks to

analyze and enhance the quality of life and the urban environment in Tehran, considering the interests and diversity of its ethnic groups.

Literature Review

Quality of life

The concept of quality of life (QoL) is broad (Perera, & Mensah, 2019), and comprises a complex and multidimensional concept, which is rather difficult to define, identify, categorize and analyze (Sinha, 2019). Quality of life can be characterized as a multidimensional construct that reflects the interaction between human needs, life satisfaction, happiness, and the quality of the environment around us (Jamal, & Ajmal, 2020; Henama & Apleni, 2021). QOL is defined as the interaction of human needs and the perception of their fulfillment (Pazhuhan, et al., 2020). Quality of life is the determinant of the difference between dreams, hopes and expectation of individual and his experience of such issues that he can enjoy using that equipment for living in the society (Zamanian, Azizi, & Joudi Gollar, 2019). WHO defines QoL as "the individuals" perception of their position in life in the concept of the culture and value systems in which they live and in relation to their goals, expectations, standards and concerns (Aggarwal, et al., 2020). QoL has many of the sub-themes, i.e. human development, health care, employment and environment. Social, economic, psychological and spiritual dimensions also measure QoL, both qualitatively and quantitatively (Kullenberg, & Nelhans, 2015; Yadav, 2019). There is a strong correlation between the quality of an urban environment and the interaction between living conditions, opportunities, and external qualities, which, in turn, affect the quality of an individual's life (Bălțătescu, 2021). An important aspect of the quality of life in urban areas is the quality of the environment (Arzhangi, & Mohammadi, 2019). An important aspect of the quality of life in urban areas is the quality of the environment.

Quality of Urban Environment

The concept of quality of urban environment is a broad and important aspect of urban development (Podoprigora, et al., 2019; Lu, et al., 2019). It encompasses various factors such as provision of urban amenities, development of comfortable urban environment, and overall well-being in urban areas (Zhang, et al., 2023). The urban quality is often measured by the characteristics of its urban environments (Goodarzi, & Razavian Amiri, 2020). Different studies have approached the evaluation of quality of urban environment from different perspectives, including objective (empirical) and perceived approaches (Khan, & Aftab, 2015). These studies aim to inform policy makers about the gap between the actual and perceived quality of environment. The assessment of quality of urban environment involves the analysis of various indicators such as land use, green space, population and floor density, accessibility, and physical quality (Shojaeivand, 2019). the quality of the urban environment is a crucial aspect that encompasses various dimensions, including social, cultural, economic, and physical-spatial conditions. Urban environment quality is constantly changing and multidimensional (Marans, 2012), influenced by many factors, including urban heat islands, green space distribution, building density, shape, and design, as well as air quality (Nichol & Wong, 2005). These conditions are indicators of citizens' satisfaction with their surroundings (Shamaei, & Pourahmad, 2005). Environmental quality transcends the mere satisfaction of human material needs, extending to the provision and enhancement of social capacities and community development, thereby influencing social behavior patterns (Rafieyan & Asgari Zadeh, 2010).

It has been found that a positive environment can have a significant impact on an individual's internal capacity (Ghasemi & Nouri, 2016). As Zaaley (1980) points out, environmental quality is not a static concept, but rather one that evolves over time (Maleki, Hoseini, Veysi, & Mokhtari, 2016). Over the past half-century, environmental quality dimensions have shifted toward psychological dimensions (Marans, 2015). Environment quality is perceived and influenced by human-environment

interactions (Palmer, et al., 2023). Due to its cultural and personal nature, its interpretation may differ based on individual differences. Studies on the relationship between environmental quality and citizens' quality of life indicate a gap when it comes to exploring the experiences of different subcultures.

Subculture and Ethnic Groups

Subcultures are groups of people with common interests and practices that differ from the mainstream culture (Fine, 2018). Ethnic groups are one of the subcultures in every society. The historical and geographical background of the formation of different ethnic groups may result in differences in cultural values, leading to differences in behavior (Khani, et al., 2014).
Usually, ethnicity refers to a group of people who identify with a specific culture, language, and customs that distinguish them from other groups (Asgarian, 2006). Various ethnic groups living in Tehran city were examined and evaluated in this study to understand their subcultures.

