

Investigating the Adaptability of Rural Physical Features to the Feeling of Security among the Residents of Toos Rural Area in Mashhad County

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Received: 24 March 2017

Accepted: 25 February 2018

Abstract

Purpose- The present study aims at examining the adaptability of physical features to feeling of security among the residents of the rural area of Toos. The achievements are supposed to be used in quality improvement of rural guidance plans in line with increasing security potentials of rural areas.

Design/methodology/approach- The methodology of this study is correlative, and data collection was performed through library and field studies. The extracted physical indices were obtained from the studies and rural guidance maps, while feeling of security index was obtained through 386 researcher-made questionnaires filled by the residents of 13 villages in the countryside of Mashhad in Toos rural area. The validity of the questionnaires was confirmed through an expert board and their reliability in the security feeling variable was confirmed by Cronbach alpha 0.8. SPSS software was used for data analysis.

Finding- The findings of the study indicated a significant negative correlation between many of the form and morphology indices of feeling of security. The correlation between the size of the village and feeling of security is significant and equals to -0.804. Moreover, a significant inverse correlation was found between population density and feeling of security which was equal to 0.592. Among the functional status indices, we can refer to an inverse moderate correlation between the distribution of services and the scale of land uses. Accessibility index indicates a strong inverse relationship of impenetrability (with correlation coefficient of 0.670) and the design of dead-end and narrow streets with feeling of security.

Research limitations/implications- The limitation of this study includes the bureaucracy of the administrative network, lack of official data and the time-consuming data collection.

Practical implications- Generally, the confirmation of the strong relationship among most of the variables indicates that it is required to develop principles of secured places and to give more consideration to the physical security in rural guidance plans, which are the most important related documents in the country.

Originality/value- The relationship between them has been ignored in rural areas in spite of the extended volume of rural guidance plans based on their physical context, as well as insecurity of the rural areas at the urban fringe.

Key words: Rural guidance plan, physical features, feeling of security, Toos rural area.

How to cite this article:

Sadrossadat, A., Sojasi Qeydari, H. & Anabestani, A. (2018). Investigating the adaptability of rural physical features to the feeling of security among the residents of Toos rural area in Mashhad County. *Journal of Research & Rural Planning*, 7(2), 41-62.

<http://dx.doi.org/10.22067/jrrp.v5i4.63412>

1. Introduction

What is important today in regard to development in rural areas is rural sustainable development. Although there have been more considerations to sustainability in recent years, the issue of security in rural society as an indirect goal of sustainable development has not been considered appropriately. On the other hand, the high rate of urban crimes compared with rural ones and highlighting security approaches in urban contexts have led to the isolation of rural security and ignoring the need for providing feel of security among the rural residents. George Vold, a pioneer in the study of rural crime, recognized that criminal statistics result from the activity of government agents such as the police, who tend to be located in, and to operate in, cities. Hence, official action and formal reporting of misdeeds are less likely to take place and all such omissions and oversights will, of course, tend to make the figures for rural areas disproportionately low (Donnermeyer, 2012).

In many rural areas, residents live far distances away from their neighbors. Residents may also drive into the city to go to work or go shopping during the day, and children and youth often have to travel long distances to go to school. This means that houses and other property are left unattended during the daytime and into the evening hours. There is also little police presence in many rural areas because of the large areas these officers have to patrol. All of these factors mean that crimes can be committed in rural areas fairly easily without anyone seeing (Sagarin, Donnermeyer, & Carter, 1982).

Also, today, modern highways and vehicles make committing crimes much easier in rural areas (Barclay & Donnermeyer, 2007).

Sustainable societies are those who are successful economically, socially, and environmentally and respect next generations' requirements. They are well designed places in which people feel secure and peaceful; and crimes, crudities, or fear of them don't lead to reduced life quality or life coherence (Lewelyn Davies, 2011).

Crime in small communities can have a long-term effect on people's perceptions of risk and their own quality of life. This calls for a more

sensitive view of crime and perceived safety in rural areas (Ceccato, 2015).

So far one of the most important plans which has been considered with regard to rural development after the Islamic Revolution victory, has been the rural guidance plans (Molaei Hashjin, 2007, p. 106).

The rural guidance plan is performing projects to transform the village's body and consequently, achieving rural development (Papoli-e-Yazdi & Ebrahimi, 2006).

Although there have been many efforts in our country to develop villages and prepare rural guidance plans, providing villagers' security has not been a goal in these plans.

On the other hand, different ideas have been represented with regard to preventing crimes and providing security especially in urban areas. The new insight is preventing the crimes through environmental design. The main idea in this approach is the fact that the built environment plays an important role in crimes commitment. This approach includes designing or redesigning an environment to reduce crime commitment through natural, mechanical, and instructional ways, so that it would be a multilateral method to reduce crimes as well as the fear of crime (Bemanian & Mahmudinejad, 2009).

In fact, some places provide more possibilities and opportunities for crime commitment due to their special physical structure, type of land uses, and characters of their inhabitants (Ahmadabadi, Salehi Hikouei, 2008).

Also built environment can induce various aspects of feeling of security (Lotfi, Anamoradnezhad, & Sasanipour, 2015). As such, development pattern and its designing details can be effective in the increased actual and perceptive level of security or fear (Chapman, 2007).

Meanwhile, it is important to notice physical approach in preventing crimes in rural guidance plans since they are the most important rural plans based on physical context. However, it seems that before expecting security to be provided in rural communities, we should first evaluate the effect of physical features on feel of security in residents or the correlation between these two. As such, the general purpose of the present study is to recognize the adaptability of such features to feel of security in residents, so that the findings can be used to improve the quality of rural guidance

plans along with increasing security potentials of rural environments. One of the effective solutions to increase feel of security, particularly in rural areas at the urban fringe, is considering the principles and standards of new development areas of such villages which can be revealed in their rural guidance plans. Toos rural area includes a large number of the villages around Mashhad metropolis having insecurity problems and serious considerations because of its disorganized texture. Hence, in this study the fundamental question is: Is there any correlation between the physical features of the villages in Toos rural area and the residents' feel of security? Generally, it is possible to endeavor to increase feel of security through direct interference in physical features and the process of security perception by the residents.

2. Research Theoretical Literature

Since the far past, providing security has always been considered in rural environments. Dispersion of the villages in plains and mountains make them vulnerable to probable attacks; and since they have to protect the villages by themselves, they inevitably had to think of architectural and structural arrangements (Zargar, 2000).

In concentrated and closed form villages, meandrous or covered passages may not necessarily be created to confront robbery and stealing, however, they could provide security against such threats (Fateh & Daryoush, 2010). Among other physical arrangements we can refer to high and inaccessible walls, lack of opening at low levels, creating covered passages so that riding people could not rush, creating passages with level difference, creating meandrous and indirect passages, relative high density in the texture, creating hidden access in houses' undergrounds, creating hide-outs to hide belongings in the buildings, and creating narrow passes and alleys with doors (Zargar, 2000).

However, today less attention is being paid to the issue of security in rural communities. In spite of the significant difference between crime commitment in urban and rural areas, crime is often considered as an urban issue than a rural one and it is assumed that there is security in rural communities (Shakoei, 1995). Here are 10 reasons why crime and safety in rural areas is a subject worth examining in its own right. They are the following: (1) Crime is not just an "urban

problem"; (2) Low crime rates in rural areas do not equate with "no problems"; (3) Rural areas are heterogeneous entities; (4) Rural areas are in constant transformation; (5) The nature of rural areas influences crime; (6) Perceived safety is unequal; (7) A commodification of security is emerging; (8) Crime prevention is urban-centered; (9) An intersectional gendered perspective of crime and safety is needed; and (10) Crime and safety are important dimensions of sustainable rural development (Ceccato, 2016).

Security is a fundamental right for people and it has two main aspects: objective and subjective, both of which have to be considered in the process of security promotion (Zabetian Toroqi, 2009). The objective aspect is the same as safety and the subjective internal aspect is feeling secure (Kargar, 2005).

Hence, feeling secure is different from security itself and according to the experts' ideas, it is more important to be paid attention because it affects other socio-cultural and economic relationships directly (Madani, Karimi Azari, Parvizi, & Hoseini, 2014).

The fear far exceeds the actual amount of crime, and affects many individuals who never have been, and may never be, victims of a crime. Crime prevention must be cognizant of both the real and perceived levels of crime and must be prepared to attack crime in all its aspects (Lab, 2010). Generally, the emotional responses to crime (i.e., fear of crime) is different from cognitive assessments of crime (i.e., perceived crime risk). The characteristics of a walkable neighbourhood, particularly retail land, were associated with less fear of crime, but greater perceived crime risk (Foster, Knuiman, Wood, & Giles-Corti, 2013).

