Cultural and Gender Dimensions of Safety: Enhancing Women's Privacy and Equity in Iraqi Housing Design

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Abstract

Sense of safety within residential environments is a multifaceted challenge, especially regarding gender-cultural requirements. Do privacy specifications of housing affect women's and men's sense of safety similarly? This research delves into the most salient aspect of housing specifications, which is the relationship between the external and internal environment of residential units and its influence on women's sense of safety in Iraq. The study conducted a comprehensive literature review and chose Koya City as a case study for analysis and engagement with relevant stakeholders. The complex interaction between indoor and outdoor spaces was explored to estimate their impact on women's sense of safety compared to men. The study uses qualitative and quantitative methodologies to identify strategies and design interventions that might effectively mitigate safety concerns and promote inclusive and empowering living environments for women. The main conclusion of the study confirms that the relationship between the housing unit and the surrounding environment greatly affects women's sense of privacy and safety, which shows the need to consider traditional concepts and norms to enhance this relationship and inform future low-rise, medium-density housing design.

Keywords

1. Introduction

Our homes represent the shelter and refuge to which we resort to achieve physical safety on the one hand and psychological safety related to self-respect and proof of identity on the other hand (Smith, 1994). The Universal Declaration of Human Rights states that the home is the natural cell from which societies emerge and the members of that cell must enjoy safety from a variety of external sources of danger and disasters (Morsink, 1999). With the escalation of different threats around the world, societies searching for social stability are paying great attention to women's safety in particular (Bilgin, 2003). Women's safety starts from their homes, which will enable them to build balanced generations that are resilient to challenges and crises (Kempen, 2019).

The coronavirus pandemic and the subsequent commitment to stay at home have emphasized one major threat to our safety (Kaukinen, 2020), which raises the question: do our homes provide the appropriate feel of safety for women? Women in Iraq currently face many challenges; the restrictive measures adopted during and after the pandemic have increased their feelings of fear. As the coronavirus infection expanded globally, women often bore the brunt of the crisis; being the primary actor for household responsibilities is only one aspect of these burdens (Abdulah et al. 2022) . Moreover, according to Georgetown Institute for Women, Peace and Security (GIWPS) and Peace Research Institute Oslo. (PRIO), the range of scores for women's safety in Iraq was one of the lowest among the Arab countries (Georgetown Institute for Women, Peace and Security [GIWPS], 2023) . This low score indicates the need for enhancing women's feeling of safety, especially at home. Feelings of safety can be enhanced through appropriate house design.

Recent studies have discussed the feeling of safety, by gender, in the Iraqi context. One study showed a general increase in psychological pressure during the pandemic in Iraqi families due to distortions in the sense of time resulting from home quarantine (Alatrany et al., 2022). Another study showed the scarcity of research related to the feeling of safety among Iraqi women as a result of the lack of safety and stability in the country. The study found that women who had gone through difficult experiences avoided staying alone at home because they did not feel safe (Pare & Logan, 2019). Another study explains the importance of the Iraqi home in meeting human needs stipulated under Maslow's pyramid, starting with the need for safety and proceeding through the five stages of the pyramid. The study concluded that a sense of belonging is the most effective factor in creating a feeling of safety at home and this can be impacted by the cultural and emotional relations with neighbors (Salih & Al-slik, 2023). Another study provided empirical evidence showing the importance of respecting cultural factors and safety in achieving healthy social interaction between neighbour as an important element of social sustainability (Almansor, 2021). Radhie et al. (2022) discussed the relationship between safety and privacy in large Iraqi cities whose population density has increased and the accompanying weakness of social relations and concepts. The study showed that there is a lack of consideration for gender safety in planning Iraqi cities and concluded that adequately addressing women's safety depends on several factors, the most important of which is monitoring population density standards and determining the presence of visual surveillance.

The physical attributes of house plan and design such as location, windows, entrances, and their integration with culture and traditions play an important role in increasing both women's and men's sense of safety (Marcus & Sarkissian, 2023). As a result, the need to study the levels of psychological safety for women in their homes is increasing, especially after crises, for two reasons; the first, relates to the great damage caused by crisis in terms of human losses, such as during epidemic infections, with many people losing their jobs and the displacement of some families. The second reason is related to increased anxiety among families and psychological pressure resulting from staying at home for long periods. In other words, there is a need for exploring women's feeling of safety at home with respect to the mentioned preferences in household design and structure. Hence, the relationship of house preferences with a feeling of safety should be studied, for better empowerment of Iraqi women. This study argues that consideration of cultural aspects; mainly "privacy" inside homes can have a positive impact on women's feelings of safety due to dominant socio-cultural values in Iraq.

2. Literature Review

The term safety generally refers to the state in which an individual feels that they are safe, comfortable, free, in control of themselves, and does not suffer from any external pressures or threats that may disturb them (Bauman, 2013). Thus, feeling safe in the home is a basic human need that depends on the availability of many important constructive feelings in building societies, such as reassurance, positivity, stability, etc. (Itma, 2018). Although the design of dwellings has changed throughout history, a feeling of safety at home remains a basic requirement on the physical, emotional, and spiritual level. Therefore, the Arab family must take all procedures and measures to increase the opportunities for safety and protection within the home (Abudabbeh, 2005).

One of the most prominent goals addressed by these safety measures and procedures in the Arabic culture is to increase opportunities for confidentiality, protection, and the preservation of personal matters including marital disputes within the home, which is called "privacy" (Sobh & Belk, 2011). The term privacy may differ somewhat from the term safety, although they are interconnected. Privacy expresses the space (both physical and symbolic) that a person needs to be alone and in which they want to keep matters private, especially about his family details and confidential information (Froomkin & Colangelo, 2020). When our homes are exposed to the eyes of strangers, we make sure that the information they obtain is limited to what we want them to know. Limiting the exposure of information means a lot for the Iraqi family (Itma & Khaleefa, 2024). This is evidenced, for example, by the excessive cost of caring for guest rooms and their luxury in Iraqi culture. Therefore, personal and private safety is a very important matter that must be considered in housing design because it protects our privacy and personal matters from any external exposure.