Materials and Methods

This study employed a mixed-method approach to examine the relationship between the quality of the urban environment and the quality of urban life from the perspective of different subcultures residing in Tehran. The city of Tehran was chosen due to its large scale, high immigrant receptivity, diversity of cultures, and dispersion of ethnicities. Cluster sampling was used to study the views of each subculture with the highest frequency in the city. Random sampling was conducted through community visits and online questionnaires. Different perspectives of different subcultures were examined

Subculture Typology	Classification Criteria	Concrete manifestations in society
Functional Subcultures	Main Functions	Work, residence, transportation, leisure activities
Gender-Based Subcultures	Gender	Gender-specific subcultures of males and females
Familial and Ethnic Subcultures	Ethnic Groups within a Culture	Ethnic and tribal subcultures within a culture
Age-Based Subcultures	Among Individuals in Society	Age-specific subcultures such as youth, middle-aged, and so on
Poverty subcultures	Culture of Poverty.	including the homeless, slum dwellers, and so on

Table 1: Classification of Subcultures from Fakouhi's Perspective, 2010

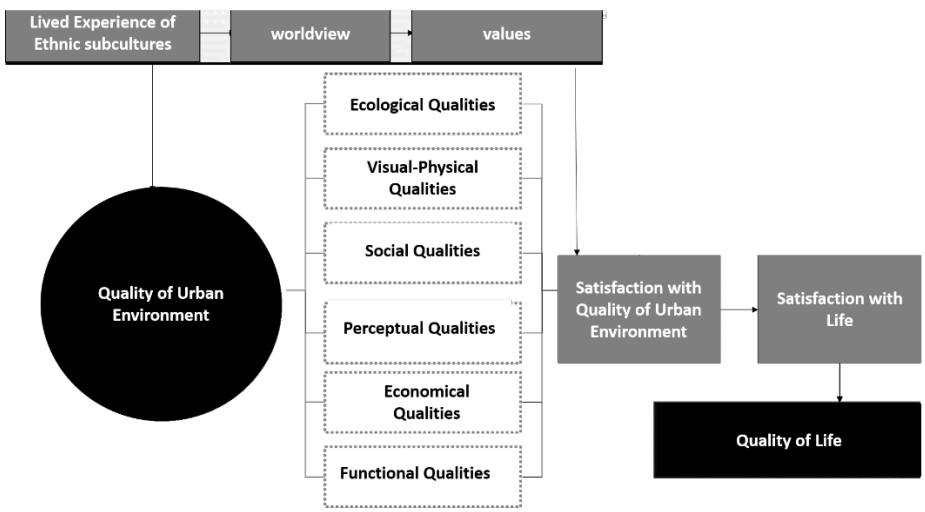

Figure 1. conceptual model based on literature review, source: authors

using ANOVA statistics, and the SEM structural equation modeling methodology was used to investigate the mechanism of environmental quality components affecting citizens' quality of life based on lived experiences of different subcultures living in Tehran. The study uncovers the communication mechanisms between urban environment quality and quality of life in highly diverse cities like Tehran.

A grounded theory approach was used in this study to investigate the relationship between environmental quality and quality of life from the perspective of various subcultures (ethnic groups) residing in Tehran. This approach enables the researcher to systematically understand the participants' perspective and the meaning of the study's specific context (Gao, 2017). semi-structured interviews were conducted with open-ended and in-depth questions systematically. The interview method provided an opportunity to extract participants' responses concerning the concept of quality of life, environmental quality, and the theoretical lens of contemporary citizens in Tehran. In this study, qualitative interviews allowed participants to share their experiences and perceptions in a safe and supportive setting. Following Strauss and Corbin (1994), data collection continued until saturation. We interviewed individuals aged 18 and over residing in Tehran in February and March 2022. In order to ensure a representative sample, we examined the demographic characteristics of the participants, including gender and ethnicity. Ultimately, we conducted in-depth interviews with 41 citizens of the Turkish, Kurdish, Lur, Baloch, Gilaki, Mazandarani, and Laki ethnicities residing in Tehran. Qualitative interview questions were designed to encourage participants to express their views freely on the quality of life and the urban environment in Tehran.

