



Social Behaviors Pathology in Informal Settlements of the Cities of Khorasan Razavi Province, A Case Study of Mashhad, Neyshabur, Torbat-e Jam, Sabzevar and Sarakhs Cities ¹

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ABSTRACT

The rapid increase in urbanization without the growth and development of economic and social indexes has made different social problems for the cities. One of such problems is the emergence of suburban neighborhoods (slums) around and inside the cities. Since these neighborhoods encompass many people and due to the lack of suitable urban services, unpleasant conditions and low life quality in these areas, they are considered as one of the key challenges of sustainable urbanization and the reason for anomic behavioral patterns. Lack of paying attention to the spiritual and physical needs of the residents of suburban areas around the cities has led to instilling and orienting the behavioral patterns of the residents of these zones, particularly, towards the anomic type of these patterns. The current study analyzes and investigates the pathology of different social behavior patterns in suburban areas of Mashhad, Neyshabur, Torbat-e Jam, Sabzevar and Sarakhs in Khorasan Razavi Province. The research method is descriptive-analytical and it is of applied type. A total number of 504 questionnaires were distributed in the selected cities to determine which parameters in suburban areas have the highest effect on the behavioral patterns of citizens. Based on the results of Spearman's correlation test, Chi-squared test, and one-sample t-test in the present research, such factors as space syntax, the quality of environment, lighting and the population have the highest effect on the behavior patterns of citizens. Moreover, the normal behavior patterns of citizens in Sarakhs city have been better than other cities, and then Torbat-e Jam, Sabzevar, Neyshabur, respectively. Finally, Mashhad was ranked lower than the other four cities. Environmental and cultural factors also are of the most important parameters affecting the creation of such patterns.

Keywords: *Informal settlement, Suburban areas, Pathology, Behavior patterns, Khorasan Razavi*

1. Introduction

One of the important issues with regards to urban spaces is the social behavior pathology of citizens. It is necessary to pay attention to the fact that public spaces in cities are the center of the most behavioral anomies and they have not been able adequately to

provide suitable grounds for organizing the needs and normative and behavioral patterns of their audience [23]. Public spaces of cities play an important role in the life quality of citizens by affecting their physical and mental health.

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In addition to making the city beautiful, urban landscape might be useful in terms of responding to the needs of human beings [33]. How people behave in public spaces of the city includes their interactions with each other in the space and the citizens show different behaviors according to the goal they follow [21]. The behavioral patterns of humans in cities are influenced by physical environment, symbolic data, design data and the spirit of environment. Reciprocally, the human also affects the environment by his behavior which is the result of cultural, social, economic and personality aspects, and transforms it to meet his physiologic and social needs and organizes the space [6]. Paying attention to the needs of citizens in cities and promoting their life quality shall increase the opportunities for urban development and the residents' feeling of satisfaction with living in the city [33]. Residing at crowded and dense neighborhoods in suburban areas is one of the factors leading the citizens to anomic behaviors [4]. Moreover, the number of crimes is higher in the suburban districts than other urban areas. With a more detailed look at the issue, it might be said that there is a significant relationship between the crime commitment and the specifications of the place where the crime has occurred, such as darkness and emptiness of the environment [30]. Poor hygiene, violations and many other social-economic challenges are imposed inappropriately on the residents of informal settlements [25]. Informal settlements in the suburban areas and the grounds for crime commitment indicate this important point that the occurrence of different crimes has had negative and unpleasant effects on the human, social and economic developments. Suburban bizarre areas (informal settlements) of cities and the selection of such areas for residence by the immigrants increase the alienation and being placed in the anomic conditions of cities, social corruption, addiction and social tensions; therefore, the domination of governmental and police organizations decreases and the social control is weakened, leading finally to the social disorder, violating the laws, disrespecting the social standards and regulations in the suburban areas and the whole city [18]. In this regard, Pathology is one of the important branches of science which deals with disorders rooted from one social anomaly. Investigating such issues within the framework of pathology is important in that its inclusiveness and realm cross the

specialized groups and it moves among different individuals of society like a fluid being. If the disorder is controlled and solved in the initial stages, it demands less costs; otherwise, to face such challenges considerable costs should be paid [17]. After beginning the economic and social reconstructions and the emergence of oil economy, uncontrolled migrations from villages to cities started in Iran, the outcome of which was emerging the phenomenon of marginalization around big cities [12]. Therefore, by the pathology of such factors it is possible to improve the performance and behavioral patterns of the residents of informal settlements and suburban areas, because in normal conditions, the areas of informal and suburban settlements are unsuitable spaces, providing the grounds for the emergence of different social and behavioral problems and disorders. Accordingly, by planning, designing and organizing such spaces, it is possible to produce and reproduce the space and promote the quality of urban environment through regeneration, which is important in creating social behavior patterns. In this regard, the current study aims at investigating and pathology of the behavior patterns of citizens residing at informal settlements of the province and the comparative study of behavior patterns in the selected cities of Khorasan Razavi Province including Mashhad, Neyshabur, Torbat-Jam, Sabzevar and Sarakhs. The main purpose of the study is analyzing and the pathology of different social behavior patterns in informal settlements of Mashhad, Neyshabur, Torbat-Jam, Sabzevar and Sarakhs Cities in Khorasan Razavi Province. The mentioned cities are the most populated and important cities of the province regarding the issues of marginalization and the population residing at such zones.

2. Literature Review

2.1 Informal Settlements

The first person who used the term marginality and marginal man was Robert Ezra Park. He describes the concept in his article entitled Human Migration and the Marginal Man, and states, "The marginal man was a cultural hybrid, a man living and sharing intimately in the cultural life and traditions of two distinct peoples; never quite willing to break, even if he were permitted to do so, with his past and his traditions, and not quite accepted, because of racial prejudice, in the new society in which he

now sought to find a place". Marginality has two internal and external dimensions. Usually, the external dimension and appearance of it is at the center of the public notice and the basis of judgments about this phenomenon. Under such circumstances, individuals reside at areas where they have little communication with the new society and there is a kind of separation between their place of residence and the main urban district. This might be due to the unpleasant economic conditions and financial inability of families whom are not able to live in the main districts of the city because of high expenses of life. In all over the world, out of four residents of cities, one person lives in informal settlements with heterogeneous neighborhoods. The suburbs of big cities are generally created due to the heterogeneous urban growth, the conflicting and stressful accumulation of capital and rural unemployment, and the destruction of family and traditional communications. Informal and uncustomary urban living spaces show a sick space of economy, weak management, and regional and spatial planning resulted from social and economic injustice, in local, provincial and national levels [20]. Moreover, most of informal settlements have been formed in suburban areas of cities and in agricultural lands.

2.2 Pathology

Social Harm is any individual or collective action which cannot be placed within the framework of ethical principles and the public rules of collective actions, whether formal or informal, in the society where active individuals perform activities, and as a result, it faces the legal prohibitions or is considered as ethical and social taboo. That's why the deviators try to hide their deviations from the eyes of the observers of law, public ethics and social order, because otherwise they shall face legal prosecution, ethical exclusion and social elimination. In the typology of social harms, different criteria could be used. Such criteria in any community are assigned to at least four miniature systems as cultural, social, political and economic systems, and in each of these fields individual and collective actors obtain four types of valuable capital or source, namely, cultural capital of knowledge, social capital or commitment and rank, political capital or power, and economic capital or wealth required by each society, through observing the principles and rules of collective action acceptable in these fields.