There are many points of convergence between the terms safety and privacy and they complement each other. There is no safety without privacy and no privacy without safety (Keall, 2010). While there is a connection between the two terms, the points of difference lie in that safety represents freedom from any external threat and dealing with the matter in peace and freedom while privacy represents freedom from intruders and interest in private and confidential matters away from people's eyes (Benn, 2017).

Feeling safe at home incurs a dual challenge. Firstly, exposure to various manifestations of danger often is minimal during the day. The possibility of danger and violence increases after the streets empty at night (Bennett et al., 2007). But it also is possible that there are some fears among residents during the day, especially in remote places, for those families who have chosen to live in homes far from crowded cities to obtain privacy (Low, 1997). Secondly, safety sometimes is required from internal factors, such as domestic violence, which is a growing source of concern in many countries that suffer from a lack of social and economic stability; Iraq is one of these (Vilardo & Bittar, 2018). Thus, feeling safe at home may require a safe place inside the house and safe places near the house to get there in emergencies (Torres et al., 2021). Besides, the importance of protecting privacy inside homes decreases a resident's freedom inside the house and thus decreases their feeling of safety (Sciama, 2021). The desire to separate women of the house from strangers (unknown men) may limit the enjoyment of environmental aspects, such as ventilation and natural lighting by limiting opening windows, as well as limiting the enjoyment of the external environment, especially for women (Al-Gebeily, 2023).

Different social aspects also can influence the choice of housing type, along with forces that accompany personal preferences related to cultural norms, in addition to the influence of social classes (Haruna et al., 2023). Privacy from the surroundings is considered one of the most important social aspects that drives the

motivation to choose certain specifications for housing such as private yards, extended views, and upper floors for living (Marcus & Sarkissian, 2023). Moreover, there is a widespread preference in Arab societies, including Iraq, to choose a house location that avoids undesirable public contact near the house such as crowding and shared public spaces (Itma & Monna, 2022). The location of the house and its surroundings means a lot for the Iraqi family to preserve the internal secrets of the house. The choice of this location aims primarily to preserve marital relations and hide internal disputes from outsiders (Nour, 1979) .

Studying the influence of privacy on feelings of safety for better empowerment of Iraqi women requires an approach that applies concepts explored in the literature review, with a specific focus on the Iraqi context. Such an approach can be divided into four main categories: the first measures the feeling of danger and its relation with privacy. The second considers the safe spaces for escape from danger and their relation with privacy. The third explores the influence of privacy on enjoying the environmental qualities of the house, and the last examines the influence of privacy on housing choice. Figure 1 summarizes the literature review, above, and introduces the methodological approach used in the analysis of this study.
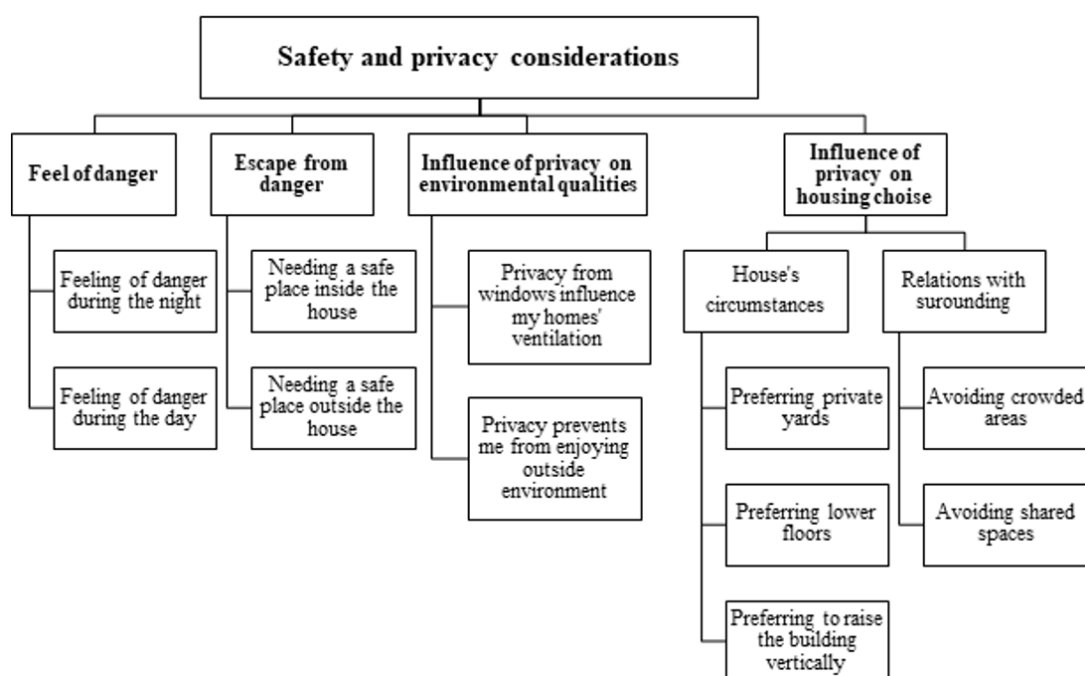

Figure 1. A methodological approach for exploring cultural influence on feeling safe.

