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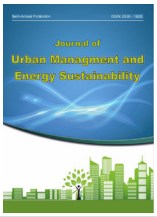

CASE STUDY RESEARCH PAPER

Analyzing the Impact of Empowerment on Enhancing the Environmental Quality of Peripheral Urban Areas Based on Social Self-Efficacy (Imam Hadi Neighborhood, Mashhad, Iran)

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ABSTRACT

Urban marginalization represents a fundamental challenge for city managers and planners in addressing economic social and infrastructural vulnerabilities and in many developing countries it is considered a demographic and residential crisis. The empowerment approach can be effective in enhancing environmental quality mitigating spatial heterogeneity reducing widespread urban inequalities and fostering social self efficacy. The present study aims to analyze the impact of empowerment on improving the environmental quality of peripheral neighborhoods in the Imam Hadi neighborhood of Mashhad focusing on the role of empowerment in enhancing residents quality of life. This research is analytical in nature and applied in purpose. Data were collected through documentary review and field surveys. Initially the theoretical foundations were examined followed by the development of a conceptual model and research framework. Indicators of the three components were assessed using questionnaires among a statistical population of 978 residents. The collected data were analyzed using factor analysis in LISREL software. The findings indicate that self-acceptance, competencies and skill acquisition are the most influential individual level indicators with factor loadings of 61 60 and 70 respectively while social level indicators also showed significant effects. The results suggest that in the studied context residents inward focused perspectives and the neglect of inherited employment opportunities are among the primary considerations for urban managers.

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INTRODUCTION

Urban marginalization is a permanent form of urban growth in most developing countries, where the majority of areas are occupied informally rather than through planned development. This phenomenon is primarily driven by the acute need for housing, especially among low-income groups (Zeilhofer & Topanotti, 2008). The main cause of marginalization is the forced exclusion of segments of society from the development process. Regional imbalances in economic coverage often lead to mass migration toward large cities (Abbott, 2008). In this context, spatial organization of peripheral urban neighborhoods, or in other words, addressing the problems arising from informal settlements, represents a major challenge and pressing issue for urban planners and managers, particularly in developing countries. From the early emergence of urban marginalization, various approaches have been proposed over time, depending on economic and social conditions as well as prevailing perspectives (Sahraian, 2003). The empowerment approach has emerged as a prominent framework for understanding how marginalized urban communities can transition from passive recipients of assistance to active agents of change. Empowerment is broadly conceptualized as a multidimensional social process that enables individuals and groups to increase control over their lives, resources, and decision-making, thereby enhancing their capacity to influence social and environmental outcomes (Okech & Mačkinová, 2025).

In the context of sustainable urban development, community empowerment involves expanding residents' agency through participatory planning, access to information, and shared governance structures, which can contribute to both social resilience and environmental stewardship (Muhamad Khair et al., 2020).Moreover, psychological constructs such as environmental self efficacy the belief in one's ability to effectively engage in behaviors that benefit the environment have been identified as key determinants of pro environmental action. Empirical research shows that individuals with stronger environmental self efficacy are more likely to participate in environmentally sustainable behaviors and communal environmental decision making, which in turn can enhance neighborhood environmental quality (Zhang & Cao, 2025). Collectively, these perspectives suggest that empowerment and self efficacy operate synergistically, with empowerment processes facilitating the development of self efficacy beliefs that enable residents to take ownership of environmental challenges and contribute to local environmental improvements. Thus Empowerment refers to a multidimensional social process through which individuals and communities enhance their capacity to make effective decisions, gain control over their lives and surroundings, and translate these decisions into practical actions. This concept is particularly important in community development and underprivileged areas, as it enables residents to actively participate in local decision-making, access information and resources, and take responsibility for improving their living and environmental conditions. Empowerment allows communities to act not merely as passive recipients of services, but as active agents in social development and transformation. This approach is especially relevant in urban planning and the development of peripheral neighborhoods, where participation and responsibility of residents are key to improving environmental quality (Alsop & Heinsohn, 2005). Since empowerment enhances decision-making capacity and resident participation, it creates the basis for effective engagement in improving living conditions. Therefore, examining environmental quality as one of the primary areas influenced by these capacities becomes essential. Environmental quality refers to a set of physical, environmental, and social characteristics that affect residents' physical and mental health, satisfaction, and daily life conditions in urban areas (Singh & Jain, 2022). This concept encompasses

factors such as air and water cleanliness, greenery, access to urban services, pollution control, safety, environmental tranquility, and visual quality of spaces (Mahmoudzadeh, Abedini, & Aram, 2024). Research indicates that environmental quality is especially critical in peripheral neighborhoods, as these areas often face challenges such as limited public spaces, weak local services, and poor environmental conditions, which can directly threaten the health and welfare of residents (Mahmoudzadeh et al., 2024). Assessing and improving environmental quality in such urban areas can play a decisive role in enhancing liveability, increasing the sense of security, and improving social health (Singh & Jain, 2022). In this context, the main question revolves around mechanisms capable of sustainably improving environmental quality. Recent literature emphasizes the role of empowerment and active resident participation in this process. Environmental quality is a set of physical, environmental, and social characteristics that influence residents' physical and mental health, satisfaction, and daily life conditions in urban environments (Singh & Jain, 2022). It includes factors such as air and water cleanliness, greenery, access to urban services, pollution control, safety, environmental tranquility, and visual quality (Mahmoudzadeh, Abedini, & Aram, 2024).

