SENSE OF SECURITY IN AN URBAN-VILLAGE STREET AS A PUBLIC SPACE

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This thesis is dedicated to my father, “Mr. Seyed Hasan Hosseinian” who taught me the meaning of life and supported me all the way since the beginning of my life, And my mother, “Marzieh Torbati” for her endless love, support and encouragement. This thesis is also dedicated to my lovely sister “Nazanin” who never say “No” for her sister and without them life is meaningless for me. Finally, this thesis is dedicated to all those who believe in the richness of learning.
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ABSTRACT

Most cities in the process of rapid development in recent decades have faced with a dramatic horizontal expansion. This will influence the villages which are located in the territorial areas of the cities. In this way some villages inhale in the cities without any alteration in their fabrics. On this score, some problems appear in urban-village fabrics where one the categories are form and function that will affect the liveability of neighbourhoods. Consequently, as a mismatch between form and function, people’s preferences in neighbourhood will decrease their desire to be present in public spaces. This will lead us to have an unsuccessful public space in an urban context. This research intends to upgrade the neighbourhood liveability by the study of sense of security which is considered as one of the liveability indicators. It is believed that improving physical and functional aspects of public spaces can extol social altitudes through increasing sense of security in urban-villages. Therefore, this research will examine the physical and functional variables in sense of security and to understand their effect on people’s presence. The research method is based on a qualitative and quantitative framework. Abkooh neighbourhood which is the remains of a previous village in Mashhad Iran has been chosen as the case study area. A descriptive study has carried out through analyses the data by a combination of content analysis as well as inferential statistics. A questionnaire was designed comprising of open and four scale questions. The social interaction is considered as dependent variable and the physical and functional aspects of security perception are regarded as independent variables. It has been termed that the most relevant variables in the context of sense of security are the projection and recession, street width and lighting under the category of visual field and the people’s presence, movement pattern, proximity to the street intersections, commerce and public facilities under the category of visual control.

Keywords: Public Spaces, Social Interaction, Sense of Security, Security Perception
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CHAPTER 1

INTRODUCTION

1.1 Background of Study

Most cities in the process of rapid development in recent decades have faced a dramatic horizontal expansion. This has an influence on the villages which are located in the territorial areas of the cities. Some villages have been integrated with the cities without any alteration in their fabrics. Gradually, these villages become part of urban areas which could be called the urban-village settlements that still preserve a physical characteristic as a village. Besides, current modernization in urban areas can affect on social economic aspects of urban-villages. This event has become a common problem in most cities when they undergo the rapid growth, either in economics, social or physical aspect so far.

Whereas, rural communities are different to urban communities and each of these two societies have their own specific cultures and social interactions. Thus, maintaining the organization of urban community must be compatible with new people. However, in some cases people could not conform to the social norms and social adjustments, because, the sociability flow does not always attend with social acceptance and welcoming community (Ariyanpoor, 1999). Furthermore, social interactions in
traditional societies and the communities are still going on and people know and trust each other based on long term familiarity of friends or stable family relationships. Anyway nowadays, due to certain conditions, in large urban communities, there is no opportunity for people to know each other. They establish relationships in the workplace instead of home and living environment. They have different jobs and social statuses which reinforce alienation and loneliness; consequently, cause to separation among different classes of society will be increased (Asadi, 2003)

Therefore, many cities are now concerning with interactions between human and their surroundings. In addition by increasing problems of congestion, monotonous new development in cities as a whole threats to decline in the quantity and quality of public spaces. On this score, some problems appear in urban-village fabrics which are categorized as form and function that will affect the liveability of neighbourhoods. On the other hand, lack of understanding people preferences in public space restricts their well presence to create a better urban place (Southworth, 2007). Ultimately, a mismatch between form and function of environment and peoples’ preferences in neighbourhood will decrease their desire to be present in public spaces. This will lead us to have an unsuccessful public space in an urban context.

