

Analysis of Safety of Urban Public Environments According to Land use Planning (Case Study: Zabol City, Iran)

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Abstract

Security is a natural right to humanity and a basis for enjoying other fundamental human rights and freedoms. Security is understood as the fundamental condition of human life around the world and most of the international instruments and fundamental laws of the nations, and has always been emphasized, and has fundamental implications for human life. Today, attention to the concept of citizen security and its promotion methods has become one of the main priorities of urban theorists. Apart from the social and cultural impacts of planning and designing urban safe environments on the patterns of citizenship behavior and improving the environmental quality of the residential areas, explaining the features and effects of the city's structural role on reducing urban crime or reducing the crime, is an independent and important subject that mentioned in some of modern urban planning theories. In this regard, the purpose of this study is Analysis of safety of urban public environments according to land use planning in Zabol city, Iran. The results of prioritizing the main indices of the security of public spaces in Zabol city with emphasis on the principles of land use by using the AHP model indicate that: the index of reduction of the natural potentials of criminality in urban areas with a score of (0.291) was ranked first and the transparency index and exposure to public spaces with a score (0.142) is in the final rank.

Key words: Security, City, Land use planning, Public spaces, Zabol city

INTRODUCTION

Today the urban population of the world is increasing and this increasing and uncontrollable growth involved the urban residents with many problems and have caused crimes and social deviance. attention to these factors can have a significant impact on crime prevention policies and it is this time that the sciences of urban planning is purposed as a science that guide the way of urban growth and organizing the physical environments, social, economic and etc and is purposed for improving the life condition and decreasing the social deviance and finally for welfare of society.

By the formation of human society and cities, the number of crimes has been growing and the larger the scope of the societies, the larger the number of crimes and it is undeniable and essential to combat it and planning on the prevention of crime. Science of Criminology believes» Suppression of crime through the accepted criminal justice system cannot leads to peace, tranquility and safety alone, but there is a need for preventive policies». If one of the components of this process is not doing their job properly, the entire system will face to difficulty; this will be a good reason for growth of disorders and crimes that delinquents and criminals follow their own evil purposes by using the gap created and opportunism. So, the concept of crime control, more precisely, is the total ways that human use to prevent or limit the crimes. Essentially, security in a society requires cooperation and coordination between all the organs that can affect national or social security to the extent of their measures. Security category is as old as human history. The reason of government existence is security creation that forms its main goal, due to the

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rapid development of communities in the social, political, cultural, economic and scientific, for meeting the demands of social life of people, modern methods for the realization of public order and security have been created.

Today the urban spaces are components of the occurrence of urban anomalies and as a result of the lack of security in the city. Investigating of the qualitative and quantitative aspects of security, both physically and socially, are essential in each of the urban spaces. The pivotal importance of safety and security in each of the urban spaces and elements, especially in areas of inappropriate design and application, should be examined, this should be rooted in the indigenous and ethnic culture of each region and place and appropriate solutions should be provided.

Research Purposes

- Create a lively environment in urban public spaces.
- Reduce the amount of crime and offenses and, as a result, create a sense of local and psychological safety in public spaces.

THE HISTORY OF THE RESEARCH

Haidari and et al (2011) have studied crime prevention through environmental design and resulted that with a balanced distribution of different land uses in the city, on the one hand, could increase social control in the quiet regions of city and, on the other hand reduce the high population density and activities in dense urban sections and thus can prevent the occurrence of crime.

Ahmadi and et al (2011) have studied environmental prevention from urban crimes and resulted environmental theories (the circuit) and psychological is relationship between the personality and the situation in the commission of more of crimes. This is a descriptive study and statistical studies aren't done.

Kalantari and et al in another study in 2010, using geographic information system (GIS) have studied the impact of land use in the formation of associations of mass crime, trafficking and drug abuse in Qazvin that their findings indicate the formation of these associations in regions of Hadiabad, Navab and Omri Mahla.

Taghavi and et al in a research titled «Analysis of the relationship between the components of land use and reduce crime and urban insecurity in 2010» have studied impact of application on security and resulted that sense of security among citizens in public spaces is more from those areas that are empty or are less public.

In the comprehensive plan, Zhao Zha Zhyn in 2005 has examined all aspects of the city and, the key point in this research is the streets role of central part of city and the proper design of the building in creating security.