2.3 Crime

The recent psychiatrist and criminologist, Olof Kinberg, defines the crime as, "a form of social incompatibility which might be considered more or less as the main problem of the individual in response to his environmental pressures, in a way that keeps him coordinated with the environment [1]. In Article 2 of the former Islamic Penal Code, a brief description of this concept was presented, "Any act or omission of act for which a punishment is assigned by the law, is considered as a crime [27]. From one viewpoint, crime might be defined, in religious terms, as a behavior at odds with bans and orders of the religion and whoever who commits the crime deserves punishment in this world and in the other world [27] From ethical viewpoint also, crime is defined as the behavior at odds with good ethics, for which a punishment is set by the law. Crime is also the unethical behavior at odds with honorable feelings and humanism.

2.4 Criminology and Preventive Solutions

Crime hotspots represent a place or geographical realm where the amount of crimes is higher than the average level. The geographical analysis of crime hotspots is about the process, demonstration, identifying and determining the boundaries of crime high-density and concentrated areas in cities. Therefore, attempts are made to identify the factors leading to crime concentrated areas and take suitable measures to omit or decrease such factors, and to prevent the occurrence of crimes in these areas [3]. So there are some urban places which are susceptible to crime commitment and the emergence of social harms. That's why a city is the best place for the emergence of the phenomenon of disorganization (Anomy), based on the viewpoint of Robert Park and the Chicago School. The high rate of reproduction, the big size of families, the young population, illiteracy and partial literacy, unemployment, little income, doing false jobs, on the one hand, and the deplorable conditions of the physical environment such as unsuitable housing, lack of hygiene, lack of infrastructure installations and equipment and urban services, on the other hand, all demonstrate the pollution of landscape in the suburban areas of cities. Crimes fall under two general categories in Iran, according to an accepted basis; the first category includes those crimes the penalty of which is fully determined and the execution of the penalty, if necessary, is

out of the judge's will. The second category includes those crimes the penalty of which bears a minimum and a maximum level and the judge has in some cases the required power to suspend, decrease or change the punishment.

2.5 Security and Urban Spaces

Generally, one of the main signs of an urban safe space is the prosperity and the flowing of life in the space. It is worthy of note that even the security offices such as police stations have emphasized that establishing security in a prospered place is much more easier for them than in an empty place of the same type [32]. Since the sociology has found a scientific and independent identity, the two concepts of city and crime have always been considered together. In defining the deviations and social harms in Chicago city, Park and Burgess emphasized the phenomenon of concentrated urbanization and the language, ethnicity, migration, settlement areas and density. The existence of such potentials in urban life makes the residents of big cities to feel worried and scared about how to approach or face the future crimes [5].

2.6 The Role of Urban Spaces in Preventing the Perpetration of a Crime and Establishing Security

Many of sociologists and urban planners agree on the role and effect of the physical aspect of cities and the design of urban spaces on preventing and decreasing the crimes and they have suggested and presented the design principles and the necessary solutions. From a general viewpoint, the crime includes behaviors in contrast with the social order, the perpetrator of which is prone to penalty or preventive measures (training, caring, and treating). Crime is a social structure which is about the violation of common values of a society, by an individual or group. The increase in crimes and their variety in urban communities not only are in contrast with the principles of social order, but also, they bring in the waste of economic resources, citizens' frustration and the general deterioration of the life quality, and by the reduction of social security, they threaten the social foundations [3]. To prevent many of crimes, urban spaces and the quality of environment might be determinant factors. Today, designing the environment for the purpose of preventing the crimes shapes an important part of the knowledge of urban development and civil.

2.7 Social Behavior

Behavior means the activities of all body parts in addition to the activities of glands (secretion of saliva, tears and sweat) [19]. Any activity or action performed by an alive being which guarantees apparent and latent body functions and physiologic, emotional and rational activities is regarded as behavior [36]. In fact, the human behavior is the resultant of the motivations and needs of the individual, the capability of environment, the mental image of the individual about the external world which is resulted from his perception, and the meaning of the image for the individual. Therefore, any activity under the effect of the mentioned conditions may find different forms and lead to a variety of behaviors [21]. Lewis Mumford, the American urbanist, emphasizes the interactive and social role of cities which are manifested in the behavior, and he believes that urban life is built by the human and is creative and the city demonstrates social actions [15]. The most important principle required for a social behavior is the closeness of two or more alive beings. Social interaction has different forms. A simple example of the social interaction is that the behavior of a being is aroused by the behavior of another being [22]. Any individual act differently in different situations. Any situation includes a united set of forces which affect the behavior of the individual. Social psychology deals with the study of the effects of situations [8]. The human lives inside the society and his behaviors are related to his social interactions. Social behavior falls under two categories: 1. Pro-social behavior and 2. Dissocial behavior [9]. Activities performed in public spaces might affect the quality and quantity of individuals' attraction to stop and interact in such spaces.

2.8 The Effect of Environment on Behavior

Deep transformations in culture and the change in political and economic actions in capitalist societies greatly affect the production and reproduction of spaces. The production of space is finally a criticism to the manner of production of an abstract form of space, by the government, capital, rationalist knowledge and male-centered symbolism [24]. Leng, the prominent theorist in the field of environmental psychology, believes, "Individuals establish relations with the environment, directly, through their handmade objects including buildings; they shape this handmade or physical environment in a way that fits the current or desired pattern of behavior" [10]. On the other

hand, some other define potency in two factual and perceptual states [26]. An environment has special constraints due to its physical characteristics and the potencies full of opportunities. Such potencies are actualized when they find meaning by interaction with the behavior of users. In other words, “the meaning of an environment is the result of the interaction between the potencies of that environment and the individual and collective needs of its users” [2]. White showed that famous plazas have significantly more spaces for sitting than the ones used less. White came to this conclusion that regardless of any variable measured, people tend to sit in places where there are sitting areas. White believed that this information is not only some astonishing findings, but also, they are vital realities which are very important for presenting a design guide for public spaces. The spatial behavior of humans, from the viewpoint of urban design, is a concept that describes the relationship between the built environment and the humans residing at it. Good spatial behavior is an indicator of successful urban design, while bad spatial behavior might be an indicator of the waste of resources and the reason for the dissatisfaction of residents [29]. Therefore, when the behavior is recognized, the environmental and individual factors affecting the behavior might be identified [31].

2.9 Citizenship Behavior

While urban spaces encompass the social and cultural values of society, they are also regarded as the context of urban activities and the necessities relevant to them. Gehl believes that the activities of people in public spaces might fall under three categories, each of which requires different features in the physical environment: essential activities, selective activities and social activities [31]. In social interactions of citizens, some search for specific

signs [7]. In the ecological system, the behavior and environment are so intertwined that it is difficult to separate them. Behavior is definable in the context of environment. Based on this approach, the environment is regarded as the continuance of existence and the personality of individuals. Actually, individuals are the factors changing the environment, and they are not merely the receivers of the influences of environment [21]. Humans are constantly interacting with an environment that they themselves are part of it. In other words, “the relation between the human and the environment is reciprocal and interactive” [14]. The urban environment includes a set of “behavior settings that are placed into each other and have common characteristics” (ibid). The physical urban environment is actually an urban environment including a lot of behavior settings [36].

