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A Comparison of Housing Satisfaction in Rural and Urban Areas of Mafraq, Jordan

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ABSTRACT

Housing satisfaction is a multidimensional phenomenon that is affected by several factors. The aim of this study is to estimate the factors that affect housing satisfaction, including demographic factors such as household type, age, income, duration of residence, ownership of a house, and education. The physical features factors include the number of bedrooms and the quality of housing units. And the neighborhood facilities factors, including access to quality schools, quality of streets and roads, accessibility to public transportation, community and shopping facilities, and the physical environment. Examining how these factors affect housing satisfaction in urban and rural areas is the study's major goal. The questionnaire consists of three parts: the first part collects demographic characteristics; the second part measures the level of residents' satisfaction with the physical features; the third part measures the level of residents' satisfaction with the neighborhood environment. 580 of the participants responded to the questionnaire. The participants of the study were from three communities: Mafarq City, Manshiyah, and Irhab, which administratively follow Mafraq governorate, Jordan. Manshiyah, and Irhab are considered rural communities. The results show that the level of housing satisfaction among residents in the city and the rural community is approximately the same, as most of the residents in the three communities share the same demographic characteristics, and they are satisfied with their houses, even though they are not satisfied with the neighborhood environment. The importance of this study comes from its results, since the neighborhood environment and facilities play a crucial role in raising the level of residents' satisfaction in their houses.

1. INTRODUCTION

Housing is one of the basic human needs; it meets a variety of residents' necessities, including aesthetic needs. As people age, the significance of home becomes a significant source of wellbeing, particularly for the elderly or those who live alone. Housing preferences vary; they are affected by several attributes, including type of tenure, area, house structure, etc.

Residents' satisfaction with their house units and their neighborhoods is one of growing interest in various arenas [1, 2]. Housing satisfaction is the feeling of contentment residents experience when their desired needs are met in a house. Several disciplines, such as sociology, economics, and planning, were considered to study housing satisfaction; it's a more complex concept than housing's physical satisfaction. Satisfaction includes three domains: home satisfaction, community satisfaction, and life satisfaction [3].

The traditional method for measuring housing satisfaction is by addressing the cognitive-affective relationship to the physical environment. Rowles [4] proposed a generally accepted strategy that has concentrated on the different aspects of the problem, including social insideness, physical insideness, and autobiographical insideness. Lu [5] combines housing, neighborhood, and household characteristics to describe individuals' housing satisfaction.

Housing satisfaction is affected by several factors, such as demographic household characteristics, given that there are links between demographic factors and occupants' housing satisfaction in several studies [5-8] this is crucial in determining an individual's level of housing satisfaction. These connections may be beneficial or show how ageing negatively affects housing pleasure.

Demographic household characteristics include household type, age, income, duration of residence, ownership of the house, and education. In Mafraq, most of the population is young.

The second factor that affects the residents house satisfaction is the house's physical features. According to Rossi [9], mobility was a simple sort of house change. Morris and Winter were the first to identify the perceived gap between real and desired housing as a source of unhappiness [10]. The authors agreed that adjustment is a multi-choice process connected to adjusting housing and gaining satisfaction. The study examines the houses' physical characteristics in the three communities. It includes the number of rooms in the house, the number of balconies, the number of bathrooms, the used areas, the number of rooms that were added to the house, and the house renovation after the family settled in the house, which affects their satisfaction. In Mafraq, residents prefer to live in detached houses.

The third factor is neighborhood facilities; the neighborhood's attractiveness and pleasant-friendliness were the most important determinants of house satisfaction, and there is a complex correlation between basic facility quality

and housing satisfaction [11]. Zanuzdana et al. [11] found that rural people are significantly more satisfied with their houses than urban slum dwellers because it is very difficult to reach services in urban slums, which are experiencing rising levels of housing dissatisfaction. The neighborhood facilities include access to quality schools, quality of streets and roads, accessibility to public transportation, community and shopping facilities, and a physical environment. As Mafraq is considered the main city, it has most of the facilities, while Irhab and Manshyeh are considered as rural areas but the house prices are low. So, the study aims to illustrate how facilities availability and house price affect housing satisfaction.

This study is based mainly on related research by Kim and Shimizu [12], Boschman [13], and Byun and Ha [14] to determine the factors that affect housing satisfaction. The main objectives of the study are to:

-Explore the factors that affect housing satisfaction.

-Compare the level of housing satisfaction among residents in rural and urban areas.