We initially developed and distributed a questionnaire based on the results obtained from qualitative interviews and content Analysis of theoretical studies. In this study, we explored the relationship between the quality of urban environmental features and citizens' quality of life using statistical tests conducted in the SPSS environment and structural equation modeling (SEM). Questions were asked on a 5-point Likert scale. The sample size was determined by estimating the percentage of each ethnic group in Tehran's population. Based on the results from the 2010 census data prepared by the National Public Culture Council, we examined the birthplace and origin of each immigrant to Tehran. In the end, 854 responses were collected, with 46.3% female and 53.7% male. Most respondents (60.4%) were between 31 and 45. According to the results, 36.7% of respondents held a bachelor's degree, and 33.7% held a master's degree or higher. Among the respondents, 45.4% were Persian, 15.8% were Turkish and Azerbaijani, 10.4% were Mazandarani, 8.2% were Kurdish, 7.7% were Lor, 6.4% were Gilaki, and 6% were from other ethnic groups. "Other" group participants included individuals of different ethnicities, such as Bakhtiari, Arabs, Leks, Afghans, Qashqais, Turks, Armenians, Balochs, and citizens of Kerman, Khuzestan, Kermanshah, Qazvin, and Hamedan. The quantitative data was collected during the summer of 2022. The perspectives of different subcultures regarding the quality of life and environmental quality in Tehran were compared using an ANOVA test. Moreover, through SEM analysis, we utilized Smart-PLS software to analyze the spatial mechanism of the effect of environmental quality components on quality of life and the role of subcultural perspectives in this regard. A structural equation model (SEM) is a multivariate analysis technique that enables researchers to test many regression equations at the same time.

Results and Discussion

During the early stages of open coding, the interview data was meticulously implemented and scrutinized sentence by sentence. Following this exercise, the coding process was carried out at three levels. The researcher identified

532 words, phrases, or sentences during the first coding phase, which suggested a different conceptual framework related to the correlation between the quality of urban environments and the quality of urban life, as derived from the lived experiences of subcultures. Following iterative coding procedures, these expressions were categorized into 16 distinct concepts. Level-one(indicator) concepts were classified according to their attributes, interrelationships, and impact on the communicative mechanism between the urban environment and the quality of life. After generating level-one concepts, level-two concepts(criteria) were generated, which were then used to formulate level-three(dimensions) concepts based on a hierarchical system that included levels, quality, dimensions, spheres of influence, and scale. The researcher manually performed the coding process based on the proposed Strauss and Corbin coding logic. In this second step, Cronbach's alpha test was used to determine the reliability of the data, yielding a score of 0.975, which is higher than the acceptable threshold of 0.7 (Blend et al., 1997). Next, the ANOVA test examined significant differences in the concepts and dimensions among the various subcultures. Finally, the communicative mechanism between these concepts was examined through path analysis.

Indicator	Criteria	Dimension
Utilization of climate friendly materials Access to suitable parks and green spaces Adequate per capita green space Good air quality Appropriate acoustic and visual landscape	Integration with natural elements	Urban Ecology
Environment cleanliness Free urban services Efficient waste collection across the city Integrated urban management Municipal management's response to citizen concerns Smart city	responsibility governmental organizations	Sustainable urban management
Living standards Desirable economic conditions public welfare hope and life security public health	Macro-Level Social Policies	
Public and free cultural events and infrastructures recreational facilities |leisure time activities/ cultural diversity, local dialects social communication infrastructure for different cultural groups Understanding cultural differences/ public culture	Integration with cultural elements	Cultural dimensions
Holding exhibitions for exchanging ideas various events to include the presence of different ethnic groups	Event management	Social integration
Diversity of users, activities, behaviors Space adaptation for people with different abilities. Cultural diversity of urban space	Inclusiveness Diversity	
Social interaction Happiness| livability Safe urban environment for all Public presence	Social livability	

