# THE ROLE OF URBAN DEFENSELESS SPACES IN WOMEN'S SECURITY: A CASE STUDY OF JIROFT, KERMAN PROVINCE, IRAN

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Growing trends in urban development combined with fundamental changes in the physical context of cities necessitate paying attention to the quality of urban spaces. The low quality of spaces, known as defenseless spaces, has a significant impact on the security of citizens, particularly vulnerable groups, including women. By emphasizing the role of defenseless spaces in Jiroft, the present study aims to evaluate their effect on women's security. Data were collected using a questionnaire and analyzed using an independent t-test. Kendall correlation and regression were also applied in order to determine the quality of urban spaces and to evaluate their relationship with women's safety. The results show that the physical spaces in Jiroft, more than 30% of which are worn out, are of low quality, and thus can be referred to as defenseless. The level of women's satisfaction with the quality of the space is not high enough and this situation has increased women's insecurity by 41%. Therefore, reconsidering urban design, especially in the peripheral and suburban areas is necessary, owing to women's dissatisfaction with the quality of urban spaces and the positive correlation of these spaces with the level of security.

*Key words*: Defenseless space, Women's security, Jiroft, Kerman Province, Iran.

# INTRODUCTION

In recent years, different planning studies have recognized security challenges for women and have attempted to alleviate them (George, 2014; Viviene, 2004; Davies *et al.*, 2014; Fatima, 2016; Hendricks, 2015). These studies are frequently related to developing societies, and they address the deficiencies in women's security, which are associated with poor social care, patriarchal governments, social violence, discrimination and social inequality. In addition, such deficiencies encompass various dimensions of security, including social, economic, and even political dimensions at the macro and national levels (McCulloch

and Stancich, 1998; Bartlett and Somers, 2016; Lou, 2016; Williamson and Rix, 2000; Mbadlanyana, 2012). Previous evidence has revealed that the issue of women's security is neither limited to one particular aspect or topic, nor related to basic and comprehensive failures. However, to reach the final target, identifying the leading challenges in specific dimensions and performing policy research (i.e., action) are also essential in planning. In this regard, women's security in urban spaces, mainly concerning the issue of social security, is recognized as one of the most important achievements of human society (Rose and Cartwright, 2009). Describing the term "security" is extremely complex, and so various definitions have been offered in different societies with different values. In one society, only physical abuse and bodily harm are recognized as a manifestation of insecurity, whereas in another, sensitivities are higher and even verbal harassment is considered as an example of insecurity. In this regard, the culture of any society is a determinant element.

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Oxford defines the word security as "to be safe, free from danger or anxiety" (Oxford, 1994). According to Velashani et al. (2015), security is the most important spiritual need, purpose, and inherent nature of every person's life in society; generally, security can be divided into both objective and subjective dimensions. As an objective definition, security is viewed as safe environmental and social circumstances and refers to a feeling of being secure and free from danger (Faridtehrani, 2011). Urban spaces can greatly influence both dimensions of security (Moorthi, 2004). The present study focuses on verbal and visual harassment, and physical security, including both mental and objective dimensions. That is, both physical and non-physical harassment are considered in the aforementioned dimensions (Razavian and Aghaei, 2014). The design of urban spaces can play a vital role in the level of security. This challenge is more serious for socially vulnerable women, since they are at greater risk (Cochran, 2019; Jahangiri and Siddiqui, 2011). More precisely, some urban spaces (e.g., defenseless and marginal spaces) are more prone to disturbances in their peace and security. Further, space and crime are certainly interconnected and closely related to each other, and so a marginal, dark, and closed space with no social supervision might increase the likelihood of crime (Ceccato, 2016; Hassanzadeh, 2017; Nasiri et al., 2014). Therefore, urban planners and designers should pay particular attention to these spaces and their negative impact on security and the distribution of peace in the context of urban management (Blobaum and Hunecke, 2005). The damage related to the lack of security in urban spaces differs between males and females. Women are mainly more vulnerable for reasons such as the overwhelming experience of fear in life and different consequences (such as stress, anxiety, recalling bad memories, etc.) of being in vulnerable situations (Tandogan and Ilhan, 2016; Condon et al., 2007). Koskela and Pain (2000) believe that the feeling of fear and insecurity is greatly influenced by one's experiences and memories of urban spaces, which generally affect the presence of women in public space. However, due to the increasing importance of women's presence in public spaces, and the existence of defenseless spaces and urban blind spots, which impede women's dynamics, there is a bold contradiction in women's sense of security. To investigate this inconsistency in women's security in defenseless spaces, the city of Jiroft, located in Kerman province, Iran was selected as the case study. This city, due to its physical problems and urban design, is facing major challenges in the daily life of its citizens, especially in women's security. In this regard, the present study seeks to evaluate the security challenges of women in defenseless spaces, as a research priority, by assessing and identifying the factors affecting their insecurity.