3. Materials and Methods

To understand the privacy influences on the feeling of safety among women in Iraq, the study intends to compare women's and men's satisfaction to understand women's cultural needs in particular. To make this comparison, the paper uses a combination of two basic methods: the first is qualitative, which depends on choosing a case study for analyzing the architectural characteristics of a sample of residential apartments with or without yards. This method is used to prepare for the selection of a group of houses to conduct the field survey. The second method included visiting inside houses and collecting data about the houses and their residents. This method converts people's opinions into a percentage of satisfaction that can be dealt with quantitatively.

This research was carried out in three sequential but overlapping stages (see Figure 2). These stages are observation of behaviour and interviews with random samples of residents from the selected area to develop a general idea of the effect of privacy inside homes on behaviour and and also provide a guide to framing the questions that should be included in the questionnaire of the second stage. The second stage included filling out the questionnaires in person in the selected homes to ensure the accuracy of the results as much as possible. As for the third stage of the study, the data collected from the questionnaire and field visits were analyzed and classified using Excel software in the preparation of tables and graphs.
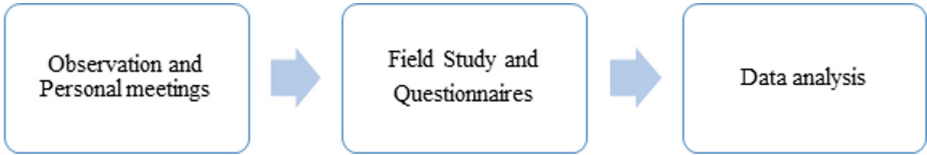

Figure 2. Methods of the conducted study.

3.1 The Case Study

The survey was conducted in the city of Koya, which has been home to an active women's movement in the last decades. The city of Koya is located between the governorates of Erbil and Sulaymaniyah, 70 km southeast of the city of Erbil and at an altitude of 625 meters above sea level. This city is surrounded by mountains, which makes it one of the most beautiful cities in Kurdistan as indicated by the presence of many tourist areas within its borders (Figure 3a). Hence, Koya is an Iraqi city with a strong political and cultural history and rich literary background. Women's participation in the political, social, and historical fields is notable (Hussein, 2023).

The city's physical context is characterized by a mix of traditional housing, mainly courtyard housing and modern housing, primarily apartment buildings. Residential neighbourhoods in Koya feature a variety of housing types, including single-family homes, low-rise apartments, and some medium-density residential blocks. These structures often incorporate courtyards or shared open spaces, integral to the local culture and community interactions. The layout of Koya's neighbourhoods typically combines narrow streets with open public spaces, creating a blend of private and communal environments. However, the proximity of houses and the lack of consistent urban planning in certain areas contribute to challenges such as reduced privacy and increased noise. Traditional architectural styles influence the city's residential areas, prioritising family-centric living arrangements and emphasising privacy, especially for women. The surrounding environment includes a mix of urban and rural landscapes. While the central areas of Koya are more densely populated and feature commercial activities, the outskirts tend to have lower-density residential developments with greater access to green spaces. This contrast between central and peripheral neighbourhoods provides a unique context for exploring how fear and safety perceptions vary based on the built environment. The city's rich cultural and historical background further shapes resident experiences, adding a layer of complexity to the interplay between the physical environment and gender-specific safety concerns. This detailed understanding of Koya's built environment helps frame the study's exploration of how housing design and urban layout influence sense of safety and privacy, particularly among women.

A neighbourhood in the eastern part of the city was chosen to survey as shown in Figure 3b. The decision to focus on this specific area stemmed from several factors. This neighborhood, located away from the city center, features a medium-density population, which provides a balanced environment for studying residential

dynamics. In contrast, the crowded areas near the center were observed to have a higher prevalence of complaints about lack of privacy, which potentially could skew the survey results. By selecting a less congested area, the study aimed to ensure more accurate and representative findings. It was observed that people complaining about the lack of privacy increased in the crowded areas near the city centre, which would affect the accuracy of the results. Moreover, the chosen neighborhood exhibits notable socio-economic diversity. The area includes housing units of varied architectural designs and heights relative to the street level, reflecting a range of income levels and lifestyle patterns. This diversity enabled the survey to capture a comprehensive view of the individual experiences and perceptions, avoiding a bias that might arise from focusing solely on homogenous socio-economic settings.
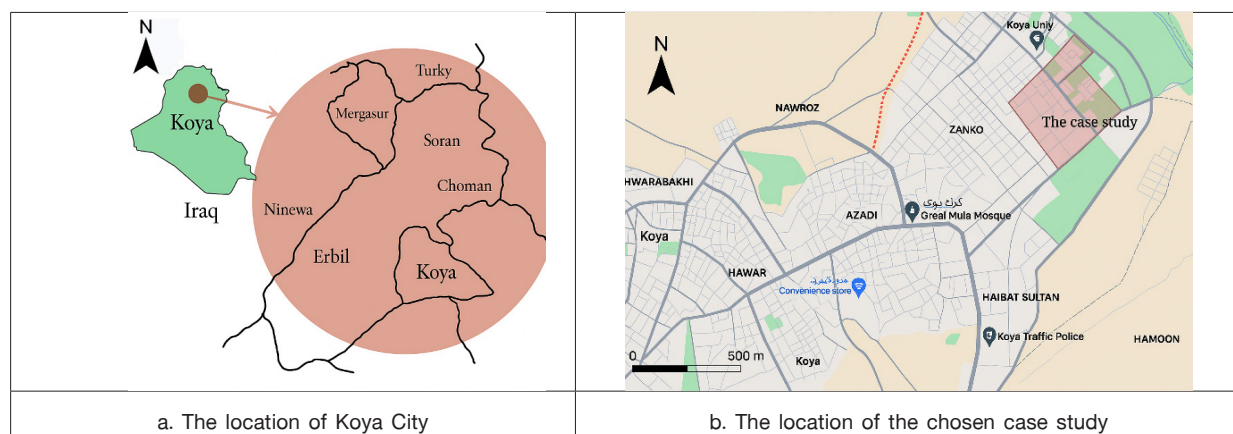

| a. The location of Koya City | b. The location of the chosen case study |

Figure 3. Location of the case study and the surveyed area (Source: authors extracted from Google Map 2024).