This research intends to upgrade the neighbourhood liveability, by studying sense of security which is considered as one of the liveability indicators. It is believed that, improving physical and functional aspects of public spaces can heighten social altitudes through increasing sense of security in urban-villages. Therefore, this research will examine the physical and functional variables in order to understand sense of security and their effects on peoples’ presence.
1.2 Statement of Problem

Some urban-villages still remain with the previous rural structure and act as a neighbourhood inside cities. Their fabric also stayed behind with narrow accessibility network, improper permeability, blind alleys and compact texture (Etesamipour, 2005). As a consequence, the urban villages fabric provide context for some other problems, generally due to inadequate facilities, poor condition of the existing ones, poor housing conditions, physical congestion, lack of infrastructure, high incidence of poverty, unemployment, crimes, drug abuse, secret societies and other social problems still exist in urban villages (Asmah, 1977).

All those inadequacies can influence quality of life in the neighbourhood but the most important one in this case is sense of security and safety as the quality of life indicators. Because for places to be well used and well loved, they must be safe and secure, comfortable, varied and attractive (Detr, 2000). Therefore, improving sense of security and safety make high quality street design, can extol livability through good people’s presence and social interactions in urban-village public space.

1.3 Research Gap

Among the literatures available on public spaces, only some of them consider public spaces in neighborhoods. These literatures emphasize on physical aspects rather than to recognize the people need of space, particularly the resident of neighborhood as well as other potential users are less addressed. According to studies that have been done, it seems no research has been undertaken on public spaces in urban-village neighborhood. Besides, in terms of public spaces on that particular area no studies have been conducted based on sense of security of urban-village settlements.
This study examines the influence of physical and functional factors on sense of security in urban-village public spaces. Therefore, it is hoped that it will reach the high quality design of safe and secure streets which can respond to the people’s preferences in public spaces.

1.4 Purpose and Objectives

The purpose of the study is to understand and identify how the form and function of urban public spaces will affect the people’s sense of security. Therefore, this study will be carried out based on the following objectives:

- To define the principles of urban design that can influence safety and security of the study area.
- To identify the physical and functional aspects that affect on the sense of security in that particular area
- To determine the variable that create the different perception of street safety due to the type of gender whether male or female
- To determine the variable that create the different perception of street safety due to the respondent’s statues whether the residents or the transit persons
1.5 Research Question

- What are the principles of urban design which can affect sense of security and street safety?
- Which one of the physical and functional aspects is significantly related with sense of security and has more influensive on that concept?
- Which one of the variables in sense of security cause to create different perception between male and female from the street safety?
- Which one of the variables in sense of security cause to create different perception among the resident and transit persons from the street safety?

1.6 Methodology of Research

As the purpose of the research is more exploratory, a quantitative approach has been adopted to answer the research questions. There is an observational techniques and scripted interview used to obtain the data. The study area contains a part of Mashhad city as the second capital city of Iran. The study area is Abkooh urban-village neighborhood which is located inside the urban fabric of Mashhad. It can be an appropriate place for studying the sense of security because the public spaces in this area have the physical and functional features which determine the insecure feeling in the spaces.

Furthermore the aim of this analysis is to determine the relationship between physical and functional feature of public spaces with the street’s sense of security. This study analyzes the data through the Correlational method which is under the category of inferential statistics. Correlation is used as the statistical methods in this study to
measure and describe a relationship between the variables. The scale of measurement for variables in this study is both nominal and ordinal and the data analysis method must support this type of data. Through the different category of correlation method, researcher has used Chi-Square for analyzing nominal data and Spearman Correlation for ordinal data. In this study sense of security are considered as dependent variables and physical and functional features of public space are regarded as independent variables. Therefore, the research method is based on quantitative frameworks which were adopted to answer the research questions.