2.10 Anomic Behavioral Patterns

Urban environments and spaces play a key role in the occurrence of crimes and the emergence of anomic behavior. Durkheim was the first who entered the concept of anomie or disorganization to the field of sociology. Based on the Anomie Theory, it is possible to explain the tendencies of youth living in suburban areas to deviant behaviors. The Vulnerability Theory believes that the rate of crimes is higher in informal zones of cities compared to other zones, and local social control and the feeling of collective participation are very low in vulnerable areas. In lines with this and with regards to the subject of the current study, many theories have been presented. All of the theorists mentioned in the followings table have pointed to the key components of environmental effects on behavior.

Table 1. The Theorists Emphasizing the Environmental-Behavioral Effects

The Theorist	Year	Theory	Key Components
Jan Gehl	1987	Living among buildings	Three groups of activities in the urban space (essential, selective and social)
John Lange	1987	The creation of architecture theory (the role of behavioral sciences in the environmental design)	The space perception of the human, the imaginations of people regarding the environment as a kind of mental schema
Roger Barker	1986	Behavior setting	Continuous activities, the territory of environment, the structure of place-behavior environment, time interval
Allotment, Holvil and Moore	1985	Evaluating the image of the city	Investigating the mental-psychological effects of urban spaces on people
Roomey Passini	1984	Routing in architecture	People orientation in the urban space and paying attention to the certain needs of users
William Whyte	1980	Social life in small urban spaces	Emphasizing the social role of urban spaces

Habermas	1980	Instrumental and communicative action	Communication of the humans with the environment
Amos Rapoport	1977	Human aspects, the city form	Non-passive position of humans against the environment; orientation of pedestrians in urban environments; culture, perception, recognition, behavioral contexts and constructed environment
Irwin Altman	1975	Social environment and behavior	Privacy, private spaces, territory and crowd
Erving Goffman	1967	Studying the behavior in public spaces	People getting close to each other and strengthening social tendencies
Kevin Lynch	1960	The image of the city	Node, edge, mark, path-area (the five elements building the image of the city)
Leghaei et al.	2011	Reviving Park Shahr in Sangelaj neighborhood with the goal of improving the ecological and social quality	Recognizing all physical, biological, social, cultural and aesthetic layers and the behavioral patterns of users
Behnaz Aminzadeh et al.	2002	Proposed designs and behavioral patterns for improving the urban parks	The compatibility and flexibility of behavioral places through studying the hierarchy of human needs
Hossein Bahreini	1996	Analyzing the urban spaces with regards to the behavioral patterns of users	Presenting suitable design rules by analyzing qualitatively and quantitatively the street space and the behavioral patterns of users, especially the pedestrians

(Source: [28])

According to the available definitions and with regards to the subject of study, in this section the relevant literature is reviewed:

Minhijack et al. (2019) investigated the third approach to hot spots. The results of the study showed that the third generation of CPTED is based on social innovation and the sustainability of local communities.

Savile (2018) investigated the role of the approach of crime reduction by environmental designing and reconstructing the neighborhood. The results of the study showed that it is possible to reconstruct the neighborhood by the approach of CPTED and participation patterns and by the pivotal role of society through participation planning.

David Kaplan et al. wrote a book, entitled, "Urban Geography" in 2004, which has pointed to the place analyses in urban geography and the approaches governing the relationship between the human and environment, and the effect of the design of Pruitt-Igoe houses and their social dimensions.

Clare Cooper Marcus conducted a study in 2000 to investigate the aspects of the proximity of people as a tool to promote and increase the social interactions in private houses of individuals in Denmark. He points to the comments of two residents there, which regard this factor as one of the reasons to live in social housing. It seems that this request of residents that Marcus has pointed to is taken from the

feeling that their residential environment (private space) conveys some concepts about the residents to others, which means identity in itself.

In another study in 1995, Marcus particularly empathized how the physical manifestation of housing might be used to express the personal identity of individuals and he stated, "the more I listened to what people said, the more it became clear to me that they consciously or unconsciously used their home environment and residential house as a tool to express some points about themselves. At conscious level, this way of thinking is not a new insight. All of us have had such an experience to visit new friends in their houses and find out some aspects of their surrounding environment to which they give value. The mentioned cases show the conscious comments of people regarding the internal identity, just like that the type of clothes, hair style or the type of car we drive represents clearly our intended values".

Hataminezhad et al. (2019) analyzed the tourism social pathology in Samen District of Mashhad to investigate and recognize the social harms in Samen district and determine the relationship between such harms and the phenomenon of tourism. Finally, after investigating and analyzing the statistical data, it was found out that the density and crowd of the district which was due to a population of millions of tourists combined with physical

factors and condition of the texture of area under study (the manner of the texture design) were among the important factors creating social harms, reducing urban security and leading to the emergence of crime in Samen district of Mashhad City.

Rezaeian and Abdollahi Neysiani conducted a study, entitled “Presenting and Explaining the Systemic Model of Human Behavior from the Viewpoint of the Holy Quran”, in 2013, and investigated the reasons of human behavior and the way of behavior and the reasons of certain behaviors of humans according to the Quranic verses. It was found out that the issues of humans and their behavior have been discussed in 44 surahs of the Holy Quran. It was determined that five factors of environmental structure, the features of the human being, the way the human communicates with the natural environment, the way the human communicates with others in the society and the religion, all affect the human behavior.

Razzaghi (2013) wrote an article, entitled “The Qualitative Analysis of Space and Urban Landscape and the Behavioral Pattern of Users of Space in the Area Surrounding Karaj River”, and stated in the article that urban spaces and particularly public spaces have constantly been important contexts for manifesting behavioral patterns and the interactions resulted from human and social activities. In the article, the indexes of environmental quality and aesthetical desirability are investigated from the viewpoint of users, and the results showed that paying attention to functional, aesthetical and comfort issues, the attractiveness of design and merging different kinds of recreation and leisure applications in such places might significantly affect the attractiveness of environment and result in desirable use and satisfaction with using such places.

Irani Behbahani, Faryadi and Mohebbali (2012) wrote an article, entitled “Protecting and Reviving the Landscape of the River in Darband

Valley Based on the Behavioral Patterns” and stated that different natural structures available in the texture and physical body of cities are specifically important for improving the quality of cities and promoting the aesthetic, ecologic and social values, and they are regarded as important contexts for different types of recreational, leisure and tourism activities of urban residents. Some design strategies were also presented regarding the principal of protecting the mountainous environment of the district and preserving the adaptive behaviors and reducing the non-adaptive behaviors.

Khatibi (2011) conducted a study, entitled “The Mutual Effect of Behavioral Patterns on Reviving the Identity of City Environment in the Entrance Area of Sanandaj City”, and came to the conclusion that different kinds of human activities and behaviors and the mutual communication of environment and behavior should be precisely identified in order to determine and explain a kind of desirable identity in cities through suitable contextualization of behavioral patterns.