2. LITERATURE REVIEW

Satisfaction is an evaluation process between what residents expected and what they received [15]. Housing satisfaction is a multidimensional phenomenon, as housing satisfaction is affected by several factors, including the physical characteristics of the house, the neighborhood, and the surrounding social quality. It is the residents' perception of the houses and the environment [6]. A feeling of satisfaction is achieved when residents' desired needs are fulfilled in a house [15].

2.1 Housing theories

Housing satisfaction is explained by three theories: the housing needs theory, the housing deficit theory, and the psychological construct theory.

•The Housing Needs Theory:

Changes in the life cycle may result in varied space requirements, which are regarded as the most crucial component of the needs. Households commonly fail to comply with their housing and neighborhood conditions as they progress through various life cycle stages and their changing housing needs and aspirations. Therefore, a household is likely to feel dissatisfied if their home and neighborhood do not meet their residential wants and objectives [15]. The Housing Needs Theory was introduced in 1955 by Peter Henry Rossi. In its theory, housing needs are based on life cycle stages, stress or dissatisfaction occurs when there is a misfit between the current and desired housing needs, mobility is the residents' response to the dissatisfaction.

•Housing Deficit Theory:

People assess the quality of their housing based on defined norms. These norms include cultural norms, which are determined by social norms or guidelines for living circumstances, and family/personal norms, which are equivalent to households' own criteria for housing [15]. It was introduced in 1978 by Earl Morris and Mary Winter. In this theory, housing dissatisfaction occurs when there is an incongruity between the actual housing situation and cultural or familial housing norms. A rough form of housing adjustment is the residents' response to decreasing their dissatisfaction.

•Psychological Construct Theory:

People might be thought of as cognitively creating a reference condition for each specific aspect of their living situation. Depending on the person's self-assessed wants and aspirations, the amount or quality of the aspect represented by the reference point will vary [15]. Psychological Construct Theory was offered by Galster in 1985; it explains that the residents' satisfaction with their houses occurs when the present situation of the house is consistent with the reference condition. While residents' dissatisfaction with their houses occurs when residents try to adapt by redefining needs, altering the evaluation of the current situation, altering the conditions of the house, or moving to another, more congruent dwelling.

2.2 Housing satisfaction factors

The factors that affect housing satisfaction include household characteristics, physical features of the house, and neighborhood facilities (Figure 1).

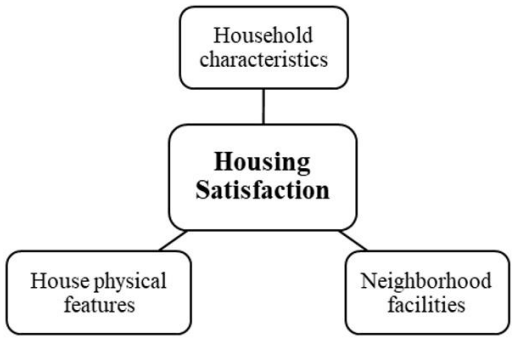

Figure 1. The factors that affect housing satisfaction

2.2.1 Household characteristics

Household characteristics describe the general characteristics of the residents, including age, sex, household size, and education. Socio-demographic factors are used in the process of assessing house satisfaction, but these factors contribute less to house satisfaction than neighborhood characteristics [16]. The households' characteristics identify the personal dimension of housing satisfaction.

The residence duration is one of the households' characteristics that affects the housing satisfaction [17]. The longer a person stays in one place, the more social contacts they develop there and the more emotionally connected they are supposed to grow [5].

Different age groups may have varying levels of housing satisfaction [17]. Additionally, according to Mohit et al. [17], housing satisfaction has a negative correlation with family size and the presence of a working wife in the family. A greater level of residential satisfaction is found in lower density housing (area per person) than in higher density housing [18].

Positive relationships exist between housing satisfaction and job type, and gender [17, 19]. There is disagreement over how marriage, education, and race affect satisfaction [5]. The level of household income also determines the residents' level of housing satisfaction. Residents with different income levels may show various levels of housing satisfaction in similar housing conditions [17, 19].

Many governments promote homeownership because it is thought to benefit both the individual and society as a whole. Owning a home is preferable to renting because it offers more security, independence, and financial advantages, which leads to higher housing satisfaction. Changing tenure status influences housing satisfaction; as renters' satisfaction increases when they become homeowners, they gain a different service in the same housing context [20].

Numerous studies have shown that homeowners and parents with children at home are more satisfied with their housing, in part because they generally stay longer in the same house [5, 21-23]. The demands and aspirations of a household determine the desired residential situation; due to the differences in housing needs and aspirations between households, responses to similar residential settings will vary [24, 25].