#### LITERATURE REVIEW

Different studies have investigated security and urban defenseless spaces as dependent and independent variables, respectively. For example, Newman (1973) indicated that an increase in crime and a decrease in security in urban spaces are related to factors such as alienation and anonymity in space, the lack of surveillance and not enough force against violent acts, as well as access to a quick escape or disappearing route. He further believed that by designing symbolic mechanisms and making fundamental physical changes, the inhabitants of an area might be able to control their environment and redesign its urban spaces. These actions include increasing the quantity and quality of light in urban areas, since this would increase the possibility of identifying criminals and improve night vision and visibility. It also means that the presence and dynamism of people would increase, as well as the number of observers and witnesses (Wekerle and Whitzman, 1995). Additionally, increased accessibility, natural supervision (formal and informal), and enhanced regional communication might lead to the elimination of marginal and unprotected areas (Atlas and Leblanc, 1994). Angel (1968) argued that criminal areas are one of the main reasons for the lack of security, and that measures to eliminate these defenseless spaces are the main mission of urban planners; he also indicated that these spaces are directly related to crime, and inversely related to security. In her book entitled The Death and Life of Great American Cities, Jacobs (1992) emphasized that streets and public spaces, in general, are regarded as the most vital elements of a city. These spaces require security, and the eyes of observers are viewed as the most important influential factors in this regard. Indeed, some studies have repeatedly emphasized the importance of social surveillance (i.e., the eyes of observers). For instance, Robinson (1999) stated that increasing security has a close relationship with users of the space, and when more space is used in a city it leads to more stable security. A direct relationship exists between witnesses and security; therefore, he suggested that fundamental changes in the physical structure of cities are urgent for increasing readability and supervision. When radical changes appear in the physical structures, they affect citizens' behavior, mental maps, and performance in the space (see: Table 1).

Regarding all these theories, people's dynamics and the surveillance of urban spaces, along with the physical properties of space, such as the accessibility and readability of buildings, and the visible and defensible design of streets can play a special role in promoting security, while reducing urban defenseless spaces (Garcia-Ramon *et al.*, 2004).

All of the factors affecting a space, including the physical structure and civil society, play a vital role in securing that space. Further, the development of space requires sustainable security, as long as it serves all age and gender groups. This kind of security is considered as a by-product of spatial security and these parameters have a causal relationship (Tabrizia and Madanipour, 2006). In this regard, Reese et al. (2003) reported that more open and denser spaces create the greatest feeling of insecurity in residents. More defenseless, marginal, and traffic-less land leads to a higher level of crime. Accordingly, innercity areas, populated with diverse and dense land use, are more secure than low-density marginal areas with reduced activity performance (Reis et al., 2003). Citizens' vulnerability in unprotected spaces varies and the results of different studies demonstrate that women have the worst experience in this respect. More generally, various factors affect citizens' responses to insecurity, some of