Morteza Rahbar (2009) carried out a study, entitled “City and Human Behaviors: The Threshold and Privacy of Human Activities in the Urban Landscape of Tehran”, and investigated the effects of urban environment on emotional and cognition explorations and the emergence of different feelings in citizens, and the results showed that it is necessary to pay attention to the frequent presence of citizens in an urban environment and its role in forming the behavior of citizens.

Therefore, based on the mentioned discussions, it might be found out that the issue of social behavior is very important with regards to the pathology of settlements, and it becomes more important when talking about informal settlements. Finally, the study investigates the concepts summarized in the conceptual model, as follows:

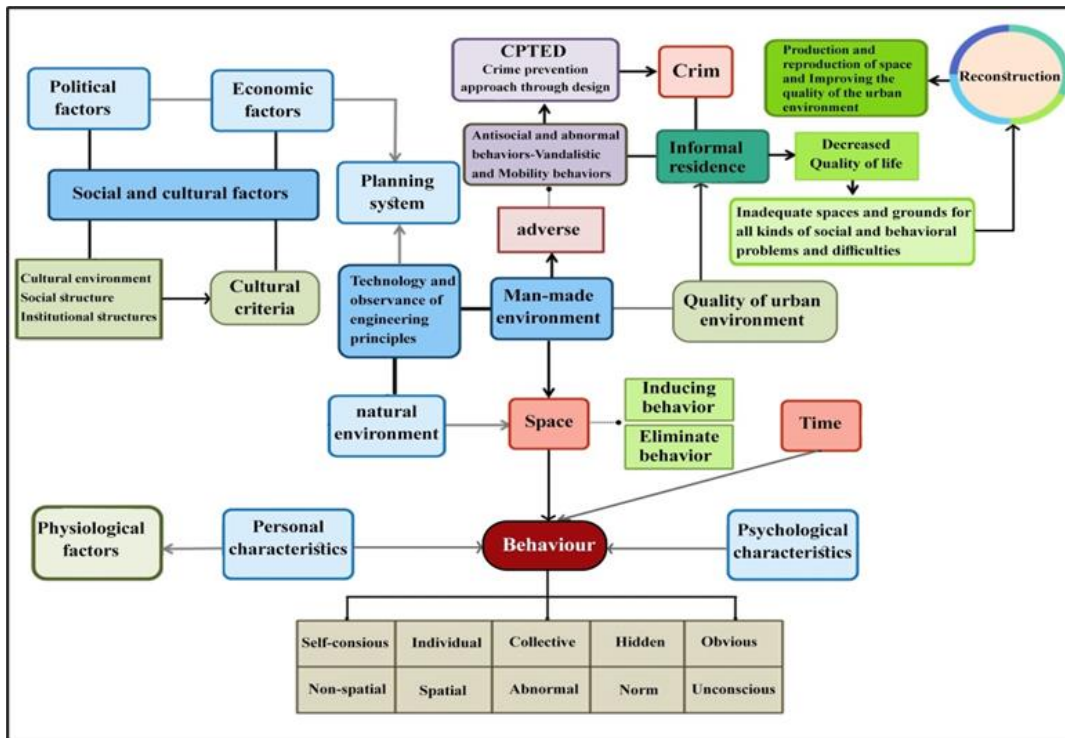


Figure 1. The Conceptual Model of the Study [28]

3. Research Area

In the current research, Mashhad, Neyshabur, Sabzevar, Torbat-e Jam and Sarakhs are the selected cities of the research because all of them are among the relatively populated cities in Khorasan Razavi Province, and considering that the current study is related to an applied postdoctoral research, and the necessities of the study are determined based on the research

priorities of the province and the research contract between University of Tehran and the Governorship of Khorasan Razavi, it becomes possible to find out the coefficient of the effect of important factors on forming the behavioral patterns of citizens in marginal settlements of populated cities of the province by studying social issues of people residing at such zones.

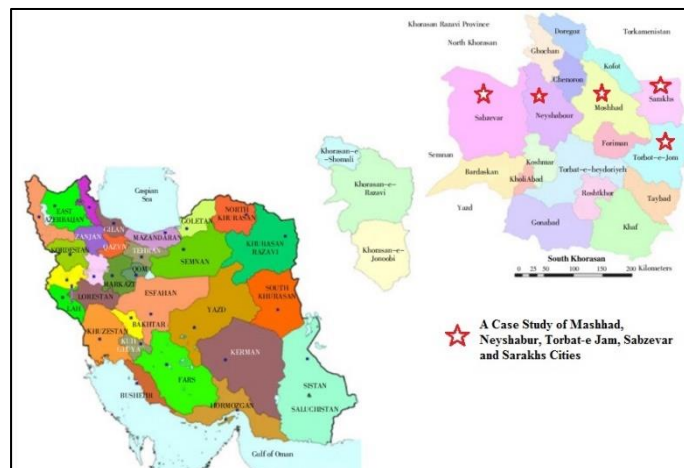


Figure 2. The Location of the Cities under Study in Khorasan Razavi Province

Table 2. The Amount of Population Density in the Selected Cities [35]

Research Zones	City	Area (Hectare)	Population (Person)	Number of Families	Population Density (Person per Hectare)
Mashhad	Mashhad	35147	3057679	930045	0.87

Neyshabur	Neyshabur	3056	264375	83143	5.86
Sabzevar	Sabzevar	2240	243700	74575	8.108
Torbat-e Jam	Torbat-e Jam	1150	100449	27156	3.87
Sarakhs	Sarakhs	560	42179	11812	3.75

4. Research Method

In the process of scientific research and planning, the method used to discover the topic plays the main role. The objective of all sciences is the cognition and perception of the surrounding world. To become aware of the issues and problems of the social world, scientific methods have significantly changed. Regarding the methodology of the current research, it should be noted that the study involves two fields of psychology and geography, and the methods of both fields are employed in the study. The method employed in the present study uses a rationalist approach based on the paradigms of behavioral sciences and is among the applied studies in terms of purpose. Its data collection method is of descriptive type and falls under the group of longitudinal surveys and correlational studies, and data are finally analyzed using the descriptive analytical method, which is one of the most important and frequently-used methods of geographical sciences. The current study employs the following methods and processes: text reading and note-taking, statistics reading and using the statistical tables, image reading and using photos and maps, document reading, using the statistical information in the statistics book of Iranian national census of population and housing on 2016, books, scientific articles, conventions, research and executive projects, models, satellite images, observing different physical, social and behavioral features, conducting the study in holidays and working days, in the determined time intervals for the execution of the project, in different hours of day and night, and giving various questionnaire to the citizens of the sample cities.

The population of the five selected cities of Mashhad, Neyshabur, Sabzevar, Torbat-e Jam and Sarakhs in the latest Housing and Population Iranian Census in 2016, has been q: The variance of the non-observed feature in the statistical sample is assumed as maximum, so q is equal to 0.5.

d: The confidence interval of generalizing results to the statistical population was considered to be 0.05.

