Residential satisfaction of Low income housing projects (Case study: housing Mehregan settlements)

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Abstract

Housing as a human need is introduced as a complex category and it has diverse dimensions, by entering into the realm of housing planning, it is sure that this kind of planning needs of different segments of society. Over the years, different methods and practices have been trying to meet human needs, but nowadays, the limited resources of the government and rapid increasing of demand for housing does not provide housing for all members of society. Hence, the framework of national development goals, especially the prioritized economic and social goals specifies the housing share of low-income groups. The largest government's plan to provide housing, "Mehr Housing” considers paying attention to the determining role of the land price in housing prices and the action to eliminate this variable, controlling the price of housing in this way, and facilitating access of vulnerable people to suitable housing, but it has ignored a set of key issues. The main objective of this paper is to analyze and determine their causes and impacts on residential satisfaction in the Ghorghi housing projects. This research applies an analytical-descriptive method and data collection tools are documentary and field studies through completion of the questionnaire and interviews. Also, Regression analysis was used. The results show that Ghorghi Mehr Housing has not reached transferring stage yet despite the time and money spent. It has many problems which had been very effective on the audience satisfaction. The results of the survey show that residential satisfaction variables that management actions housing in residential neighborhoods to explain a greater impact on satisfaction.

Keywords: Residential Satisfaction, Regression analysis, Low income, Mehr Housing, Ghorghi.
1. Introduction

Housing is important in human life from different perspectives. Economically, housing is considered as an asset. Socially, housing provides ideal conditions for families to realize their activities. It also leads to family stability and solidarity. Mentally and physically, adequate housing can be a place for relaxation and recuperation and mental and physical fatigues can be in an appropriate home and an individual would be ready for future activities (Ayatollahi, 2006: 27). In terms of cultural and educational, overcrowding in houses has many effects and all people living in these houses affected by external forces caused by overcrowding (Seyfoddin, 1992: 34). The house must be considered as one of the important things in throughout life. In the Constitution of the Islamic Republic of Iran emphasized the need for housing for each person and family. According to the article 31 of the Constitution, having housing tailored to the needs is the right of every Iranian individual and family and the government is obliged to implement this principle to those who are in need, (Ministry of Culture and Islamic Guidance, 1989) so as to solve the housing problem. During the past three decades, low-income housing in our country has always faced with different policies (Office of Planning and Housing Economics, 2010:15).

In the fourth development plan, Prepare a comprehensive housing plan for solving the housing problem was on the agenda of the government. This plan is focused on sustainable development, social justice and empowerment of low-income housing. Housing Master Plan in connection with the transfer of the right of land use, provided some programs in the form of two plans:

Plan A: the transfer of land use rights for the construction of small housing in small and medium cities; The plan’s target groups is households without housing in 3, 4 and 5 deciles who are under Social Security and pension insurance coverage; and transfer the right of land use is intended for the construction of 20 thousand housing units per year for small and medium-sized cities during the five-year plan. Plan B: the transfer of land use rights for the construction of rental housing by cooperatives and public and private employers in big cities (social housing), the target groups for this project are 1 and 2 income deciles with priority given to young families.

Mehr housing actually can be a kind of selective perception of housing master plan in the context of transferring the land use right; In accordance with paragraph "d" of the six clause in the budget law of 2007, construction of 1.5 million housing units was put on the agenda. Accordingly, in this new plan, the government handed over the land without transfer of ownership and these lands entered into the housing production cycle and by transfer of exploitation rights for long-term (99-year) and separate the land price from the finished expense, the government plans to balance the housing market (Rashidenhal et al., 9: 2008). These housing units on land within the city limits, within the scope of the additional land and the land surrounding villages, towns and cities can be considered as new construction sites. However, some problems such as the lack of comprehensive studies conducted before, the same construction and lack of attention to the cultural and climatic conditions, lack of basic infrastructure, improper positioning of its population and its lack of transparency in the form of new towns, causing uncertainty in the future of this plan. However, housing development planning is one of the most important parts of planning and urban design; economic factors, such as cost of living, employment base and unsustainable revenues play an important role in housing planning. Architecture, regional native language, stylistic trends, weather, geography, customs and local traditions and other factors affect the development of planning and design.
of housing in different places (Sendich, 27, 2006: 185) that these cases in the implementation of Mehr housing scheme are rare and residents' satisfaction is reduced. Mehr housing in Mashhad has been done in the new cities of Golbahar, Binaloud and Ghorghi detached area (the research sample) and the submission phase has not yet carried out and suffers from several problems. Preparation of 180-acre lands is executed outside the privacy of Mashhad in order to accommodate a large population and housing projects. 30,000 people in the city will be the owner of housing through Mehr housing. The purpose of this study was to determine the effectiveness of the consent of the residential units, residential, neighborhood and housing management practices in the residential neighborhood satisfaction in Ghorghi detached area from the perspective of residents and answer the question that which is more influential on residential satisfaction in Mehr housing. In this regard, in the first step, the research methodology and framework to identify the basic concepts of residential satisfaction are reviewed.