Existing theoretical and experimental studies indicate that security perception among people is affected by different factors such as individual and social features, economic conditions, and physical features of their surrounding (Mazini, Izadi, & Soltani, 2010).

In many cases, the type of the built environment design, the role adapted by the place, and the social dimensions of an area result in insecurity of the secure spaces and vice versa (Adibi Saad Nezhad, & Azimi, 2012).

So many ideas have been represented regarding the effect of built environment on security. Crime

prevention is an idea that has been around for as long as there has been crime. While the form has changed and the term “crime prevention” is relatively new, the concern over safety is age-old. (Lab, 2010). Generally, there are two common approaches toward crime prevention. The first approach is a non-spatial one referring to reducing or removing personal motivations for crime commitment through moral, social, economic, and cultural training and codifications. The other approach is the spatial one and its main goal is to make the possibility of crime commitment more difficult by applying special techniques in a particular place (Behbahani & Dastoum, 2014).

A variety of theories have been presented regarding reducing crime in places, the most complete of which is the theory of crime prevention through environmental design. It is an approach looking for appropriate design and effective operation for the environment and buildings which would lead to the improvement of life quality and the reduction of criminals as well as the fear resulted from them (Bemanian, Forutan, & Mousavipour, 2014).

This point of view is continuously being evaluated and modified; it has four main elements, which are: (a) Territoriality; (b) Surveillance; (c) Maintenance and Target hardening; and (d), Access Control (Aldrin, Nsordin, Mohd Najib, Siti Rasidah, 2012). The extended model of this approach is based on seven key strategies: territorial reinforcement, surveillance, image, access control, legitimate activity support, and target hardening. The seventh is geographical juxtaposition (surrounding environment).

Image/space management seeks to promote a positive image and routine maintenance of the built environment to ensure the continued effective functioning of the physical environment and this also transmits positive signals to all users. An extensive body of research supports the importance of the physical condition and “image” of the built environment and the potential effect on crime and the fear of crime (Cozens & Love, 2015).

Geographical juxtaposition is about the capacity of a location to influence crime in adjacent locations and vice versa. Different types of land use and activities are associated with varying levels of crime, and when many high-crime risk land uses are concentrated together, higher levels

of crime can occur. It is about assessing the potential influence of surrounding land uses on crime and the fear of crime (Cozens & Love, 2017).

Landscaping, lighting, road placement, entrances, site layouts, and traffic circulation patterns are all tackled by CPTED (Hutter, 2016).

Meanwhile, domestic studies categorize different physical dimensions related to security perception of people. For instance, Salehi (2009) categorized four effective physical components in providing secure space using the theories related to crime prevention. These components are: a) the size and form of the space, b) visual and environmental comfort, c) spatial organization and penetrability, and d) housing quality and land use. Different studies like Lotfi et al. (2015, 2016) and Akbari and Pakbonyan (2013) investigated these factors and their effects on feeling secure. Korkeabadi and Mesgarian (2014) studied the openness of the space, texture compactness, plant coverage, lightness of the passages, and the furniture and quality of the passages. Madani et al. (2014) investigated the effect of hygiene, light, abandoned and semi-constructed buildings, abandoned lands, land use, and greenbelt on feeling of security among the people. Accordingly, the present study investigates the feeling of security by only a part of physical features that are extractable and measurable from the guidance plan studies; these features are categorized in the form of three general components which are functional status, form and morphology, and accessibility (Figure 1).

Urban experts and researchers have recently been aware of the role of urban design to create safe environments through applying certain policies; they have obtained several theories in this regard namely the theory of defensible spaces, crime prevention through environmental design and environmental criminology. They believe that crime commitment in urban environment can be prevented or reduced by applying the principles and standards of the mentioned theories, which consequently leads to increased security among the citizens (Zabihi, Larimian, & Pourani, 2013). An obvious example of such theories is Crime Prevention through Environmental Design (CPTED) created by Jeffry (1971). In addition, Newman (1972) with the theory of defensible spaces, Jacobs (1961) with the theory of using old

pattern of street designing, Felson and Cohen (1979) with the routine activity theory, Wilson and Kelling (1982) with broken windows theory, Hillier (1995) with using space syntax, Pascoe and Topping (1997) by presenting theoretical principles of secured by design, and Armitage (2004) with the theory of security through environmental design, have all had

significant contributions in forming evolutionary route of the theories related to environmental crimes and physical design at universal level (Zabihi, Larimian, & Pourani, 2013). In the twenty-first century, there is now a plethora of policy guidance and standards, which operationalize CPTED as part of codes and standards (Cozens & Love, 2015).

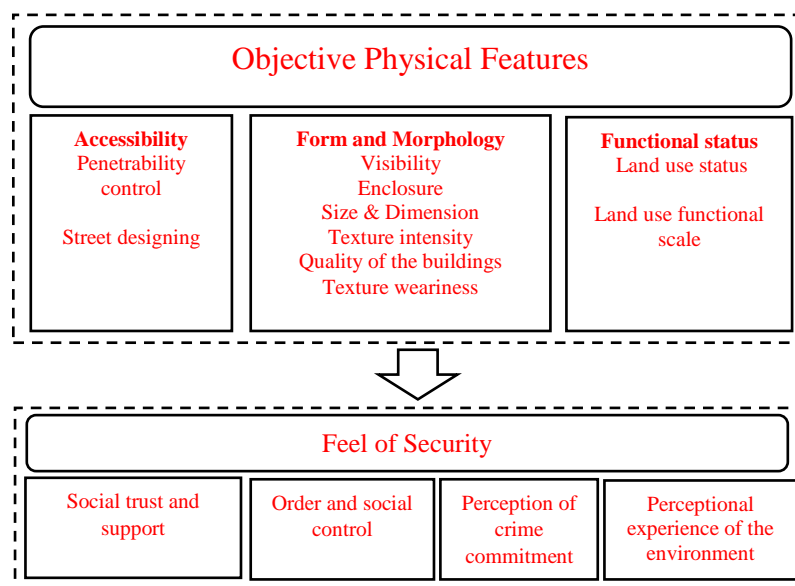


Figure 1. conceptual model of objective physical features affecting feel of security
 Source: Salehi, 2009; Akbari & Pakbonyan, 2013; Korkeabadi & Mesgarian, 2014.

In Iran, in 2003 the ministry of roads and city planning conducted a study to identify environmental factors for safer urban spaces to gradually prepare disciplines reducing crudity conditions in urban spaces by environmental design. After that lots of studies have been conducted regarding the physical security in urban spaces in the country in recent years, some of which are referred to below:

Mazini, Izadi and Soltani. (2010) suggested that some physical features, for instance, arid spaces and narrow passages are effective on reduced feel of security. Adibi Saad Nezhad, and Azimi (2012) referred to the effectiveness of the weight of physical parameters on security and showed that organized texture, openness of the space, urban furniture, plant coverage, quality of passages network, and light are respectively the most effective parameters on feel of security. Mousavai pour (2014) classified the factors which a designer can use to improve environment security in two

groups: psychological and physical. He found that among the physical components, spatial arrangement, density, penetrability, safety, housing quality, size of the space, access-relationship, greenbelt, furniture, building materials, form, enclosure, visual-environmental pollution, and noise are effective on the environment security. Daliri and Pakshir (2013) found that physical texture of the old neighborhoods is safer than urban new-built neighborhoods. Shabani, Malekinia and Ehtesham (2014) showed that there is a direct correlation between the variety of land uses and urban activities with increased security perception among women. Mousavi and Siami (2014) found that indices like quality of passages network, urban furniture, and organized environment texture are the most effective factors on the quality and improvement of security of that texture and openness of the space is the least.

However, despite the extended studies in urban scope, there has been no direct study with regard to the effects of built environment on security perception among rural inhabitants. However, the study of crime in a rural context, or rural criminology, is advancing rapidly, even though it was slow to develop during much of the twentieth century (Donnermeyer, 2015, p.158).

At the same time considering security in these areas has become important more than the past. The concept of crime prevention through environmental design can be used in any situation_ high density urban areas, small cities and towns, and even rural areas (Fennelly, 2013, p.9).

Hence, this study is identifying the correlation between environmental factors and security perception among the rural residents.

3. Research Methodology

3.1 Geographical Scope of the Research

Toos rural area is among the suburbs of Mashhad city located in Khorasan Razavi province. It includes many villages known as one of the main bases of forming and distributing social disorders which has been the focus of police and jurisdictions for being the bed for crime commitment. Toos area includes many rural and urban roads and serves a massive volume of immigrants which causes different security problems. Particularly, it seems that in most circumstances insecurity is even doubled because of the type of built environments in rural areas (Figure 2).