3,056,769 persons, 264,375 persons, 243,700 persons, 100,449 persons and 42,179 persons, respectively, so the statistical population of the current study is totally 3,707,472 persons. The obtained sample size was 384 questionnaires that considering the high population of Mashhad City, 190 questionnaires were assigned to this city (using the formula of division to proportion, based on the population share), and the share of other cities was determined based on their current population and the remaining sample size, because the zones under study included the population residing at the margins of cities and their behavioral patterns, and these behavioral patterns are related to the citizens, residents and the actors of society, so the factor of population is important in this regard. Accordingly, based on the populations residing at such areas, the samples size was calculated by the method of share division based on the population ratio, which is the best method. Moreover, it is necessary to note that considering the low population of four cities out of five cities (except for Mashhad), to each sample size 30 questionnaires were added for analysis, and at last, the final sample size in the current study was determined to be equal to 504 questionnaires. Considering the population of the five selected cities of Khorasan Razavi Province, which was totally 3,707,472 persons in 2016, and the possibility of 5 percent error based on Cochran Formula, the obtained sample size was 504 persons who filled out the questionnaires. The calculations are as follows:

N: Size of the statistical population equal to the total population of five selected cities = 3,707,472 persons.

Z: Confidence interval coefficient was assumed to be 95%; as a result, z is equal to 1.96.

p: The variance of the observed feature in the statistical sample is assumed as maximum, so p is equal to 0.5.

$$n = \frac{z^2 pq}{d^2 \left(1 + \frac{1}{N} \left(\frac{z^2 pq}{d^2} - 1 \right) \right)}$$

Based on the latest population and housing census in 2016, the population of the five selected cities, namely, Mashhad, Neyshabur,

Sabzevar, Torbat-e Jam and Sarakhs, is 3.056.769, 264.375, 243.700, 100.449 and 42.179 persons, respectively, so the statistical population of the current study is 3.707.472 persons, in total. The sample size of the five selected cities in Khorasan Razavi Province was calculated according to their population in 2016, which was totally 3.707.472 persons, and by considering 5 percent error based on the Cochran Formula. So based on the method employed, the sample size was determined to be 504 persons.

To analyze the data obtained through the mentioned data collection methods, such analysis methods were used: descriptive

statistical analyses, showing the results on the maps related to each dimension, inferential analyses by the tests of SPSS Software, such as Spearman’s correlation test, chi-squared test, one-sample t-test and so on.

5. Discussion and Findings

Demographic variables in the current study include gender, age, level of education and job of the citizens. From demographic viewpoint, most of the respondents were men, aged from 18 to 30 years old, whose degrees were under high school diploma and they were jobless. The results presented in the following sections are related to the data obtained from the five cities.

Table 3. The Number and Percentage of Respondents in Terms of Gender

Gender	Frequency	Percentage
Female	225	45
Male	279	55
Total	504	100

To analyze data, first, the normality of the variables was tested by Kolmogorov-Smirnov Test. Since the variables were not normal, non-parameter tests were used to test the hypotheses. At first, since five different cities are considered in the study, the behavioral patterns of the citizens of the five cities should be compared. Therefore, the non-parametric Kruskal-Wallis Test and the Prism software were used. Then, considering the fact that urban spaces are one of the important factors affecting the creation of

the behavioral patterns in people, the effects of two factors of surrounding environment and urban spaces on the creation of the behavioral patterns in people are investigated, using the modeling of structural equations and the SmartPLS software. Finally, the effect of each of the items of urban spaces quality on the creation of the behavioral patterns in people is investigated, separately, using the modeling of structural equations and the SmartPLS software.

Table 4. Results of Kruskal-Wallis Test

Variable	Test Statistic	Degree of Freedom	Significance Level
Attandancy	354.921	3	0.000
Walking	327.970	3	0.000
Social Assistance	223.240	3	0.000
Social Participation	120.201	3	0.000
Harassment	260.423	3	0.000
Vandalism	254.532	3	0.000
Calmness	271.343	3	0.000
Fear	302.152	3	0.000
Hooliganism	320.150	3	0.000
Crime	324.158	3	0.000
Studying	124.568	3	0.000
Writing and Painting	121.548	3	0.000
Behaviorism	328.127	3	0.000

Table 5. The Mean and Mean of the Ranks of Behavioral Patterns of Residents in Each of the Five Cities

Mean	Variable	Sarakhs	Torbat-e Jam	Sabzevar	Neyshabur	Mashhad
	Attandancy	4.572	4.084	3.839	2.312	2.636

	Walking	4.526	4.450	3.940	2.890	2.707
	Social Assistance	4.890	4.133	3.570	2.829	2.534
	Social Participation	4.894	4.448	4.057	2.395	2.747
	Harassment	1.896	4.380	3.816	2.548	4.727
	Vandalism	1.914	2.268	3.859	4.658	4.886
	Calmness	4.021	4.001	3.651	2.321	1.889
	Fear	2.325	2.235	3.254	3.658	3.987
	Hooliganism	1.658	2.123	3.214	4.120	4.851
	Crime	1.685	1.129	2.689	2.301	3.331
	Studying	4.254	4.009	3.965	2.011	2.385
	Writing and Painting	4.654	4.332	3.521	2.013	1.001
	Behaviorism	4.753	4.303	3.882	2.889	2.534
Mean of the Ranks	Attendantcy	340.787	186.474	122.631	35.265	11.864
	Walking	274.775	240.000	88.184	38.1255	14.409
	Social Assistance	323.629	197.257	117.223	36.125	20.818
	Social Participation	329.624	204.206	102.024	40.125	12.455
	Harassment	331.489	199.829	105.015	98.1255	25.727
	Vandalism	342.978	191.571	112.155	36.569	11.500
	Calmness	315.214	192.145	121.214	65.213	25.135
	Fear	321.520	192.145	126.147	56.125	26.154
	Hooliganism	312.358	189.210	129.540	65.102	24.102
	Crime	310.254	186.125	123.014	63.021	11.205
	Studying	325.122	240.158	124.022	32.254	11.369
	Writing and Painting	369.254	231.125	158.014	52.658	13.584
Behaviorism	344.876	212.291	75.311	35.685	11.500	

Based on the results of Table 5 and also Dunn's Multiple Comparison Test, in the indexes under study, there are differences among the five selected cities, in terms of social behavior patterns; based on the mean of the mentioned

indexes, the behavior of citizens in Sarakhs city is more desirable, and then Torbat-e Jam, Sabzevar and Neyshabur. Finally, Mashhad City was ranked lower than the other four cities.

Table 6. Results of Structural Equations

Dependent Variable	Independent Variable	Path Coefficient	Standard Deviation	t-statistic	Result
Behaviorism	Surrounding environment	0/392	0/033	16/354	Effective
	Urban spaces	0.603	0.034	17/365	Effective

Based on Table 5, since the value of the t-statistic, regarding the effect of surrounding environment on behaviorism, is equal to 16.354 and is more than 1.96, the surrounding environment affects the behaviorism. The value of path coefficient is equal to 0.329 and it is positive, so by the improvement of the surrounding environment, the behavior of

citizens also improves. The value of the t-statistic, regarding the effect of urban spaces on behaviorism, is equal to 17.365 and is more than 1.96, so urban spaces affect the behaviorism. The value of path coefficient is equal to 0.603 and it is positive, so by the improvement of urban spaces, the behavior of citizens also improves.