The field visit to the city's residential neighborhoods confirmed that the selected residential complex is characterized by the presence of medium to high-rise multi-storey apartment buildings. Many of the buildings are blocks with 2 to 4 apartments on each floor and one or more central staircases. The apartments surveyed range in size from 67 to 125 square meters and most of them consist of one or two bedrooms (Figure 4).
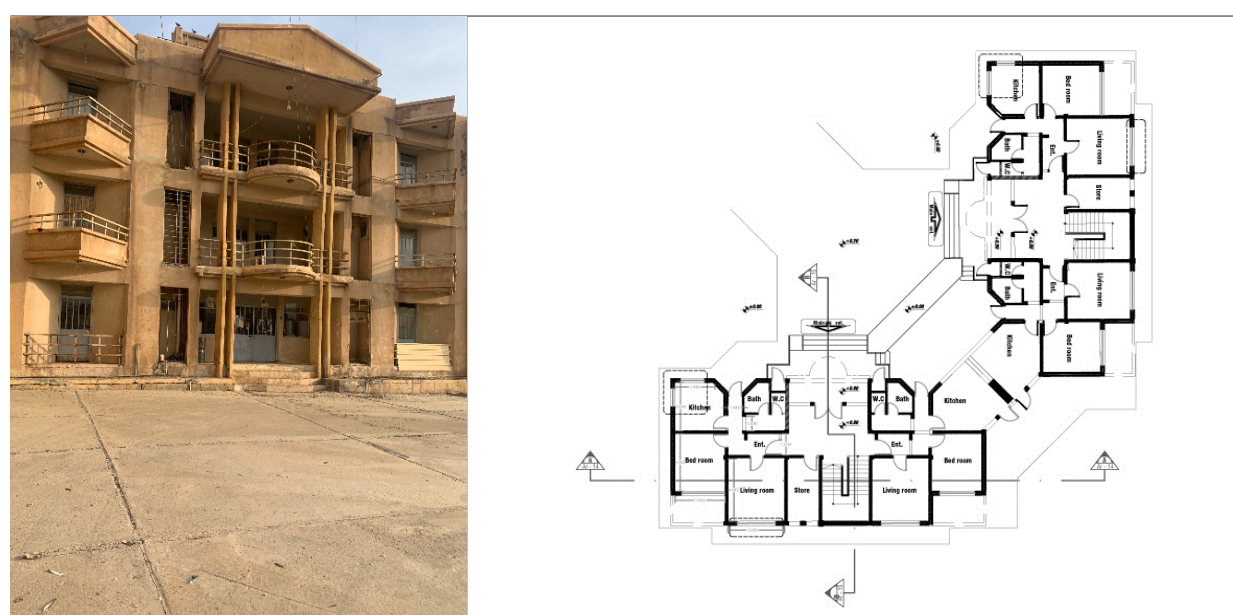

Figure 4. Example of the surveyed apartment buildings (left) and the ground floor plan (right).

Compared to other parts of Koya, such as the more affluent suburban developments, the chosen neighborhood represents a middle ground. The central areas, while vibrant and commercially active, often lack adequate privacy and open spaces due to high population density. On the other hand, the suburban developments, typically occupied by wealthier residents, might not face the same challenges related to communal interactions or accessibility. The eastern neighborhood thus provided a balanced character to examine residential life in a setting that reflects both the challenges and opportunities present in medium-density urban environments. The selection process for the surveyed houses within this neighborhood also prioritized diversity. Factors such as the housing unit's proximity to main roads, its position within the block, and its elevation relative to the street were carefully considered. This approach ensured that the study accounted for various spatial dynamics, offering insights into how these factors influence residents' experiences, including their sense of privacy and community engagement. By incorporating these considerations, the research aimed to deliver findings that are not only precise but also broadly applicable to similar urban contexts.

It was necessary to determine an appropriate sample size to conduct the field survey. Referring to the approximate population of Koya city, which is about 100,000 people, we considered an appropriate sample size whose number can be controlled, thus facilitating the collection of the required questionnaires (Ali et al., 2023). Accordingly, a stratified random sample was used in this study where the city's population was divided into specific residential groups, thus choosing the samples by referring to the municipality's zoning plans. The determination was possible because Koya consists of small to medium-sized residential complexes and is very similar in the population's housing style and demographic characteristics (Zakaria et al., 2013) . As such, the size of the entire targeted segment of users was estimated, which is one of the residential complexes that contains 1,200 housing units on average. Then, 10% of the population of the selected pool was determined based on the relative size recommended by (Heppner et al., 1992), which reduces the amount of error in the results when analyzing the selected sample to be 60 recepents (Dorofeev & Grant, 2006).

3.2 The Questionnaire Survey

The questionnaires were designed to include easy, simple, and accessible questions that explored the outlooks of common recipients. Surveying opinions regarding privacy and safety inside their home required 24 questions, which were arranged in two main sections: the first was the satisfaction with the current home about privacy and safety and their relationship together. The second section dealt with visioning of a future house, the relationship between the house and the surroundings, and the extent of possible future house impact on the residents. This visioning was accomplished by asking participants about their different preferences for a future building as they imagine it.