Studies show that environmental quality in peripheral areas is particularly important because these areas often lack public spaces, local services, and adequate environmental conditions, which can directly threaten residents' health and welfare (Mahmoudzadeh et al., 2024). Measuring and enhancing environmental quality in such urban areas can play a decisive role in improving liveability, increasing the sense of security, and enhancing social health (Singh & Jain, 2022). Although empowerment has a direct role in improving environmental conditions, research indicates that this process is more effective when combined with psychological factors that influence environmental behaviors. One of the most important of these factors is social self-efficacy. Local empowerment through educational programs, participation, and delegation of responsibilities can enhance residents' capacity to engage in environmental management and local decision-making, ultimately leading to improved environmental quality. Studies show that when individuals acquire environmental knowledge, maintenance skills, and access to resources, their pro-environmental behaviors increase, leading to reduced environmental degradation and improved public spaces (Si et al., 2022). Furthermore, empowerment programs that focus on strengthening social capital and trust among residents contribute to collective participation, which can improve green space maintenance, waste management, and social oversight of environmental issues. Therefore, local empowerment is not only a socio-political goal but also a practical tool for improving environmental quality in urban neighborhoods, particularly in peripheral areas (Dushkova & Ivlieva, 2024). The importance of these findings becomes even clearer when considering the role of self-efficacy in interacting with other forces that shape the environmental status of neighborhoods, especially factors used to precisely assess environmental quality. Individuals' belief in their ability to influence the environment is one of the most important predictors of pro-environmental behavior and plays a fundamental role in enhancing urban environmental quality (Steinhorst et al., 2015). When residents feel capable of effecting change in their living environment, they are more likely to engage in activities such as waste management, green space protection, and other environmentally sustainable behaviors, which directly contribute to improved environmental quality (Fritsche et al., 2011). Moreover, social self-efficacy at the collective level the belief of the group in its shared capacity to solve environmental problems enhances motivation, cooperation, and collective responsibility in neighborhoods, thereby improving public space quality and neighborhood

liveability (Greenaway et al., 2014). Consequently, both individual and collective self-efficacy, as a psychological construct, plays a key role in enhancing environmental quality, particularly in peripheral and underprivileged urban areas (Fritsche et al., 2011). While the role of individual and collective self-efficacy in environmental quality improvement is well-supported, literature review shows that this psychological construct has not been cohesively studied alongside social empowerment components. This gap between existing findings and the real needs of these neighborhoods highlights the research necessity and the importance of developing an innovative approach. Although the literature on community centered empowerment has expanded significantly in recent years, systematic reviews indicate that most studies still focus on the economic and social outcomes of empowerment, while the environmental aspects, especially in informal settlements, remain underexplored (Alsop & Heinsohn, 2005). On the other hand, research on environmental quality predominantly emphasizes physical, ecological, and infrastructural factors, largely neglecting psychological constructs such as individual and collective self-efficacy in shaping pro-environmental behaviors (Bonaiuto, Fornara, & Bonnes, 2003). This situation has left the relationship between empowerment, social self-efficacy, and environmental quality in peripheral areas underexplored and conceptually ambiguous, particularly in countries facing spatial heterogeneity and widespread urban inequalities. The main innovation of this study lies in presenting an integrated framework that, for the first time, examines social empowerment, environmental self-efficacy, and environmental quality in a single model within real-world peripheral neighborhoods. Drawing on environmental psychology and collective behavior theories (Fritsche et al., 2011), the study demonstrates how social self-efficacy can provide a mediating mechanism through which empowerment has a greater impact on enhancing environmental quality. From this perspective, the present study contributes both conceptually and practically to the existing literature and can guide the design of community-based interventions in underprivileged settlements. The Imam Hadi neighborhood Behradabad in District 10 of Mashhad, as one of the main informal settlement areas of the city, faces extensive environmental and social challenges. According to official data, approximately 29% of the neighborhood area is informal settlement, and around 12% falls within deteriorated urban fabric zones, indicating a high level of physical disorder and urban insecurity. Net residential density exceeds 1,056 persons per hectare, and there is a serious shortage of essential land uses, including educational and healthcare services and green spaces, posing significant challenges to environmental quality. Many planned land uses in the master plan have not been realized, and much of the land remains as large or vacant plots. Heterogeneous urban structures, including old rural fabrics, grid-pattern streets, and irregular parcels, create severe spatial fragmentation and a lack of coherent urban identity. The formation of heterogeneous and peripheral neighborhoods, coupled with insufficient services, weakens the sense of place and social participation, leading to social issues such as reduced social trust and neighborly interactions. These conditions make Imam Hadi one of the critical peripheral zones in urgent need of empowerment interventions and environmental quality improvement. The aim of the current study is to analyze the extent to which empowerment contributes to enhancing environmental quality in peripheral neighborhoods, focusing on the Imam Hadi neighborhood of Mashhad. The aim of the current study is to analyze the extent to which empowerment contributes to enhancing environmental quality in peripheral neighborhoods, focusing on the Imam Hadi neighborhood of Mashhad.

