





## A Comparative Study of Residential Satisfaction Indicators in Oil Company Towns: A Case Study of Newside and Naft Town, Ahvaz

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### ABSTRACT

Oil company towns are among the settlements in which housing, in addition to its residential function, is linked to organizational structure, spatial order, and the social relations of residents. Therefore, evaluating residential satisfaction in these settlements requires simultaneous attention to the physical, social, perceptual, and managerial dimensions of residential quality. The present study aims to analyze the components affecting residential satisfaction in the oil company towns of Ahvaz by comparing two residential complexes, namely Newside and Naft Town. The conceptual framework of the study was developed based on human–environment relationship theory, and residential quality was examined across five dimensions: spatial identity and attachment, social and ethical values, functionalism and quality of life, dynamism and physical quality, and urban management and governance. In terms of purpose, this research is applied, and in terms of method, it is quantitative–qualitative. Data were collected using a researcher-made questionnaire based on cluster sampling among 384 residents of the two neighborhoods. The results showed that Naft Town is at a high level in the components of spatial identity and social values, and at a moderate level in the physical, functional, and managerial components. In contrast, Newside is below the moderate level in all components, with its weaknesses being particularly evident in dynamism and physical quality, functionalism, and urban management. The comparison of the two neighborhoods indicates that residential satisfaction in oil company towns is not merely a function of the physical characteristics of housing units, but also depends on spatial legibility, the quality of neighborhood relations, the possibility of developing a sense of belonging, access to services, and the efficiency of urban management. Therefore, achieving desirable housing in these settlements requires a multidimensional and context-sensitive approach to housing planning and design.

**Keywords:** Residential Satisfaction, Oil Company Towns, Newside, Naft Town.

## 1. Introduction

Residential satisfaction has become one of the central concepts in housing studies, urban management, and the evaluation of residential environments because it reflects the extent to which the built environment, social relations, service systems, and governance mechanisms respond to the needs and expectations of residents. Housing is not merely a physical shelter; rather, it is a multidimensional socio-spatial system through which residents experience security, identity, social interaction, access to services, and everyday quality of life. In contemporary urban studies, the quality of housing is increasingly understood as the outcome of an interaction between physical-spatial characteristics, functional efficiency, social cohesion, environmental quality, and institutional performance. This perspective is particularly important in planned settlements and company towns, where housing is historically connected to employment systems, organizational discipline, spatial hierarchy, and collective identity. Accordingly, the evaluation of residential satisfaction in such settlements requires a broader analytical framework than conventional assessments of housing units, because residents' perceptions are shaped simultaneously by the spatial structure of the neighborhood, the quality of social relations, the accessibility of services, the performance of management institutions, and the symbolic meanings attached to place (Hashempour et al., 2022; Rafeiean et al., 2010; Rafeiean et al., 2009).

The global discourse on sustainable urban development has reinforced the importance of integrated spatial planning and context-sensitive residential development. Recent studies emphasize that sustainable residential environments should be planned not only in terms of land use, infrastructure, and physical form, but also in relation to social equity, ecological performance, governance capacity, and adaptability to changing urban conditions. From the perspective of spatial planning, urban and peri-urban areas require development pathways that integrate settlement structure, functional connectivity, and environmental sustainability, particularly where rapid urbanization creates pressure on residential systems (Zhang, 2025). Similarly, the increasing role of digitalization in urban sustainable development has expanded the scope of urban management by emphasizing data-driven decision-making, economic transformation, and the improvement of urban service delivery (Yang et al., 2025). Artificial intelligence and advanced urban technologies have also been discussed as

emerging instruments for sustainable urbanization, particularly through innovation in infrastructure, market systems, and urban governance capacities (Wang et al., 2025). Although these debates are often framed at the macro-urban scale, their implications are directly relevant to residential neighborhoods, because sustainable urban development ultimately materializes in the everyday environments where residents live, interact, and evaluate their quality of life.

Within this broader discourse, collective housing and planned residential complexes occupy a special position. They are typically designed through coordinated spatial arrangements, service networks, and shared open spaces, and their success depends on the extent to which these elements support both functional needs and collective life. Urban green spaces, public realms, and spatial patterns in collective housing have been identified as key contributors to sustainable residential development because they provide ecosystem services, support social interaction, and improve the environmental quality of everyday life (Vinczeová & Tóth, 2025). In this regard, residential satisfaction cannot be reduced to the size, material condition, or architectural quality of individual housing units. Instead, it involves residents' holistic perception of the neighborhood as a living environment. Factors such as the legibility of spatial organization, access to shared facilities, the presence of usable public spaces, visual and environmental quality, neighborhood safety, and opportunities for interaction all contribute to the perceived quality of residence. Therefore, housing evaluation must adopt a relational approach that considers the reciprocal connection between human experience and environmental structure.