Table 7. Results of Structural Equations Regarding the Effect of Sub-indexes of Urban Spaces Quality on the Behavior Patterns of the Residents of Areas under Study

Quality of Urban Spaces	Independent Variable	Path Coefficient	Standard Deviation	t-statistic	Result
	Spatial Syntax	0.216	0.013	16.414	Effective

	Number of Population	0.197	0.028	15.156	Effective
	Quality of Environment	0.206	0.025	12.127	Effective
	Illumination	0.179	0.025	11.176	Effective
	Urban Furniture	0.17	0.025	10.877	Effective
	Population Density	0.19	0.019	9.902	Effective
	Color	0.109	0.011	9.47	Effective
	Aroma	0.106	0.009	8.948	Effective
	Noise	0.104	0.032	7.286	Effective
	Lighting	0.103	0.024	6.265	Effective
	Crowd	0.072	0.016	5.541	Effective
	Manner of Design	0.045	0.023	3.943	Effective
	Existence of Green Spaces	0.301	0.02	2.856	Effective
Land Use	0.264	0.016	2.423	Effective	

Based on Table 6, four items of spatial syntax, quality of environment, illumination and number of population have the highest effect on the behaviorism of citizens. Generally, the items with t-statistic greater than 1.96 affect the behaviorism.

According to the results of Table 6, since the coefficient of the effect of each of the factors mentioned in the table above on the behaviorism of citizens is positive, it might be stated that by the improvement of each of these factors, the behavior of citizens also improves.

Table 8. Reviewing the behavioral features of citizens in each city

City	Test	Violating	Error like	Mistakes	Aggressive	Positive and Constructive
Sarakhs	Correlation Coefficient	.312	.414	.485	.174	.535
	Significance Level	.000	.001	.000	.000	.000
	The Population under Study in the Region	21	21	21	21	21
Torbat-e Jam	Correlation Coefficient	.249	.349	.603	.439	.550
	Significance Level	.000	.000	.000	.000	.001
	The Population under Study in the Region	65	65	65	65	65
Sabzevar	Correlation Coefficient	.316	.202	0.125	0.201	.892
	Significance Level	.000	.000	.000	.000	.000
	The Population under Study in the Region	11	11	11	11	11
Neyshabur	Correlation Coefficient	.252	.135	.268	.147	.774
	Significance Level	.047	.008	.015	.007	.000
	The Population under Study in the Region	41	41	41	41	41
Mashhad	Correlation Coefficient	.883	.657	.845	.500	.030
	Significance Level	.000	.000	.001	.008	.005
	The Population under Study in the Region	22	22	22	22	22

According to Table 7, the significance level as for Sarakhs and Torbat-e Jam cities is less than 0.05, indicating a significant relationship between the mentioned cities and the behavior patterns of the citizens. Moreover, in the mentioned zones, violating behavior, error-like behavior, mistakes and aggressive behavior have lower correlation coefficient and the positive and constructive behavior has higher correlation coefficient. Furthermore, the significance level as for Neyshabur and Sabzevar cities is less than 0.05, indicating a significant relationship between the mentioned cities and the behavior patterns of the citizens. In the mentioned cities, violating behavior, error-like behavior, mistakes and aggressive behavior have a relatively similar correlation coefficient to the positive and constructive

behavior correlation coefficient. In Mashhad City also the significance level is less than 0.05, indicating a significant relationship between the mentioned city and the behavior patterns of the citizens. And violating behavior, error-like behavior, mistakes and aggressive behavior have higher correlation coefficient and the positive and constructive behavior has lower correlation coefficient. Based on the table and the mentioned analyses, it is possible to state that the behavior of citizens has different features in different environments and places. Subsequently, it might be stated that the environmental and cultural factors are among the most effective parameters in determining the behavior patterns of citizens in public spaces of cities, particularly the public spaces of suburban areas.

Table 9. Affecting Factors in Determining the Behavior Patterns of Citizens Residing at Suburbs of the Selected Cities of the Province

-	Cultural Factors	Environmental Factors	Technology and Tools	Time Factor	Psychological Factors	Type of Religion	Economic Factors	Social Factors
Correlation Coefficient	.612	.514	.485	.374	.358	.259	.103	.152
Significance Level	.000	.001	.000	.000	.000	.000	.000	.000

According to Table 8, the significance level between the behavior patterns of citizens in public spaces in suburbs of the selected cities of the province and the cultural, environmental, technological and tools, physiological, religious, economic and social factors and parameters, is less than 0.05; therefore, there is a significant relationship between the behavior patterns of citizens and the mentioned factors.

The correlation coefficient between the type of behavior patterns and the cultural and environmental factors is higher than other factors and parameters, indicating the important fact that two cultural and environmental factors play a more important role in determining the behavior patterns of pedestrians in the zones under study.

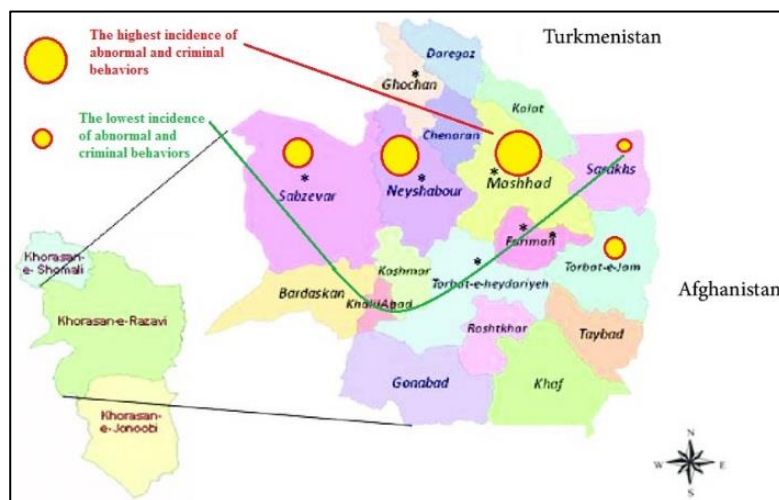


Figure 3. The Amount of the Occurrence of Anomic Behavior in the Selected Cities of the Research

Considering all discussions and the results of the research, this important point should be mentioned that the previous studies came only to these conclusions that public spaces are a context for manifesting behavioral patterns, and functional and aesthetic issues significantly affect the environmental attractiveness and the satisfactory and desirable use of spaces and they are very important, and finally different kinds of human activities and behaviors should be identified in the urban spaces; however, the novelty of the current research is that it has evaluated and investigated the pathology of social behaviors in informal settlements and suburban areas, which were not investigated previously. And finally, it was found out that the more the city size, whether in terms of area or population, the more the possibility of anomic behavior and such normative behaviors as reading books, attendancy, social assistance and participation, walking and forming collective groups.