MATERIALS AND METHODS

Importance of Empowerment in Enhancing Environmental Quality

Peripheral urban neighborhoods, as one manifestation of unbalanced urban growth, are spaces that develop outside formal planning structures and under conditions of resource scarcity and lack of standard infrastructure. These settlements are typically characterized by high population density, low construction quality, limited access to basic services, and environmental vulnerability (UN-Habitat, 2020). Such conditions lead to decreased environmental quality and exacerbate spatial inequalities, a problem that is particularly pronounced in developing countries, especially in urban peripheries (Sverdlik, 2011). Therefore, any intervention aimed at improving the living environment in these areas requires an approach that addresses not only physical deficiencies but also activates the social and institutional capacities of residents. Within this framework empowerment emerges as a key community-centered development approach. Empowerment is a multidimensional process that enables individuals and communities to play a more active role in managing their living environment through increased access to information, skills, and participatory mechanisms (Alsop & Heinsohn, 2005).

Research evidence indicates that empowerment interventions—including environmental education, local participation, and social capital strengthening enhance proenvironmental behaviors and improve urban space quality, particularly in areas that, due to structural limitations, rely more heavily on internal community capacities (Dushkova & Ivlieva, 2024). From this perspective, empowerment is not merely a social tool but a practical mechanism for improving environmental quality in peripheral neighborhoods. The effect of empowerment becomes sustainable and effective when combined with supportive psychological construct

s, including social and environmental self-efficacy. Environmental and social self-efficacy refers to the belief of individuals and groups in their ability to effect change in their surroundings and is one of the most important predictors of pro-environmental behaviors (Steinhorst et al., 2015). When individuals feel capable of influencing their environment, their participation in activities such as waste management, green space preservation, or maintenance of public spaces increases (Fritsche et al., 2011). Moreover, collective self-efficacy, by strengthening cooperation and shared responsibility, enhances the effectiveness of environmental interventions and fosters neighborhood liveability (Greenaway et al., 2014). Based on this, examining peripheral neighborhoods with a focus on empowerment and social self-efficacy provides a framework to integrate residents' social behavioral effects with environmental indicators, offering a unified framework for analyzing environmental quality in informal settlements. This theoretical synergy highlights that improving environmental quality in these neighborhoods is not merely a physical issue but a process dependent on activating capacities, perceived efficacy, and active participation of residents. Building on this theoretical foundation, the next step is to operationalize these concepts in real-world peripheral neighborhoods. Accordingly, the methodological structure of this study was designed to allow simultaneous measurement of physical conditions, levels of empowerment, and dimensions of social self-efficacy. In analyzing the conditions of peripheral neighborhoods, this research adopts an approach that does not consider environmental improvement solely dependent on physical interventions but emphasizes the role of residents' social and psychological capacities. Consequently, the theoretical framework of this study draws on previous research demonstrating the empirical significance of collective efficacy and social participation in improving local conditions (Sampson, Raudenbush, & Earls, 1997; Sampson, 2018). To examine this framework, data were collected in three domains: physical conditions and quality of urban services, social and economic empowerment indicators, and components of individual and collective self-efficacy. Data were gathered us-

ing standardized questionnaires and field observations to analytically examine the relationships among urban fabric, empowerment, self-efficacy, and environmental quality. The use of this methodological design, based on the combination of quantitative data and field observations, has previously proven successful in research on underprivileged neighborhoods, showing a significant relationship among social capital, collective efficacy, and environmental quality (Agyeman & Evans, 2020; Carrasco & Tavares, 2021). This approach allows the assessment of environmental quality in peripheral neighborhoods not only from a physical perspective but also considering the social and psychological mechanisms influencing residents' behavior, providing a more accurate understanding of the role of empowerment and self-efficacy in improving environmental conditions.