Based on the literature review, this study will examine household characteristics, including resident gender, education level, employment status (state-owned enterprise, privately owned enterprise, self-employed, public sector), house ownership, house location (city or village), house ownership (owner or tenant), family members, economic status (low, middle, and high income), and home loan (formal bank loan, informal family loan, no loan).

2.2.2 House features

Housing physical features were more essential determinants than household demographic characteristics. Housing satisfaction is affected by the house's physical characteristics, such as the number of bedrooms and quality of housing units [26].

The level of satisfaction in low-energy houses is high where a complex of solutions is available, such as combining external solar shading, appropriate window design and orientation, facilitating effective use of natural and mechanical ventilation, and reducing noise at ventilation inlets. Also, artificial and natural lighting in the different house forms are related to the satisfaction level [27, 28].

Moreover, controlling the indoor temperatures helps ensure satisfaction among residents [27, 26]. Ceiling and floor type were irrelevant to housing satisfaction [28].

Housing satisfaction increases when the number of rooms per house and the amount of space available for various uses increase [29]. Housing dissatisfaction increases with smaller structure types, such as insufficient space for children to study, problems with privacy, the number of bedrooms and closets, and the size of the dining room [8]. A higher density decreases housing satisfaction, so when the number of people per room increases, the satisfaction decreases.

Kitchen space, laundry and washing areas, living area size, dining area, residence hall morphological configuration, and number of bedrooms and bathrooms all influence housing satisfaction [27].

The physical environment of the home as well as the surrounding neighborhood comprise the residential environment [14]. The assessment of residents' emotional and cognitive reactions to their surroundings is useful in determining their well-being [30].

As a conclusion of the above studies, the physical characteristics of the house, including the number of rooms, the number of bathrooms, the number of balconies, the number of rooms that were added to the house after buying it, the house renovation, the percentage of usable area, the house price, the subjective evaluation of the house design, the subjective evaluation of the house quality, the subjective evaluation of the house location, the level of residents' satisfaction about ventilation and lighting, the level of residents' satisfaction about heating conditions (winter temperatures), and the level of residents' satisfaction about soundproofing, the house renovation.

2.2.3 Neighborhood facilities

Neighborhood satisfaction refers to residents' overall assessment of their neighborhood environment and is studied in different fields such as sociology and planning [31-33].

Certain types of neighborhoods are considered more problematic than others due to their physical characteristics [29]. In housing satisfaction, neighborhood factors are considered more important than socio-demographic factors [21]. Thus, neighborhood factors include the physical condition of the neighborhood, quietness, greenness, cleanliness, and security [33].

Adriaanse [29] grouped the residential environment dimensions into objective criteria and public facilities. Objective criteria such as the age of the building, the spatial structure, the architectural style, the amount of green space, and the location. The degree of life convenience is determined by public infrastructure, including transportation, education, healthcare, retail, banking, and parking amenities, which influence residential satisfaction [29, 30].

Public open space is crucial for meeting the community's needs for comfort and relaxation; as a result, the degree of contentment with public open space can be used as a barometer for satisfaction with the urban environment, which in turn affects people's quality of life [34, 35].

Many facets of sustainable living, including inhabitants' environmental behaviors, are influenced by the physical qualities of residential communities [36]. Residential satisfaction evaluates the discrepancy between the housing or environment's actual condition and what the occupants want from their homes and neighborhoods [31, 32]. Mohit et al. [17] based their analysis on public facilities and neighborhood facilities behind the dwelling unit features to measure housing satisfaction.

Amerigo [32] considers the effect of psychological factors, such as relationships with neighbors, as well as physical factors concerning the residential environment. Various variables were used to study housing satisfaction, including relationships with neighbors, housing safety, basic housing infrastructure, neighborhood infrastructure, deterioration, urban activity and noise, and open spaces.

Two unique methodologies can be used in empirical studies in this field. Firstly, there are studies that consider house satisfaction as a measurement tool of residential quality, other scholars believe that house satisfaction is a predictor of residents' behavior [37].

Hur et al. [38] explore the effect of physical attributes on housing satisfaction. The presence of trees, the amount of open space and parks, and the density of housing within a neighborhood are all physical attributes that influence overall neighborhood satisfaction. The level of satisfaction increases with the ease of access to amenities like retail stores, community centers, and cultural venues [37].

Accessibility means the proximity of residents to particular locations. Consequently, a region with good geographic accessibility to services and physical activity supports greater opportunities for residents' social interaction [12].

Neighborhood relations have been recognized as a notable inspiration for livability; so urban environments should be

arranged in a way that increases accessibility to urban services and encourages residents to socialize [39, 40].