Researchers	Components Affecting Security	Solution for Increasing Security
Newman	- Urban alienation - Lack of social surveillance - Access to escape routes	<ul> <li>Redesigning marginal and unprotected spaces</li> <li>Establishing a regulatory mechanism</li> <li>Enhancing readability and visibility through environmental design</li> </ul>
Angel	- Abandoned spaces - Low density of spaces - Reduced activity in space - Lack of social control through designing unreadable spaces	<ul> <li>Distributing business centers throughout the city</li> <li>Providing traffic and parking facilities</li> <li>Guiding people to specific paths through urban design</li> <li>Increasing land use density</li> <li>Not making unreadable and out of sight spaces</li> </ul>
Atlas and Leblanc	- Improper access - Lack of social supervision - Low density in public places	<ul> <li>Increasing accessibility</li> <li>Providing natural supervision (formal and informal)</li> <li>Strengthening regional communication</li> </ul>
Jacobs	<ul> <li>Lack of business centers and public uses</li> <li>Lack of social supervision</li> <li>Lack of visibility in the streets</li> <li>Uniformity of urban functions and activities</li> </ul>	<ul> <li>Designing buildings with a sufficient view of streets and public spaces</li> <li>Increasing commercial use and its distribution</li> <li>Planning for a variety of activities and functions in the space</li> <li>Increasing social surveillance</li> </ul>
Robinson	<ul> <li>Blind and out of sight spaces</li> <li>Outline of buildings and points of view</li> <li>Non-separation of public from private and semi-public spaces</li> <li>having no view of the building from the surroundings</li> <li>Low density in public spaces</li> </ul>	<ul> <li>Strengthening social surveillance by designing visible spaces</li> <li>Using real or symbolic fences to control the space</li> <li>Separating public territory from semi-public and private territory</li> <li>Increasing the visibility and readability of buildings through design and architecture</li> <li>Creating density and ease of access to blind and marginal spaces</li> </ul>

Table 1. Effective Security Components and Solutions with an Emphasis on the Design of Urban Space
(Source: Robinson, 1999; Jacobs, 1992; Atlas and Leblanc, 1994; Angel, 1968; Newman, 1973)

which include gender, age, past experiences, location and geography, ethnicity and culture. Although gender is considered as the most important factor in understanding security, the sense of security is quite different for men and women. Women feel more afraid and men feel more positive about environmental security. Stanko (1992) stated that the fear of security risks in women is three times greater than in men, which relies on the following factors:

- Women are less physically able to defend themselves;
- Child care and protection makes women more prone to the fear of insecurity;
- Women have less control over their privacy. Thus, they are more afraid of the situation;
- Women are more susceptible to sexual assault compared to any other type of harm. Thus, they have realistic reactions in the face of danger; and
- The level of women's fear is reasonable, while men tend to appear normal.

Generally, in spaces where violence is possible, women not only feel less secure, but also lose their connection to such space. Arclark (cited in Tabrizi, 2004) describes features such as urban suburbs, unobstructed spaces, blind and outof-sight spaces, dilapidated and deserted buildings, as well as dark and narrow communication arteries, calling them a special situation. Figure 1 illustrates the most important characteristics of unprotected urban spaces based on the literature review, which impacts the display of violent behavior, and ultimately, impacts the level of women's security.

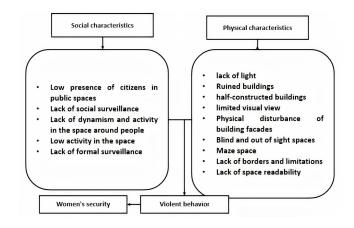


Figure 1. Characteristics of urban defenseless spaces

#### METHODOLOGY

In the present descriptive and analytical study, the required data were collected through literature analysis (using articles and related books to express the research background) and field methods (a questionnaire). In the field section, the sample size was 383 individuals, and the research was based on the Cochran formula using a researcher-made questionnaire. Additionally, a non-random sampling method was used due to the lack of access to the entire statistical population and the impossibility of the selection process. Then, the data were analyzed using an independent sample t-test, Kendall correlation, and linear regression using SPSS software. In

addition, Cronbach's Alpha test was utilized to calculate the reliability of the questionnaire, which turned out to be 0.79. Further, nine space quality indices, including brightness (the quality of light), readability (space and resolution), the line of sight (the detection of distant objects), social surveillance, hearing distance (density in public spaces), access, maintenance (rapid reconstruction process), human factors (positive human behaviors), and the overall design (all space components) were measured.

# **STUDY AREA**

Jiroft, one of the most ancient cities in Iran, is located in the south of Kerman (Figure 2). Based on the population and housing census results of 2016 (Table 2), Jiroft has a population of 130,429 and 39,855 households, among whom 66,874 are male and 63,555 are female (Statistical center of Iran, 2017).