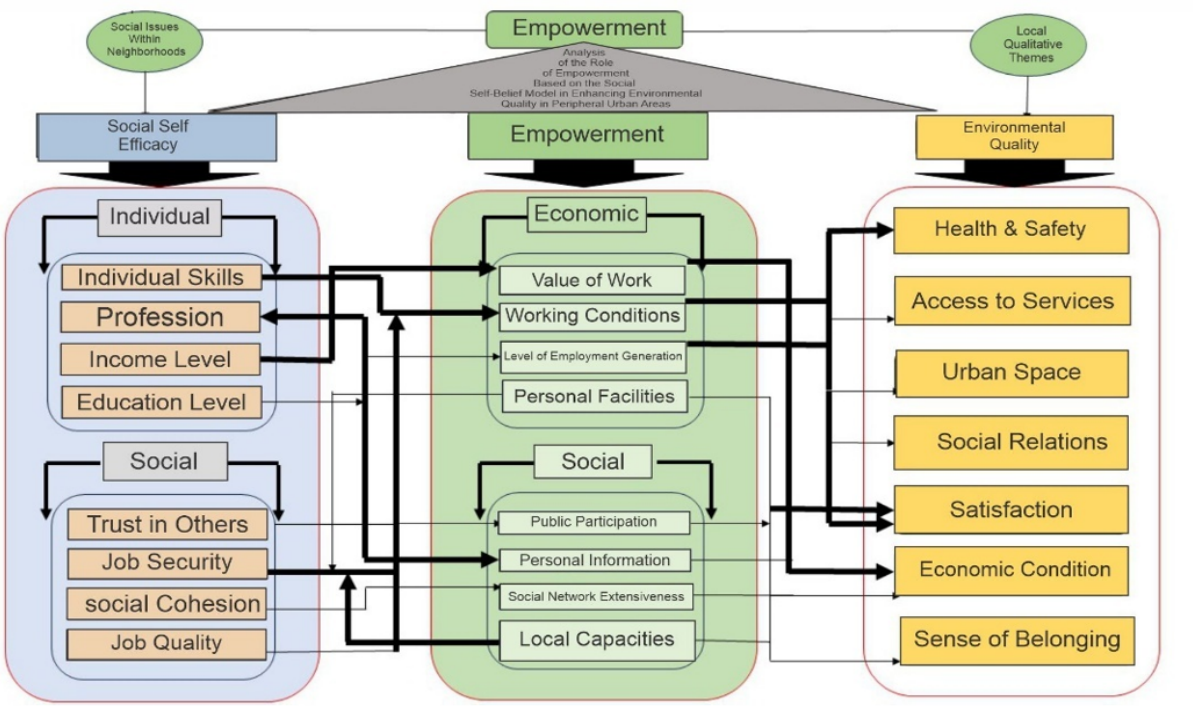

Figure 1: The Conceptual model of resaerch

In examining the characteristics of peripheral neighborhoods through the lens of empowerment and social self-efficacy, a set of components emerges that demonstrates that changes in environmental quality occur only when the individual and social capacities of residents have been activated beforehand. Within this framework, the indicators presented in the following table clearly show that the starting point for any sustainable transformation is the enhancement of self-efficacy—manifested both at the individual level and in social interactions. Indicators such as personal efficacy, self-esteem, skill utilization, and a sense of social security indicate that residents who perceive themselves as capable are more prepared to participate in neighborhood affairs. The same pattern is observed at the social level, where responsibility,

solidarity, mutual trust, and shared purpose provide the foundation for collective action. Once this psychological and social groundwork is strengthened, the mechanisms of empowerment can take effect. Economic and employment indicators from job creation to organizing local activities and increasing income illustrate how economic stability can enhance citizen participation. Alongside these, factors such as support networks, skills training, and increased trust demonstrate that social empowerment becomes meaningful when residents have a real role in decisions affecting their daily lives. These two layers are ultimately reflected in the environmental conditions of the neighborhood. Environmental indicators, such as absence of pollution, cleanliness of spaces, and familiarity with building regulations, along with physical

Table 1: Dimensions and Indicators of Imam Hadi Neighborhood

Component	Criterion	Indicators
Self-Efficacy	Individual Self-Efficacy	Personal efficacy level; utilization of individual abilities; increasing knowledge and literacy; high self-esteem; social security; individual competence in the community
Empowerment	Interactive / Social Self-Efficacy	Sense of responsibility and willingness to progress; respect and trust toward others; purposefulness; social cohesion; residents' respect and trust toward others; utilization of neighborhood capacities in social participation by neighborhood managers; identification of capable and literate individuals in urban planning to enhance neighborhood empowerment
	Economic and Employment	Work as a value; job creation; welfare facilities for residents; organization of existing businesses; provision of facilities; improvement of residents' income; government support in implementing major commercial land uses
	Social	Citizen participation in certain activities through local offices; formation of support networks facilitation offices increasing individual knowledge through technical and vocational centers and skills training; trust in others; utilization of local community capacities; improvement of social relations to enhance social sustainability
Environmental Quality	Environmental	Neighborhood environmental quality; absence of noise pollution, air pollution, and unpleasant odors; cleanliness and aesthetic quality; residents' familiarity with building regulations; municipal incentive programs encouraging compliance with construction standards
	Physical	Adequacy of construction materials; housing physical conditions; building form and shape; household size relative to housing area; use of regulated and high -quality materials and construction in government-owned properties to promote construction literacy and quality in the neighborhood

indicators, such as material quality, construction status, and suitability of housing units to household size, all demonstrate that environmental quality is a direct outcome of residents' conscious and coordinated actions. Wherever self-efficacy and empowerment are properly established, their effects are observable in the physical fabric and landscape of the neighborhood. In fact, the combination of these three components provides a clear picture of the process of environmental quality enhancement. Self-efficacy supplies the initial energy for change; empowerment transforms this energy into effective action; and environmental quality represents the tangible outcome of this process in the neighborhood. The table follows this logic precisely, presenting indicators that allow each stage of the process to be measured within the real context of the Imam Hadi neighborhood. Thus, the relationships among these components can be examined not as abstract concepts, but through measurable behaviors and conditions. (Tab. 1)

Research Methodology

The present study is analytical in nature and aims at practical application. The research paradigm is interpretive, and the research design is quantitative. Data collection was carried out using both documentary library-based methods and field surveys. In the first step, by reviewing initial concepts and theoretical foundations regarding empowerment, environmental quality, and social self-efficacy in peripheral neighborhoods, the structure of the conceptual model was developed. In the next step, the formulated indicators were tested in the peripheral context of the Imam Hadi neighborhood in Mashhad using a questionnaire. The statistical population included residents, beneficiaries, and specialists. A semi-structured questionnaire was applied using a random sampling method. Subsequently, based on the results of the questionnaire analysis, the findings were presented using multivariate factor analysis with Lisrel software.