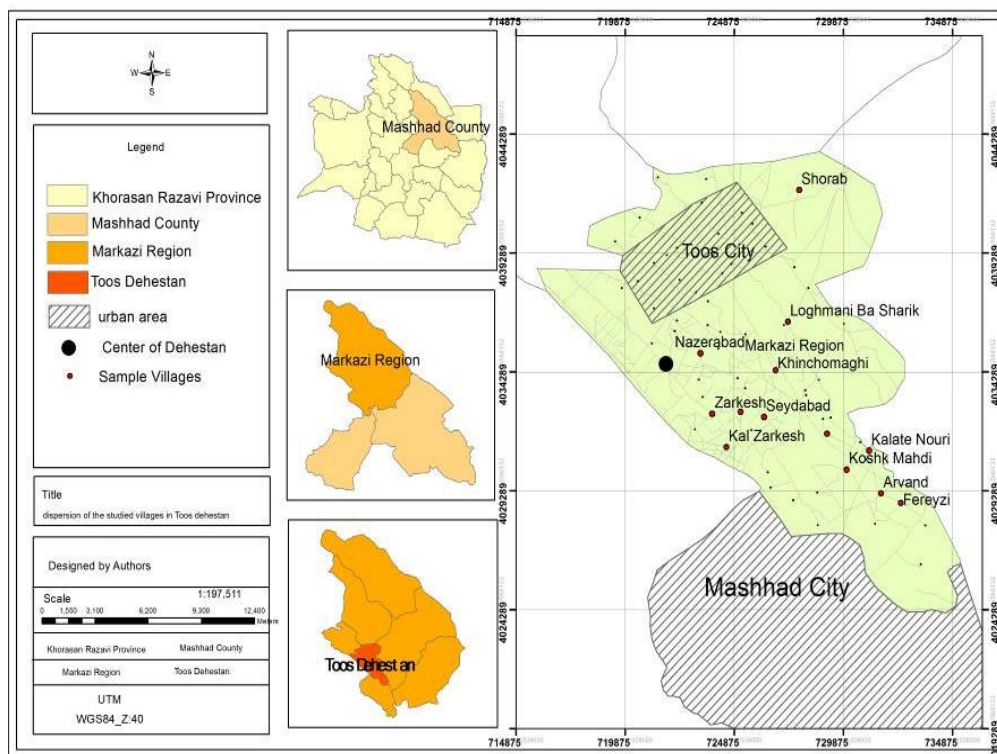


Figure 2. dispersion of the studied villages in Toos dehestan

3.2 Methodology

Regarding the nature and methodology, the present study is a correlative study and is an applied study with regard to its purpose. This study was performed with the general goal of investigating the correlation between physical features of the villages and security perception among their residents in Toos dehestan. In this

research we used two methods: library studies and filed studies. Through library studies we identified physical features interfering feeling of security and extracted them from studies and maps of rural guidance plans. Among 65 villages recorded in 2011 census in Toos dehestan in Mashhad, 4 villages with less than 10 households, as well as 32 villages located in legal area of Mashhad and

Toos cities were removed from the statistical society. To determine the sample size 13 villages were selected randomly by using Cochran formula with 0.2 % error coefficient. In field studies, questionnaires were prepared and distributed among the residents in order to assess feeling of security. Based on Cochran formula with 0.05 error from among 6195 families, 362 samples were obtained at the level of head of households, and the number of the samples per village were determined according to division to ratio rule.

Then by promoting the samples with less than 10 households, the final number of modified samples reached to 386 (Table 1). For data analysis we used SPSS statistical software; we also used descriptive statistics including frequency distribution, means examination, and inferential statistics including Pearson correlation test (in case of normal and relative distribution), Spearman (in case of abnormal and sequential distribution) and eta (in case of nominal and interval distribution).

Table 1. estimating sample size of the villages in Toos dehestan based on Cochran formula. Source: Statistical Center of Iran, Census of 2011

Villages	Household	Sample	Edited Sample
Shorab	59	3	7
Arvand	72	4	7
Kalate Nouri	83	5	8
Parkandabad	103	6	10
Loghmani Ba Sharik	103	6	10
Nazerabad	114	7	10
Khinchomaghi	115	7	10
Seydabad	368	22	22
Fereyzi	404	24	24
Chehl Hojreh	1000	58	58
Koshk Mahdi	1010	59	59
Zarkesh	1138	66	66
Kal Zarkesh	1626	95	95
Total	6195	362	386

3.3 Variables and Study Indices

After studying the literature, 12 indices were extracted from studying the rural guidance plans in the form of 3 components: morphology, functional status, and accessibility. The indices of land use status and their functional scale in the form of “functional status” component, visibility, enclosure, size and dimensions, texture intensity, quality of the buildings; and texture weariness indices in the form of “form and morphology”; and indices of penetrability control and street

designing in the form of “accessibility” were extracted from the rural guidance plans. In order to investigate feel of security we used 4 indices of perceptual experience of the environment, perception of crime commitment, order and social control, and social trust and support, along with 17 items of the questionnaire and questions in the form of Likert Scale. Face validity of the questionnaire was confirmed by a panel of university experts and the reliability of it was confirmed by 30 questionnaires using Cronbach with the alpha of 0.8 (Table 2).

Table 2. items of feeling secure

Index	Items'
Perceptual experience of the environment	Feeling comfortable and comfort in the village, Not having fear during the day and night, Immigration rate of the village due to insecurity, The feeling to have a safer village than other villages.
Perception of crime commitment	The fear of linguistic harassment, Background or fear of being a victim of conflict, theft and etc., The fear of being a victim of a car accident, The fear of not being heard while asking for help, The fear that your family members are being abused
Order and social control	The sense of insecurity of youth roam, The sense of insecurity from the traffic, The fear of the absence of police

Social trust and support	Trust in neighbors, the confidence in receiving help from neighbors in times of danger, Co-operation rate of villagers, The trust in the performance of the Basij militia and police
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4. Research Findings

4.1. Investigating Feeling of Security among Villagers from the Respondents' Point of View

In order to evaluate feeling of security among the villagers, we used 4 indices which are “perceptual experience of the environment, perception of crime commitment and delinquency, order and social control, and trust and social support”. More than half of the respondents evaluated the effects of each variable of feeling secure as high. Meanwhile, the variable “perceptual experience of the environment” had the highest contribution in providing feeling of security with the mean equal to 3.8; it includes psychological scope of the respondents and their

personal experiences in recognizing feeling of security. The effect of the variable “social order and control” was at a medium level with the average of 3.1; it had the least contribution in providing feel of security. In other words, police authority in providing such feeling is not visible. Weakness of the role of “social order and control” is also obvious in the variable “social trust and support”. Many respondents feel secure in the absence of the police and refer to the role of social coherence obtained as a result of all villagers’ cooperation. The reason can be the fact that with the population increase in the villages around the cities and the increase in crimes, the number of police bases and equipment has not increased and this will affect the police performance (Table 3).

Table 3. feel of security among villagers from respondents' perspective

Index	Percentage of respondents					Average rating
	Very Low	Low	Moderate	High	Very High	
Perceptual experience of the environment	2/2	14/4	7/2	45	31/2	3/8
Perception of crime commitment	7/6	24/2	2/5	33/6	32/1	3/6
Order and social control	11	28/9	7/5	34/9	17/7	3/1
Social trust and support	2/2	20/6	8	51	18/1	3/6
Total	5/8	22	6/3	41/1	24/8	3/5

4.2. Spatial Distribution of Feeling Secure per Village

The spatial dispersion of feel of security in sample villages is as follows: the villages Kal Zarkash, Zarkash, and Kushk Mahdi had the least amount of security feeling with averages equal to 2.96, 3.17, and 3.33 respectively. In contrast, the feeling of security had the highest amount in villages Loghmani Bashrik and Nazer Abad with averages equal to 4.54 and 4.50 respectively. From the respondents’ point of view, the highest level of feel of security in the variable “perceptual experience of the environment” was for the village Shourab with the average equal to 4.83 and the lowest level in this variable was for the village Kal Zarkash with the average of 3.30. Regarding the variable “perception of crime commitment and delinquency” the highest

average was for the village Loghmani bashrik equal to 4.94, and the least average was obtained for Zarkash. Social order and control was the highest for Nazer Abad due to its vicinity to Kazem Abad police station which was equal to 4.73; while the least value was for Kal Zarkash equal to 2.18. Social trust and support had the least average in Kushk Mahdi with the most number of immigrants which was equal to 3.14; while the highest average equal to 4.50 was for the village Loghmani Bashrik with extreme introversion. Generally, feel of security in Kal Zarkash was lower than average. The feel of security in the villages Zarkash, Arvand, Chehel Hojreh, Freezy, and Kushk Mahdi was 3-4, while it was higher than average for the other villages (Table 4). Dispersion state of feel of security for each village is shown in Figure 3.

