

Evaluation of Quantitative and Qualitative Indicators in Informal Housing of Slums (Case Study: Shahid Ghorbani Neighborhood in Mashhad Metropolis, Iran)

Dr. Farzaneh Razzaghian

Academic staff of Iranian Academic
Center for Education Culture & Research (ACECR)
Khorasan Razavi Branch, PhD on Geography and Urban Planning

Simin Foroghzadeh

Academic staff of Iranian Academic
Center for Education Culture & Research (ACECR)
Khorasan Razavi Branch, Master on Pure Sociology

Sahar Soltani

Academic staff of Iranian Academic
Center for Education Culture & Research (ACECR),
Khorasan Razavi Branch, Master on Economic Development and Planning

Dr. Javad Barati

Academic staff of Iranian Academic
Center for Education Culture & Research (ACECR),
Khorasan Razavi Branch, PhD on Economic Development and Planning

Abstract

This study investigated the causes of informal settlements and attitudes related to the pathology of Shahid Ghorbani neighborhood in District 4 of Mashhad. About 11.8 percent of total area and 31.46% of population of Mashhad city belong to the Informal settlements and 12 percent of them is in District 4 where Shahid Ghorbani neighborhood have more than half of it. The aim of this study is to understand the conditions and characteristics of informal housing. Then finding out the potential of informal settlements through the provision of housing as the most basic needs of human societies and reducing physical damage. This research by using descriptive and field study of 300 questionnaires in case study area shows Shahid Ghorbani neighborhood housing situation. The indicators are divided into two groups of quantitative and qualitative indicators and a total of 11 indicators have been investigated. Finally, using SWOT model housing assessed in the neighborhood.

Keywords: Informal Settlement, Housing Indicators, Shahid Ghorbani Neighborhood, Mashhad.

1. Introduction

According to the UN, informal settlements are introduced as the main challenge of the third millennium (**Ababsa, et.al, 2012**). The speed of urbanization in developing countries such as Iran, is more than the developed countries (**Amkachi, 2003**). This rapid growth, has followed by many problems for these countries (**Rostam Zadeh, 2012**). This phenomenon is influenced not only within informal settlements, but in some cases a region from the '1990s and later (**Iran Doost, 2012**).

The remarkable thing is that poverty raises the inability to housing in the official market and the formation of informal settlements. And the existence of these settlements as proof of the existence of poverty (**Poor Mohamadi, 2000**). Mashhad as the second largest metropolis in Iran is taken into consideration along with renovation of social and economic structures of the 1950s onwards, by immigrants and the outbreak of war increase the immigration from early 1980 and makes it the second metropolis of the country after Tehran (**Hatami Nejad, 2003**). This increase in population has led to an increase in population of margins. So that from the 1980s about 28 percent of the total population accounted for population of margins and this ratio have not been decrease (**Mirei and et.al, 2012**).

Zone 4 as one of the main areas of marginalized in Mashhad and Shahid Ghorbani region as one of the main marginalized communities, has been considered as the study area in this research.

2. Theoretical Framework of the Research

This paper aims to determine the potential of informal settlements in the provision of housing and reducing the physical damages of areas, by using quantitative and qualitative indicators of housing and compare the Shahid Ghorbani region with Mashhad and the state of housing in Shahid Ghorbani will be determine (Azizi, 2004). The basic hypothesis of research is the probability of lack of favorable conditions in housing indicators in Shahid Ghorbani region in comparison with Mashhad.