Overview and Introduction to Imam Hadi Neighborhood

Imam Hadi (A.S.) neighborhood is located in District 10 and Zone 3 of Mashhad Municipality. It is surrounded by major thoroughfares, including Azadi Payambar-e-Azam Street and Cheraghchi Highway, as well as the Tus and Khadem al-Sharieh arteries. Neighboring districts include Hojjat Town, Khatam, and Al-Anbiya. The total area of the neighborhood is approximately 3,014,107 square meters, which accounts for about 12% of District 10. (Fig. 2)

Figure 2: Illustrates both the informal neighborhood zoning and the geographic location of the Imam Hadi neighborhood (Source: Organization for Urban Regeneration, 2021)

The Imam Hadi (Behrabad) neighborhood is one of the older districts located along Tos Boulevard. Historically and morphologically, the neighborhood was not confined to its current boundaries. Areas such as the Behrabadi Cemetery, the wrestling pit (Goud Keshti), parts of Mahdiabad, and the connection to the Chal Chehel Bazeh watershed leading to Khoshk River constituted the old boundaries of the neighborhood. However, street layouts and urban planning interventions over time created inter-fabric discontinuities within the area. The rural fabric of Behrabad, the grid street pattern of Imam Hadi, and the organized urban land plots (Kuye Saadat) along Azadi Boulevard represent different urban morphological types within the neighborhood.

Demographic Characteristics of Imam Hadi Neighborhood

According to the 2016 census (1395 in the Iranian calendar), the population of the neighborhood was approximately 33,791 people. Considering an average household size of 3.3 and the number of residential units in the neighborhood, the projected population for 2021 (1400 in the Iranian calendar) is 41,853 people up to the Statistical Center of Iran in 2016. The population density of the area is approximately 60 persons per hectare. However, since about half of the neighborhood's area consists of large non-residential plots, the net residential density differs significantly from the gross density and is approximately 1,056 persons per hectare. (Tab. 2)

Table 2: Population Distribution in Imam Hadi Neighborhood

Population (% of total)	Total	Age Groups				Description
		Age +64	Age 35-64	Age 15-34	Age 0-14	
2.50	966 ،16	9.86	410 ،5	224 ،6	756 ،4	**Male**
8.49	825 ،16	7.3	054 ،5	467 ،6	611 ،4	**Female**
0.100	791 ،33	239 ،1	464 ،10	721 ،12	367 ،9	**Total**
*	0.100	663	0.31	6.37	7.27	**Percentage**
*	*	9.86	107	8.95	103	**Sex Ratio**

Population Density in Imam Hadi Neighborhood

The population density of the Imam Hadi neighborhood is 112 persons per hectare, calculated as gross density. Considering that more than half of the neighborhood's area is occupied by Ghods Province gardens, Razavi Hospital, and a tourist hotel, gross density does not accurately reflect the residential conditions. Therefore, calculating net residential density provides a more realistic measure. The total area of the residential fabric in Imam Hadi neighborhood is approximately 6,008,845 square meters. Based on a population of 33,791, the net residential population density is estimated at 563 persons per hectare. For the year 2021 (1400 in the Iranian calendar), the gross population density is projected to be 138 persons per hectare, while the net residential density is estimated at 696 persons per hectare.

MATERIALS AND METHODS

In this section, the variables obtained from the qualitative findings of the study are examined. Following the qualitative analysis, which reviewed the perspectives of experts, consultants, and managers, the study proceeded to analyze the opinions of residents in the Imam Hadi neighborhood as a case study. This approach allowed a comprehensive assessment of the components identified in the qualitative phase and a quantitative measurement of the study variables. Considering the neighborhood population of 41,853, a total of 150 questionnaires were

completed and analyzed based on Cochran's formula. Random sampling was used to select respondents. Three main dimensions of the study were examined: the individual dimension with the intra-personal component including four indicators: skill development, enhancement of individual knowledge and awareness, self-acceptance and abilities, and hope for employment; the human dimension with the beliefs and values component including five indicators: life satisfaction, motivation and hope, interaction with cultural and social centers, skill development and talent identification, and employment generation based on capabilities; and the social dimension with the trust-building component including three indicators: building trust among people, trust in employment, and high responsibility; the employment support component including three indicators: attracting investors, providing government facilities, and assisting in employment generation; the social quality component including five indicators: promoting culture through education, reducing crime and corruption, social environment assessment, enhancing social interactions, and establishing neighborhood councils; and the physical quality component including two indicators: improving the built environment and assessing physical deficiencies in the neighborhood. To implement the questionnaire, 22 indicators were designed based on a five-point Likert scale. To ensure content validity, the questionnaire was reviewed by 10 academic experts, and its content validity was confirmed. Reliability was assessed using Cronbach's alpha, and the results confirmed the instrument's internal consistency. Subsequently, the collected data were analyzed using confirmatory factor analysis. (Tab. 3)

Table 3: Reliability Coefficients of Research Indicators

Indicator Dimension	Cronbachs
Individual	887.0
Human	864.0
Social	895.0

Among the citizens participating in the questionnaire, 48% were women and 52% were men. In terms of age groups, individuals aged 30 to 50 years accounted for the highest proportion at 60%, while those aged 51 years and above represented the lowest proportion at 15%. Regarding educational attainment, respondents with a bachelor's degree constituted the largest group at 55%, whereas those with postgraduate education represented the smallest group at 15%.(Tab. 4)

Table 4: Frequency Distribution of Questionnaire Participants' Characteristics

Variable		Frequency	Percentage
Gender	Male	78	52
	Female	72	48
Age	Years 30-18	39	25
	Years 50-30	90	60
	Over 50 years	23	15
Education	High school diploma	45	30
	Bachelor's degree	82	55
	Postgraduate degree	23	15