The study team assisted the residents in filling out the paper questionnaire through nonstructured interviews, which included a set of three topics with questions that emanated from each topic. The measure of participant level of satisfaction for each question was calculated using a Likert-like scale from 1 to 5, where 1 represents the lowest satisfaction indicator and 5 is the highest satisfaction indicator. The scores were then converted into a percentage of satisfaction (PS) using the following equation:

$$PS = \frac{sum\ of\ score}{number\ of\ questions} * 20\%$$

The 65 questionnaires were distributed in different homes in the selected area. One of the family members, either a man or a woman, filled out the questionnaire for each household. In choosing the survey participants we strove to represent a variety in the numbers of women and men between the ages of 25-65 years, and including consideration of the variability in family characteristics with respect to the number of members, degree of education, profession of the father or mother, etc. (Figure 5a). After sorting the returned questionnaires, 60 questionnaires were selected for analysis while 5 of the questionnaires were excluded because they were incomplete. Among questionnaires analyzed, 30 represented houses having a ground yard and 30 houses were on the upper floors but had a view of the street. Diversity also was reflected in the specifications of the houses in terms of size, number of rooms, years of occupation, location in the building, etc. as shown in Figure 5b.
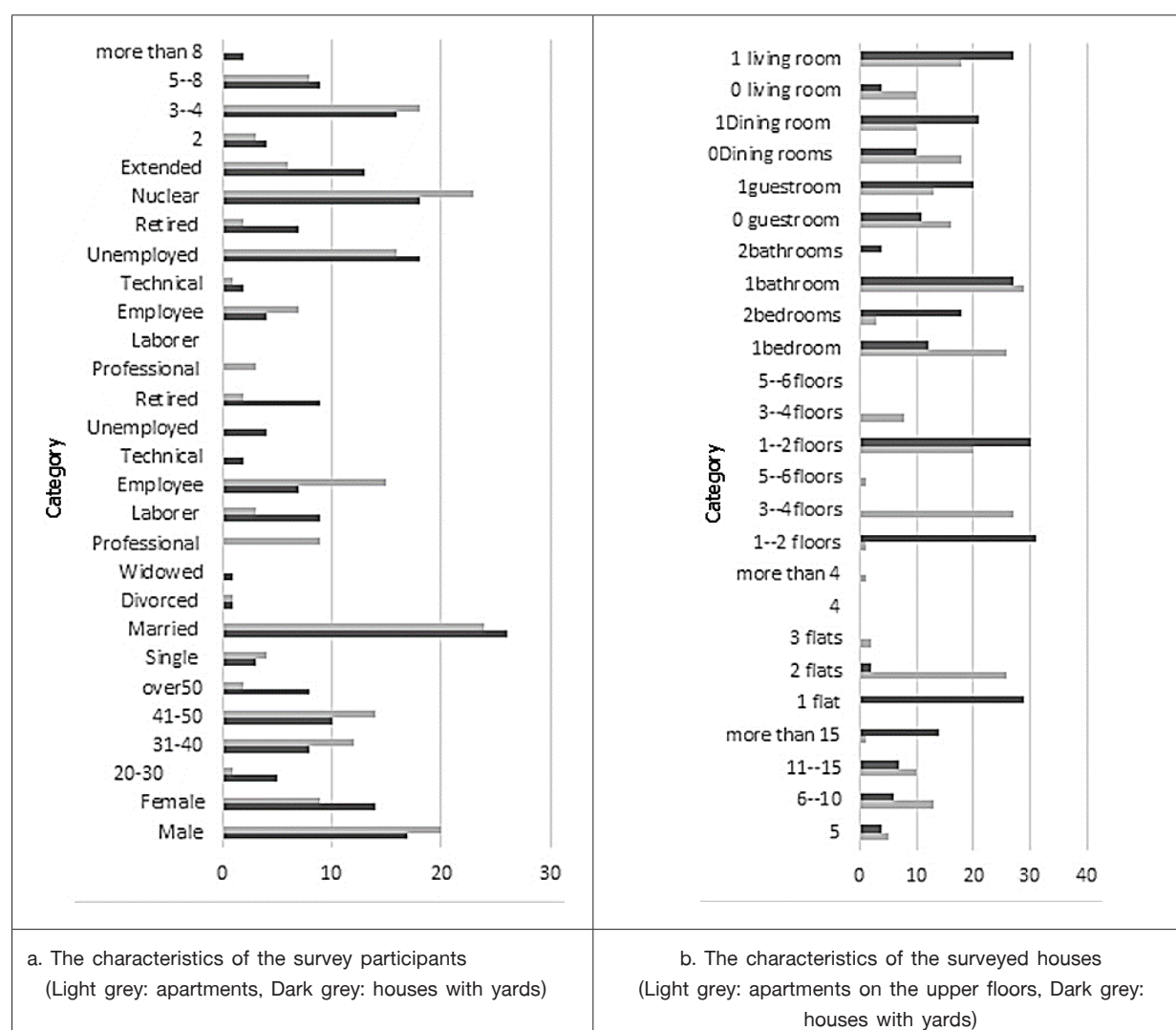

a. The characteristics of the survey participants
(Light grey: apartments, Dark grey: houses with yards)

b. The characteristics of the surveyed houses
(Light grey: apartments on the upper floors, Dark grey: houses with yards)

Figure 5. The characteristics of the survey participants and their houses.

4. Results

4.1 Satisfaction with the Current Residence

The first part of the results discusses the extent to which residents are satisfied with the level of safety and privacy in their current homes. Table 1 shows the results for both women's and men's satisfaction and the difference between them. The following text discusses these results.