Table 4. the average of feel of security among the residents of each village

Villages	Perceptual experience of the environment	Perception of crime commitment	Order and social control	Social trust and support	Feel of security
Arvand	3/49	4/29	4/38	3/37	3/88
Parkandabad	4/42	4/54	4/50	3/84	4/33
Chehl Hojreh	4/35	3/88	3/47	3/84	3/89
Khinchomaghi	4/54	4/12	3/60	3/76	4/01
Zarkesh	3/48	2/65	2/83	3/70	3/17
Shorab	4/83	4/71	3	3/94	4/12
Seydabad	4/44	4/45	4/67	4/20	4/44
Fereyzi	4/10	3/93	3/82	4/06	3/98
Kal Zarkesh	3/30	3/04	2/18	3/31	2/96
Kalate Nouri	4/13	4/40	4/21	3/53	4/06
Koshk Mahdi	3/66	3/75	2/79	3/14	3/33
Loghmani Ba Sharik	4/80	4/94	3/93	4/50	4/54
Nazerabad	4/46	4/66	4/73	4/14	4/50

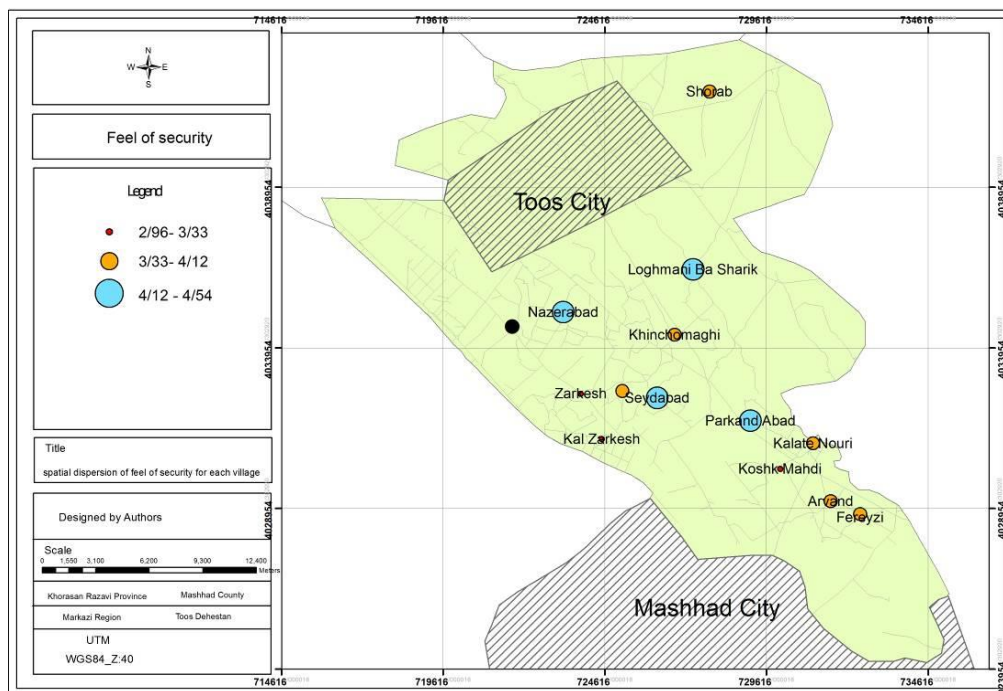


Figure 3. spatial dispersion of feel of security for each village

4.3 Investigating Objective Physical Features in Sample Villages

We used three components to investigate the objective physical features which are form and morphology, functional status, and accessibility. As presented before, physical features in some areas can be effective in social disorders and consequently feeling of security among the residents. For this purpose, we study rural guidance plans. A rural guidance plan is one of the most important plans in rural sustainable

development after the victory of Islamic Revolution. After examining the maps and plans the data was extracted quantitatively as shown in Tables 5 to 7.

4.3.1 Investigating Form and Morphology in the Sample Villages

Visibility is a quality in which not only the objects and activities are visible, but also they present themselves to all of human senses clearly and intensively (Lotfi, Anamoradnezhad, &

Sasanipour, 2015). Accordingly, the less the number of indentations and pullbacks in the passages or empty spaces and out of sight corners, the more the visibility. Kushk Mahdi has the most incongruities on the edge of passages, such that the number of indentations and pullbacks in the passages of this village is 52. Empty less visible spaces are seen more in Zarkash equal to 74 cases (Figure 4). To achieve security in the space, we need to control enclosure (Bemanian, Forutan, & Mousavaipour, 2014, p.13). In order to see the enclosure status of the sample villages, it is required to determine the arid spaces which prevent the feeling of enclosure as well as the closed spaces which induce it in people. According to the guidance plans of the sample villages, Kal Zarkash had the most arid and abandoned spaces inside the texture of the village. In contrast, the abandoned spaces in Kalateh Nouri were very few and the closed spaces in this village was calculated as 93.7% (Figure 5). Large scales do not create feel of security because of the reduced possibility of controlling them. The increase in the size reduces the opportunities for residents to have deep cognition and be able to extend the sense of belonging. Accordingly, the numbers of crimes increase to the same ratio as the settlement grows. While, if settlement expansion stops and the population remains fixed, crimes will decrease (Salehi, 2009, p.58). With regard to the area of the sample villages, Arvand is the smallest one with the area of 6.23 acres, and Zarkash with the area of 46.79 acres is the largest

village (Figure 6). Small and large spaces are shown in Figures 7 and 8 respectively.

Open spaces, which are inversely related to texture intensity, show that Shourab village with the most amount of open spaces is the least compact. Kalateh Nouri with the least open spaces is the most compact village (Figure 9). Too much population and structure density in combination with other economic and socio-cultural factors can lead to reduced collective effectiveness and consequently increased crime commitment (Salehi, 2009, p.201). The highest population density is reported for Kal Zarkash with 121.4 people per acre, while Parkand Abad with 26.1 person per acre has the least population density (Figure 10).

The type of the texture in rural settlements can indicate the amount of weariness. An old rural texture which is often unclear, narrow, and impenetrable, may behave differently in inducing feeling of security compared to a new texture with an organized passage network. Quality of the buildings is also an effective factor in how people feel secure. Abandoned and ruined spaces can become places for addicts; or new-built structures which inhabits new households, can reduce residents' cognition and awareness and affect feel of security. Accordingly, Zarkash, Kushk Mahdi, and Kal Zarkash were reported to have the most area of new texture (Table 5). Figures 11 and 12 show the conditions of new-built structures and the texture weariness in the sample villages respectively.

Tale 5. Form and morphology of the sample
(Islamic Revolution Housing Foundation, 2016)

Villages	(Lack of) Visibility		(Lack of) Enclosure	Size and Dimension			Texture intensity		Quality of the buildings	Texture weariness	
	Number of dents in the street	Less visible space	The barren and abandoned space	Village size	The small and narrow space	The extent of big space	The extent of open space	population density	The percentage of new buildings	The extent of old texture	The extent of new texture
Arvand	12	2	11353	62365	100	12051	28048	35/2	35/3	19333	43032
Parkandabad	16	4	37851	179961	56	39878	81482	26/1	26/2	17996	161965
Chehl Hojreh	25	40	26919	269193	1123	26919	125443	153/4	70	24227	244966
Khinchomaghi	35	9	25357	219028	235	36006	104635	22/8	18/2	28474	190554
Zarkesh	41	74	73873	467974	1068	76160	205563	111/5	95/9	51477	416497
Shorab	20	3	53683	160914	119	53683	96747	18/3	41/6	22528	138386
Seydabad	29	20	24191	219915	1400	24191	80268	92/2	56/5	4398	215517

Tale 5.

Villages	(Lack of) Visibility		(Lack of) Enclosure	Size and Dimension			Texture intensity		Quality of the buildings	Texture weariness	
	Number of dents in the street	Less visible space	The barren and abandoned space	Village size	The small and narrow space	The extent of big space	The extent of open space	population density	The percentage of new buildings	The extent of old texture	The extent of new texture
Fereyzi	18	5	18771	147807	889	20369	56750	57/8	63	31039	116768
Kal Zarkesh	44	55	100150	411333	1845	101898	240684	121/4	79/6	65813	345520
Kalate Nouri	29	3	5612	89086	197	7733	5612	28/3	16/7	16035	73051
Koshk Mahdi	52	45	60017	431776	1458	61065	141629	85/7	83	51813	379963
Loghmani Ba Sharik	23	4	17219	142304	341	13980	33162	29/1	13	44114	98190
Nazerabad	11	2	8496	113278	169	12950	34930	38/2	88/1	79295	33983

Passages fewer than 4 meters are counted as small and narrow. Passages above 15 meters as well as arid lands are counted as large spaces.