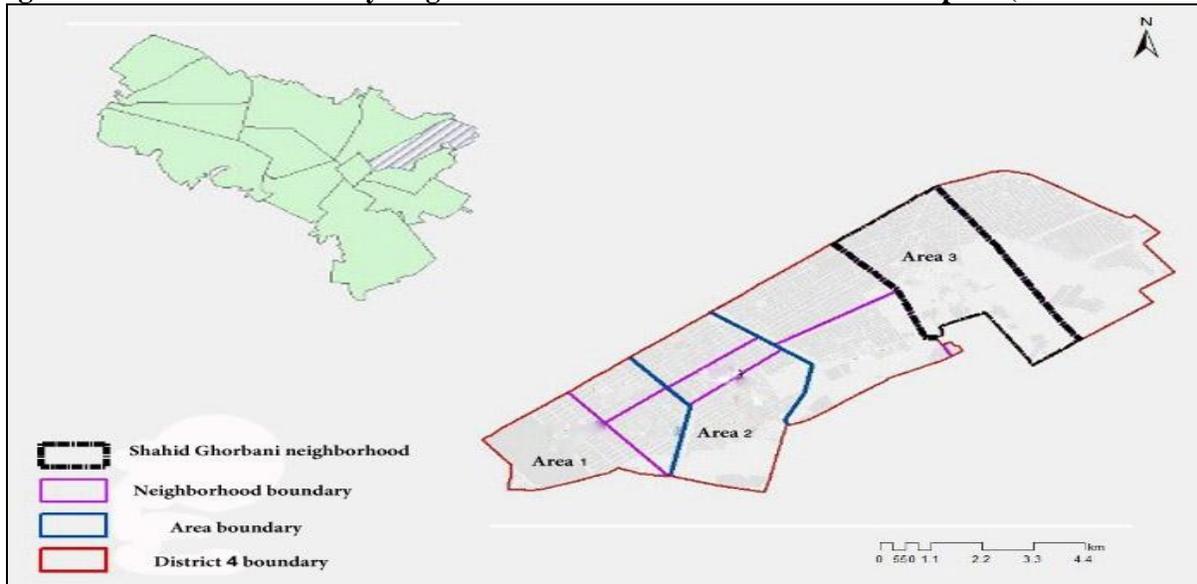
3. Materials and Methods

The research method is analytical and descriptive and comparative study between indicators of housing in informal settlements in Shahid Ghorbani region city of Mashhad. The method of collecting data in this research has been done both documentary and field. 11 qualitative and quantitative indicators will be reviewed in two categories. The sample size in this study is 300 questionnaires. Finally, using SWOT model the housing sector has been assess in Shahid Ghorbani region.

3.1. Case study zone

District 4 with an area of 470 hectares of slums is one the high proportion (12%) districts in Mashhad (Mashhad Municipality, 2014). Shahid Ghorbani region is one of the regions of zone 3 in district 4 of Mashhad municipality with 15 years old antiquity (Mashhad Municipality, 2015) and 43831 population and area of 271 hectares (Moosavi Khorghi, 2015). This region is one of the main Marginalized neighborhoods in District 4 of Mashhad municipality (Mashhad Municipality, 2013). Figure 1 shows the case study zone in Mashhad metropolitan.

Figure 1: Position of case study neighborhood in district 4 of Mashhad metropolis (Source: writers)



4. Results and Discussion

Since the indicators have been checked in qualitative and quantitative groups, therefore, we discuss later each of the indicators:

4.1. Quantitative Indicators

In the case of quantitative indicators of housing in Shahid Ghorbani neighborhood in 4th District of Mashhad, it can be concluded that the situation is worse than Mashhad city and Mashhad area, and indicators such as density of person per residential unit (Esmael Poor, 2010), average number of room per family (Khoshfar, 2006) and the average surface area (Marsosi, et.al, 2012) are in more unfavorable situation in comparison with three others of density of family per residential unit (Mabhoot, et.al, 2015), density of person per room (Yousefi, et.al, 2014) and density of room per residential unit (Sargaran Ghavi, 2008) (Table 1).

Table 1: Comparison of quantitative indicators of housing in Shahid Ghorbani neighborhood with Mashhad city and Mashhad area

Quantitative indicators	Shahid Ghorbani neighborhood	Mashhad city	Mashhad area
density of family per residential unit	1.38	1.08	1.09
density of person per residential unit	6.21	4.14	4.19
density of person per room	3.23	1.28	1.31
density of room per residential unit	1.41	3.22	3.19
average number of room per family	1.76	2.96	2.92
average surface area	59.16	98.44	95.33

4.2. Qualitative Indicators

Results of qualitative indicators show that the situation of the age of buildings(Hatami Nejad, et.al, 2006) in the neighborhood is more than Mashhad city and Mashhad area. But having basic services such as electricity, water and gas(Keynia, 2010), are equal to Mashhad city and Mashhad area (Table 2).

Table 2: Comparison of qualitative indicators of housing in Shahid Ghorbani neighborhood with Mashhad city and Mashhad area

Quantitative indicators	Shahid Ghorbani neighborhood	Mashhad city	Mashhad area
Are under 20 years	54.8	72.3	71.1
Durable materials	3.3	36.3	34
Seizing property	44.6	51.5	52.7
Ownership (documentation)	12.6	85	83
having basic services	98.8	98.3	96.2

4.3. Evaluation of housing in Shahid Ghorbani neighborhood using the SWOT model

SWOT model is one of the tools for strategy development. Using this analysis, it is possible to analyze internal and external environments first and to make strategic decisions that balance the strength with environmental opportunities secondly(Ahadian, et.al, 2013).Using this model, we can find many of the capabilities and constraints of a geographic space in different fields.Table3 illustrates SWOT model and evaluate the housing sector in Shahid Ghorbani neighborhood.