Table 2. Population Growth of Jiroft over the Past Half Century
(Source: Statistical center of Iran, 2017)

Year	Urban Population	Growth Rate
1956	2,480	-
1966	6,723	10.6
1976	20,186	11.6
1986	35,033	5.7
1996	59,201	5.3
2006	97,988	5.2
2011	154,000	5.8
2016	130,429	-3.11

The body of Jiroft, considering its hot and dry climate, is brick facade, which covers almost the entire city. Furthermore, the combination of palm trees and other indigenous trees with hard walls is another feature of Jiroft's landscape (hard and soft wall combination). Additionally, the Melonti and Helielrood Rivers play an essential role in creating a separation between the three parts of the city. Due to the large width of the two rivers, there is a natural division or dissociation in the body of the city, especially in social communication between the aforementioned parts. Owing to its old and new textures with different landscapes and structures, the city has a variety of landscapes in all the three, i.e., the new, old and marginal areas (Kalahrood neighborhood). Further, most of the defenseless spaces in Jiroft are located in the wornout suburban textures, and due to the density and variety of land uses in the historical and new contexts of the city, a good opportunity is available for women's dynamism and their presence in these spaces.

A large part of the physical texture of Jiroft is located in worn-out areas. According to 2017 statistics, its worn-out texture includes 2,483 residential plots and more than 30% of the total area of the city. The average, minimum, and maximum areas of the existing parts of the physical texture of Jiroft are 426, 13, and 9,476 m<sup>2</sup> in size, respectively. About 70% of the worn-out texture of Jiroft is between 5 and 30 years old and 15% is more than 30 years old. However,

only 8% of the parts are under 5 years old and new, and more than 5% are under construction (Statistical Center of Iran, 2017). The wear and tear of these textures can have a significant impact on women's safety because some areas are considered to be defenseless spaces. Based on field information, there is no public transportation in the whole city of Jiroft, except for taxis, and almost the entire population uses pedestrian and private transportation for transit, while about 70% of urban passages are less than 9 m wide (Sharestan Consulting Engineers, 2017). All focal points within the city, including standard and worn-out textures such as schools, health networks, banks, shopping centers, government organizations, and the like are of relatively uniform distribution. The present study highlights one of the main challenges for women in urban spaces, considering that no study has been conducted on the security of women in Jiroft so far. Since a large number of spatial features in Jiroft, such as its worn-out texture and defenseless spaces can be found in most of Iran's cities, the results can also be applied elsewhere. In addition, the field information indicates that women's security is endangered in the late hours of the night and when public spaces are less crowded. Insufficient security is always among the concerns of women in this city, although there has been a significant improvement during recent years. However, there seems to be a long way to go.

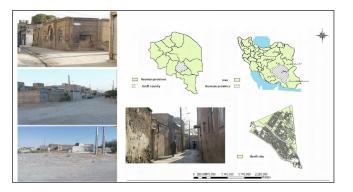


Figure 2. Study area (Source: Gessami et al., 2015)

# RESULTS

# **Descriptive Statistics**

Based on the data obtained from the questionnaire (Table 3) regarding the age range of the respondents, the highest number of respondents belonged to the age groups 15-30 and 31-45 years, with 42.6 and 42.3%, respectively. In contrast, the lowest number of respondents were in the age group of 60 years and older, at 3.1%. Regarding the employment status of the respondents, the findings revealed that out of 383 respondents, most were housewives (47.8%), while the remaining were employed (2.9%) and unemployed (4.2%).

The results of the questionnaire indicated that 37.3% of the respondents had a diploma and 32.1% held AD and BA degrees, while only 0.5% were illiterate. Regarding marital status, 28.5% were single and 71.5% were married.

Age	Frequency	Percentage	Cumulative Percentage
15-30	163	42.6	42.6
31-45	162	42.3	84.9
46-60	46	12	96.9
60>	12	3.1	100
Total	383	100	
Marital status	Frequency	Percentage	Cumulative Percentage
Single	109	28.5	28.5
Married	274	71.5	100
Total	383	100	
Job Status	Frequency	Percentage	Cumulative Percentage
Government jobs	32	8.1	8.1
Self-employment	18	4.6	12.7
Student	124	32.4	45.1
House wife	182	47.8	92.9
Unemployed	16	4.2	97.1
Other	11	2.9	100
Total	383	100	
Level of Education	Frequency	Percentage	Cumulative Percentage
Uneducated	2	0.5	0.5
Primary and secondary school	103	26.9	27.4
Diploma	143	37.3	64.8
AD and BA	123	32.1	96.9
MA>	12	3.1	100
Total	383	100	

#### Table 3. Personal Characteristics of Respondents

Table 4. Evaluation of Urban Space Quality from Women's Viewpoint with Indefinite Space Indices