The area of passage network, agricultural lands, and arid lands are counted as open spaces.

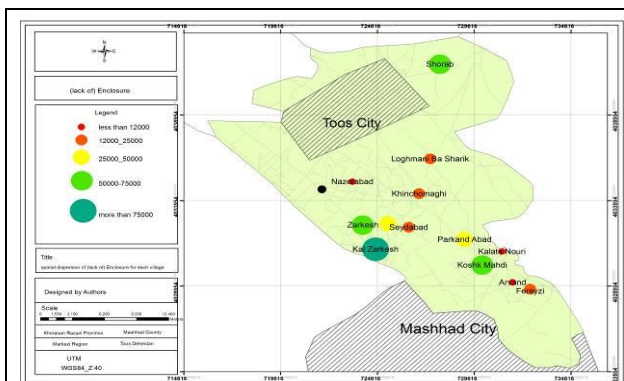


Figure 5. Spatial dispersion of (lack of) Enclosure for each village

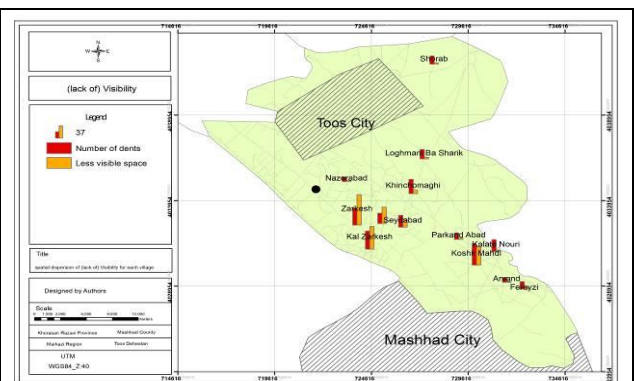


Figure 4. Spatial dispersion of (lack of) Visibility for each village

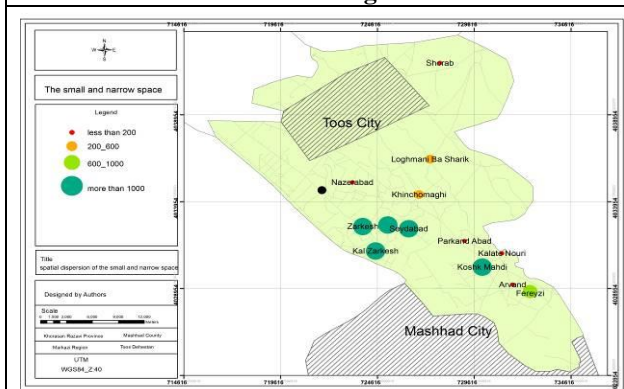


Figure 7. Spatial dispersion of the small and narrow space for each village

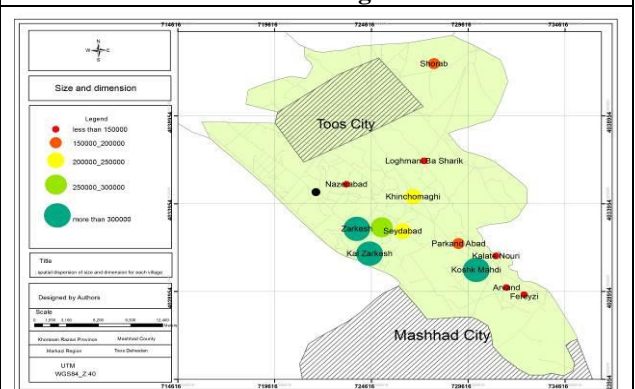


Figure 6. Spatial dispersion of size and dimension for each village

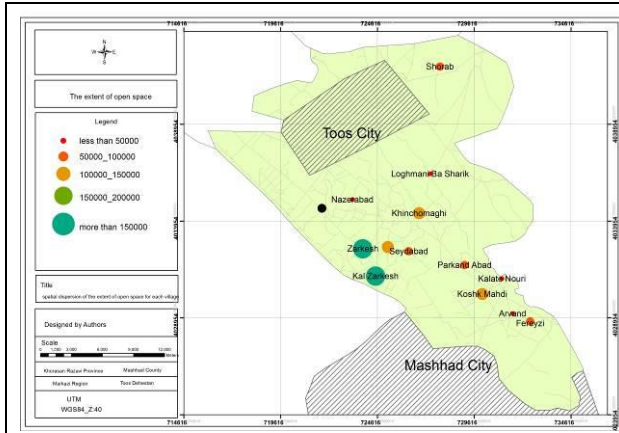


Figure 9. Spatial dispersion of the extent of open space for each village

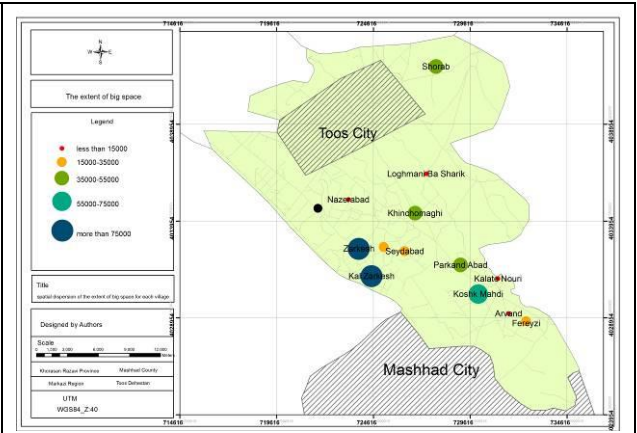


Figure 8. Spatial dispersion of the extent of big space for each village

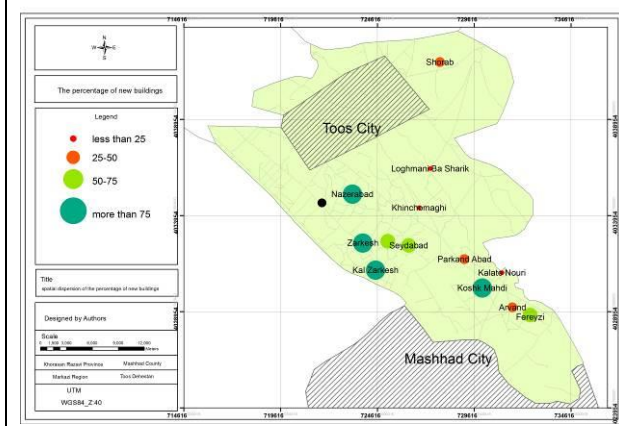


Figure 11. Spatial dispersion of the percentage of new buildings for each village

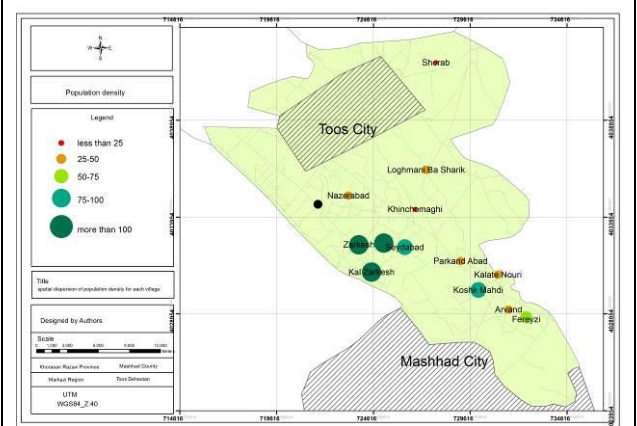


Figure 10. Spatial dispersion of population density for each village

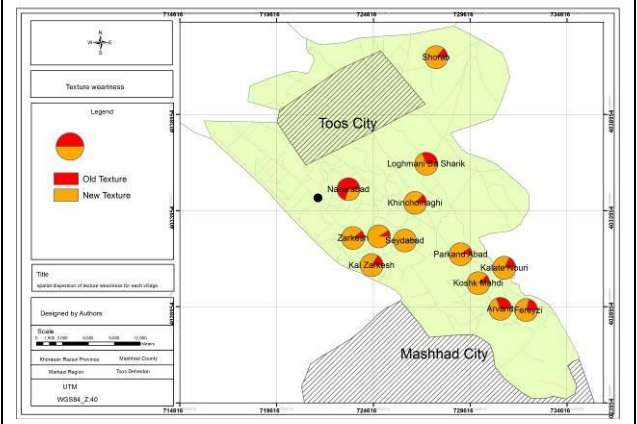


Figure 12. spatial dispersion of texture weariness for each village

4.3.2 Investigating functional Status of the Sample Villages

Any pattern of land use has some effects on settlement. Land use zoning leads to dispersion of the activity patterns. Due to the nature of activities

some areas become empty at night. On the other hand, establishment of inconsistent land uses close to each other leads to spatial and functional turbulence and consequently decreased environment quality, social disorganization, and

crime and anomic behaviors (Salehi, 2009; pp. 68-69). Distribution of land use in the studied sample villages can be taken from existing land use maps. Also, with regard to inconsistent land uses such as industrial, and cemetery, located in rural physical texture, Zarkash and Kalateh Nouri have the least

inconsistent land uses. It is worth considering that no village among the studied ones has spaces to spend leisure time, such as sports fields, libraries, and parks. The functional scales of most of the villages are shown in Table 6.