In Iran, residential satisfaction has been widely examined in relation to housing policies, urban development projects, and planned residential environments. Studies on residential quality in different Iranian urban contexts have shown that residents' satisfaction is shaped by a combination of physical, social, economic, and managerial factors. Early studies on neighborhoods such as Navab and Ekbatan demonstrated that the quality of the residential environment depends on spatial organization, accessibility, social relations, public services, and residents' perception of environmental adequacy (Rafeiean et al., 2010; Rafeiean et al., 2009). Subsequent research on Mehr Housing projects in cities such as Zahedan, Ahvaz, and Kerman further showed that satisfaction with planned housing is strongly affected by the quality of infrastructure, neighborhood facilities, social integration, location, and the efficiency of implementation

and management mechanisms (Maleki et al., 2015; Rafieian et al., 2014; Rahnama & Kamandari, 2015). These studies reveal that the shortcomings of planned housing are often not limited to the dwelling unit itself, but are associated with incomplete service provision, weak public spaces, insufficient attention to social life, and inadequate coordination between housing policy and residents' lived needs.

The importance of housing policy is especially evident in contexts where residential development is shaped by state, institutional, or organizational intervention. Government housing-provision policies in Iran have historically been connected to broader economic, social, and cultural development plans, and their outcomes have depended on the alignment between macro-policy objectives and local residential realities (Pourmohammadi et al., 2012). When such policies prioritize quantitative production over qualitative evaluation, the result may be residential environments that provide shelter but fail to generate satisfaction, identity, belonging, or social vitality. For this reason, recent studies have increasingly emphasized the need to move beyond housing supply indicators and incorporate residents' perceptions, neighborhood-level quality, and governance performance into housing evaluation frameworks. This shift is consistent with the growing recognition that desirable housing must be understood as a composite outcome of physical adequacy, functional efficiency, social cohesion, environmental quality, and institutional responsiveness.

Oil company towns in southern Iran represent a distinctive and highly significant form of planned residential settlement. These settlements emerged in relation to the development of the oil industry and were designed to accommodate employees within spatially organized environments connected to industrial production, organizational hierarchy, and corporate welfare systems. Unlike ordinary urban neighborhoods, oil company towns were often shaped by centralized planning, employment-based access to housing, specific architectural typologies, and controlled forms of service provision. As a result, they combine characteristics of organizational housing, planned urbanism, industrial heritage, and neighborhood community. Studies on oil company settlements have shown that their residential quality cannot be assessed solely through general urban housing indicators, because their spatial form, social structure, and governance model are deeply influenced by their institutional origin and historical development

(Babakhani et al., 2021; Kargar et al., 2018; Mombeni et al., 2020).

In the oil-rich regions of southern Iran, particularly in Ahvaz, the spatial organization of oil company towns has played an important role in shaping residents' perceptions of housing quality. The physical-spatial structure of these settlements, including street networks, housing typologies, open spaces, neighborhood boundaries, and spatial accessibility, influences patterns of daily movement, social encounter, environmental perception, and place attachment. Recent work on Ahvaz Oil Company Town has emphasized the significance of physical-spatial structure in housing quality and has examined this relationship through the lens of space syntax theory, highlighting how spatial configuration affects the usability, integration, and perceived quality of residential environments (Arzani Birgani et al., 2025). Such findings suggest that the spatial form of oil company towns is not a neutral background, but an active component in the formation of residential satisfaction. Where spatial structure supports legibility, accessibility, and interaction, residents are more likely to experience attachment and satisfaction; where it produces fragmentation, isolation, or functional inefficiency, residential quality is likely to decline.

The literature on oil company towns also indicates that desirable housing in these settlements depends on a set of interrelated indicators. Research on indicators of desirable housing in oil company towns has pointed to the importance of physical quality, access to services, environmental comfort, neighborhood identity, social relations, and compatibility between the residential environment and residents' everyday practices (Miri & Faramarzi Asl, 2022). Similarly, studies focusing on specific residential complexes have identified key indicators for achieving desirable housing, including the adequacy of housing design, the organization of open spaces, functional accessibility, safety, neighborhood facilities, and residents' sense of belonging (Masoudinejad et al., 2021). These findings support the view that residential satisfaction in oil company towns should be studied as a multidimensional construct that integrates objective environmental characteristics with subjective residential experience. In this framework, housing quality is not merely a technical or architectural issue, but a managerial and social issue as well.

Social structures are particularly important in company-town settlements because residents often share occupational backgrounds, organizational affiliations, and long-term neighborhood relationships. These shared conditions may

strengthen trust, solidarity, and collective identity; however, they may also produce social closure, dependency on organizational systems, or dissatisfaction when institutional support declines. Research on the effect of social structures in oil-company-town settlements has shown that social relations, collective norms, and neighborhood interaction patterns have a significant impact on satisfaction (Kargar et al., 2018). In addition, public participation has been identified as a critical factor in improving housing quality in oil company towns, because residents' involvement in decision-making can enhance responsiveness, strengthen place attachment, and align management interventions with lived needs (Namiani & Ilani, 2022). These findings are highly relevant to urban management because they show that residential satisfaction depends not only on the physical provision of housing and services, but also on participatory governance, institutional trust, and the capacity of management systems to recognize residents as active stakeholders.