Indices	95% Confi	dence Level	Mean Difference	error coefficient	Degree of Freedom	Calculated t value
	Lower Bound	Upper Bound			(df)	
Lighting	2.920	3	2.964	0.000	382	131.060
Readability	2.780	2.920	2.850	0.000	382	80.452
Line of sight	3.061	3.236	3.148	0.000	382	70.482
Social surveillance	2.436	2.559	2.497	0.000	382	79.950
Hearing distance	2.104	2.252	2.178	0.000	382	57.571
Access	2.847	2.993	2.920	0.000	382	78.339
Repair and maintenance	3.428	3.673	3.550	0.000	382	57.52
Human factors	2.506	2.644	2.575	0.000	382	73.524
Overall design	2.340	2.511	2.425	0.000	382	55.771

# **Inferential Statistics**

Table 4 presents the results related to the evaluation of women's viewpoints on the space in Jiroft with respect to nine indices based on an independent t-test with a 5% error rate and a 95% significance level. The mean of each index was calculated on a Likert scale from 1 to 5 with a mean of 3. It means that the index is better if the mean is higher than three and vice versa. In other words, there are fewer

defenseless spaces if the means for each index are greater than three.

The results of the t-test demonstrated that from the women's point of view, the status of the quality of the space is evaluated as undesirable. As shown in Table 4, an average level of 3.1 and 3.5 is only observed for the line of sight (monitoring of objects or individuals at long distances without physical obstruction) and maintenance (restoring abandoned and

blind spaces) indices, respectively. The lowest score is related to the auditory distance index (meaning people's presence and dynamics at different times of the day and the density of the neighborhoods) with an average of 2.1, followed by the overall design index (the coherence and mastery of space), with an average of 2.4. Furthermore, the total score of the indices is 2.7, which represents an unfavorable condition. In all indices, the error coefficient of 0.000 indicates the significance of the differences and the reliability of the resulting means.

Kendall's correlation test was used to evaluate the relationship between the indices of the defenseless atmosphere and women's security in Jiroft (Table 5). The results indicate that there is a significant relationship between all independent and dependent variables. The overall design index, with a correlation coefficient of 0.452, is more relevant than other indices for women's safety in the study area, and the lowest correlation is related to readability at a level of 0.144. Additionally, the error level is less than 5% in all indices, indicating significant correlations. Based on the test results, as the desirability of urban spaces increases, the women's sense of security increases too; and when the size of more defenseless spaces increases, the women's level of security decreases. More precisely, there is a significant difference between the independent and dependent variables.

The Kendall test results (Table 6) revealed a significant positive relationship between defenseless spaces and the security of urban women in the study area, with a correlation coefficient of 0.588 and an error rate of 0.000%. In addition, it was observed that there is a positive and significant relationship between the variable of defenseless spaces and the security of women in urban areas in the region under study. The presence of defenseless spaces affects the level of the women's sense of security in all urban areas of Jiroft; and due to poor readability and hearing distance, along with inadequate access, these spaces induce the sense of insecurity to women in all urban areas of Jiroft.

Finally, the effect of the independent variable indices on the dependent variables was studied based on the standardized coefficient. Based on the results in Table 7, eight out of nine indices have a statistically significant effect on the security of urban women. Further, in terms of the effect of these indices

on the security of urban women, the hearing distance with an impact factor of 0.222 and human factors with 0.222 have more impact on urban women's security than other aspects. On the other hand, readability and maintenance have the least impact on women's security with 0.131 and 0.133 impact factors, respectively. Finally, the social monitoring index, with an error coefficient of 0.047, is insignificant, and the results are unreliable.

To analyze and predict the impact status and to determine the strength and amount of the correlation, eight effective indices were used through multivariate regression regarding the role of defenseless spaces in relation to the effective component of urban women's security in the study area (Table 8). The results indicate a correlation between the security dimensions of urban women for eight factors not including the social surveillance index (r=0.655). Furthermore, the adjusted coefficient of determination indicated that 41.6% of changes related to security dimensions among urban women are explained by the linear combination of octal variables.

Based on the calculated F-value at the 99% confidence level and from the women's point of view, the linear combination of independent variable indices (defenseless spaces) can significantly explain and predict changes in dependent variable dimensions (urban women's security) in the study area (Table 9).