Indicator	Criteria	Dimension
Visual aesthetic qualities| façade design Modern architectural design Use of color and public art |Night Lightening Unity in diversity in visual structure. Adequate infrastructure for physical activity Compatibility of building structures with local culture.	Visual-physical attractiveness	Visual-physical qualities
Enhanced mobility and welfare of seniors and disabled suitable urban space for people with physical disabilities	Optimization of urban environment	
Access to leisure and recreational facilities Adequate access to parks and green spaces Adequate access to sports facilities and playgrounds Proximity to daily shopping facilities Suitable healthcare and medical service centers Diverse and multifunctional land uses Equitable distribution of facilities across the city	Public services	Functional qualities
convenient public transportation Quality of roads and infrastructure Traffic management Suitable bicycle infrastructure| walkable streets	Transportation	accessibility
Tangible and intangible qualities Observance of ethical and human principles Sense of safety and security Respect for each other's rights Comfort of urban spaces Understanding cultural differences Avoiding judgment of other citizens' cultures	Compatibility with the needs and desires of citizens	Perceptive qualities
place attachment physical and mental health citizens' satisfaction with the quality of the urban environment. readability of the urban environment.	Sensory-cognitive interaction	
Relaxation Reduction of stress Improvement of the mental health	Subjective quality of life	
Intangible qualities of the urban environment Authenticity and identity maintenance of historical and cultural landmarks	Historical meaning| identity	

Table 2: Indicators, criteria, and dimensions affecting the quality of the urban environment and quality of urban life based on the lived experiences of various subcultures (ethnicities) in Tehran extracted from qualitative interviews, source: Authors

Comparison of Key Concepts Influencing Perception of Quality of Life and Quality of Environment among Different Subcultures in Tehran Based on ANOVA Test

One-way ANOVA or F-test tests the difference in means of a variable among more than two groups. It is also known as Analysis of Variance (ANOVA) because it decomposes the total variance of a population into its primary factors. Additionally, this test permits us to perform multiple comparisons between groups. (Habibpour Gotabi, Safari Shali, 2016).

The Sigma column indicates a significant difference between the perspectives of various ethnic groups regarding the influential factors in explaining the relationship between environmental quality and quality of life. Thus, the quality of accessibility and Mobility, the social quality, the economic-urban management status, the perception of cultural Elements, and the quality of life indices have significant differences according to the theoretical lens of various ethnic groups living in Tehran. Afterward, each index's mean and standard deviation were examined from the perspective of various ethnic groups. After scrutinizing the results, it was determined that Lurs exhibited the highest level of contentment with accessibility and mobility in Tehran, garnering an average score of 2. 54. Additionally, they have the highest level of satisfaction with the city's social quality, with a mean rank of 2.51 (other ethnic groups residing in Tehran also have a mean ranking of 2.58). Kurdish ethnic groups have also been the second highest satisfied with the level of social relationships and concepts in Tehran, with a mean score of 2.50In terms of economic and management dimensions, other ethnic groups residing in Tehran have expressed the highest satisfaction with a mean rank of 2.22, followed by the Lur ethnic group with a mean rank of 2.21, followed by the Mazandarani ethnic group with a mean rank of 2.19.

Among other ethnic groups and subcultures living in Tehran, the Lur ethnic group has the highest mean rank of 2.51 regarding integration with cultural elements. Based on dimensions related to the quality of life, the Mazandarani ethnic group has the highest mean rank of 2.41, and other subcultures residing in Tehran have the highest mean rank of 2.49 (see Figure 2).

Exploring the Interplay between Environmental Quality and Quality of Life

The study employed a path analysis utilizing structural equation modeling and Smart-PLS software to investigate the mechanisms through which environmental quality and quality of life components impact subcultures' lived experiences. Figure 3 illustrates the tested framework comprising ten latent and 71 manifest variables. To ensure the reliability of the SmartPLS model, many researchers believe that the value of each type of factor loading should be higher than 0.4 (Hair et al., 2019). The factor loadings of all items were higher than 0.4, confirming the model's validity.

For more reliable and valid results, it is necessary to eliminate the non-significant relationships in the model. To achieve this goal, the "bootstrapping" method will be utilized, which considers both the P-value and the T-statistics when determining the significance of the relationships (Hair et al., 2019). Table 5 presents the results of the first bootstrapping procedure.