At the same time, the historical and policy context of oil company towns has generated challenges that continue to affect their residential quality. Critical analyses of housing policies in oil company towns of southern Iran have pointed to issues such as aging housing stock, uneven maintenance, changing household needs, institutional fragmentation, and the mismatch between original design assumptions and contemporary lifestyles (Yarmohammadi et al., 2020). Studies on the organizing factors of the residential environment in oil company towns similarly emphasize that the quality of these settlements depends on the coordination of physical organization, functional facilities, environmental conditions, and social-spatial coherence (Mombeni et al., 2020). Furthermore, studies on oil-company housing design indicators and sustainability argue that the sustainability of these settlements requires attention to design quality, social needs, environmental adaptation, and the long-term performance of residential spaces (Mousaei Jo & Abdolmaleki, 2018). Taken together, these works suggest that oil company towns must be re-evaluated not only as historical or organizational housing complexes, but as living neighborhoods that require adaptive planning, participatory management, and context-sensitive regeneration.

Ahvaz provides a particularly important context for such an investigation. As one of the main centers of Iran's oil industry and a major urban hub in southwestern Iran, Ahvaz contains several oil-related residential settlements that reflect different phases of industrial urbanization, organizational housing policy, and architectural planning.

Previous research on spatial planning and quality-of-life indicators in Ahvaz oil company towns has shown that these settlements differ in terms of environmental quality, service provision, social conditions, and residents' perceptions of everyday life (Babakhani et al., 2021). These differences make Ahvaz an appropriate setting for comparative research, because the city contains oil company neighborhoods with shared institutional origins but different spatial forms, construction periods, levels of maintenance, and degrees of integration with the wider urban fabric. A comparative approach can therefore reveal how different configurations of physical structure, social relations, functional services, and management performance influence residential satisfaction within a common organizational-historical context.

Among the oil company settlements of Ahvaz, Newside and Naft Town represent two distinct residential patterns. Newside is an older oil-related neighborhood with historical and architectural significance, while Naft Town belongs to a later generation of planned organizational settlements with a more defined spatial order. Although both were developed in relation to the housing needs of oil-sector employees, their differences in design period, physical structure, neighborhood organization, and subsequent transformation create different residential experiences. This contrast makes them suitable cases for examining how residential satisfaction is shaped by the interaction of spatial identity, social and ethical values, functional quality of life, physical dynamism, and urban management. By comparing these two neighborhoods, it becomes possible to identify whether satisfaction is primarily linked to housing-unit characteristics or whether it emerges from the broader human-environment relationship that includes place identity, social cohesion, service adequacy, public-space quality, and governance efficiency.

Despite the growing body of research on housing satisfaction and oil company towns, several gaps remain. First, many studies examine housing quality in general urban contexts, while fewer focus specifically on the organizational and historical particularities of oil company towns. Second, existing research often emphasizes either physical-spatial indicators or social indicators, whereas residential satisfaction in company towns requires an integrated framework that connects physical form, social relations, lived experience, and management. Third, the comparative study of different oil company neighborhoods within the same city can provide more precise insight into how variations in spatial structure and management history

produce different levels of satisfaction. Finally, the relationship between residential satisfaction and the human–environment relationship remains underdeveloped in the study of oil company towns, even though this theoretical perspective is well suited to explaining how residents interpret, use, and attach meaning to their residential environments.

Therefore, the aim of the present study is to comparatively analyze the components affecting residential satisfaction in Newside and Naft Town in Ahvaz based on the human–environment relationship framework, with emphasis on spatial identity and attachment, social and ethical values, functionalism and quality of life, dynamism and physical quality, and urban management and governance.

## 2. Methods and Materials

In terms of purpose, this research is applied, and in terms of nature and implementation method, it is descriptive–analytical. Its data were collected directly from the residents of two organizational settlements, Newside and Naft Town, in Ahvaz. The study focuses on explaining the status of residential quality in these two oil company towns and comparatively assessing them.

The statistical population of the study consisted of all residents of Naft Town and Newside in Ahvaz. Given the extent and spatial dispersion of the housing units, cluster

sampling was used to select the sample. The sample size was estimated using Cochran’s formula, and finally, 384 residents of the two neighborhoods were selected as the research sample, and the questionnaire was distributed among them. Accordingly, the data required to measure various dimensions of residential quality at the household level were obtained.