Next, the study examines the latent factors present within the set of research variables. To ensure the accurate measurement of the data, confirmatory factor analysis (CFA) was employed. The relationship between factors is represented on a scale from 0 to 1, indicating the correlation between factors and their respective indicators. Factor loadings below 0.2 are considered weak, between 0.2 and 0.6 acceptable, and above 0.6 highly desirable. Weak factor loadings are omitted from further consideration. The analysis results indicate that, according to Table 4-15, within the human dimension, the factors employment generation based on capabilities and skill development and talent identification exhibit the greatest impact, with factor loadings of 0.708 and 0.702, respectively. Conversely, crime and corruption reduction and establishment of neighborhood councils show the least impact on the social and familial dimension, with factor loadings of 0.375 and 0.352, respectively. Following these, the factors enhancement of individual knowledge and awareness, self-acceptance and abilities, and provision of government facilities rank third to fifth in terms of influence. The factors skill development, self-acceptance and abilities, skill development and talent identification, employment generation based on capabilities, attracting investors, provision of government facilities, physical quality improvement, and assessment of built environment deficiencies are identified as highly desirable factors, while the remaining factors are considered acceptable. To assess statistical significance, a t-test was performed, indicating significance at the 99% confidence level. (Tab. 5)

In the individual dimension, the factor self-acceptance and abilities ranks first with a factor loading of 0.618, followed sequentially by skill development, enhancement of individual knowledge and awareness, and hope for employment, occupying the second to fourth positions. This indicates the primacy of self-acceptance and personal efficacy over other individual factors, followed by skill development and knowledge enhancement, which reflects the impact of individual empowerment, and finally, the hope for employment. In the human dimension, skill development and talent identification ranks first with a factor loading of 0.708, while employment generation based on capabilities occupies the second position with a factor loading of 0.702. This demonstrates the importance of skill and talent development, followed by employment opportunities aligned with individuals' capabilities and competencies. In the social dimension, attracting investors ranks first with a factor loading of 0.698, followed by provision of government facilities with a factor loading of 0.695, while the remaining factors are ranked accordingly, as shown in the table below. This highlights the importance of managerial support and institutional backing in the development and enhancement of the model. (Tab. 6)

As shown in the table above, Self-Acceptance and Abilities and Skill Development are the most influential factors in the individual dimension, while Employment Generation Based on Capabilities and Skill Development and Talent Identification are the most significant in the human dimension. In the social dimension, Attracting Investors and Provision of Government Facilities are identified as the key factors exerting the greatest impact on the model. It is noteworthy that, based on the conducted analyses, self-efficacy, empowerment, skill development, individual potential, and economic factors emerged as the most influential variables, demonstrating the strongest effects in the model. This highlights the critical role of the individual, family, and social-economic factors in shaping outcomes. According to the research conceptual model, the individual, human, and social dimensions were employed in measuring the social and familial background within the model, encompassing a total of 22 variables: 4 in the individual dimension, 5 in the human dimension, and 13 in the social dimension. To evaluate the model's validity

and fit, the statistical indices extracted from the questionnaires were analyzed. The results confirm that the research model is acceptable and valid, with all examined indicators demonstrating an appropriate model fit, as presented in Table 7.

Table 5: Confirmatory Factor Analysis and Significance Coefficients of Research Variables in Imam Hadi Neighborhood

Dimension	Factor	Factor Loading	t-value	Result	Rank
Individual	Skill Development	60.0	32.5	Highly Desirable	8
	Enhancement of Individual Knowledge	50.0	75.2	Acceptable	14
	Self-Acceptance and Abilities	61.0	37.5	Highly Desirable	5
	Hope for Employment	49.0	65.3	Acceptable	17
Human	Life Satisfaction	44.0	01.4	Acceptable	20
	Motivation and Hope	45.0	45.4	Acceptable	19
	Interaction with Cultural and Social Centers	56.0	97.4	Acceptable	12
	Skill Development and Talent Identification	70.0	21.6	Highly Desirable	2
	Employment Generation Based on Capabilities	70.0	25.6	Highly Desirable	1
Social	Trust-Building among People	50.0	23.4	Acceptable	15
	Trust in Employment	56.0	21.4	Acceptable	9
	High Responsibility	49.0	67.3	Acceptable	18
	Attracting Investors	69.0	37.5	Highly Desirable	3
	Provision of Government Facilities	69.0	45.5	Highly Desirable	4
	Employment Support	56..0	76.4	Acceptable	10
	Cultural Promotion through Education	56.0	63.5	Acceptable	11
	Crime and Corruption Reduction	35.0	65.2	Acceptable	22
	Social Environment Assessment	50.0	23.4	Acceptable	16
	Enhancement of Social Interactions	53.0	32.3	Acceptable	13
	Establishment of Neighborhood Councils	37.0	67.2	Acceptable	21
	Physical Quality Improvement	60.0	21.6	Highly Desirable	8
	Assessment of Built Environment Deficiencies	61.0	02.5	Highly Desirable	6

Tabl 6: Confirmatory Factor Analysis and Significance Coefficients of Research Variables in Imam Hadi Neighborhood