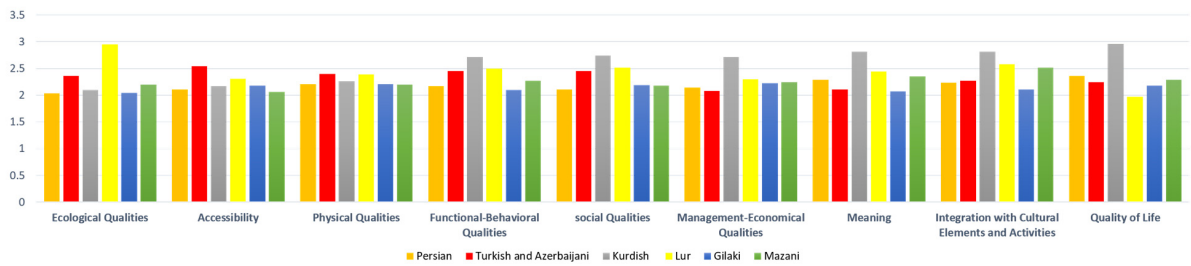

Figure 2. Comparing the perspective of dominant culture and ethnic subcultures residing in Tehran based on the findings of ANOVA test

Reliability and Validity Tests

Many scholars argue that in structural equation modeling using SmartPLS software, a composite reliability index is a better alternative to Cronbach's alpha since Cronbach's alpha is calculated based on lower-bound values and provides more concise results (Hair et al., 2019). Below is the table of "composite reliability" for the research model. It is shown that all relevant values are above 0.7, indicating model reliability following the standards described in the literature (Wang & Wang, 2019). An additional criterion for assessing the fit of a measurement model in PLS-SEM software is Average Variance

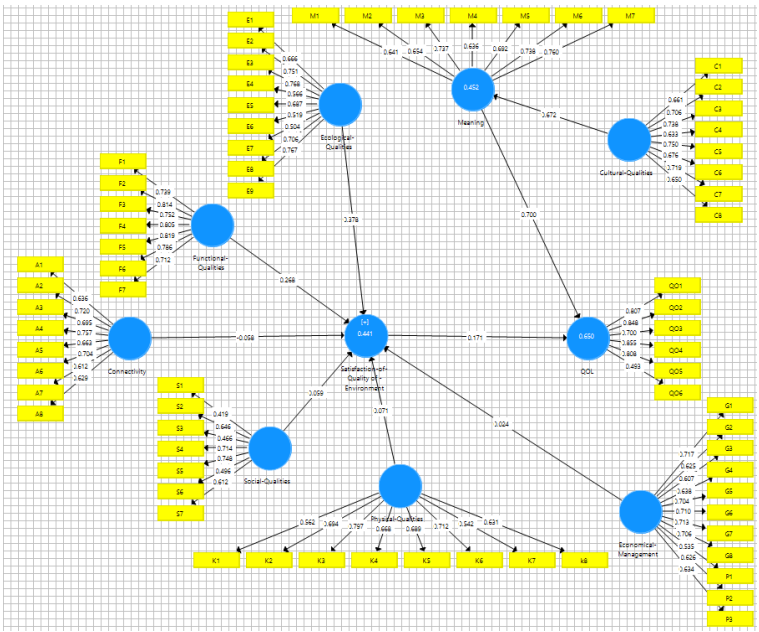

Figure 3. Measurement Model Evaluation

Path Coefficients	Standard Deviation (STDEV)	T Statistics (|O/STDEV|)	P Values
Accessibility -> Satisfaction with urban environmental quality	0.059	0.974	0.330
Integration with culture and cultural elements -> Meaning, worldview, and mental valuesTop of Form	0.028	24.411	0.000
Ecological Qualities of Urban Environment-> Satisfaction with urban environmental quality	0.059	6.395	0.000
Management-Economic Infrastructure-> Satisfaction with urban environmental quality	0.061	0.393	0.695
Functional-Behavioral Qualities-> Satisfaction with urban environmental quality	0.061	4.383	0.000
Meaning, worldview, and mental values -> Quality of Life	0.029	24.084	0.000
Visual-Physical Qualities -> Satisfaction with urban environmental quality	0.060	1.092	0.273
Satisfaction with urban environmental quality->Quality of Life	0.034	5.022	0.000
Social Qualities Satisfaction with urban environmental quality	0.059	1.006	0.314

Accessibility -> Satisfaction with urban environmental quality 0.059 0.974 0.330
Integration with culture and cultural elements -> Meaning, worldview, 0.028 24.411 0.000

Table 3. Measurement Model Analysis

Extracted (AVE). AVE indicates the average shared variance between each construct and its indicators, with a critical value of 0.5. A value above 0.5 indicates acceptable convergent validity. Drawing from the discoveries of this investigation, the functional-behavioral quality, quality of life, and satisfaction with urban environmental quality in this model demonstrate desirable validity.