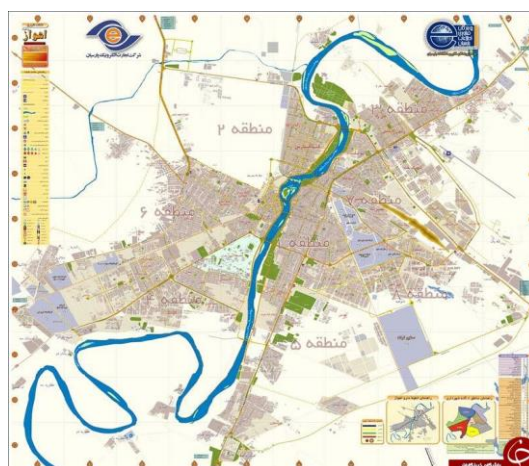
The data collection instrument in this study was a researcher-made questionnaire on housing quality and the residential experience in oil company towns. The questionnaire items were designed based on a combination of theoretical literature review and content analysis of 15 in-depth interviews with residents of Newside and Naft Town in order to cover the physical, functional, social, and perceptual dimensions of residential quality, neighborhood relations, sense of belonging, and patterns of everyday life in the two neighborhoods.

### Research Context

The study area of this research is the city of Ahvaz, the capital of Khuzestan Province and the largest city in southwestern Iran. This city is the commercial, service, and medical hub of southwestern Iran, as well as the center of the Southern Oilfields region. It is also home to industries such as steelmaking, pipe manufacturing, and sugarcane industries, and serves as a transit route for goods to the gateways and ports of southwestern Iran. For this reason, it also provides services to non-native users.

**Figure 1**

*Map of Ahvaz municipal districts. Source: Ahvaz Municipality.*



**Figure 2**

*Map of Ahvaz neighborhoods. Source: Mojtahedzadeh and Namavar (2012).*



The spatial scope of this research includes two organizational residential complexes belonging to the National Iranian South Oilfields Company in the city of Ahvaz: Newside and Naft Town.

Newside is one of the relatively old neighborhoods of Ahvaz, located on the eastern bank of the Karun River. It was constructed in the middle decades of the twentieth century as housing for employees of the National Iranian South Oilfields Company. The design of this complex in the 1940s and 1950s was carried out in collaboration with British architects and engineers and was shaped based on garden-city ideas. Accordingly, its residential units were generally built as villa-style houses with yards, brick or stone façades, and pitched roofs. Due to its age and architectural value, this neighborhood has been registered on the national heritage list of cultural heritage.

Naft Town is also a residential area for employees of the National Iranian South Oilfields Company and is located south of Ahvaz International Airport. Unlike Newside, the design of this town dates back to the mid-1970s, before the 1979 Revolution, but its construction began in the early 1980s, and part of it was completed by the 1990s. Thus, it represents a later generation of oil-related settlements in Ahvaz. With a more coherent spatial order and a clearly defined enclosure around its boundary, this town is separated from the surrounding urban fabric.

Despite their common origin as organizational housing for oil-sector employees, these two cases provide an appropriate basis for a comparative examination of residential quality in the oil company towns of Ahvaz because of their differences in construction period, design pattern, and trajectory of physical transformation.

**Figure 3**

*Aerial photograph of Newside.*



**Figure 4**

*Aerial photograph of Naft Town.*



**Figure 5**

*Sample residential house in Newside.*



**Figure 6**

*Sample residential house in Naft Town.*



### 3. Findings and Results

This section presents the quantitative results of the 34-item questionnaire based on the human–environment

relationship theory in the two neighborhoods of Naft Town and Newside. First, the status of each dimension in each neighborhood is presented in table form, and then it is explained analytically and comparatively.

**Table 1**

*Mean and Standard Deviation of Residential Satisfaction Components in Naft Town*

Status	Standard Deviation	Mean	Dimension of Human–Environment Relationship Theory
High	0.86	3.61	Spatial identity
Very high	0.84	3.84	Social values
Moderate	0.90	2.93	Functionalism and quality of life
Moderate	0.94	3.12	Dynamism and physical quality
Moderate	0.89	3.00	Urban management and governance

As shown in the table above, in Naft Town, the two dimensions of social values and spatial identity are at high to very high levels. This pattern indicates that the residents of Naft Town experience a relatively favorable situation both

in terms of social relations and trust, and in terms of sense of belonging to the neighborhood and the formation of place identity.

**Table 2**

*Mean and Standard Deviation of Residential Satisfaction Components in Newside*

Status	Standard Deviation	Mean	Dimension of Human–Environment Relationship Theory
Low	0.86	2.54	Spatial identity and attachment
Low	0.84	2.66	Social and ethical values
Poor	0.90	2.31	Functionalism and quality of life
Very poor	0.94	2.08	Dynamism and physical quality
Poor	0.91	2.17	Urban management and governance

In Newside, the situation is completely different. All dimensions of the human–environment relationship theory are at low, poor, or very poor levels, and none reaches the moderate level. The weakest status is related to dynamism and physical quality, with a mean of 2.08. This means that, from the residents' perspective, the physical environment, public spaces, and spatial organization of the neighborhood are not only unattractive, but also hinder the formation of everyday presence and interaction in open spaces.

After that, functionalism and quality of life, with a mean of 2.31, was evaluated at a poor level, indicating dissatisfaction with services, facilities, and infrastructures required for everyday life. Even the social and identity-related dimensions do not show a better status: spatial

identity and attachment, as well as social and ethical values, are at a low level, indicating that residents neither have a strong sense of belonging to the neighborhood nor consider the level of social trust and solidarity satisfactory. The dimension of urban management and governance, with a mean of 2.17, also reflects a negative perception of the efficiency of responsible institutions.