6. Conclusion

Based on the findings of the study, it might be concluded that the quality of environment significantly affects the behavior of residents. Such findings are in lines with the results of the study of Rezaeian and Abdollahi (2013) who investigated the effect of five factors of environmental structure, the features of the human being, the way the human communicates with the natural environment, the way the human communicates with others in the society and the religion. The findings of the current study are also consistent with the studies of Razzaghi (2013) who stated that the public spaces of the city are an important context for manifesting the behavioral patterns and the interactions resulted from human and social activities. The low quality of life in cities, high social dissatisfactions, emergence of social rebellions, the infinite concentration of political power, the concentration of massive wealth in the hands of a few classes of society, madly urban development in some countries such as the countries bordering the Persian Gulf, constructing towers and luxurious palaces, lack of paying attention to the needs of ordinary people while constructing buildings in cities and public spaces of cities, lack of paying attention to the financial ability of people regarding the purchase of properties and the use of urban services for the general public, developing cities for the investment of the rich

class without paying attention to supplying the needs of good life for the majority class, disruption of social classes structure in cities and the emergence of economic and social inequities, the increase in shanty towns and suburban residences (slums), lack of paying attention to the spiritual needs of individuals in planning for cities and urban development, are all the products of capitalism system, leading to the increase in dissatisfaction with residing at cities, increasing the vandalism spirit in the deprived classes of society, increasing the anomic social behavior, the emergence of crime phenomenon in vulnerable urban spaces, decreasing the social interactions in unsuitable urban spaces, and generally decreasing the environmental quality of people social life. Moreover, Rahbar (2009), Kaplan (2004) and Marcus (2000) investigated the effect of frequent presence of citizens in an urban environment and its role in forming the behavior of citizens, the results of which are in lines with the current study. Therefore, a lot of attempts are required to be made to reach suitable social, cultural and physical systems which pay attention to the human and spiritual needs and the human-centered urban development, so that through which it is possible to try to promote the behavior patterns of citizens and decrease social anomic behaviors, through suitable urban space building, particularly quality, beautiful and accessible public spaces, and through believing in appropriate spatial distribution of urban services and facilities and establishment of social justice (in terms of having access to the mentioned services and financial ability of using the mentioned services), by increasing the quality of urban public spaces. Khatibi (2011) came to this conclusion that different types of human activities and behaviors and the mutual interaction of environment and behavior should be precisely identified in urban spaces to be able to create a desirable identity in cities through the proper contextualization of behavioral patterns, and the current study also proves such findings. Today's cities grow improperly under the influence of inconsistent urban systems and the inefficient system of regional and urban planning and due to lack of balance between regional and national spaces. So by the increase in the population of cities, the physical texture of cities also developed (the cities became more expanded). On the other hand, by the physical development of cities and the increase in

population in cities, the crowd increases in cities and the monitoring over the behavior of residents decreases. Therefore, considering such a viewpoint, the necessity of investigating the behavior patterns of residents in the informal settlements as one of the most important areas of any city, finds importance more than ever. According to the field-based observations and the method of questionnaire survey, the current study investigated the behavior patterns of the citizens residing at informal settlements in five cities, namely, Neyshabur, Sabzevar, Torbat-e Jam, Sarakhs and the metropolis of Mashhad. Although some studies have been conducted regarding the role of behavior and environment, which were explained earlier, little studies have been carried out in this regard in the zones of informal settlements; however, the current study made an attempt to investigate such settlements. The results of the investigation showed that the manner of arrangement, quality of environment, suitable urban furniture, lighting and the direct monitoring of individuals, directly affect the behavior patterns of the residents in such areas. Based on all discussions and results obtained during the process of the research, this important point has been found out that the more the city size, whether in terms of area or population, the more the possibility of anomic behavior and such normative behaviors as reading books, attendancy, social assistance and participation, walking and forming collective groups. By establishing behavioral settings inside the open and public spaces in the informal settlements of the sample cities, it is necessary to strongly monitor the behavior and functions of individuals. Among the strategies to improve the conditions of the areas under study are the following cases:

- Protecting and strengthening the behavioral settings available in public spaces of the zones of informal settlements, especially the parks;
- Participation of people in designing the new behavioral settings in the zones of informal settlements;
- Locally proper distribution of parks in the zones of informal settlements in order for creating behavioral settings in such a way that all citizens can easily have access to and walk on them;
- Taking benefit of the potential of behavioral settings in the zones of informal settlements for training and constructive discussions;
- Taking benefit of the potential of behavioral settings in the zones of informal settlements for the growth and flourishing of the local children;
- Equipping the urban spaces of the zones of informal settlements with different kinds of suitable urban furniture;
- Taking benefit of the potential of local councils in managing and maintaining the behavioral settings available in the zones of informal settlements;
- Suitable lighting of urban spaces to be used by all classes, particularly ladies, children and the elderly, at nights;
- Precise monitoring of public spaces by the relevant security groups to observe and reduce social anomic behaviors;
- Using suitable vegetation (beautiful and aromatic) and planting flowers on the margins of passageways;
- Proper location of police and supervision stations to increase the security and attendance of ladies;
- Assigning some part of public spaces to children to play (by using zones with sand and soil for playing and assigning some part of public spaces like parks to mass and group activities, such as mass sport, etc., it is possible to change the environmental conditions in such a way that by increasing the quality of environment, constructive and normative behavioral patterns are created, particularly in the margins of cities).

Moreover, by maintaining and strengthening the behavioral settings of the public spaces in the informal settlements, particularly parks, letting people participate in designing the new behavioral settings in the informal settlements, the proper local distribution of parks in the zones of informal settlements for creating behavioral settings in such way that they are accessible to all citizens who could walk on them, using the potential of the behavioral settings in the zones of informal settlements for training, constructive discussions, growth and flourishing of the talents of local children,

equipping the urban spaces of the informal settlements with proper urban furniture, using the potential of councils in managing and maintaining the behavioral settings in informal settlements, proper lighting of urban spaces for the use of all classes of society, particularly women, children and the elderly at night, precise monitoring of public spaces for observing and reducing the anomie social behaviors by the relevant authorities, using proper vegetation (beautiful and aromatic) and planting flowers on the margin of passages, properly locating the monitoring and police

stations for increasing the security and the attendance of ladies, assigning a part of public spaces for the children to play (using the areas covered by sand and soil for playing and assigning a part of public spaces like parks for public and group activities, such as public exercises and so on). The environmental conditions might be transformed in such a way that by increasing the quality of environment, constructive and normative behavior patterns are created, particularly in the zones of suburban areas.