After Bootstrapping and removing non-significant relationships, the measurement models of the conceptual model are depicted in Figure 4

Structural Model Analysis

Based on these coefficients and calculating the overall coefficient of paths, all introduced paths can be considered to have a significant impact on the conceptual model. In this model, the most important indirect relationship is the integration with cultural elements and qualities, which results in the formation of meaning, worldview, and mental perception in individuals, which in turn improves citizens' quality of life.

Conclusion

The present research study underscores the pivotal role of environmental quality in enhancing the quality of life of ethnic groups residing in Tehran. Despite the presence of immigrants, ethnicities, and diverse cultures in Tehran, no research has yet been conducted to explore the impact of various environmental quality components on the quality of life of ethnic groups. Consequently, the study posits that the mechanisms that shape or reshape the relationship between environmental quality and quality of life lack sufficient efficiency in measuring these concepts, primarily based on the experiences and perspectives of ethnic groups living in Tehran. The study employs a multi-method approach that combines theoretical studies and qualitative interviews to identify the most influential components for measuring the relationship between environmental quality and quality of life. The findings reveal that the dimensions of ecological quality, accessibility, dynamics quality, visual-physical qualities, functional-behavioral qualities, social qualities, Tehran's managerial and economic model, perceptual and worldview qualities, cultural qualities, integration with cultural elements and activities, and the quality of life are critical factors that shape the relationship between environmental quality and quality of life based on the lived experiences of ethnic groups in Tehran.

The study highlights the importance of evaluating the impact of environmental quality on the quality of life of ethnic groups. It underscores the need for policy interventions to address

	Cronbach's Alpha	Composite Reliability	Rho_A	AVE
Accessibility	0.833	0.872	0.842	0.461
Integration with culture and cultural elements	0.844	0.880	0.846	0.480
Ecological qualities	0.841	0.876	0.857	0.444
Management-Economical Infrastructure	0.869	0.893	0.874	0.434
Functional-Behavioral Qualities	0.890	0.914	0.899	0.602
Meaning, worldview, and mental values	0.823	0.867	0.833	0.484
Visual-Physical Qualities	0.819	0.863	0.830	0.444
Quality of Life	0.848	0.890	0.868	0.581
Satisfaction with urban environmental quality	1.000	1.000	1.000	1.000
Social Qualities	0.700	0.789	0.719	0.357

Table 4. Reliability of Measurement Model Based on composite reliability index

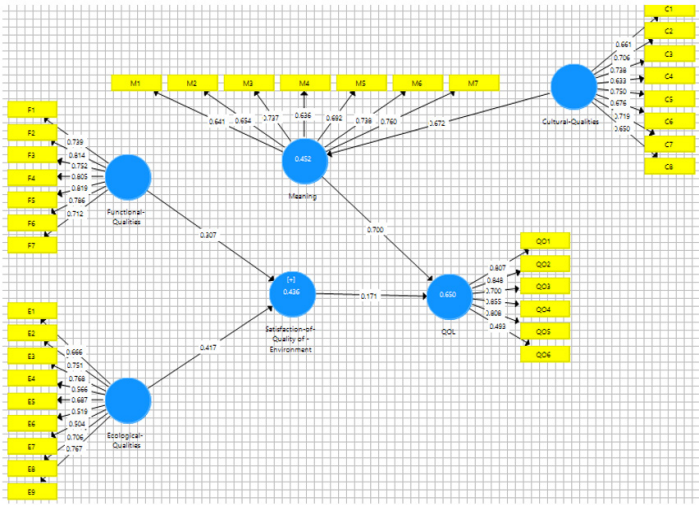

Figure 4. Measurement Model After Bootstrapping

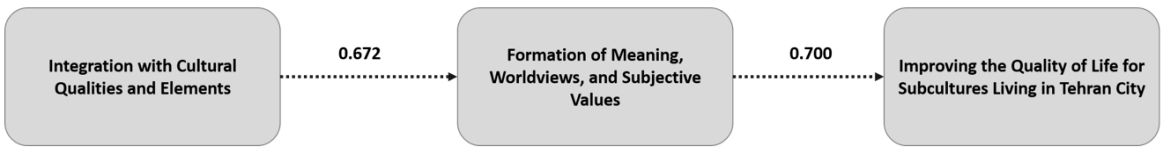

Figure 5. The Most Important Pathway to Enhancing the Quality of Life among Ethnic Minorities Residing in Tehran