It appears from Table 1 that the highest percentage of difference in opinion between women and men (11%) was for question 7.Recipients were asked about the extent of fear they felt at night, with responses being 60% for women and 49% for men. This is an indication of the general feeling of safety inside the home for the women of this sample. The night should be a time of stillness, safety, and preparation for rest to face the next day with full activity. Observation conducted by the study indicates that this feeling of anxiety is more related to houses facing the street, which are exposed to outside viewers to a greater extent at night. In that sense, women are more concerned than men about privacy factors and their sense of safety inside the home. However, men also are affected by a feeling of lack of privacy, but the results may reflect their attempt to suppress feelings of fear and nightly anxiety because their duty towards the family is protection.

The second greatest difference in response between the answers of women and men was registered for question 1, which pertains to the satisfaction regarding the presence of a safe place inside the home. Here the difference is -7% (the negative sign indicates a greater satisfaction level for men (36%) compared to women (29%). This means that women feel less safe inside the home in terms of having a room or space to shelter in case of danger. Clearly, women are more sensitive to the issue of safety inside the home than men. The low percentages of results for this question, 29% for women and 36% for men also may indicate a general lack of satisfaction with safety inside the home. In addition, question 6 reflected results similar to question 1, with a difference of -6%. The question carries a similar meaning as question 1, but at the building level, rather than the house level. This correspondence in the answers for questions 1 and 6 indicates a general consistency in survey results.

The percentage of women's satisfaction with environmental factors, ventilation and lighting inside and around the house, is in similar proportions for question 5 and question 12, and it is 6% higher than the percentage of satisfaction among men. This result suggests that men who are present at home less often than women during the day may not notice these factors to the same extent. In the absence of the men in the family, women can enjoy more environmental aspects such as opening windows and walking in the outdoor corridors. This indicates that Iraqi women may be more sensitive than men to details of home design. Homes with poor ventilation and insolation affect women more than men. The results for questions 5 and 12 may be influenced by the number of women not employed outside the home, as more than 60% of the women in the sample were housewives.

The questionnaire also asked about the relationship between privacy from windows and safety. Female respondents were less satisfied with the safety associated with windows (question 3), recording a difference of 5% from the male response. More than a third of the women expressed their need for an external shelter in the vicinity of the home in question 11, also with a difference of 5% from men's answers. It should be noted here that the study questions did not specifically clarify the type of danger, whether it was internal danger or external danger, due to the study team concerns regarding privacy of household secrets that would affect respondent desire to tell the truth about sensitive issues like domestic violence, for example. In other words, it is not preferable to ask about these matters directly in Iraqi culture, because the respondents, whether men

or women, may not deal with these answers frankly for fear of scandals, which is another type of strict cultural role. However, the need for external refuge was mentioned clearly in question 11 apart from the type of danger intended, which is internal danger.

The remaining questions, 2, 4, 8, 9, and 10 have the lowest difference between women's and men's responses, at 4% or less. These questions relate to external safety or other matters such as green areas around the house and are not directly related to safety within the home. In conclusion, women's and men's opinions can be less different when talking about the exterior environment around the house.

Table 1. Satisfaction on Privacy and Safety for Women and Men.

	1. Do you have a safe place in your house for emergencies?	2. The entrance facilitates leaving the house quickly for a safer place.	3. Do your windows on the street pose a danger?	4. Is the location of the children's rooms safe?	5. Satisfaction with ventilation in your house.	6. Satisfaction with building resistance from outdoor danger during the day.	7. Degree of fear during the night	8. Satisfaction with outdoor spaces in your surrounding.	9. Satisfaction with green areas in your surrounding environment.	10. Satisfaction with safety in the street near your house.	11. Do you need a safe shelter near your building?	12. Enjoying the surrounding environmental qualities.
Women	29%	38%	46%	43%	55%	37%	60%	48%	40%	50%	38%	56%
Men	36%	38%	41%	39%	49%	43%	49%	46%	42%	46%	33%	50%
Subtraction result	-7%	0%	5%	4%	6%	-6%	11%	2%	-2%	4%	5%	6%

Table 1 reports the comparative opinions of women and men on various aspects of housing safety, environmental satisfaction, and quality. To summarize, women scored higher than men in the majority of categories related to indoor spaces, indicating a greater concern or awareness of these factors. For instance, women scored higher on satisfaction in the safety of children's rooms, ventilation, and fear during the night. However, men slightly exceeded women in satisfaction with safe place for emergency, and satisfaction with green areas. Overall, the data highlight that women generally report higher satisfaction levels or perceptions of safety and quality across most factors, reflecting their unique priorities or experiences within their indoor living environments.

4.2 Future Residence Preferences

The second part of the results discusses the responses of women and men to the preferences for future housing. The focus was on the location of the house, the building, and its relationship to its surroundings based on the literature reviewed above. The need for a view or private yard also was covered by the questions. The first result of this section shows the differences in cultural influences between women and men. Question 1 indicates the importance of feeling safe in the indoor spaces. This question shows a higher rating by women (42%) as compared to men (30%). This result confirms the different vision of women and men regarding the home, it is important for women to feel safe at home while men can feel safe outside the home in a much easier way as compared to women.

Question 2 of this section shows that women in the sample prefer low-rise floors 1-2 for living (76%), with a clear difference from men's preferences (56%), a 20% difference. This result is consistent with the negative difference in favour of men for questions 3, 4, and 5, which ask about the desire to live on the upper floors. This result may be explained in that low-height floors make women feel safer due to the ease of leaving the house in cases of danger, rather than due to their privacy from the street. High floors are further away from the disturbance and sight of passers-by and thus obtain greater privacy. The result also may be explained by noting that women's safety can be linked to children's safety and low floors enable women to monitor their young children outside, allowing them to reach quickly in cases of danger. However, question 6 shows that 42% of women compared to 38% of men think that living on the ground floor is not comfortable because of crowding. Moreover, question 8 shows that having private yards on the ground floor is not a priority choice in terms of safety issues. As a result, living on the first and second floors is ideal for women of the sample to provide a balance between privacy and safety.