References

1. Abdul Fattah, Ezzat. (1393). What is a crime and what are the criteria of criminalization, *Legal Justice* Winter 2002, No. 41
<https://www.sid.ir/fa/journal/ViewPaper.aspx?ID=20961>
2. Ahadi, Parisa. (1394). *Environmental Psychology* textbook. Retrieved from the architecture of Islamic Azad University, Mashhad Branch.
3. Ahmadabadi, Zohreh; Maryam Salehi Heikoui and Ali Ahmadabadi. (1393). The relationship between place and crime. *Social Welfare Quarterly*, Year 7, No. 27.
<https://www.sid.ir/fa/journal/ViewPaper.aspx?ID=77308>
4. Ahmadi, Habib and Iman, Mohammad Taghi. (1383). Culture of Poverty, Marginalization and Tendency to Delinquent Behavior among the Ten Marginal Youth of Shiraz in 2004. *Journal of Humanities Research*, University of Isfahan. Volume 19, NO. 2.
<http://ensani.ir/fa/article/132843/1383>
5. Alikhah, Fardin and Najibi, Maryam (2006). Women and the fear of crime in urban spaces. *Social Welfare Research Quarterly*. Sixth year, No. 22.
https://refahj.uswr.ac.ir/browse.php?a_id=2102&sid=1&slc_lang=fa
6. Aminzadeh, Behnaz and Dokhi, Afshar. (1381). Design and Behavioral Patterns: A Proposal for Improving Urban Parks, *Journal of Environmental Studies*, Volume 29, No.30.
<https://www.sid.ir/fa/Journal/ViewPaper.aspx?id=4157>
7. Atashpour, Hamid and Kazemi, Ehsan. (1390). *Citizenship skills*. Abu Atta Publications. First Edition.
8. Azarbayjani, Massoud and Salari Fard, Mohammad Reza. (1387). *General Psychology*. Zamzam Hedayat Publications. Fifth Edition.
9. Bagheri, Fardin (1390). *Family, social, political psychology*. Besat Publications. First Edition.
10. Daneshgar Moghadam, Golrokh and Islampour, marble. (1391). Analysis of environmental capability theory from Gibson's perspective and its feedback in human studies. *Armanshahr Journal of Architecture and Urban Planning*, No. 9.
http://www.armanshahrjournal.com/article_33213.html
11. Dorina Pojani & Kenneth Baar (2020): The legitimacy of informal settlements in Balkan States, *Journal of Contemporary Central and Eastern Europe*, DOI: 10.1080/25739638.2020.1833563
12. Farhadikhah, H., Hataminezhad, H., Shahi, A. (2019). Investigating the patterns of the residence of immigrants and its relationship with marginalization and urban poverty in metropolises: A case study of Mashhad metropolis. *Urban Economics*. 4(1 (6 consecutive), 25-40.
<https://www.sid.ir/fa/journal/ViewPaper.aspx?id=550221>
13. Gehl, j. (1987). *Life between buildings*, translated by j. Koch, New York
14. Golestani, Nafiseh; Roshan, Mahboubeh and Sheibani, Mehdi. (1394). Synchronicity of meaningful alignment. *Methods of evaluating behavioral sites and redesigning urban furniture and urban space*. *Urban Management* No. 38.
<https://www.sid.ir/fa/journal/ViewPaper.aspx?id=247834>
15. Gott Deaner, Mark and Wind, Leslie. (2014). *Key concepts in urban studies*. (Translated by Hossein Hatami Nejad and Abdolmutallab Baratnia). Toos Books Publishing. First Edition.
16. Harvey, D. (2006). Space as a keyword. In Gregory, D. & Castree, N. (eds.) *David Harvey: A Critical Reader*, pp 270 293. Malden: Blackwell.
17. Hataminejad, Hojat; Hosseinian, Negar and Alikhani, Hoda. (1398). An analysis of the social pathology of tourism in Samen region of

- Mashhad. National Conference on Ecotourism, Culture and Tourism Development, Nos. 13 and 14.
<https://civilica.com/doc/990723/>
18. Hataminejad, Hossein; Mahdian Bahnemiri, Masoumeh and Mehdi, Ali. (1393). Investigation and analysis of spatial justice in health services using Topsis, Morris and Taxonomy models Case study: Mazandaran cities. *Journal of Spatial Planning*. Volume 2, Number 5.
<https://www.sid.ir/fa/journal/ViewPaper.aspx?id=248886>
 19. Heb, D (1996), *Psychology textbook*. (Translated by Javad Ghahremani and Hamzeh Ganji). Roshd Publications. First Edition.
 20. Kazi Nazrul Fattah, Peter Walters (2020). A Good Place for the Poor!" Counternarratives to Territorial Stigmatisation from Two Informal Settlements in Dhaka. *Social Inclusion*. Volume 8, Issue 1, Pages 55–65. DOI: 10.17645/si.v8i1.2318
 21. Khatibi, Seyed Mohammad Reza. (1392). Interaction of Behavioral Patterns in Reviving the Identity of the Urban Environment: A Case Study of Sanandaj Input Area. *Journal of City Identity*, Year 7, Issue 13.
https://hoviatshtahr.srbiau.ac.ir/article_1943.html
 22. L. Man, normal. (1365). *Principles of Psychology*. (Translated by Mahmoud Saatchi). Volume II. Amirkabir Publications. Eighth edition.
 23. Latifi, Amin and Sajjadzadeh, Hassan (2014) Evaluating the effect of environmental quality components on behavioral patterns in urban parks; Case study: Hamedan People's Park. *Journal of Urban Management* No. 11.
https://urbstudies.uok.ac.ir/article_9563.html
 24. Lefebvre, H. (2009). State, space, world. In Brenner, N. & Elden, S. (eds.) *Terror and the State of Territory*. Minneapolis: University of Minnesota Press.
 25. Lubisi, Thembisile Phenina. (2021). The question of community participation in informal settlements upgrade projects. A case of Diepsloot. A project report in partial fulfillment of requirements for the degree of masters in sustainable urban planning and development the faculty of engineering and the built environment department of town and regional planning.
 26. Matlabi, Qasim. (1380). *Psychology of a new knowledge environment in the service of architecture and urban design*. Fine Arts Quarterly, No. 10.
<https://www.sid.ir/fa/journal/ViewPaper.aspx?id=33314>
 27. Najafi Tavana, Ali. (1393). *Criminology*. Tehran: Sanjesh va Danesh Publications. Eleventh edition.
 28. Nnadi, Nmere Obasi. Anetoh, John Chidume & Anetoh, Vivian Chioma, *International Journal of Marketing and Communication Studies* Vol 5. No.
<https://www.iiardpub.org>
 29. Pakzad, Jahanshah. (1391). *Alphabet of environmental psychology for designers*. First edition, Armanshahr Publications.
 30. Poorahmad, Ahmad. Rahnamaei, Mohammad Taghi and Kalantari, Mohsen (2003). Geographical study of crimes in Tehran. *Journal of Geographical Research*, No. 44.
<https://www.sid.ir/fa/journal/ViewPaper.aspx?id=4038>
 31. Sabeti, Ali. (1396). Analysis of the performance of urban furniture in creating patterns of citizenship behavior; Case study: Shirazi axis of Mashhad. Bachelor Thesis in Urban Planning. Binalood Higher Education Institute.
 32. Safiri, Khadijeh. (1387). The role of neighborhood NGOs in providing social security. *Journal of Studies*.
 33. Sarkardei, A., Rohani Chitgar, A., & Shadi, F. (2020). The effect of physical design of the residential town on promoting the social behavior of citizens: A case study of Mehr Housing Plan of Mehregan District in Mashhad. *Architecture*, 3(16).
<https://www.sid.ir/fa/journal/ViewPaper.aspx?id=568669>
 34. Shaari Nejad, Ali Akbar. (1992). *An Introduction to Human Psychology*. Azadeh Publications. First Edition.
 35. *Statistical yearbook of Mashhad Municipality*. 1395. Mashhad, Iran.
 36. Zakrani, Amir. (1394). Urban pergola design with the aim of changing the patterns of street crossing behavior. Master Thesis in Industrial Design. Art university. Faculty of Applied Arts.