Dimension	Factor	Factor Loading	t-value	Result	Rank
Individual	Skill Development(f1)	60.0	32.5	Highly Desirable	2
	Enhancement of Individual Knowledge(f2)	50.0	75.2	Acceptable	3
	Self-Acceptance and Abilities(f3)	61.0	37.5	Highly Desirable	1
	Hope for Employment(f4)	49.0	65.3	Acceptable	4
Human	Life Satisfaction(e1)	44.0	01.4	Acceptable	4
	Motivation and Hope(e2)	45.0	45.4	Acceptable	4
	Interaction with Cultural and Social Centers(e3)	56.0	97.4	Acceptable	3
	Skill Development and Talent Identification(e4)	70.0	21.6	Highly Desirable	1
	Employment Generation Based on Capabilities(e5)	70.0	25.6	Highly Desirable	1
Social	Trust-Building among People(j1)	50.0	23.4	Acceptable	9
	Trust in Employment(j2)	56.0	21.4	Acceptable	5
	High Responsibility(j3)	49.0	67.3	Acceptable	11
	Attracting Investors(j4)	69.0	37.5	Highly Desirable	1
	Provision of Government Facilities(j5)	69.0	45.5	Highly Desirable	2
	Employment Support(j6)	56..0	76.4	Acceptable	6
	Cultural Promotion through Education(j7)	56.0	63.5	Acceptable	7
	Crime and Corruption Reduction(j8)	35.0	65.2	Acceptable	13
	Social Environment Assessment(j9)	50.0	23.4	Acceptable	10
	Enhancement of Social Interactions(j10)	53.0	32.3	Acceptable	8
	Establishment of Neighborhood Councils(j11)	37.0	67.02	Acceptable	12
	Physical Quality Improvement(j12)	60.0	21.6	Highly Desirable	4
	Assessment of Built Environment Deficiencies(j13)	61.0	02.5	Highly Desirable	3

Table 7: Model Fit Indices

Goodness of Fit Index	Df	2X	RMSEA	/X²df	GFI	AGFI	CFI
Model Values	684	875. 22	0. 042	1. 9	0. 68	0. 85	0. 89

The figure below illustrates the standardized factor loadings influencing the Social and Family Background Model. All variables in the model are confirmed, demonstrating acceptable positions and significant effects on the three research dimensions. The three dimensions individual, human, and social play a critical role in establishing logical and effective relationships within the model, and all three dimensions are confirmed and acceptable. These findings indicate the interrelationships among variables within each dimension, the connections between the dimensions, and ultimately the final research model. In the individual dimension, all four variables skill development, enhancement of individual awareness and knowledge, self-acceptance and capabilities, and employment aspiration are confirmed and demonstrate significant impact on the model. In the human dimension, the five examined variables life satisfaction, motivation and hope, interaction with cultural and social centers, skill development and talent identification, and employment based on individual capabilities are also confirmed. In the social dimension, thirteen variables are confirmed, including: building trust among people, job confidence, high responsibility, attracting investors, providing government facilities, supporting employment creation, education-based cultural promotion, crime reduction, social environment assessment, increasing social interactions, establishing neighborhood councils, improving physical quality, and assessing the physical environment. Individual Dimension: Skill development Enhancement of individual awareness and knowledge Self-acceptance and capabilities Employment aspiration. Social Dimension: Building trust among people Job confidence High responsibility Attracting investors Providing government facilities Supporting employment creation Education based cultural promotion Crime reduction Social environment assessment Increasing social interactions. (Fig. 3)

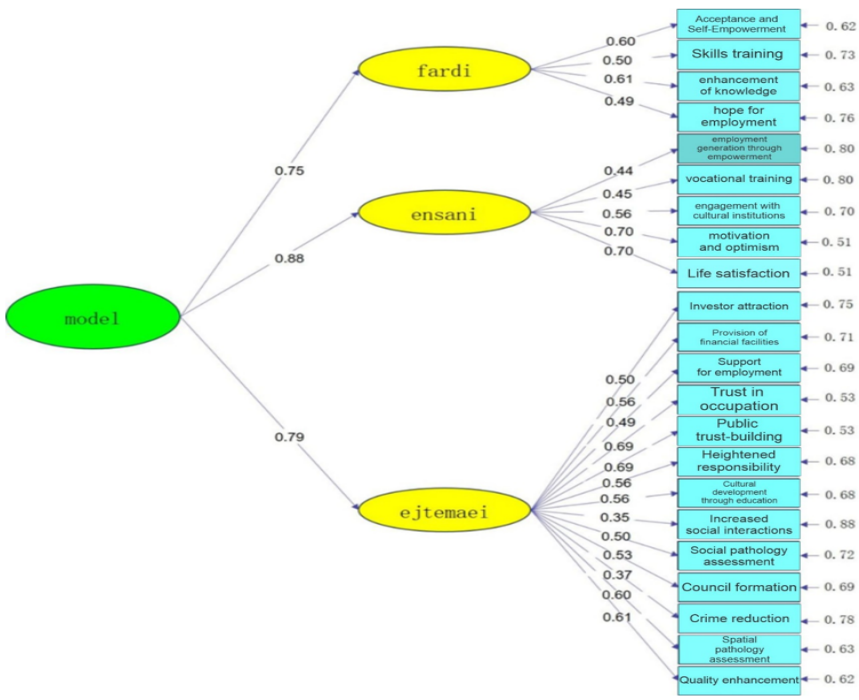

Figure 3: Standardized factor loadings affecting the social and family background of Imam Hadi neighborhood