Robertson and Johnson in 2001 in another research give the possibility to the police and the community that by Using GIS (Geographical Information System) identify the chaotic streets and then act upon them

THEORETICAL FUNDAMENTALS

City

Although still in the Third World people live in rural areas, but city was the center of the many developments that have occurred in colonial period and especially after it (Smith, 2000). According to ecology, the existence of cities belongs to the second food production. In this period of time rich cities are growing in number in rich areas. Urban communities are growth and more facilitate. So production is increased in the cities. Transactions occur between the cities, life is more extensive and comfort coupled with the vast social network. Then the man went into the field of urban communities and creates new areas of a Word. Devices may be replaced by a machine instead of simple tools and period of machinery in production begins. Cities become a closed Center and habitats of community elders and social organizations are transmitted to the cities from the villages. City Especially big city is an unquiet community that large groups gathered in mass, and because of a variety of complex social organizations, especially official organizations they are cooperating together. City dwellers usually have an official or private relation with each other. Among city dwellers, there are fundamental differences in terms of jobs and expertise. Despite cities have in common about qualities but they are not all of one type, many cities by the time spent, have been named in terms of certain specialties. So cities can be divided into different groups such as trade center city, industrial city, cultural city, realigned city, political city, cultural city, sportive city and so on (Romory, 2008, 9).

Security

The human need for mental and physical security is also one of the basic needs in relation to the space that has a different dimension.

1. The visibility of space, readability and clarity of space is provided by existing the various activities and planned events to increase and sustain presentation of the people in space.
2. Possibility of environmental perception and accessing with appropriate lighting, Open sight lines, eliminating the insecure areas and symptoms that help to

3. Imagine a place and aesthetic values, mark the location and qualities that will prevent them from straying into space.
4. Control location by using various forms of mechanical (camera, Gate and etc), Natural (Definition of space and territory), Organizational (police, guard and etc), (Avila, Montero, 2006).

Public Space

The public space can be defined as this: The public space consists of parts of the natural and artificial environment that the general public easily accesses, including streets, squares, and other paths that others have the right to pass through. Residential, commercial and neighborhood neighborhoods with open spaces and public parks and public spaces open to the public at least some times during the day. Rahnamayi and Ashrafi in an article as the public spaces of the city and its role in the formation of civil society by this point of view that urban planning considers the public space as a space where the general public from any age group, race, and class can enter to them and attend without any limitations (Rahnamayi and Ashrafi, 2010:11). Madenipour says about the separation of urban spaces: the separation of the living environment into private and public areas is one of the key components of how we organize our community. This division has been visible from the oldest settlements to the existing metropolis, a division that reflects and shapes social communication. This division is not merely antithetical, but it covers a wide range of areas, from the most private to the most general areas of society and urban space (Madenipour, 2008: 220).

AREA OF STUDY

Zabol is located the geographical coordinates 31 degrees' north latitude and 61 degrees and 2 minutes and 39 minutes east. The extent of Zabol is 2084 hectares, which is equal to 0.13 percent of the area encompasses the city. Zabol

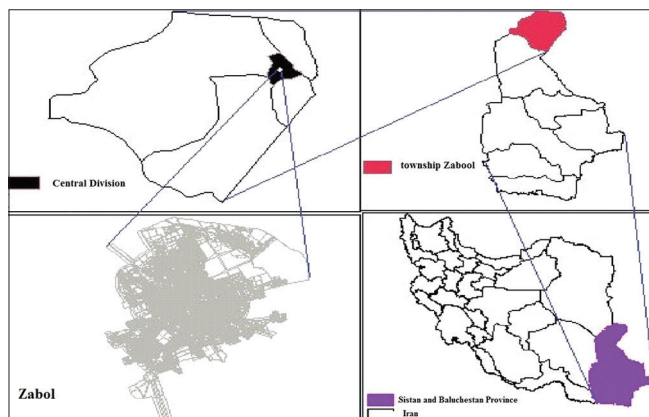


Figure 1: Position in the region, Sistan-Baluchistan province

in term of land distance is 210 km from Zahedan city in southeastern, 1538 km north of Tehran, 366 km North West of Birjand and 834 km from Mashhad and thus be associated with the centers of neighboring provinces and other parts.

RESEARCH METHOD

The research method is descriptive – analytic and is based on documentary librarian and field studies. Model AHP are used for analyzing the findings.

DISCUSSION AND CONCLUSION

Prioritizing The Main Indices of the Security of Public Spaces in Zabol city, Emphasizing the Principles of Land use Using the AHP Model

First, the problems of converting a hierarchical structure that includes a three-level hierarchy of objectives, criteria, and be choices are.

Comparison matrix to determine the binary parameters (A = aij) question are results and their importance and expertise of specialists in this field is used.

Matrix pair (two for binary) index is obtained as follows:

It is to fill this matrix; scale of 1 to 9 is used to determine the relative importance of each element relative to other elements.