Table 6. functional status of the villages
(Islamic Revolution Housing Foundation, 2016)

Villages	Land Use Status				Land use functional scale
	Distribution of land uses			The extent of incompatible land use (m ²)	
	Focal Point (No mixed use)	Longitudinal distribution (Mixed use)	Scattered in the texture (Mixed use)		
Arvand	*	*		3528	Inside the village
Parkandabad	*			3590	Inside the village
Chehl Hojreh		*	*	9200	Outside the village
Khinchomaghi		*		1951	Inside the village
Zarkesh		*	*	15561	Outside the village
Shorab	*			4645	Inside the village
Seydabad	*	*	*	5163	Outside the village
Fereyzi		*		1499	Inside the village
Kal Zarkesh	*	*		15014	Outside the village
Kalate Nouri			*	1235	Inside the village
Koshk Mahdi		*	*	10556	Outside the village
Loghmani Ba Sharik	*			2060	Inside the village
Nazerabad			*	1358	Inside the village

4.3.3 Investigating the Accessibility of the Sample Villages

Access control is one way to prevent crimes through environmental design that is used to decrease access potential to the areas to commit crimes (Pourjafar, Mahmoudinejad, Rafian, & Ansari, 2009, p. 77).

Meanwhile, the penetrability of the villages against strangers can be examined by studying the highways that link villages or cities together. Chehl Hojreh and Zarkash had the highest penetrability. Arvand, Parkand Abad, Shourab, Kalateh Nouri, Loghmani Bashrik, and Nazer Abad are considered as dead-end villages. Also, the design of the streets as narrow, unclear, and meandrous passages, can be effective on increased

crime commitment and decreased feel of security. Freezy has the longest unclear passages and Koushk Mahdi has the most number of narrow passages in their access structures. Also, Zarkash has the longest wide passage due to passing highways from the settlement that can result in accidents and threatening the safety. The length of dead-end passages was the highest in Zarkash, Kal Zarkash, and Chehl Hojreh which can either cause increased feel of security because of providing a sense of neighborhood, or surprisingly increased feel of insecurity in the form of out of sight areas (Table 7).

Spatial distribution of street design is shown in Figure 13 for each village.

Table 7. access status of the sample villages (Islamic Revolution Housing Foundation, 2016)

Villaeags	Penetrability control	Street designing (length of road / meter)			
	Highways	Broad Street	Narrow street	Illegible and zigzag streets	Dead Ends
Arvand	0	466	495	312	189
Parkandabad	0	829	487	118	203
Chehl Hojreh	1735	474	3050	103	1355
Khinchomaghi	856	856	1070	275	492
Zarkesh	1515	2168	3439	266	1790
Shorab	0	906	198	68	172
Seydabad	764	871	2903	60	1605
Fereyzi	749	287	1750	691	307
Kal Zarkesh	959	499	2534	81	1731
Kalate Nouri	0	760	197	63	63
Koshk Mahdi	1047	401	3765	404	1131
Loghmani Ba Sharik	0	181	548	186	431
Nazerabad	0	264	335	149	263

Under 6 meter passages are considered as narrow

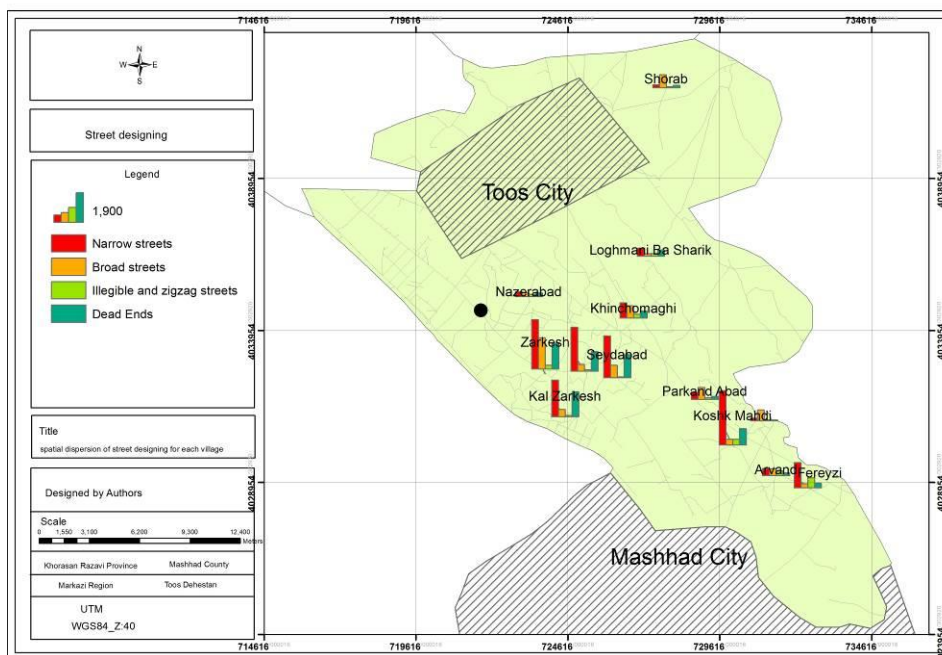


Figure 13. spatial dispersion of street designing for each village

4.4 Correlation among the Variables

The less the visibility, which is analyzed as the increased number of indentations in the passages and decreased visible empty places, the less the feel of security. Negative correlation coefficient -0.743 and -0.829 indicates the strong correlation between these two variables. (Lack of) enclosure also indicates that the more the amount of abandoned and arid spaces, the less the feel of security. The correlation coefficient of this variable which is 0.803 at significance level of 0.001 indicates a strong correlation. Size and

dimension variable also has an inverse significant relationship with feel of security. Such that the magnitude of the village with correlation coefficient of -0.804 had a significant relationship with feel of security. Hence, the more the spatial area of the village is, the less the feel of security among the residents. Small and narrow spaces with the coefficient equal to 0.647 and the large spaces with the coefficient equal to 0.812 are related to the feel of insecurity. Texture intensity also impacts the feel of security inversely. Such that as the population density increases, feel of

security decreases. Correlation coefficient equal to -0.592 indicates a moderate relationship intensity. Also, decrease in texture intensity has a strong inverse correlation with the feel of security. The status of buildings' quality is considered by analyzing new-built buildings which indicates a moderate inverse relationship. Analysis of feel of security in relation with weariness of the texture shows that feel of security is different in new and old textures. There is no significant equation to show any relationship between the condition of the old textures and feel of security or insecurity. However, there is a strong inverse relationship between the volume of new texture and feel of security in the village (Table 8).

Penetrability control is defined as a variable including access variables; here with data such as the extent of highways between the villages and cities, penetrability condition is defined. The inverse relationship indicates that the more the penetrability in the village, the less the feel of security there; significance level equal to 0.012 indicates its significance with correlation coefficient equal to 0.670. Street design also is differentiated by the longitude of the wide, narrow, meandrous,

and dead-end passages. The results indicate that there is no significant correlation between wide or unclear passages and feel of security; while there is a significant relationship between narrow and dead-end passages with the feel of security with significance level of 0.02 and 0.026 respectively. Correlation coefficient also indicates an inverse strong relationship. It seems that if the dead-end passages are long, it will become difficult for the criminals to escape which influences the feel of security.

The results of correlation test for the lack of organization in land use indicates that there is no significant relationship with regard to land use distribution; while there is an inverse significant relationship with the amount of inconsistent land uses. Such that with the increase in dispersion of inconsistent land uses inside the rural texture, feel of insecurity among the residents will increase. Totally correlation coefficient for this variable is -0.687 (Table 9).