Accessibility, pleasantness, and safety all have an impact on neighborhood satisfaction [41]. The satisfaction with accessibility to public institutions, cultural amenities, commercial facilities, and medical institutions was used to assess accessibility. Satisfaction with green parks and the surrounding natural environment was used to assess pleasantness. And safety is affected by the presence of natural disasters, crime, and users' accidents due to deteriorated facilities [41, 42].

As a conclusion, neighborhood facilities including fifteen factors are: accessibility to markets, hypermarkets, and department stores, accessibility to hospitals and medical welfare facilities, accessibility to cultural facilities, parks, and playgrounds, accessibility to public transportation such as buses, convenience in using parking facilities, burden in commuting to work or school, educational environments such as schools and private educational institutes, public security issues such as burglaries and robberies, car horns and noise levels around the house, cleanup and state of refuse disposal around the house, satisfaction with relationships with neighbors, privacy protection from neighbors, safety from disasters, facility management within the complex, such as elevators, and exterior of the complex, such as outer wall painting and landscape.

Based on the literature review, the factors that affect housing satisfaction are categorized into three groups:

1- Demographic household characteristics include household type, age, income, duration of residence, ownership of house, and education.

2- The physical features of the house include the number of bedrooms and quality of housing units.

3- The neighborhood facilities include access to quality schools, quality of streets and roads, accessibility to public transportation, community and shopping facilities, and the physical environment.

3. METHODOLOGY

3.1 Study sitting

This study focuses on three communities to compare the level of housing satisfaction among residents in the city and rural areas. These communities were selected because they have the highest population densities in Mafraq Governorate and share similar features, such as geographical location and characteristics. Mafraq City was selected to study the housing satisfaction of the residents in the urban community, and Manshiyah and Irhab were selected to study the housing satisfaction of the residents in the rural communities.

Mafraq governorate is located in the northeast of Jordan, 60 kilometers east of Amman. It covers 26552 km^2. It is one of the twelve governorates that make up the Hashemite Kingdom of Jordan, and it is the second largest governorate in terms of area after the Ma'an Governorate. The Northern Badia region constitutes the vast majority of its area [43, 44].

The governorate was established in 1985 and includes four districts (Qasbah Mafraq District, Northern Badia District, Northwest Badia District, and Al-Ruwaished District). Mafraq has 18 Municipalities, are: Mafraq Municipality, Irhab, Bala'ama Municipality, Hosha Municipality, Manshiyah Municipality, Al-Khaldieh Municipality, Al-Basleieh Municipality, Al-Za'atri Municipality, Al-Sarhan Municipality, Prince Hassan Bin Abdullah Municipality, Um-AlJmal Municipality, Sabha and AlDafianeh Municipality, Um-Alquteen and Al-Mkefteh Municipality, Deir Al-Kahf Municipality, Rweshed Municipality, Al-Salheieh Municipality, Bani Hashem Municipality, and Al-Safawi Municipality [43, 44].

Manshiyah is a residential district in Mafraq's capital district (Mafraq Casabah), located on the western side of Mafraq City. It is about 13 km from Mafraq City. It is bordered to the south by the Irhab district. It has a population of 12244 people and a population density of 303.6 people per km^2 [43, 44].

Irhab is a residential district in Mafraq's capital district (Mafraq Casabah), located on the southwest side of Mafraq City. It is about 12 km from Mafraq City. It has a population of 223874 people and a population density of 117.3 people per km^2 [43, 44].

3.2 Participants

The population of Mafarq governorate reached about 622,500 people according to the 2020 census, with a density of about 10.8 people per km^2, making up 5.8% of Jordan's population. A random sampling method was used, and 660 questionnaires were distributed (220 questionnaires for each community), 580 participants from the three communities responded to the questionnaires, so the response rate to the questionnaire was 88%.

174 participants were from Mafarq City; 37% of the participants are male and 63% are female. About education level: 29% of the participants have a master's degree or higher, 62% have a bachelor's degree, 8% study at school only, and 1% do not have any educational level. 69% of the participants who live in Mafraq City work in government institutions; 15% of them are privately owned enterprises; 10% of the participants are working in the public sector; and 6% of the participants are self-employed.

Manshiyah had 208 participants, with 23% being male and 77% being female. The education level for the participants was as follows; 19% have a master's degree or higher, 62% have a bachelor's degree, 17% study at school only, and 2% do not have any educational level. 62% of the participants who live in Manshiyah work in the government institutions, 11% of them are privately owned enterprise, while 16% of the participants work in the public sector, and 11 % of the participants are self-employed.