The survey results also indicate that the need for privacy from neighbours is almost equally important for both women and men. Questions 8-11 confirm this interpretation; questions 8 and 9 indicate the lack of agreement among sample members - 25% for women and 18% for men - that sharing external spaces and entrances with neighbours provides safety. Question 10 shows that the majority of the sample members, 82% of women and 81% of men, prefer an extended view in their homes, which means not being exposed to the eyes of neighbours from neighbouring homes. Question 11 shows an equal acceptance by women and men, 43%, who would agree to live in large residential blocks with a large number of apartments and thus share the same building with many neighbours. The reason for this approval may be purely economic, as privacy from neighbours requires living in low-density areas. Question 12 indicates that more than half of the sample considers low-density areas safer for living as compared to dense areas. However, the approval rate among women, 64%, was lower than that of men, 73%, in this question, which confirms that privacy is linked to the small number of residents in the residential area more for men compared with women to obtain a feeling of safety.

Table 2. Outdoor-indoor Relationship and Future House Preferences.

	1. I feel safe in the indoor spaces in general.	2. I prefer living in 1—2 floors.	3. I prefer living in 3-4 floors.	4. I prefer living on more than the 4th floor.	5. The upper floors provide more safety.	6. Ground floors increase crowding.	7. Private yards make me feel safe.	8. Shared spaces with neighbours make me feel safe.	9. I prefer sharing building entrance with fewer neighbours	10. I prefer to have an extended view.	11. Residential blocks are a good choice.	12. I prefer to move to live in a low density area.
Women	42%	76%	20%	6%	37%	42%	18%	25%	74%	82%	43%	64%
Men	30%	56%	29%	8%	39%	38%	19%	19%	79%	81%	43%	73%
Subtraction result	12%	20%	-9%	-2%	-2%	4%	-1%	6%	-5%	1%	0%	-9%

The results in Table 2 highlight gender-based differences in preferences for safety, privacy, and housing layout. The table shows the survey results comparing preferences and perceptions of women and men regarding residential living conditions. In summary, key findings include: Women generally feel safer indoors than men. Many women prefer living on 1–2 floors and would avoid living above the 4th floor. Women perceive the last floors as slightly less safe than men but strongly agree that ground floors increase crowding. Both women and men value private yards as providing a feeling of safety. Shared spaces with neighbours are less favourable among women and women are less inclined to share entrances with neighbours. Finally, women slightly prefer extended views and do not consider residential blocks in low-density areas as a priority.

4.3 Women's vs Men's Needs for Privacy and Safety

Finally, we compare the questionnaire results to the theoretical framework of Figure 1 to explore differences between male and female responses in terms of privacy and security needs. Four main items are discussed: measuring the feeling of danger, considering the safe spaces for escape, the influence of privacy on enjoying environmental qualities, and the influence of privacy on housing choice. As shown in Table 3, the first three items are extracted from Table 1, and the fourth one is extracted from Table 2. Sub-items are reported either from one result of one question, or in the case where two or more questions are considered, an average of the questions is shown. Figure 6 presents the comparison in the form of a "line chart" to facilitate an understanding of the differences in needs between women and men of the sample.

Accordingly, Table 3 shows the results of the clarified application, which can be summarized into four main conclusions: The first is that a feeling of fear dominates women a little more during the day and at night, as indicated in sub-item 1 and 2. The second conclusion is the importance of having a safe place inside the home is equal for both men and women, however, this importance increases slightly for a safe place outside the home for women as indicated in sub-item 3 and 4. The third conclusion is the influences of privacy on women's enjoyment of environmental aspects inside the home is higher than for that of men, while outside the home such influences are approximately equal between women and men as indicated in sub-items 5 and 6. The last conclusion is privacy appears to have a slightly greater influence on women's choice of future housing than men as reflected by women's preference for low-rise floors, avoiding crowded areas, and sharing areas with neighbours (sub-items 7 to 12).

Table 3. Applying the Theoretical Frame: A Comparison between Women's and Men's Needs for Privacy and Safety

| a. Item	Sub-Item	Women	Men
Feeling of danger (Table 1)	1. Feeling of danger during the night (Q7)	60%	49%
	2. Feeling of danger during the day (Q6)	63%	57%
Escape from danger (Table 1)	3. To a safe place inside the house (Q1,Q4)	38%	38%
	4. To a safe place outside the house (Q2,Q10,Q11)	38%	33%
Influence of privacy on environmental qualities (Table 1)	5. Privacy from windows influences my home's ventilation (Q3, Q5)	46%	41%
	6. Privacy prevents me from enjoying the outside environment (Q8,Q9,Q12)	48%	46%
Influence of privacy on housing choice (Table 2)	7. Preferring private yards(Q8)	18%	19%
	8. Preferring lower floors (Q2, Q12)	70%	65%
	9. Preferring to rise the building vertically (Q3,Q4,Q5)	21%	25%
	10. Avoiding crowded areas (Q6,Q7)	34%	29%
	11. Avoiding dense buildings (Q9,Q10)	78%	80%
	12. Avoiding shared spaces (Q1,Q11)	43%	37%
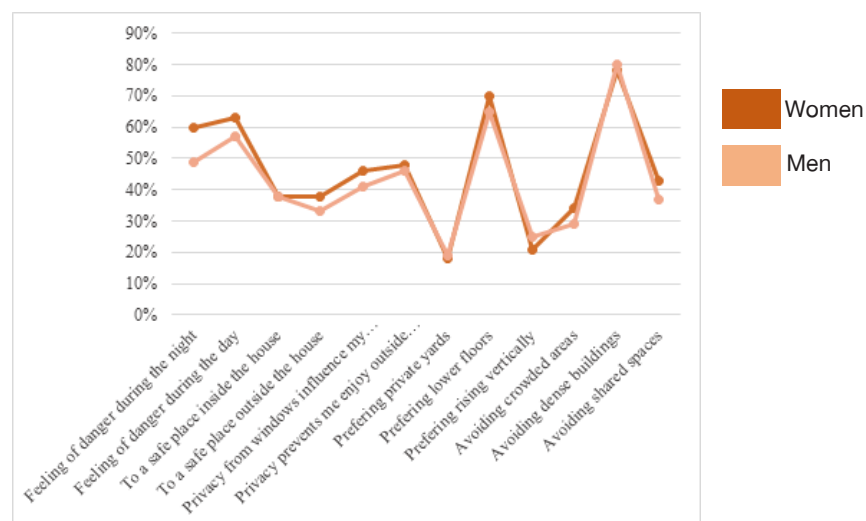
Figure 6. Differences in safety and privacy needs between women and men.