The analytical interpretation of this pattern describes it using concepts such as relational rupture and spatial isolation. In other words, Newside is perceived less as a livable neighborhood and more as a fragmented space that is inconsistent with residents' lifestyles and lacks stable communication networks.

**Table 3**

*Results of the t-Test for Examining the Significance of Variables*

Result	Sig.	df	t	Standard Deviation	Mean	Variable
Significant	0.001	382	3.74	0.86	3.61	Spatial identity and attachment
Significant	0.000	382	4.12	0.84	3.84	Social and ethical values
Significant	0.014	382	2.47	0.90	2.93	Functionalism and quality of life
Significant	0.032	382	2.18	0.94	3.12	Dynamism and physical quality
Not significant	0.081	382	1.76	0.89	3.00	Urban management and governance

The results of the t-test show that four of the five examined components are significant at the 0.05 error level. Specifically, the components of spatial identity and attachment, social and ethical values, functionalism and quality of life, and dynamism and physical quality were all statistically significant. These results indicate that these dimensions play an effective role in shaping residential quality and residents' satisfaction with housing in the study area. Among these components, social and ethical values, with a mean of 3.84, obtained the highest value, indicating the importance of social relations, trust, and solidarity among residents in the residential experience. After that, the component of spatial identity and attachment, with a mean of 3.61, is at a relatively favorable level and indicates that residents' emotional and perceptual bonds with the residential environment play an important role in shaping housing satisfaction.

In contrast, the component of urban management and governance, with a significance level of 0.081, is not significant and does not show a statistically significant difference. This result may indicate that residents' perceptions of the performance of managerial institutions and the way the neighborhood is administered have a weaker effect on the overall evaluation of residential quality compared with social, spatial, and physical dimensions. Overall, the statistical test results show that in the oil company towns under study, social, identity-related, and physical dimensions play a more prominent role in shaping desirable housing, whereas the managerial dimension shows a weaker effect on residents' perception of residential quality.

In Naft Town, the social–identity dimensions are at high or very high levels, while the physical and managerial dimensions are at a moderate level.

In Newside, almost all dimensions are below the moderate level, and the physical dimension and quality of life, in particular, have pushed the neighborhood toward a poor residential experience.

In simple terms, Naft Town is an example of residence in a planned company town in which social and identity capital plays a protective role in residential quality. By contrast, Newside, with its combination of physical, functional, and social weaknesses, appears more as a space with fragile and fragmented residential quality. This difference shows that in the oil company towns of Ahvaz, residential satisfaction is not merely the result of housing-unit standards, but depends on the co-presence of three levels: physical form, services and functions, and social–identity relations.

These results indicate that residential satisfaction in the oil company towns of Ahvaz is the outcome of the successful co-presence of the five components mentioned above. In Naft Town, this co-presence has been achieved to some extent, whereas in Newside, it has not.

#### 4. Discussion and Conclusion

The present study aimed to comparatively examine the components of residential satisfaction in two oil company towns in Ahvaz, namely Newside and Naft Town, based on the human–environment relationship framework. The findings showed that the residential satisfaction pattern in these two neighborhoods is not homogeneous, despite their shared institutional origin as organizational housing for oil-sector employees. In Naft Town, the components of social and ethical values and spatial identity were evaluated at high and very high levels, while functionalism and quality of life, dynamism and physical quality, and urban management and governance were placed at moderate levels. In contrast, Newside showed a consistently weaker condition across all dimensions, with all components falling below the moderate level. The weakest status in Newside was related to dynamism and physical quality, followed by urban management and governance and functionalism and quality of life. This pattern indicates that residential satisfaction in oil company towns is a multidimensional phenomenon that cannot be explained solely by the physical characteristics of housing units. Rather, it emerges from the interaction of

spatial organization, social relations, service provision, place attachment, and institutional performance.

The higher level of spatial identity and attachment in Naft Town suggests that residents perceive this neighborhood as a more coherent, legible, and meaningful residential environment. Spatial identity is formed when residents can recognize, interpret, and emotionally connect with their living environment. In planned settlements, this connection is strongly influenced by spatial order, neighborhood boundaries, architectural consistency, accessibility, and the presence of recognizable collective spaces. The findings of this study are consistent with studies emphasizing the role of physical-spatial structure in the quality of housing in oil-rich regions and oil company towns. Arzani Birgani et al. showed that the spatial configuration of Ahvaz Oil Company Town affects housing quality through its influence on accessibility, spatial integration, and the organization of everyday movement (Arzani Birgani et al., 2025). Similarly, research on residential satisfaction in Iranian urban neighborhoods has shown that residents' attachment to place is strengthened when the residential environment provides spatial clarity, environmental adequacy, and a recognizable neighborhood identity (Rafeian et al., 2010; Rafeian et al., 2009). Therefore, the relatively favorable score of Naft Town in spatial identity can be interpreted as the outcome of a more coherent spatial structure and a stronger capacity to produce place-based belonging.