198 participants from Irhab, 36% of them are male and 64% are female. Education level: 19% have a master's degree or higher, 62% have a bachelor's degree, 17% study at school only, and 2% do not have any educational level. 65% of the participants who live in Irhab work in government institutions, 9 % of them are privately owned enterprise, while 16% of the participants work in the public sector, and 10% of the participants are self-employed.

3.3 Data collection

The study is based mainly on a literature review to collect secondary data about housing satisfaction. The factors that have an impact on residents' housing satisfaction were categorized into three main groups, including demographic household characteristics, physical features of the house, and neighborhood facilities. Then, the data were derived from a

structured questionnaire survey, a questionnaire was distributed among the residents of Mafraq City, Manshiyah, and Irhab. The structure of the questionnaire is divided into:

- The first part of the questionnaire collects demographic and household characteristics, including resident gender, education level, employment status (state-owned enterprise, privately owned enterprise, self-employed, public sector), house ownership, house location (city or village), house ownership (owner or tenant), family members, Economic status (low, middle, and high income) and home loan (formal bank loan, informal family loan, no loan).
- The second part of the questionnaire measures the level of residents' satisfaction with the physical characteristics of the house, including the number of rooms, the number of bathrooms, the number of balconies, the number of rooms that were added to the house after buying it, the house renovation, the percentage of usable area, the house price, the subjective evaluation of the house design, the subjective evaluation of the house quality, the subjective evaluation of the house location, the level of resident's satisfaction about ventilation and lighting, the level of resident's satisfaction about heating conditions (winter temperatures), and the level of resident's satisfaction about soundproofing, the house renovation. To measure the subjective evaluation of the house features, the benchmarks were divided into three categories: very satisfied, satisfied, and not satisfied.
- The third part of the questionnaire measures the level of residents' satisfaction with the neighborhood environment facilities, including fifteen factors are: accessibility to markets, hypermarkets, and department stores, accessibility to hospitals and medical welfare facilities, accessibility to cultural facilities, parks, and playgrounds, accessibility to public transportation such as buses, convenience in using parking facilities, burden in commuting to work or school, educational environments such as schools and private educational institutes, public security issues such as burglaries and robberies, car horns and noise levels around the house, cleanup and state of refuse disposal around the house, satisfaction with relationships with neighbors, privacy protection from neighbors, safety from disasters, facility management within the complex, such as elevators, and exterior of the complex, such as outer wall painting and landscape.
- The fourth part of the questionnaire measures the level of residents' satisfaction with overall dwelling unit satisfaction and overall neighborhood environment satisfaction. In parts three and four, the level of satisfaction benchmarks were divided into three categories for each factor: very satisfied, satisfied, and not satisfied.

4. RESULT AND DISCUSSION

4.1 Demographic characteristics

The demographic characteristics of the residents in the three communities are approximately the same. The majority are female, and most of them have a bachelor's degree and work in government institutions.

The results indicate that the detached house is the preferred type of dwelling for the residents in Mafraq City, Manshiyah, and Irhab, as 79% of the participants live in a detached house, while 21% live in apartments (Table 1).

31% of the participants who live in Mafraq City buy their houses without using a loan, 14% of the participants resort to informal loans by borrowing money from their relatives; and 55% rely on the formal loans from the banks. While 29% of the participants who live in Manshiyah buy their houses without using a loan, 27% of the participants resort to informal loans by borrowing money from their relatives; and 44% rely on formal loans from the banks. 42% of the participants in Irhab buy their houses without using a loan, 14% of the participants resort to informal loans by borrowing money from their relatives; and 44% rely on formal loans from the banks (Table 1). The majority of the participants in the three sittings who bought their own houses resorted to bank loans, since most of them are from middle income households (Table 1) and work for government institutions, which facilitate getting bank loans.

Table 1. Demographic characters

Characters		Mafraq	Manshiyah	Irhab
Housing Type	Detached House	69%	85%	82%
	Apartment	31%	15%	18%
House Price (JD)	20 000-30 000	22%	34%	38%
	30 000-40 000	16%	17%	23%
	40 000-50 000	15%	22%	13%
	50 000-60 000	47%	27%	26%
Properties	Owned	72%	85%	84%
	Rented	28%	15%	16%
Loans	No	31%	29%	42%
	Formal	55%	44%	44%
	Informal	14%	27%	14%
Household Income	High	5%	5%	1%
	Medium	84%	67%	76%
	Low	11%	28%	23%