Figure 6 summarizes the comparison of survey responses between women and men on safety, privacy, and housing preferences. Key observations can be summarized as follows. The feeling of danger in the daytime is generally higher than during the night for both genders. The responses for both genders align closely on these points, showing similar levels of concern. Many respondents prioritize having safe spaces inside and outside the house, indicating a shared emphasis on safety. Privacy-related concerns, such as preventing views from windows and enjoying private yards, show variation between genders. Women show a stronger preference for these aspects; preferences for lower floors and private yards are notably higher for women, reflecting a desire for accessibility and personal space. Avoiding crowded areas and shared spaces also appears more pronounced for women. The chart shows sharp peaks in areas like preferring lower floors and avoiding

overcrowded areas, indicating strong preferences with both men and women. There are troughs for preferences like to rise the building vertically, suggesting less interest in high-rise living. Overall, the figure highlights differing priorities between the two groups, with women emphasizing safety, privacy, and a preference for low-density living environments.

Conclusion

A strict conservative culture, economic sanctions, and armed conflicts in Iraq have marginalized women economically, socially, and politically. These factors have contributed to insufficient living preferences for women, exacerbating inequality in the housing environment. Neglecting these aspects in housing design worsens the situation. A lack of awareness about women's rights to feel safe at home, coupled with the instability of the region, further confines Iraqi women and girls to traditional roles and limits their access to both indoor and outdoor environments.

Today, women in Iraq suffer from insufficient living preferences that may spread violence and inequality. Ignoring traditions and cultural norms in house design, as well as a lack of awareness of women's rights to feel safe at home, often make matters worse, and instability restricts Iraqi women and girls to traditional roles, limiting their access to enjoying inside and outside environments. Women staying at home in Iraq is not an emerging phenomenon due to pandemics; it also is related to many cultural and societal factors, the most important of which is obtaining privacy from the surroundings. Neglecting these factors may affect a woman's freedom inside the home much more than men's, such as living on the ground floor, exposing windows to the neighbours, and living on high-rise floors, thus reducing their sense of privacy and safety. Housing designs that fail to address privacy needs disproportionately affect women's freedom, safety, and sense of privacy compared to men.

This study seeks to move beyond simplistic conclusions about gendered experiences of fear by examining the nuanced relationship between residential units and their surroundings. It focuses on the interplay of cultural influences, gendered experiences, and housing characteristics that contribute to feelings of safety. Specifically, it identifies critical design elements that impact women's sense of safety, including easy access to outdoor spaces such as yards, the balance of visual interaction between interior and exterior spaces, and provisions for ventilation and natural lighting. By addressing these elements, the study aims to offer a culturally sensitive and equitable perspective on housing design that empowers women and enhances their safety and well-being. This study examines the effect of the relationship between residential units and the surroundings on women's sense of safety. It reviews the most important elements that determine this relationship, such as easy access to the external land and yards, visual interaction between the interior and exterior, and easy access to ventilation and natural lighting.

The study also acknowledges the cultural sensitivities in Arab societies, where privacy is deeply intertwined with feelings of safety, especially for women. The study adopts a methodological approach to assess these elements through women's opinions about their current housing satisfaction and future preferences in Koya City, comparing them to men's perspectives The study also addresses the challenges posed by Arabic cultural norms—such as embarrassment or hesitancy to articulate privacy-related needs in relation to housing characteristics. Accordingly, this research argues that learning from traditional housing designs is a culturally sensitive solution. Traditional Arabic homes, with their inward-focused layouts, courtyard-centric designs, and emphasis on separating private and public spaces, inherently address the dual

requirements of privacy and safety. By revisiting and integrating these traditional design principles into modern housing, the study proposes a way to better accommodate women's emotional and cultural needs while fostering a safer and more inclusive residential environment.

Finally, years of safety issues and political instability in Iraq threaten privacy in homes and thus the feeling of safety for residents. It is recommended that further studies clarify the reflections of these years on women's senses; feelings of safety in particular. It also is recommended that further studies explore how to enhance the meaning of home in Iraqi cities to continue representing the main place for privacy and safety, thus empowering women inside their homes. Considering the Arabic norms and cultural values should be the keystone of those studies, as the fear of an invasion of privacy decreases the likelihood of people talking about these topics, due to fear of shame and stigma.

Author Contributions

Conceptualization, M.I. and T.K.; methodology, M.I. and T.K.; software, M.I.; investigation, T.K.; resources, M.I., and T.K.; data curation, M.I.; writing—original draft preparation, M.I.; writing—review and editing, M.I. and T.K.; supervision, M.I. All authors have read and agreed to the published version of the manuscript.

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