The weak condition of Newside in spatial identity and attachment is also significant because this neighborhood has historical and architectural value. Although heritage value can potentially strengthen place identity, the findings suggest that historical character alone is insufficient to generate residential satisfaction when the physical environment, services, and everyday functionality are weakened. This result aligns with studies showing that desirable housing depends not only on the symbolic or architectural value of the residential setting, but also on the compatibility between the environment and residents' current needs (Masoudinejad et al., 2021; Miri & Faramarzi Asl, 2022). In Newside, aging physical structures, reduced functional adaptation, and possible mismatch between the original design logic and contemporary lifestyles may have weakened the residents' connection with place. This finding is consistent with critical analyses of housing policies in oil company towns of southern Iran, which have emphasized the challenges created by outdated housing stock, inadequate maintenance, and the insufficient adaptation of organizational housing to changing household needs

(Yarmohammadi et al., 2020). Thus, Newside's historical identity may remain important at the architectural level, but this identity does not automatically translate into lived residential satisfaction.

The findings also showed that social and ethical values received the highest score among the components in Naft Town. This indicates that social relations, trust, solidarity, and neighborhood-based interaction play a major role in shaping residential satisfaction in oil company towns. In company-town settlements, social relations are often influenced by shared occupational backgrounds, organizational affiliation, common histories of residence, and repeated daily encounters. Such conditions can contribute to the formation of social capital and collective identity. The present finding is consistent with Kargar et al., who emphasized that social structures significantly affect satisfaction in oil-company-town settlements (Kargar et al., 2018). It also supports the broader literature on residential satisfaction, which identifies neighborhood relations, social trust, perceived safety, and interpersonal cohesion as important determinants of residential quality (Hashempour et al., 2022). Accordingly, Naft Town's relatively strong social dimension appears to operate as a protective factor: even where physical and managerial dimensions are only moderate, social cohesion can sustain residents' overall satisfaction and reinforce their sense of belonging.

In contrast, Newside's low score in social and ethical values indicates that social cohesion and neighborhood trust are weaker in this setting. This finding is important because it shows that physical decline and functional inadequacy may gradually affect social life as well. When public spaces are unattractive, services are insufficient, and the neighborhood does not support everyday presence, opportunities for interaction may decline. As a result, social networks become weaker, and residents may experience spatial isolation or relational disconnection. This interpretation is consistent with studies on the organizing factors of residential environments in oil company towns, which have shown that physical organization, social relations, and functional quality are interdependent rather than separate dimensions (Mombeni et al., 2020). It is also aligned with research on collective housing and urban green spaces, which suggests that open spaces and spatial patterns can support collective life, social encounter, and environmental quality when they are properly designed and maintained (Vinczeová & Tóth, 2025). Therefore, the weakness of Newside in social values should not be interpreted only as a social problem, but also as a

consequence of broader physical and functional deficiencies in the residential environment.

The component of functionalism and quality of life was evaluated at a moderate level in Naft Town and a poor level in Newside. This difference indicates that access to services, adequacy of infrastructure, suitability of neighborhood facilities, and compatibility of the residential environment with everyday routines are central to residents' satisfaction. Housing quality is not limited to the dwelling unit; it includes the broader system of services and functions that enable daily life. Previous studies on housing satisfaction in Iran have repeatedly shown that access to facilities, transportation, infrastructure, public services, and neighborhood amenities affects residents' evaluations of residential quality (Maleki et al., 2015; Rafeian et al., 2014; Rahnama & Kamandari, 2015). In the context of oil company towns, Babakhani et al. also emphasized the importance of spatial planning and quality-of-life indicators in Ahvaz oil company towns (Babakhani et al., 2021). Therefore, the poor functional condition of Newside suggests that residents experience deficits in the everyday usability of the neighborhood, while Naft Town, although not ideal, provides a more acceptable functional basis for residential life.

The weakest component in Newside was dynamism and physical quality. This result shows that residents perceive the physical environment, public spaces, and spatial organization of Newside as unable to support vitality, movement, interaction, and environmental attractiveness. Physical quality is one of the most visible dimensions of residential satisfaction, but its effect is not merely aesthetic. It influences safety, comfort, accessibility, social presence, environmental perception, and the capacity of the neighborhood to respond to changing needs. This finding is consistent with studies on oil-company housing design indicators and sustainability, which argue that the long-term sustainability of such settlements requires attention to design quality, environmental adaptation, and the performance of shared spaces (Mousaei Jo & Abdolmaleki, 2018). It also aligns with research emphasizing that spatial planning must integrate physical form, environmental function, and social use in order to support sustainable residential development (Zhang, 2025). The very low score of Newside in this dimension suggests that the neighborhood may require not only maintenance, but also physical regeneration and spatial reorganization aimed at restoring livability and everyday vitality.