Table 8. the relationship between feel of security and physical features (morphology and form)

Correlation		(Lack) Visibility*		(Lack) Enclosure*	Size and Dimension			Texture intensity		Quality of the buildings	Texture weariness	
		Number of dents and retreats in the street	Less visible space	The barren and abandoned space	Village size	The small and narrow space	The extent of big space	The extent of open space	population density	The percentage of new buildings	The extent of old texture	The extent of new texture
Feel of security	Coefficient	-0/743**	-0/829**	-0/803**	-0/804**	-0/647*	-0/812**	-0/824**	-0/592*	-0/554*	-0/310	-0/795**
	Sig	0/004	0/000	0/001	0/001	0/017	0/001	0/001	0/033	0/005	0/302	0/001

*Because of the nature of the data the names of the indices are used reversely here.

Table 9. the relationship between the feel of security and physical features (land use and access)

Correlation		Land Use Status		*Penetrability	Street designing			
		Distribution of land uses	The extent of incompatible land use		Broad Street	Narrow street	Illegible and zigzag streets	Dead Ends
Feel of security	Coefficient	-0/418	-0/593*	-0/670*	-0/250	-0/636*	-0/196	-0/611*
	Sig	0/156	0/033	0/012	0/411	0/020	0/521	0/026

*Because of the nature of the data the names of the indices are used reversely here.

By transferring the feel of security variable to interval variable, it is possible to examine its relationship with functional scale as a two-value nominal variable in the form of Eta square root correlation coefficient. That way, Eta coefficient for this variable is 0.569 which indicates a 32.3% effect of the functional scale on the feel of security. Also, analysis of Figure 14 shows that as the data grows from the villages with inner-scale

land uses to the villages with outer-scale land uses, the feel of security decreases. In fact, it is possible to improve the functional status of the environment by applying inner-scale land uses, not attracting stranger population, and creating a healthy environment for social interactions which provide a variety of land uses and encourage the villagers to extroversion.

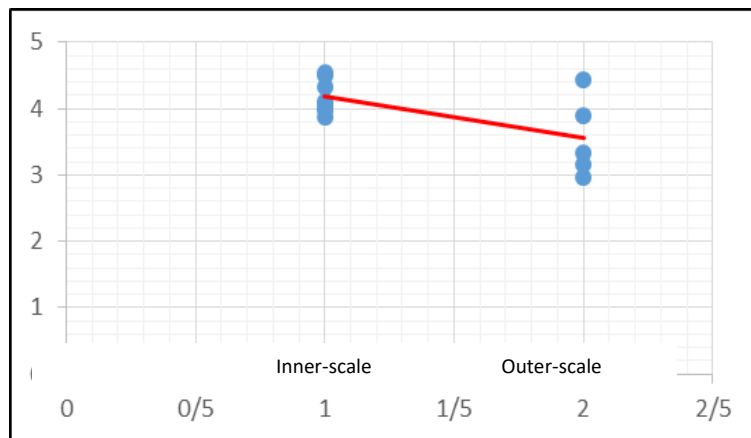


Figure 14. feel of security in villages with different functional scale

5. Conclusion and Recommendations

The findings of the study indicate a significant strong and inverse correlation among many physical features and feel of security among the residents of the villages under investigation. Among the components, the morphology indices of (lack of) visibility, (lack of) enclosure, size and dimensions of the village and spaces, texture intensity (extent of open spaces), and texture weariness (extent of new texture) have a strong inverse relationship with feel of security. There is a medium inverse correlation between the quality

of the buildings and compactness (population density) and feel of security. There is a medium inverse correlation between the distribution of land uses from the index of the (dis)organization of land use and feel of security. Accessibility also indicates that there is a strong inverse relationship between penetrability and the design of dead-end narrow streets and feel of security. The findings of the present study are consistent with the findings of Mazini et al. (2010) with regard to some physical features like arid spaces or narrow passages. Also, the weight of open space and the

quality of passages network in the study by [Adibi Saad Nezhad and Azimi \(2012\)](#) is consistent with the results of this study. The study by [Mousavi and Siami \(2014\)](#) showed that open space has a low effect coefficient, while it has a high effect coefficient in this study. Also the present study showed a high effect coefficient of regular texture in feel of security, while it didn't show any relationship between meandrous passages in the villages and feel of security. Although types of evaluations are not similar, it can be said that there is an incongruity between the two studies. Consistency of the present study with regard to density, penetrability, space size, and enclosure with the study by [Mousavipour et al. \(2014\)](#) is also confirmed. The present study didn't show any significant relationship between the old texture and feel of security, so it is inconsistent with the study by [Daliri and Pakshir \(2013\)](#). The present study analyzed the distribution and mixing of different land uses which do not have any significant relationship with feel of security, and it isn't consistent with the study by [Shabani et al. \(2014\)](#).

Generally, the confirmation of the strong correlation among most of the variables show that rural guidance plans are required to pay more attention to the issue of physical security. So far, the system of preparing rural guidance plans such as its regulations and rules have not had a significant role in changing life quality and patterns and its invisible hand in providing possibility of social control and crime prevention has been ignored. For this purpose, guidance plan consulates are required to be aware of the special situations causing feel of insecurity through walking by rural residents, particularly the youth and women.

Form and morphology have a special place in maintaining the security of rural settlements, and there are traditional defending strategies, which seem to have lost their importance with time. The present condition of form and morphology of the villages which affect security include lack of appropriate spatial enclosure, existence of arid and abandoned spaces, existence of under construction buildings, new-built structures, and the higher extent of new texture in the villages at the urban fringe compared to their old texture. Functional status of the village includes a variety of activities and land uses attracting different

people. Generally, an outer-scale of the rural land uses which defines the power of attracting strangers plays a critical role in the feel of insecurity among rural residents. In the same way, introversive villages have a controlling nature. The key to feel of security is in social interactions appearing in public rural spaces that can be achieved by function improvement through making variety of land uses. To the same amount that these activities have the power of founding feel of security among social groups, they can create insecurity by attracting unhealthy people which is obvious especially in commercial land uses. Accessibility particularly provides safety in terms of road accidents. Length and width of the streets, shape of the streets, the hierarchy and communication network in the village, the covering quality in passages network, street usage for cars and pedestrians and equipping the streets with disciplinary signs, and so on are among the arrangements providing streets more safe.

Followings are recommendations to improve morphology, function, and access conditions from the security point of view:

- Increasing security in vicinity of under construction buildings, appointing guards to protect these spaces, and arranging for the acceleration of the constructions are required.
- Recognizing less visible spaces and out of sight corners and trying to remove indentations and pull backs in passages which make hiding possible seems essential. Moreover, it is necessary to increase the visibility and decrease the chances of being surprised by modifying walls, removing barriers, or providing light.
- Providing ownership borders in the abandoned lands using walls, fences, and fenders; and separating the border between the ownership of public and private spaces clearly are necessary.
- Paying attention to land use change of the villages is required as dispersed textures can promote insecure feeling and it is necessary to create concentrated textures in rural areas. Therefore, the increased process of constructions out of the legal limits of the village is inconsistent with secure village criteria. On the other hand, too much compactness hurts feeling of security. Hence, in studying guidance plans in big villages, zoning should be considered.

- Applying mechanical equipment for supervision close to inconsistent land uses such as industrial areas are required.
- Creating or increasing supervision by supervising institutes especially in outer-scale villages is needed.
- Transferring inconsistent and insecure land uses to the margins of the villages and creating guarding rooms to control such spaces should be considered.
- Defining secure and defendable open public spaces for villagers is required, since the bases for a healthy society is represented in public spaces.
- Applying various land uses which are attractive for different age and sex groups in abandoned and arid spaces should be considered.
- Increasing security of roads and improving supervisions and control by social and disciplinary institutes particularly in villages with high penetrability is necessary. For this purpose, it is required to locate security stations or design the entry of the villages in a proper way.
- Rehabilitating, reforming, and increasing the width of passages in villages in which the percentage of narrow passages and length of such passages are high, are considered in priority. In spite of the focus of guidance plans on widening rural streets, it has not happened yet due to the lack of financial resources in public institutes. On the other hand, due to the lack of cooperation by the villagers in pulling back, the widening of the passages has not occurred, so the security efficiency is not provided in the passages.
- Adapting arrangements to decrease speed and establishing warning and security signs in villages that have highways inside. Such that there is a need to emphasis on road equipment and road signs in preparing rural guidance plans.

Acknowledgments: The current paper is extracted from the master thesis of the first author (Aida Sadrossadat) in the Department of Geography, Faculty of Letters & Humanities, Ferdowsi University of Mashhad, Mashhad, Iran.