Table3: SWOT model

Internal factors	Strengths	<ul style="list-style-type: none"> - The presence of relatively durable materials - Low build density - High level of ownership in the neighborhood - Satisfaction of most people from Shahid Ghorbani neighborhood as their place of residence
	Weaknesses	<ul style="list-style-type: none"> - High density of family per residential unit - High density of persons per residential unit - High density of persons per room - Low density of rooms per residential unit - Low average number of rooms per family - Low average surface area - old age of residential homes - Lack of car parking in residential homes - Lack of desired landscape in neighborhood due to lack of facades
External factors	Opportunities	<ul style="list-style-type: none"> - Access to basic facilities such as sanitation water, electricity, gas and ... - Municipal supervision over neighborhoods construction and forced licensing in recent years - The existence of large scale land around the neighborhood to meet the needs of the residents - Residents' willingness to participate in improving their quality of life
	threats	<ul style="list-style-type: none"> - The ineffectiveness of official housing market against the growing demand of low-income groups - Low security of seizure due to high level of informal ownership - Low level of sanitation services of water waste and environmental pollution - Failure to take construction license

5. Conclusions and Suggestions

Investigations in this study showed that although the situation of qualitative indicators is almost normal in Shahid Ghorbani neighborhood as one of the suburbs of Mashhad. But the quantitative indicators in this neighborhood in comparison with Mashhad city and Mashhad area are under very difficult conditions, so that the hypothesis of the probability of lack of favorable conditions in housing indicators in Shahid Ghorbani region in comparison with Mashhad, is confirmed.

Existing construction in the neighborhood is done illegally without obtaining building permits since the formation of the, but in recent years the population living in the neighborhood have increased and the neighborhood is located in the metropolitan area of Mashhad and obtaining building permits to build new homes has become a legal requirement, but these building permits also aren't able to change the pattern of the form of construction in the neighborhood and new homes are built much like the older houses in maps and the segmentation which don't have permission. On the other hand there is a high level of satisfaction and a sense of belonging among the residents of the neighborhood to 68% that can influences on the participation in improving living conditions.

References

- Ababsa, M., Depret, B., Denis, E. (2012). Popular Housing and Urban Land Tenure in the Middle East, case studies from Egypt, Syria, Jordan, Lebanon and Turkey, The American University in Cairo Press
- Ahadian, A. & Shakerardakani, R. (2013). Strengthening of local management, strategies for the empowering of informal settlements, Case study: Mahmood Abad of Esfahan, Urban Management Journal, No.32
- Amkachi, H. (2003). An analysis of legal and law work in the country's five-year plans of development in the creation of marginalization, Proceedings of marginalization and informal settlements, Volume I, Tehran University of Social Welfare and Rehabilitation Sciences.
- Azizi, M.M. (2004). The index for housing in housing planning process, Journal of Fine Arts, Tehran University, No. 17
- Esmael poor, N. (2010).The status of housing in informal settlements and the strategies of organizing them, Case Study: Hassan Abad Neighborhood, Yazd, Journal of Urban and Regional Studies and Research, First year, No.4.
- Hatami Nejad, H., Seifodini, F. & Mireh, M. (2006). Evaluation of the informal housing indices in Iran, Case study: Sheikh Abad neighborhood of Ghom, Journal of Geographic Research, No. 58.
- Hatami Nejad, H. (2003). Informal settlement in the World, Monthly magazine of municipalities, Fifth year, No. 50, Tehran.
- Iran Doost, K. (2010). Review the experience of empowering of informal settlements, Case study: Kermanshah City, Journal of Geography and development, No, 20.
- Keynia, M. (2010). Principles of Criminology, Tehran University Publisher
- Khoshfar, G.R. (2006). The use of social indicators in housing development, housing and Revolution Monthly magazine, Islamic Revolution Housing Foundation, Tehran, No. 69 & 70.
- Mabhoot, M.R., Haji poor, A., Davari, N. & Frootan Zadeh, M. (2015). Assessment of qualitative and quantitative indicators of housing in informal settlements, Case Study: Ghaleh Sakhteman region of Mashhad, International Conference on new findings in engineering and technology
- Marsosi, N., HatamiNejad, H., Taleshi, M. & Abbasi, H. (2012).The status of informal housing in the cities of Tehran using cluster analysis, Journal of Applied Research in Geographical Sciences, twelfth year, No.26.
- Mashhad Municipality, (2014). Statistical Yearbook of Mashhad, Mashhad Municipality Publications, deputy of planning and development.
- Mashhad Municipality, (2013). deputy of planning and development, Management of Statistics and Data Analysis, Information of population of informal settlements in Mashhad different regions, districts and localities
- Mashhad Municipality, (2015). Deputy of Planning and Architecture, management of urban development, architecture and urban planning rules and regulations collection
- Mirei, M., Hatami Nejad, H. & Khodayi, Z. (2012). Informal Settlement in the World and Iran, ACECR Publisher of Alborz Province.
- Moosavi Khorghi, M. (2015).The report of social development of Shahid Ghorbani neighborhood (Zone 4 District 3), Shahid Ghorbani Neighborhood Social Council
- Poor Mohamadi, M.R. (2000). Housing Planning, Tehran, Samt Publisher.
- Rostam Zadeh, Y. (2012). Organizing and empowering informal settlements in urban areas with the attitude of local residents, Case Study: Tohid Neighborhood, Bandar Abbas, Journal of Urban Management, No. 28
- Yousefi, A., Sadeghi, A., Abdollahi, S. & Charkh Zarin, M. (2014). Urban landscape, the Sixth National Conference of planning and urban management