In Naft Town, dynamism and physical quality were evaluated at a moderate level, which suggests that although the neighborhood performs better than Newside, it still does not fully achieve a high-quality physical environment. This result may indicate the presence of acceptable spatial order but insufficient vitality, limited renewal of public spaces, or moderate deficiencies in physical maintenance. The moderate score is consistent with the argument that planned company towns may initially benefit from coherent design but can gradually face decline if maintenance, adaptation, and participatory improvement are not sustained over time (Mombeni et al., 2020; Yarmohammadi et al., 2020). It also resonates with the broader literature on sustainable urbanization, which emphasizes that urban environments must continuously adapt to new social, economic, environmental, and technological conditions (Wang et al., 2025; Yang et al., 2025). Therefore, even in Naft Town, where residents report stronger social and identity-related satisfaction, the physical environment requires ongoing management and renewal to prevent future decline.

The results of the t-test showed that four components—spatial identity and attachment, social and ethical values, functionalism and quality of life, and dynamism and physical quality—were statistically significant, while urban management and governance was not statistically significant. This finding suggests that residents' satisfaction is more strongly shaped by dimensions that are directly experienced in everyday life, such as social relations, spatial identity, functional adequacy, and physical quality. The non-significance of urban management and governance does not necessarily mean that management is unimportant. Rather, it may indicate that residents perceive management indirectly through its effects on services, physical quality, and neighborhood conditions. This interpretation is consistent with studies emphasizing the role of public participation and governance responsiveness in improving housing quality in oil company towns (Namiani & Ilani, 2022). It is also compatible with research on housing-provision policies, which has shown that policy and management systems affect residential quality when they are translated into concrete improvements in services, infrastructure, and the residential environment (Pourmohammadi et al., 2012).

The comparative findings demonstrate that Naft Town represents a relatively more successful model of organizational housing, primarily because its social and identity-related dimensions compensate for its moderate physical and managerial conditions. In other words, the neighborhood's social capital and spatial identity appear to

sustain residential satisfaction even though not all environmental dimensions are at a high level. Newside, by contrast, reflects a more fragile residential pattern, in which weaknesses in physical quality, functionality, social relations, and governance combine and reinforce one another. This distinction supports the argument that residential satisfaction in oil company towns is produced through the alignment of physical form, services, social cohesion, and place identity. When these dimensions operate together, as partly observed in Naft Town, residents experience a stronger sense of residential quality. When they are fragmented, as observed in Newside, residential satisfaction declines across multiple dimensions.

Overall, the findings confirm the relevance of the human–environment relationship framework for analyzing residential satisfaction in oil company towns. The results show that residents evaluate their housing not only as a physical object but as a relational environment in which spatial structure, social interaction, functional support, physical vitality, and managerial performance are interwoven. This conclusion is consistent with the broader body of residential satisfaction research in Iran and with recent debates on sustainable residential development, which emphasize integrated planning, environmental quality, social cohesion, and adaptive governance (Hashempour et al., 2022; Vinczeová & Tóth, 2025; Zhang, 2025). Therefore, the study contributes to the literature by showing that oil company towns should be understood as complex socio-spatial systems whose residential quality depends on both their historical-organizational legacy and their current capacity to support residents' everyday lives.

This study had several limitations. First, the research was conducted only in two oil company towns in Ahvaz, and although these two cases provide a meaningful basis for comparison, the findings cannot be generalized to all oil company settlements in southern Iran without caution. Second, the data were collected using a questionnaire, and although the questionnaire was designed based on theoretical foundations and interviews with residents, self-reported data may be influenced by individual expectations, memory, emotional attachment, or temporary dissatisfaction. Third, the study focused on residents' perceptions and did not include direct technical assessment of building conditions, infrastructure performance, environmental quality, or service standards. Fourth, because the study was cross-sectional, it could not examine how residential satisfaction changes over time or how historical

processes of maintenance, decline, or regeneration affect residents' evaluations.

Future studies should examine a wider range of oil company towns in different cities of southern Iran in order to compare various generations of organizational housing and identify common and context-specific determinants of residential satisfaction. Longitudinal research is also recommended to investigate how residents' satisfaction changes over time in response to physical deterioration, demographic change, service improvement, or urban regeneration. Future research could combine questionnaire data with spatial analysis, environmental observation, interviews, and technical assessments of housing and infrastructure in order to provide a more comprehensive evaluation of residential quality. It would also be useful to examine the role of age, gender, length of residence, employment status, household structure, and ownership or occupancy conditions in shaping residents' perceptions of satisfaction, belonging, and quality of life.

The findings of this study suggest that improving residential satisfaction in oil company towns requires an integrated approach rather than isolated physical interventions. In Newside, priority should be given to physical regeneration, improvement of public spaces, strengthening of neighborhood services, and restoration of functional and social vitality. In Naft Town, policies should focus on preserving the existing social and identity-related strengths while improving physical quality, service efficiency, and participatory management. Urban managers and responsible institutions should involve residents in identifying problems, prioritizing interventions, and monitoring improvement programs, because participation can strengthen trust and increase the compatibility of interventions with everyday needs. In both neighborhoods, housing improvement should be treated as a multidimensional process that connects physical design, social cohesion, service provision, environmental quality, and accountable management.