Table 2. House physical characteristics

House Physical Characteristics		Mafraq	Manshiyah	Irhab
Members	2	7%	4%	2%
	3	5%	7%	13%
	4	11%	14%	19%
	5	20%	15%	19%
	6	31%	39%	28%
	>6	26%	21%	19%
Rooms	2	6%	4%	6%
	3	22%	18%	26%
	4	31%	38%	35%
	5	29%	29%	26%
	>5	12%	11%	7%
Bathrooms	1	17%	25%	26%
	2	45%	49%	48%
	3	31%	21%	19%
	4	7%	5%	7%
Balconies	No	33%	29%	31%
	1	46%	46%	42%
	2	15%	21%	23%
	3	6%	4%	4%
Number of Added Room	No	82%	67%	74%
	1	10%	17%	10%
	2	7%	14%	10%
	3	1%	2%	6%
House Renovation	Yes	54%	71%	62%
	No	46%	29%	38%
Used Area	75%	84%	82%	74%
	50%	16%	13%	19%
	25%	0	5%	7%

47% of the house price in Mfraq City is between 51 000JD and 60 000JD as the land plot price in the city is high. While the majority of the house price is between 20 000JD and 30 000JD in Manshiyah and Irhab, as the plot area price is low (out of the city) (Table 1).

4.2 House physical characteristics

Firstly, the questionnaire assessed the houses' physical characteristics in the three communities. It includes the number of family members, the number of rooms in the house, the number of balconies, the number of bathrooms, the number of rooms that were added to the house, the house renovation after the family settled in the house, and the used area.

The responses from the three sittings show that the houses' physical characteristics in the three communities are almost the same, whereas most of the families include six members. And the number of the house's rooms, from the most common to the least common, is four rooms, five rooms, three rooms, more than five rooms, and two rooms, respectively (Table 2).

The majority of the houses include two bathrooms and one balcony. And the percentage of the house's used area in most of the houses is 75% of the house area. Most of the participants haven't added any rooms to their houses after they settled in, the houses, which indicates that most of the residents are satisfied with their houses. But they renovated and maintained the houses (Table 2).

Secondly, residents' subjective evaluation of the houses was assessed in the three communities. In Mafraq City, 26% of the participants are very satisfied with the house design, and the others are satisfied or not satisfied; in Manshiyah, the majority of 43% of the participants aren't satisfied with the house design, while in Irhab, the majority of 44% are satisfied (Table 3). As for the quality of the building material, most of the residents in the three sittings are satisfied. In Mafraq City, the majority of the residents, 48%, are very satisfied with the house location and environment, while the majority of the residents in Manshiyah and Irhab are satisfied (Table 3).

Most of the residents in the three sittings were satisfied with the house's heating conditions, ventilation, and lighting, while the majority in the three sittings weren't satisfied with the soundproofing system that was used in the houses (Table 3).

As a result, housing's physical attributes were more crucial variables than household demographics. Housing satisfaction is affected by the house's physical characteristics, such as the number of bedrooms and the quality of housing units, which is consistent with Knudsen [26].

Table 3. Subjective evaluation of house

Subjective Evaluation of House		Mafraq	Manshiyah	Irhab
Design	Very Satisfied	26%	23%	16%
	Satisfied	37%	34%	44%
	Not Satisfied	37%	43%	40%
Quality	Very Satisfied	41%	37%	34%
	Satisfied	43%	56%	55%
	Not Satisfied	16%	7%	11%
Location	Very Satisfied	48%	36%	36%
	Satisfied	43%	53%	40%
	Not Satisfied	9%	11%	24%
Environment	Very Satisfied	40%	23%	28%
	Satisfied	46%	28%	50%
	Not Satisfied	14%	19%	21%
Ventilation and lighting	Very Satisfied	42%	42%	33%
	Satisfied	44%	47%	56%
	Not Satisfied	14%	11%	11%
Heating conditions (winter temperatures)	Very Satisfied	42%	42%	33%
	Satisfied	44%	47%	56%
	Not Satisfied	14%	11%	11%
Soundproofing	Very Satisfied	14%	6%	10%
	Satisfied	34%	40%	37%
	Not Satisfied	52%	54%	53%