MATERIALS AND METHODS

Based on the obtained data and the theoretical framework of the study, coding and factor loadings were determined. According to the results, the general indicators of the social aspect in the three dimensions individual, human, and social were identified in the Imam Hadi neighborhood. Based on these findings, empowerment components and indicators were developed, and the resulting factors were evaluated according to social self-efficacy and its impact on improving environmental quality in the neighborhood. Subsequently, using the criteria derived from qualitative analysis and reviewing the results in the quantitative phase, empowerment components and indicators were further developed. The figure below shows the standardized factor loadings affecting the social and family aspect model, indicating that all variables are validated and have a significant and acceptable impact on the three dimensions of the study. The three dimensions individual, human, and social play a critical role in establishing logical and effective relationships within the model, and all three are confirmed and acceptable. These findings demonstrate the interrelation of variables within each dimension, the connection between the dimensions, and ultimately, the final research model. In the individual dimension, all four variables skills development, increasing personal knowledge and awareness, self-acceptance and capabilities, and employment aspiration are confirmed and have significant impact on the model. In the human dimension, the five variables life satisfaction, motivation and hope, interaction with cultural and social centers, skills development and talent identification, and employment based on personal capabilities are confirmed. In the social dimension, thirteen variables trust-building among residents, trust in occupation, high responsibility, attracting investors, granting governmental facilities, assistance in job creation, educational cultural promotion, crime reduction, environmental social assessment, increasing social interactions, formation of neighborhood councils, improvement of physical quality, and environmental structural assessment are confirmed. According to the categories obtained from the tables, aspects of social interaction, self-confidence, increasing hope through employment, acquiring skills, and self-acceptance are highly significant. The frequency of these categories shows that urban planners and consultants emphasize the importance of the individual dimension and see the enhancement of empowerment in this neighborhood through attention to this aspect. Moreover, human aspects such as attention to human beliefs, job creation based on abilities, talent identification, skill acquisition, and development of potential through cultural centers are also highly significant. Experts and urban consultants consider the human dimension very important for empowerment enhancement in this area. Human-based empowerment includes attention to human beliefs and values, talent identification and skill development in schools, and employment based on individual abilities and capacities. Considering the weighted categories, the social dimension and, to a great extent, the individual dimension are highly significant. Attention to employment, regional capacities, and personal abilities, along with enhancing self-efficacy and self-confidence, is interlinked with other social and economic factors such as job creation, skill acquisition, government and community participation, and support from investors and authorities. Finally, the obtained components, based on the evaluation of social self-efficacy indicators with an employment-oriented approach, and their impact on improving environmental quality in the Imam Hadi neighborhood of Mashhad, were analyzed and presented. According to the frequency of coded data in this study and the impact of the derived criteria, interviews with consultants indicated that one of the effective factors in promoting employment in this neighborhood is fostering an internal perspective among residents enhancing personal abilities and self-con-

fidence which leads to trust-building between residents and urban managers and reduces reliance on hereditary employment. One of the main factors affecting the low quality of the urban environment in economically disadvantaged areas may be the lack of community participation. Neglecting the individual dimension and residents' environment causes insecurity and deterioration of the living environment, ultimately reducing civic engagement.

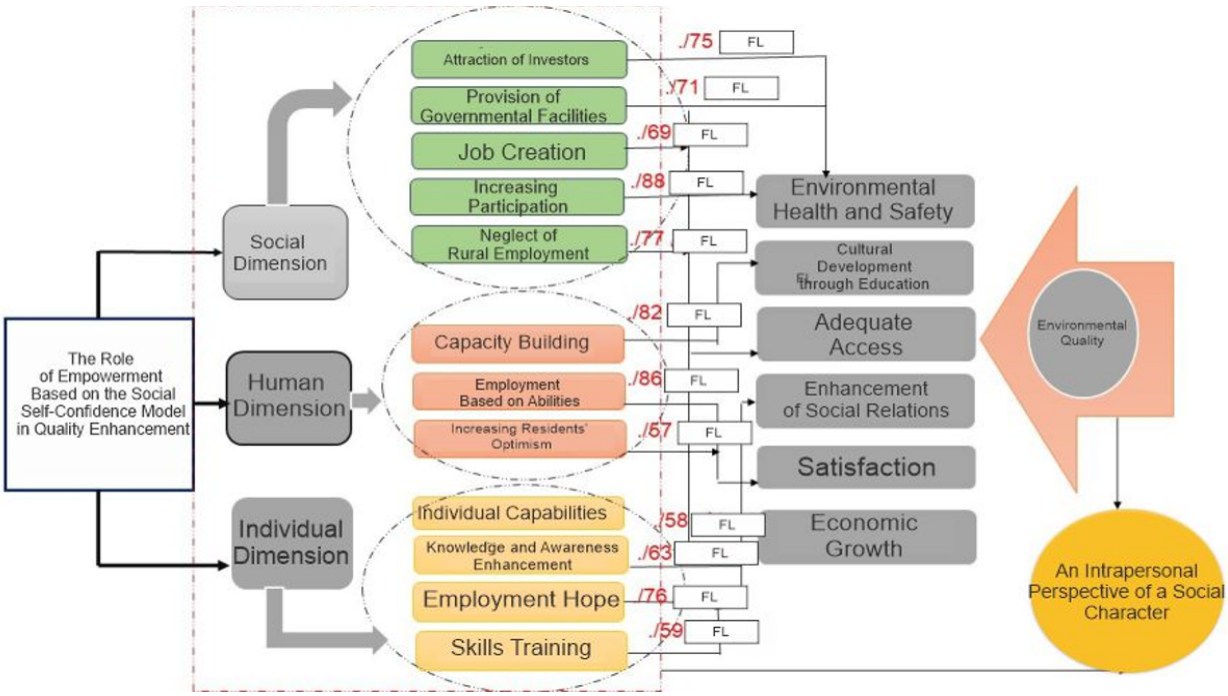

Figure 4: Diagram of the relationship of social self-efficacy indicators from an employment-oriented perspective toward urban environmental quality

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