### Authors' Contributions

Authors contributed equally to this article.

### Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

### Transparency Statement

Data are available for research purposes upon reasonable request to the corresponding author.

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## Declaration of Interest

The authors report no conflict of interest.

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## Ethics Considerations

In this research, ethical standards including obtaining informed consent, ensuring privacy and confidentiality were considered.

## References

- Arzani Birgani, N., Mirgozar Langroudi, S. S., & Kaboli, A. (2025). An inquiry into the role of physical-spatial structure in the housing quality of oil-rich regions with a view to space syntax theory: Case study of Ahvaz Oil Company Town. *Safe City*, 8(30).
- Babakhani, S., Yazdanfar, M., & Norouzian Maleki, H. (2021). Spatial planning and quality-of-life indicators in Ahvaz oil company towns. *Journal of Regional Planning and Development*, 13(1), 88-105.
- Hashempour, M., Hosseini, R., & Karimi, N. (2022). Factors affecting housing satisfaction in urban areas of Iran. *Urban and Regional Planning Research*, 15(1), 77-94.
- Kargar, M., Yari, J., & Pourkalankesh, A. (2018). The effect of social structures on satisfaction in oil-company-town settlements. *Social and Economic Studies of Oil*, 14(2), 57-73.
- Maleki, S., Hosseini, S. R., Veisi, E., & Mokhtari, S. (2015). Measuring citizens' satisfaction with the residential quality of the Mehr Housing Project: Case study of Shirinshahr, Ahvaz.
- Masoudinejad, M., Rostami, B., & Mazhari, S. (2021). Key indicators for achieving desirable housing in the New Site residential complex. *Journal of Urban Planning and Design*, 14(4), 29-45.
- Miri, J., & Faramarzi Asl, S. M. (2022). Examining indicators for achieving desirable housing in oil company towns. *Iranian Architectural and Urban Planning Thought*, 18(4), 34-50.
- Mombeni, N., Karami, A., & Moradi, S. (2020). Analysis of organizing factors of the residential environment in oil company towns. *Environmental and Development Research*, 7(3), 40-57.
- Mousaei Jo, A., & Abdolmaleki, S. (2018). Examining oil-company housing design indicators and their effect on sustainability. Fifth National Conference on Recent Achievements in Civil Engineering, Architecture, and Urban Planning,
- Namiani, M., & Ilani, F. (2022). The role of public participation in improving the quality of housing in oil company towns. *Iranian Social-Urban Studies*, 16(2), 59-75.
- Pourmohammadi, M., Sadrmousavi, M., & Abedini, A. (2012). An analysis of government housing-provision policies with emphasis on economic, social, and cultural development plans.
- Rafieian, M., Amin Salehi, F., & Taghvaei, A. A. (2010). Assessing the quality of the residential environment in Ekbatan Town, Tehran. *Modares Human Sciences: Spatial Planning*(4), 63-85.
- Rafieian, M., Asgari, A., & Asgarizadeh, Z. (2009). Measuring residents' residential satisfaction in the Navab neighborhood. *Human Geography Research*(67), 53-68.
- Rafieian, M., Masoudi-Rad, M., Rezaei, M., & Masoudi-Rad, M. (2014). Measuring residents' satisfaction with the residential quality of Mehr Housing: The case of Mehrshahr, Zahedan. *Geography and Urban-Regional Planning*(12), 135-150.
- Rahnama, M., & Kamandari, M. (2015). Measuring residents' satisfaction with the quality of the residential environment in Kerman: Case study of Mehr Housing Project in Mehrgan Town. *Urban Social Geography*(2).
- Vinczeová, Z., & Tóth, A. (2025). Urban Green Spaces and Collective Housing: Spatial Patterns and Ecosystem Services for Sustainable Residential Development. *Sustainability*, 17(6), 2538.
- Wang, Q., Zhang, F., & Li, R. (2025). Artificial Intelligence and Sustainable Development during Urbanization: Perspectives on AI R&D Innovation, AI Infrastructure, and AI Market Advantage. *Sustainable Development*, 33(1), 1136-1156.
- Yang, Y., Shen, L., Sang, M., & Ding, X. (2025). The impact of digitalization on urban sustainable development - An economic perspective. *Technological Forecasting and Social Change*, 212, 124005. <https://doi.org/10.1016/j.techfore.2025.124005>
- Yarmohammadi, R., Naderi, M., & Karimi, B. (2020). A critical analysis of housing policies in oil company towns of southern Iran. *Journal of Urban Planning and Development*, 11(3), 22-39.
- Zhang, A. (2025). Analysis of the Sustainable Development Pathway of Urban-Rural Integration from the Perspective of Spatial Planning: A Case Study of the Urban-Rural Fringe of Beijing. *Sustainability*, 17(5), 1-19. <https://doi.org/10.3390/su17051857>