Table 4. Subjective evaluation of neighborhood

Subjective Evaluation of Neighborhood		Mafraq	Manshiyah	Irhab
Accessibility to markets, hypermarkets, department stores	Very Satisfied	31%	16%	11%
	Satisfied	45%	53%	54%
	Not Satisfied	24%	31%	35%
Accessibility to hospitals and medical welfare facilities	Very Satisfied	28%	10%	10%
	Satisfied	55%	53%	53%
	Not Satisfied	17%	37%	37%
Accessibility to cultural facilities, parks, and playgrounds	Very Satisfied	13%	8%	8%
	Satisfied	53%	34%	31%
	Not Satisfied	34%	58%	61%
Accessibility to public transportation such as buses	Very Satisfied	17%	10%	13%
	Satisfied	53%	44%	45%
	Not Satisfied	30%	46%	42%
Convenience in using parking facilities	Very Satisfied	19%	10%	12%
	Satisfied	52%	54%	60%
	Not Satisfied	29%	36%	28%
Burden in commuting to work or school	Very Satisfied	23%	15%	11%
	Satisfied	50%	58%	63%

	Not Satisfied	27%	27%	26%
	Very Satisfied	23%	13%	11%
Educational environments such as schools and private educational institutes	Satisfied	63%	59%	53%
	Not Satisfied	14%	28%	36%
	Very Satisfied	32%	23%	23%
Public security issues such as burglaries and robberies	Satisfied	59%	67%	66%
	Not Satisfied	9%	10%	11%
	Very Satisfied	22%	12%	22%
Car horns and noise levels around the house	Satisfied	48%	50%	53%
	Not Satisfied	30%	38%	25%
	Very Satisfied	17%	14%	16%
Cleanup and state of refuse disposal around the house	Satisfied	55%	60%	62%
	Not Satisfied	28%	26%	22%
	Very Satisfied	25%	18%	21%
Satisfaction with relationships with neighbors	Satisfied	67%	64%	63%
	Not Satisfied	8%	18%	16%
	Very Satisfied	23%	13%	18%
Privacy protection from neighbors	Satisfied	63%	62%	64%
	Not Satisfied	14%	25%	18%
	Very Satisfied	20%	13%	12%
Safety from disasters	Satisfied	63%	70%	74%
	Not Satisfied	17%	17%	14%
	Very Satisfied	8%	9%	2%
Facility management within the complex, such as elevators	Satisfied	54%	57%	51%
	Not Satisfied	38%	34%	47%
	Very Satisfied	13%	6%	5%
Exterior of the complex, such as outer wall painting and landscape	Satisfied	50%	47%	60%
	Not Satisfied	37%	47%	35%

4.3 Neighborhood facilities

This part assesses the residents' subjective evaluation of the neighborhood in the three communities. To determine the level of satisfaction with the neighborhood, fifteen features were considered as a subjective evaluation by the residents. The results show that the satisfaction level is within the same range in the three communities, but it varies among residents in the city and rural areas regarding the accessibility to cultural facilities, parks, and playgrounds, and the accessibility to public transportation such as buses.

In Mafraq City, most of the residents were satisfied with the accessibility to cultural facilities, parks, and playgrounds, whereas the majority in Mansheiyah and Irhab were not satisfied. The majority of the residents of Mafraq and Irhab were satisfied with the accessibility to public transportation such as buses, whereas the majority in Mansheiyah were not (Table 4).

In the three communities, most of the residents were satisfied with the accessibility to markets, hypermarkets, and department stores, the accessibility to hospitals and medical welfare facilities, the convenience of using parking facilities, the burden of commuting to work or school, educational environments such as schools and private educational institutes, public security issues such as burglaries and robberies, car horns and noise levels around the house, cleanup and the state of refuse disposal around the house, relationships with neighbors, privacy protection from neighbors, safety from disasters, facility management within the complex, and the exterior of the complex, such as the outer wall painting and landscape (Table 4).

Accessibility to the environment's facilities affects residents' satisfaction with the environment, which is congruent with the results of Marans [39], Mouratidis [40], Özkan and Yilmaz [41], and Lee [42]. They stated that urban environments should be arranged in a way that increases accessibility to urban services and encourages residents to socialise, which increases the level of satisfaction.

4.4 The Residents satisfaction

The residents' satisfaction includes both overall dwelling unit satisfaction and overall neighborhood environment satisfaction. In general, the overall housing satisfaction in the three communities is that 17.3% of the residents are not satisfied, 68.5% of the residents are satisfied, and 14.2% of the residents are very satisfied (Figure 2). As most of the residents in the three communities own their houses and are satisfied with the house features and the house location.