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تاریخ پذیرش: ۶ اسفند ۱۳۹۶

تاریخ دریافت: ۴ فروردین ۱۳۹۶

چکیده مبسوط

۱. مقدمه

عوامل مختلفی از جمله ویژگی‌های فردی، اجتماعی، وضعیت اقتصادی و خصوصیات کالبدی محیط اطراف آنها قرار دارد. درباره تاثیر محیط فیزیکی و فضا بر امنیت، نظریات بیشماری مطرح شده است و کاملترین آن نظریه پیشگیری از جرم از طریق طراحی محیطی است. پیشگیری از جرم از طریق طراحی محیطی به عنوان یک رویکرد به دنبال طراحی مناسب و کاربری موثر از محیط و ساختمان است که با هدف بهبود کیفی زندگی مردم منجر به کاهش جرم و ترس ناشی از جرم می‌شود و بر مبنای استراتژی‌های کلیدی مشتمل بر تملک قلمرو، نظارت طبیعی، حمایت، تعمیر و دشوارسازی هدف و کنترل دسترسی‌ها بنا نهاده شده است.

۳. روش تحقیق

تحقیق حاضر بر مبنای ماهیت و روش از نوع همبستگی و با توجه به هدف از نوع کاربردی می‌باشد. در این پژوهش از دو روش مطالعات کتابخانه‌ای و میدانی استفاده شده است. به کمک مطالعات کتابخانه‌ای، ویژگی‌های کالبدی مداخله‌کننده بر احساس امنیت در مجموع در قالب ۱۲ شاخص از ۳ مولفه ریخت شناسی، وضعیت عملکردی و دسترسی تعریف شدند و از مطالعات و نقشه‌های طرح‌های هادی ۱۳ روستا استخراج شدند. در مطالعات میدانی جهت بررسی میزان احساس امنیت، اقدام به تهیه و تکمیل پرسش‌نامه از ساکنین این روستاها گردید. بر مبنای فرمول کوکران با میزان خطای ۰/۰۵، از مجموع ۶۱۹۵ خانوار، تعداد ۳۶۲ نمونه در سطح سرپرست خانوار به دست آمد. سپس با ارتقا نمونه‌های زیر ۱۰ خانوار در هر روستا، تعداد نهایی نمونه‌های اصلاح شده به رقم ۲۸۶ رسید. روایی این پرسشنامه توسط پانل متخصصان دانشگاهی و پایایی آن با استفاده از فرمول کرونباخ با آلفا ۰/۸ مورد تایید قرار گرفت. به منظور تحلیل داده‌ها از نرم افزار تحلیل

آنچه امروزه در مورد توسعه مناطق روستایی مطرح است، توسعه پایدار روستایی است و اگر چه در سال‌های اخیر توجه به توسعه پایدار روستایی بیش از گذشته در پژوهش‌های مکتوب پیرامون مسئله توسعه کشور نمود یافته، اما هنوز به مقوله امنیت در بطن جامعه روستایی به عنوان یکی از اهداف غیر مستقیم توسعه پایدار توجهی نشده است. از سویی در زمینه رویکردهای کالبدی پیشگیری محیطی و ایجاد تغییرات محیطی به منظور کاهش جرم خیزی فضاها و افزایش قابلیت امنیتی آن‌ها، نظریات متعددی ارائه شده و درچه ای نوین به تامین امنیت گشوده شده است که در آن تاثیر محیط کالبدی را بر امنیت یا احساس امنیت نشان می‌دهد. در این میان طرح‌های هادی روستایی به عنوان مهمترین طرح در حوزه برنامه‌ریزی روستایی با ماهیتی کالبدی می‌باشند ولی به مقوله امنیت کالبدی نپرداخته‌اند. هدف کلی این تحقیق شناخت میزان سازگاری ویژگی‌های کالبدی با احساس امنیت ساکنین است تا با آزمون میزان ارتباط میان این متغیرها، از دستاوردهای آن بتوان در جهت ارتقای کیفی طرح‌های هادی روستایی همسو با افزایش قابلیت امنیتی فضاها روستایی بهره برد.

۲. مبانی نظری تحقیق

از گذشته‌های دور تاکنون نظم و امنیت همواره در محیط‌های روستایی مورد توجه بوده است. امنیت یکی از ملزومات زندگی و حقوق بنیادین انسانی است که دارای دو بعد اصلی عینی و ذهنی می‌باشد. احساس امنیت مقوله‌ای جدای از امنیت بوده و تحت تاثیر

۵. نتیجه گیری

یافته‌های تحقیق نشان از وجود رابطه معنادار قوی و معکوس میان بسیاری از ویژگی‌های عینی کالبدی روستاها با احساس امنیت داد. از میان مولفه‌های ریخت شناسی، شاخص‌های (فقدان) میدان دید، (فقدان) محصوریت، ابعاد و اندازه روستا و فضاها، فشردگی بافت (میزان) فضاها (باز) و فرسودگی بافت (میزان بافت جدید) رابطه معکوس و قوی با احساس امنیت دارند. میان شاخص کیفیت ابنیه و فشردگی (تراکم جمعیتی) رابطه‌ای در حد متوسط و معکوس با احساس امنیت برقرار شده است. میان متغیر توزیع کاربری‌های خدماتی از شاخص (عدم) ساماندهی کاربری اراضی با احساس امنیت رابطه‌ای متوسط و معکوس وجود دارد. وضعیت دسترسی نیز نشان می‌دهد که رابطه‌ای قوی و معکوس میان نفوذپذیری و نحوه طراحی خیابان‌های بن بست و باریک با احساس امنیت برقرار است. به طور کلی تایید وجود رابطه قوی در بیشتر متغیرها نشان می‌دهد می‌توان در طرح‌های هادی روستایی که مهمترین سند روستایی کشور است و به وضعیت کالبدی روستاها می‌پردازد، به مقوله امنیت کالبدی توجه نمود.

کلمات کلیدی: طرح هادی روستایی، ویژگی‌های کالبدی، احساس امنیت، دهستان طوس.

تشکر و قدرانی

پژوهش حاضر برگرفته از پایان‌نامه کارشناسی ارشد آیدا صدرالسادات، گروه جغرافیا، دانشکده ادبیات و علوم انسانی، دانشگاه فردوسی مشهد، مشهد است.

آماري SPSS و از آمار توصيفی شامل توزیع فراوانی و بررسی میانگین‌ها و آمار استنباطی شامل آزمون همبستگی پیرسون (در صورت نرمال و نسبی بودن)، اسپیرمن (در صورت غیرنرمال یا ترتیبی بودن) و اتا (در صورت اسمی و فاصله‌ای بودن) استفاده شد.

۴. یافته‌های تحقیق

توزیع فضایی میزان احساس امنیت در روستاهای نمونه نشان داد که کمترین میزان احساس امنیت در روستاهای کال زرخش، زرخش و کوشک مهدی درک می‌شود. از بررسی فرم و ریخت شناسی روستاها مشخص شد که ساختار بافت جدید روستایی که غالباً با شبکه معابر منظم و شطرنجی است می‌تواند در القای حس امنیت نسبت به بافت قدیم متفاوت عمل نماید. ابنیه نوساز که معمولاً خانوارهای جدید را می‌پذیرد در صورت غیربومی بودن آن‌ها می‌تواند شناخت و آگاهی ساکنین را تقلیل دهد و در کاهش احساس امنیت موثر باشد. بررسی وضعیت عملکردی نشان داد که هرچه داده‌ها از روستاهای با کاربری-های درون روستایی به سمت روستاهای با کاربری‌های برون روستایی پیش رود، احساس امنیت کاهش می‌یابد. در واقع درونگرایی کاربری‌ها، عدم جذب جمعیت غریبه، همراه با ایجاد محیطی سالم برای تعاملات اجتماعی، که تنوع فضا را با اختلاط کاربری‌ها بالا برده، جملگی ارتقای عملکردی فضا را بالا می‌برند. از بررسی وضعیت دسترسی مشخص شد که هرچه وضعیت نفوذپذیری در روستایی بیشتر باشد میزان احساس امنیت در آن روستا کاهش می‌یابد که با داده‌هایی از قبیل میزان معابر عبوری بین روستایی و شهری از بافت روستا تعریف گردید.

ارجاع: صدرالسادات، آ.، سجاسی قیداری، ح. و عنابستانی، ع. (۱۳۹۷). بررسی میزان سازگاری ویژگی‌های عینی کالبدی روستایی با احساس امنیت ساکنین دهستان طوس در شهرستان مشهد. *مجله پژوهش و برنامه‌ریزی روستایی*، ۷(۲)، ۴۱-۶۲.
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