these groups' challenges in Tehran. By improving the environmental quality, Tehran can enhance the quality of life of ethnic groups and promote social equity and inclusivity. The research outcomes possess noteworthy ramifications for policymakers, urban planners, and scholars with a vested interest in comprehending Tehran's environmental conditions and the overall well-being of its inhabitants. The second step of the research examined the relationship between environmental quality and the perceived quality of life among different ethnic groups living in Tehran. Toward this goal, we conducted a survey in which individuals with different cultural backgrounds were asked to compare the factors influencing their perception of quality of life. The study's results revealed a substantial disparity among various ethnic groups residing in Tehran concerning factors such as accessibility, social quality, economic and urban management status, perception of cultural elements, and indicators of quality of life (p-value < 0.05).

Among the different ethnic groups, the Lur ethnicity showed the highest level of satisfaction with the Tehran accessibility quality, with an average of 2.54. Also, they were most satisfied with the social quality of Tehran, with an average rank of 2.51 (other ethnic groups living in Tehran also achieved an average rank of 2.58). With an average ranking of 2.50, Kurds were the second most satisfied with social concepts and relationships in Tehran. Regarding economic and managerial dimensions, other ethnic groups living in Tehran had the highest satisfaction, with an average rank of 2.22. In contrast, the Lur ethnicity had an average rank of 2.21, followed by the Mazandarani ethnicity, with an average rank of 2.19.

Lur ethnicity had the highest average rank of 2.51 when comparing its integration with cultural elements and activities with other ethnicities and subcultures in Tehran. In dimensions related to the quality of life, Mazandaranis and other subcultures living in Tehran had the highest average

rank, with an average rank of 2.41 and 2.49, respectively. Structured equation modeling and path analysis in SMART-PLS were used to identify the mechanisms of the practical environmental quality components on citizen quality of life. According to the path coefficients observed in Tehran, the urban environment is characterized by cultural attributes, and the integration of cultural elements can facilitate the cultivation of significance, worldviews, and mental values that hold promise for augmenting the quality of life of citizens. This approach is considered the most efficacious strategy for enhancing the lives of subcultures (ethnic groups) residing within the city. Furthermore, the study's results suggest that alternative pathways can also contribute to an improved quality of life.

One of the key discoveries of this investigation was the recognition of environmental indicators that influence the quality of life of subcultures (ethnic groups) in Tehran. This insight enabled the formulation of pivotal and fundamental quality of life indicators for planning purposes. An evaluation of the role, importance, and necessity of paying attention to the capacity of environmental quality components might provide a roadmap for urban planners, designers, and managers in determining how to design quality environments that meet the needs of citizens and various subcultures in Tehran.

Based on the outcomes of the research and the results of the statistical studies, it can be concluded that the practical components for improving the quality of life of citizens residing in Tehran can be achieved through five different routes. These factors have been identified within the framework of cultural and environmental dimensions and elements, ecological qualities, functional-behavioral qualities, citizens' perceptions and meaningful qualities, and satisfaction with the urban environment, with the weight of each component also being evaluated. According the lived experiences of ethnic subcultures living in Tehran city, the results indicate that these five main paths effectively achieve satisfaction with the quality of the environment and improve the quality of life for citizens residing in Tehran city. The research outcomes are consistent with previous studies' results on the direct relationship between the quality of the environment and quality of life (Diener & Suh, 1997; UNECE, 2009; Psatha, Deffner; 2009; Štreimikienė, 2015). The concept of urban environmental quality can be viewed as multidimensional, resulting from combining different dimensions or environmental perceptions in general (Moore, et el., 2006). Additionally, the findings confirm that citizens with a positive evaluation and higher satisfaction with the quality of urban environments perceive a higher quality of life (Chang et al., 2020).