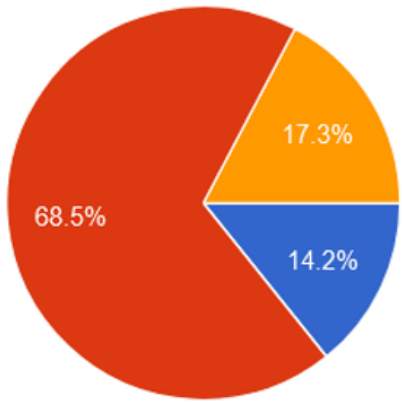

Figure 2. Level of housing satisfaction

The largest percentage of the residents who are very satisfied with their dwellings is 15% in Manshiyah, while the largest percentage of the residents who are not satisfied with their dwellings is 21% in Mafraq and Irhab. And the percentages of housing satisfaction in the three sittings are the same, which is 70% in Mafraq, 71% in Manshiyah, and 70% in Irhab. As a result, housing satisfaction is the same in the city (Mafraq) or in the rural areas (Manshiyah and Irhab) (Table 5). The majority of residents in the three sittings were satisfied with the house features, except the soundproofing system that was used in the houses.

Table 5. The overall satisfaction

The Residents' Satisfaction	Level of Satisfaction	Mafraq	Manshiyah	Irhab
Overall dwelling unit satisfaction	Very Satisfied	9%	15%	9%
	Satisfied	70%	71%	70%
	Not Satisfied	21%	14%	21%
Overall neighborhood environment satisfaction	Very Satisfied	12%	6%	1%
	Satisfied	54%	54%	56%
	Not Satisfied	34%	40%	43%

Moreover, the residents are satisfied with the overall neighborhood environment in the three communities; thus giving an indication that there is a strong relationship between the neighborhood's satisfaction and house satisfaction since housing satisfaction is a multidimensional phenomenon (Table 5).

The level of house satisfaction is higher than the level of environmental satisfaction among all residents in the three communes, as some facilities need improvement. In Mansheiyah, the residents were not satisfied with the accessibility to public transportation, and the residents in Mansheiyah and Irhab were not satisfied with the accessibility to cultural facilities.

5. CONCLUSION

Housing satisfaction is a multidimensional phenomenon that involves an evaluation process between what residents expect and what they receive. There are several factors that affect housing satisfaction, including household characteristics, physical features of the house, and neighborhood facilities. Demographic household characteristics include the number of family members, household type, age, income, duration of residence, ownership of the house, and education level.

The physical features of the house include the number of rooms, number of bathrooms, number of balconies, quality of housing units, housing design, location, ventilation and lighting, heating conditions, and soundproofing.

The neighborhood facilities include accessibility to markets, hypermarkets, and department stores, accessibility to hospitals and medical welfare facilities, accessibility to cultural facilities, parks, and playgrounds, accessibility to public transportation such as buses, convenience in using parking facilities, burden in commuting to work or school, educational environments such as schools and private educational institutes, public security issues such as burglaries and robberies, car horns and noise levels around the house, cleanup and state of refuse disposal around the house, relationships with neighbors, privacy protection from neighbors, safety from disasters, facility management within the complex, such as elevators, and exterior of the complex, such as outer wall painting and landscape.

The results indicate that most of the residents in the three communities share the same demographic characteristics. For example, the gender, where the majority are female; the level of education, and the type of job. Most of the participants hold a bachelor's degree, and work in government institutions. This facilitates obtaining bank loans, in order to finance housing projects. Moreover, the houses' physical characteristics in the three communities are almost the same.

Generally, the residents of Mafraq, Manshiyah, and Irhab live in detached houses, which are owned by the residents. Most of them bought their houses using formal loans from the banks, since the majority of the residents are from middle income households and they work in government institutions, which facilitates obtaining bank assistance to finance housing projects.

Also, most of the participants did not make any expansions or add rooms to the residence after the occupation, while maintenance was being done. And this is consistent with the results, as most of the residents in the three communities are satisfied with their houses.

Based on the study, the level of house satisfaction is higher than the level of environmental satisfaction among all residents in the three communities because most of the residents owned their houses and were satisfied with the house's features and location. while some neighborhood facilities need improvement. For example, the accessibility to public transportation and the accessibility to cultural facilities.

Moreover, the level of housing satisfaction among the residents of the city and the rural communities is almost the same. For several reasons, the common household characteristics between rural and urban sittings, the proximity of the three communities to each other, and the similarities in geographical location. Although most of the residents work in government institutions located in the city, the other advantage found in rural communities is that the price of houses is cheaper due to the lower price of land in villages compared to cities.

One of the most important limitations of this study, which can be discussed in future research, is grouping by family and its effect on the housing satisfaction. This phenomenon that occurs in our villages, where our communities are dominated by a tribal character, and residential clusters are primarily based on kinship, which does not exist in cities.

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