It is worth noting that the security of urban women is strongly influenced by the space and community in which they live. Additionally, the impact of defenseless spaces on women's security has been confirmed across Jiroft, which means there is a direct link between these two variables. Based on the theoretical literature, it can be seen that the level of crime is strongly influenced by physical space (Ceccato, Koskela, and Pain, 2000; Angel, 1968, 2016; Hassanzadeh, 2017; Nasiri et al., 2014) and can have a significant impact on women when the conditions are suitable. Physical spaces with high readability, line of sight, brightness, and the like increase women's security because they transform defenseless space into safe space. In other words, the level of women's security increases in Jiroft, when urban management attempts to eliminate the defenseless and blind spaces, especially in the suburb context of Jiroft.

Dependent Variables	Independent Variables	Correlation Coefficient	Significance Level	Number	Result
Women's sense of	Lighting	0.314	0.000	383	Yes
security	Readability	0.144	0.001	383	Yes
	Line of sight	0.236	0.000	383	Yes
	Social surveillance	0.366	0.000	383	Yes
	Hearing distance	0.411	0.000	383	Yes
	Access	0.328	0.000	383	Yes
	Repair and maintenance	0.287	0.000	383	Yes
	Human factors	0.307	0.000	383	Yes
	Overall design	0.452	0.000	383	Yes

Table 5. Relationship between Defenseless Atmosphere of Jiroft and Women's Security

Independent Variables	Dependent Variables	Kendall's	tau-b Test	Result
		Significance Level	Correlation Coefficient	
Defenseless spaces	Women's security	0.000	0.588	Yes

#### Table 6. Relationship between Defenseless Spaces of Jiroft and Women's Security

#### Table 7. Coefficients Related to the Intensity of the Influence of Independent Variables on Dependent Variables (Women's Security)

Independent	Significance Level	Т	Standard Coefficient	Non-standa	rd Coefficient
Variables			Beta.	Std. Error	В
Lighting	0.000	4.308	0.191	0.042	0.183
Readability	0.004	2.907	0.133	0.045	0.131
Line of sight	0.000	3.711	0.201	0.046	0.217
Social surveillance	0.047	1.996	0.108	0.066	0.132
Hearing distance	0.001	3.250	0.175	0.069	0.223
Access	0.000	3.740	0.174	0.055	0.204
Repair and maintenance	0.001	3.325	0.140	0.040	0.133
Human factors	0.000	3.261	0.166	0.068	0.220
Overall design	0.000	4.430	0.228	0.049	0.219

Table 8. Regression Results of the Impact of Protected Areas on Women's Security in Jiroft

Multiple Correlation Coefficient	Coefficient of Determination	Adjusted Coefficient of	SD
(r)	(R2)	Determination (Rad)	
0.655	0.429	0.416	0.886

Note. SD: Standard error

#### Table 9. Regression Statistics for Independent and Dependent Variables

Regression	Sum of Squares	Degree of Freedom	Mean Square	F	Significance Level
Regression effect	220.580	8	27.573	35.073	0.000b
Remaining	294.021	384	0.786		
Total	514.601	382			

# CONCLUSION

The results of the present study reveal that women's security is strongly influenced by spaces, decreasing with the expansion of defenseless spaces and vice versa, which is in line with the results of other studies (e.g., Robinson, 1999; Jacobs, 1992; Atlas and Leblanc, 1994; Angel, 1968; Newman, 1973). At the Jiroft level, t-test results confirmed that women are completely dissatisfied with the quality of its urban space in terms of seven indices, and a type of defenseless environment has been formed which affects the dynamics and activity of women in the community. The findings show that the quality of the space was at an average level, with a score of 3.1 and 3.5 only for the line of sight and maintenance indices, respectively. In addition, the Kendall test results emphasized the significant and positive relationship between the quality of urban spaces and women's safety, with a value of 0.577,

meaning that the level of women's security increases by increasing the quality of the environment. However, the level of women's security decreases with an increase in defenseless spaces in Jiroft. Further, the results of the regression test showed a correlation between the dimensions of urban women's security and the eight factors with the amount of 0.655 (except for the social surveillance index, with an error rate of more than 5%). Regarding the adjusted coefficient of determination, 41.6% of changes in the dimensions of urban women's security are explained by a linear combination of octal variables. Thus, reducing defenseless spaces, especially in the suburbs and inefficient urban contexts, is essential in Jiroft in order to increase the level of women's security. Some of the solutions for increasing the women's sense of security, and reducing defenseless spaces presented here are evident in physical changes, including night lighting and redesigning blind and marginal spaces. Some changes should also take

place in the social fields including the increase of people's surveillance, and even formal institutions in defenseless spaces. Finally, based on field surveys and the results of the questionnaire, strategies can be developed to increase women's security and prevent the growth of defenseless spaces, where violent and criminal behavior are more likely. Some of these strategies are as follows:

- Given the low readability index, improving its level by increasing the number of street signs can help to citizens with navigation and routing, and also reduce the possible fear resulting from getting lost in the city.
- The urban landscape should be considered when creating environments with transparency or high readability. Cities with five high readability elements, including paths, edges, neighborhoods, nodes, and clear signs provide greater visual acuity, and increase emotional security, as well as deeper human experience.
- More appropriate police coverage of some areas can occur by establishing police stations to increase security for all, especially vulnerable groups, including women and children.
- More police interaction can take place with the public, and public education can be provided by the police station's social agents in addition to informing public and the youth about the consequences of a quarrel.
- Based on the impact of the overall design index, creating public spaces in the city is required to prevent social harm and reduce depression and violence in the community.
- Urban furniture is considered as one of the most important physical factors affecting security; thus, it should be taken into consideration.
- The creation of attractive and eye-catching spaces is necessary for men and women of all ages. As it has been argued, this is especially true for women in order to increase their lively presence in urban space and their social surveillance.
- The quality of the network of passages should be increased due to the low level of the brightness index.
- The attractiveness of public spaces should be increased using mental and environmental factors.
- An in-depth look at social development and more attention to women's participation, and their role in urban affairs should be considered, and managers should be responsive to urban women's needs.
- The urban environment should be empowered through exposure (being seen) and easy surveillance, enabling supervision of urban areas by citizens or police agencies.
- Development of socio-cultural functions is considered necessary since neglecting the cultural and social aspects of urban spaces is known as a contributing factor to crime, which encourages violence and aggression.
- Sport and recreation should be strengthened as well. The addition of sport-recreation functions to public spaces creates a lively environment and decreases the crime rate, as well as the performance of the space. Finally, this increases attendance and supervision, and improves social security.

Appendix: Summary of Questionnaire Questions
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Lighting	How good is the lighting of urban spaces at night? How satisfactory is the lighting at night in parks and public spaces? How appropriate is the lighting at night in the urban streets and alleys?
Legibility	How visually clear is the sign and urban routing? How suitable are pedestrian levels for walking? How desirable are the number of stations with routing maps and signs? How desirable is the length of the marked paths on the floor of the sidewalk? To what extent are visual index elements installed in public spaces? To what extent has visual and street arts been used in urban space design?
Sight line	How appropriate is the visual diversification of urban symbols and signs? How desirable is the view of the buildings? How visually qualified is the public space landscape? How desirable is the visibility of the urban space? To what extent is creativity observed in architecture? To what extent is the visual compatibility of urban buildings and symbols acceptable?
Social control	To what extent do citizens feel responsible for insecurity? How much aid is provided by citizens in cases of insecurity? How much do citizens feel attached to public spaces?
Hearing distance	How much is the privacy of individuals respected in urban spaces? What is the appropriate distance between the urban furniture?
Access	How satisfactory is the physical access to urban public roads? How much access do you have to people-centered spaces? How many narrow and dark roads are in the surroundings of your living space?
Repair and maintenance	How good is the collection of construction debris on the sidewalks and roads? How many semi-finished buildings can be observed in the city? To what extent is the presence of addicts and delinquents avoided in semi-finished buildings? How satisfied do you feel about the addition of for example outdoor furniture and welfare services to the urban spaces?
Human factors	To what extent are the effects of destruction and vandalism observed in the city? To what extent are urban spaces suitable for the presence and activities of citizens? To what extent can women be present in parks and public spaces at night?
General design	How suitable do you consider the general design of the urban spaces? To what extent has the design of urban spaces considered the presence of women at night in parks and public spaces? How much do you feel that the urban spaces are gender-based?
Security	How much have you experienced sexual harassment in urban spaces? To what extent have you been physically abused in urban areas? How much have you been visually harassed? How much have you been verbally harassed? How insecure do you feel at night? How insecure do you feel during the day?

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