A research model consists of independent and dependent variables. Citizens' quality of life is the dependent variable in this study. In contrast, the independent variables include a variety of environmental quality dimensions, including "ecological quality," "accessibility quality," "economic and managerial infrastructure," "social quality," "visual-physical quality," and "functional-behavioral quality."." Additionally, the model considers the dimensions of "cultural quality and its integration with cultural elements," the values and worldviews of citizens, meaningful dimensions, and satisfaction with the urban environment." In this article, the mechanism of impact of environmental quality components on improving citizens' quality of life was evaluated. The research model and its constituent elements are illustrated in Figure 6

Moreover, the study found that through the theoretical lens of subcultures, different ethnic groups have different perceptions of cultural elements, accessibility and dynamism, social quality, sustainable urban management patterns, and quality of life. The Lur ethnic group, for instance, shows the highest level of satisfaction with accessibility quality and the highest level of satisfaction with the social quality of Tehran city (other ethnic groups living in Tehran have an average rank of 2.58). Kurdish ethnic groups have also achieved the second-highest

satisfaction level with social relationships and concepts in Tehran. Regarding the economic and managerial dimensions of the city, other ethnic groups residing in Tehran, followed by the Lur and Mazandarani ethnic groups, are most satisfied with the quality of the economy and the pattern of urban management. Comparatively to other ethnic groups and subcultures in Tehran city, the Lur ethnic group has the highest average rank in terms of integration with cultural elements and activities. The Mazandarani ethnic group and other subcultures residing in Tehran have ranked highest in quality of life.

This study suggests that ethnic groups and subcultures living in Tehran city have unique lifestyles and experiences based on their worldviews, values, ideals, and mental images, which impact their perception of the urban environment in a significant way. On the one hand, the quality of the urban environment affects individuals' perceptions and assessments of the environment, concept formation, and mental and cultural values, as well as enhancing citizens' satisfaction with the quality of their living environment in both subjective and objective dimensions. In other words, individuals' mental concepts or values are a social and cultural construct influenced by their mental history and values. These constructs affect their perception of various dimensions of environmental quality. Furthermore, various components of the urban environment's quality influence how citizens interact with it, how they perceive it, and how satisfied they feel.

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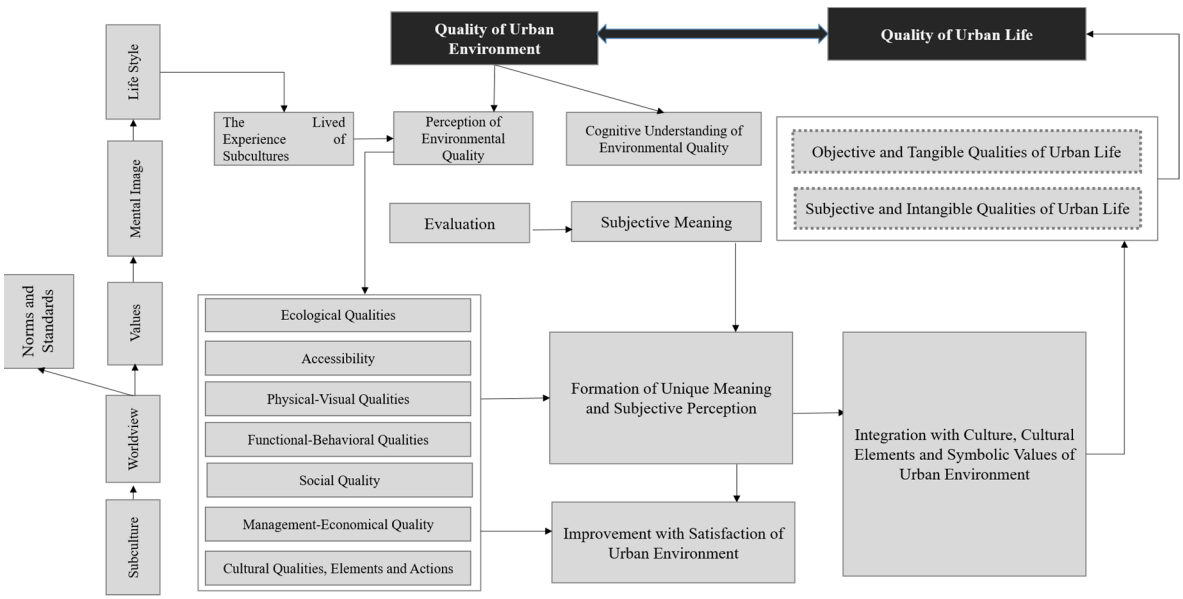

Figure 6. The Applied Research Model and Its Constituent Elements

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