After forming the matrix of paired comparisons and values should be the norm. For this purpose, the value of each

Table 1: Indicators studied

Criterion	Options
A	Quality of life and its recognition
B	People's passion for reporting and dealing with violations and crimes
C	Transparency and exposure to public spaces
D	General monitoring in public space
E	Safety-enhancing for children and women in public spaces
F	Reduction of the natural potentials of criminality in urban areas

Table 2: Matrix A couple of indicators

Criterion	A	B	C	D	E	F
A	1	2	3	4	3	4
B	3	1	1.6	1.7	1.6	1.5
C	1.4	2	1	1.3	3	2
D	1.5	4	2	1	1.4	1.5
E	1.6	3	1.2	4	1	2
F	1.5	5	1.2	3	2	1
Σ	10	17	10	16	12	12

Table 3: 9 Saaty scale quantitative comparison of binary options

Intensity of importance	1	3	5	7	9	2-4-6-8
Definitaion	Equal impotence	Weak importance of one over another	Essential of strong impotence	Demonstrated importance	Absoloute importance	Intermediate values

Table 4: Paired comparison matrix normalized relative indicators and weights

Criterion	A	B	C	D	E	F
A	0.1	0.117	0.3	0.25	0.25	0.333
B	0.3	0.058	0.16	0.106	0.133	0.125
C	0.14	0.117	0.1	0.081	0.25	0.166
D	0.15	0.235	0.2	0.62	0.116	0.125
E	0.16	0.176	0.12	0.25	0.833	0.166
F	0.15	0.294	0.12	0.187	0.166	0.833

Table 5: Inconsistency rate (IR)

N	1	2	3	4	5	6	7	8	9	10
I..R	0	0	0/58	0/9	1/12	1/24	1/32	1.41	1.45	1.45

Table 5: Prioritizing the Indices

Criterion	Options	Weight	Rank
A	Quality of life and its recognition	0.225	4
B	People's passion for reporting and dealing with violations and crimes	0.147	5
C	Transparency and exposure to public spaces	0.142	6
D	General monitoring in public space	0.241	3
E	Safety-enhancing for children and women in public spaces	0.284	2
F	Reduction of the natural potentials of criminality in urban areas	0.291	1

column of the matrix corresponding to the sum will be divided The logical consistency of judgments

Now the same steps for all choices of (a, b, c) we do. This step must be calculated to determine whether the inconsistency rate between paired comparisons we are compatible or not. Here are just a couple of inconsistency rate for comparisons of account we choices of similar operations to be performed on every indicator. Inconsistency rate can be obtained from the following relationship be:

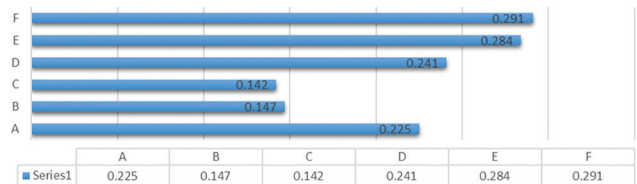
$$I..R. = \frac{I..I.}{I..I..R.}$$

Inconsistency rate (IR): the table below is extracted:

So the inconsistency rate calculations in the present study, 0.06 is. Since 0.06 smaller than 0/1, then the paired comparisons, there is a remarkable consistency All calculations of the eigenvector (eigenvector) is carried out. In the questionnaire, and explain briefly introduce the measure

compiled and presented in Table values for comparison of paired preference, paired- comparison was requested to be completed. The sample questionnaire, and program managers are urban planners. After collection, analysis and verification questionnaire, the following results were obtained:

A (L: 0.225) B (L: 0.147) C (L: 0.142) D (L: 0.241) E (L: 0.284) F (L: 0.291)



Inconsistency = 0.06

With 0 missing judgment

Figure (2): Results of hierarchical analysis using expert choice software, Source: research findings

The results of prioritizing the main indices of the security of public spaces in Zabol city, emphasizing the principles of land use using the AHP model, indicate that:

- The index of reduction of the natural potentials of criminality in urban areas with a score of 0.291 was ranked first.
- The safety-enhancing index for children and women in public spaces with a score of 0.284 was in second place.
- The general monitoring index in public space with a score of 0.241 was in the third place.
- The Quality of Life Index and its recognition with a score (0.225) ranked fourth
- The index of peoples passion for reporting and dealing with violations and crimes with a score (0.147) is in fifth place.
- The transparency index and exposure to public spaces with a score of 0.142 was in the sixth place.

CONCLUSION

The growth of cities and metropolises, as well as the spread of suburban districts around modern cities, and consequently the expansion of human populations and changing the small and medium-sized cities into large and densely populated cities, lead to the expansion of public spaces inside the cities and around

these demographic locations. The safety criterion in urban public spaces has a significant role in the reliability of citizens. Finally, it should be said that today, attention has been paid to the concept of citizen security and its promotion methods in border cities, especially Zabol city, as one of the main priorities of urban managers. In Zabol city urban planning processes are less focused on the potential of urban areas and buildings in reducing or preventing crimes. Therefore, the emphasis on efficient and optimal design of artificial environment in reducing urban crime can improve the quality of life and increase citizenship satisfaction in this border town.

SUGGESTIONS

- Increased motivation to participate in neighborhood affairs in order to provide security.
- Improve spatial planning at Zabol city areas through efficient use of urban spaces.
- Use landscape design to guide people in safe paths.
- No full and windowed walls beside the street.

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