1.7 Limitation and Delimitation

This study focuses on sense of security and peoples’ preference in order to influence good presence in the public space in urban-village district of Mashad. In this way, limitation of this revision is related to the characteristic of the study area which has some specific conditions in the context. The residences of this area have strong cognition relationship with each other and they can recognize strangers immediately in their neighborhood that behave in different ways. So, the sample size that will be used in this study is small due to this limitation. Furthermore, the observation will be frequently done during the day time hours because maybe at nights there maybe some difficulties such as insecurity for participants to come to the street. Although, many features of public spaces can affect the sense of security still this research focuses on the physical and functional aspects because of the time limitation.
1.8 **Significance of Study**

Public spaces can be considered as ostensibly neutral ground which is open to all (Holland, 2007). Although urban squares and streets are very popular in terms of public use, but, the recent studies of neighborhood design shows much more activities occurred in the streets and sidewalks in neighborhoods, because most of the people use open spaces that are close to home (Harrison, 1983). Also, these open spaces in neighborhoods have an important role in creating residents’ sense of neighboring (Fleming et al., 1985).

On the other hand, understanding the social interaction between people within public spaces may be a starting point to perceive community needs and wants. Social interactions in public space are influenced by many factors; furthermore, the way spaces are understood and used may also depends on human characteristics (Holland, 2007). Social characteristics of neighborhood spaces encourage you to move through and feel instinctively at ease because it is a familiar or well known space, thus, neighborhood space is a mixture of physical and social space (Fisher, 1984). Those explanations determined Social interaction in public spaces were influenced by many factors (Holland, Clark, 2007) but physical and functional features have been determined as efficient design elements in outdoor spaces for encouraging social contacts (Gehl, 1986; Carr et al., 1992). So, these aspects of public spaces will affect social interaction and peoples’ presence among the residents in environmental design (Huang 2005).

Although, the use of neighborhood space depends on many factors (Hester, 1975) but lack of quality in urban public spaces cannot meet the increasing demands of every stratum of the people (Baftshahr, 2001), whereas, well presenting in the spaces create conditions for safety and liveliness as a significant approach in the cities (Zekavat, 2005). Furthermore, safety is precondition for the economic and social well-being of an area (Chris, 1995). But nowadays, personal safety and security continue to be issues of public concern. If public spaces seem to be unsafe and insecure, fewer peoples will
utilize the space. However, if those particular spaces are given the impression to be safe and secure, then the people will be present in such spaces and use them (Chris, 1995). Hence, the public space associated with safety and the presence of the other people could reduce the degree of vulnerability (Gilroy, 1995).

Therefore, street safety and security have been a topic of interest through the improvement of the physical and functional feature of public spaces. Such improvements create better implement of sense of security and livability to the neighborhood. The present study hopes to expand the approach of understanding in urban-village public spaces. In addition, the result of the study can be applied to similar public spaces.


- Butt, M. (July 2007). "Addressing crime, safety and social disorder " community and neighbourhood services social research unit


- Department, O. P. (2010). "Crime Prevention through Environmental Design (CPTED) Security Handbook". Department of sustainability and development, Neighborhood Services Division, Oakland, CA 94612


- Fajr Tosee Consultant. (2006). “The principle of urban design”. Iran


- Foster. S, B. G.-C., School of Population Health, University of Western Australia (OCT 2006). "Perceptions of crime-related safety in suburban neighbourhoods: exploring new and existing measures to examine the influence of perceived safety on walking ". The 7th international conference on walking and liveable communities, october 23-25 2006, melbourne, Australia


- "Gender migration and intercultural interaction in south-east Europe", from www.gwmic.eu.


- Hiller, P. B., Sahbaz. O. (March 2008). "An evidence based approach to crime and urban design or, can we have vitality, sustainability and security all at once?"


- Koskela, H& Pain, R. (1999). “Revisiting fear and place: women's fear of attack and the built environment”. University of Northumbria at Newcastle, Lipman Building, Newcastle upon Tyne NE1 8ST, UK; revised 1999

- Lawrence, C. E., NCSN. (October 2006). "National Community Safety Network Community Safety The English Experience."


- Pakzad, J. (2007). “an introduction to urban design in Iran”


- Police, V. (September 2001). "Neighborhood safety watch closed circuit tv - a safer community option for the downtown eastside, strathcona, chinatown and gastown area, discussion document."


- Southworth, M. (2007).” berkeley.it forme nella citta / spazi nella metropoli urban forms and metropolitan spaces”.Roma, 2-3 April 2007 Università degli Studi di Roma Sapienza, Facoltà di Ingegneria