2. Research Methodology
Methods in this paper are descriptive-analytic and its nature is for urban management in Ghorghi detached area (Mehregan settlement) and housing authorities. Library method was used for data collection and the data collection tool information in this field was completing the questionnaire and interviews with applicants and residents of Mehr housing in this area. In this study, regression analysis method was used to determine the impact of variables on residential satisfaction in planning of Mehr Housing at the unit level, complex and residential quarters and administrative measures And analysis were performed by SPSS software. In other words, low-income housing planning can only be used in order to enhance quality and residential satisfaction, when all these dimensions be simultaneously considered. Therefore, in this study, with theoretical and experimental study of records related to the satisfaction of the settlement, seven dimensions at the level of unit, complex, neighborhood and management measures; the effective dimensions on residential satisfaction in housing planning are considered; these dimension should have the potential to be improved. In the table below, the factors associated with each of the aforementioned aspects the relevant studies and research were presented:

<table>
<thead>
<tr>
<th>Related studies</th>
<th>Criteria and Indicators</th>
<th>Component</th>
<th>Levels of planning</th>
<th>No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Galster &amp; Hesser 1981</td>
<td>- Type of housing</td>
<td>Physical</td>
<td>Unit, complex and residential neighborhood</td>
<td>7</td>
</tr>
<tr>
<td></td>
<td>- Size of housing</td>
<td></td>
<td></td>
<td>8</td>
</tr>
<tr>
<td>Miller 1980</td>
<td>- Safety issues of housing</td>
<td></td>
<td></td>
<td>9</td>
</tr>
<tr>
<td>Mohit 1980</td>
<td>- number and size of rooms</td>
<td></td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Hourihan 1984</td>
<td>- View of housing</td>
<td>Aesthetic</td>
<td></td>
<td>11</td>
</tr>
<tr>
<td>Rohe and Stegman 1991</td>
<td>- The aesthetics</td>
<td></td>
<td></td>
<td>12</td>
</tr>
<tr>
<td>Galster &amp; Hesser 1981</td>
<td>- overcrowded in the neighborhood</td>
<td>Density</td>
<td></td>
<td>13</td>
</tr>
</tbody>
</table>

Table 1. Documenting factors and indicators for residential satisfaction in Mehr housing
<table>
<thead>
<tr>
<th>Reference</th>
<th>Topic</th>
<th>Category</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Varad2011</td>
<td>- noise</td>
<td>Pollution</td>
<td>14</td>
</tr>
<tr>
<td>Baiden2011</td>
<td>- smell</td>
<td></td>
<td>15</td>
</tr>
<tr>
<td>Salleh2008</td>
<td>- climate</td>
<td></td>
<td>16</td>
</tr>
</tbody>
</table>
| Campbell1976| - Educational  
- clinical  
- shopping center | Amenities                     | 17   |
| Duncan1971 | - Recreational areas and green spaces     |                               | 18   |
| Turkoglu1997 | - Public transportation              |                               | 19   |
| Enosh1984  | - Suitable sidewalks                      |                               | 20   |
| Mustapha2006| - Water, electricity, gas and telecommunications and drainage system | Infrastructure               | 21   |
| Enosh1984  | - Garbage collector                       |                               | 22   |
| Mustapha2006| - Fire Stations  
- Parking  
- Light and street lighting |                               | 23   |
| Miller1980 | - Facilities for people with disabilities | Facilities                   | 24   |
| Enosh1984  | - Asphalt roads  
- Cleaning runnels             |                               | 25   |
| Lansing & Hendricks1967 | - Relations with neighbors | Community Relations         | 26   |
| Caldieron2011 | - Local social networks           |                               | 27   |
| Mecrea2005 | - movement of villain persons             |                               | 28   |
| Mohit1020  | - Traffic accidents                       |                               | 29   |
| Van poll1997| - The price of land and housing          | Willingness to invest         | 30   |
| John & Clark1984 | - Income                          |                               | 31   |
| Ng2001     | - Confidence in the actions of officials in this category  
- Cooperate with the authorities | Managerial                  | 32   |
|            | economic                                   |                              | 33   |
|            | Management practices                      |                              | 34   |
|            |                                             |                              | 35   |
|            |                                             |                              | 36   |
|            |                                             |                              | 37   |
|            |                                             |                              | 38   |
|            |                                             |                              | 39   |
Then, in the residential satisfaction were extracted components based on external and internal literature review in texts related to low-income housing and scope of study revealed. Components of physical - environmental, service, sociocultural and economic were evaluated based on satisfaction of housing units, buildings, neighborhoods and management. These values were analyzed by SPSS software. For detecting the correlation, residential satisfaction in the housing component of the index at any level, is considered as the independent variable and the satisfaction expressed by the residents as the dependent variable. Figure 1 shows the conceptual model of the present study.

**Diagram 1. Conceptual Model**

Hence, given that the main objective of this study was to evaluate the success of Mehr housing at Ghorgi town (Mehregan settlements); for the statistical population studied in this research, which has a population of over 30,000 people and included 7,500 households. Based on Cochran formula and expert opinions, the sample size obtained in the range of 365 questionnaires and at different times of day. Then we tried to evaluate the consequences of the implementation of Mehr housing in this study, which is based on measurement of residential satisfaction of the residents in this area. And based on descriptive statistics, the satisfaction of Mehr housing has been set with a score very high, high, medium, low and very low. Kolmogorov-Smirnov test results show the acceptability of factors and the shared coefficients greater than 0.6 and correlation more than 0.4 between the obtained factors and factors are amongst the assumptions acceptable in this research. In this study, the content validity technique used for assessing reliability and Cronbach's alpha was used to determine the...
reliability of the questionnaires. The results of reliability for different items indicates that the reliability of the items are optimal and desirable (see Table 2).

Table 2. Results of the questionnaire reliability measures

<table>
<thead>
<tr>
<th>Variables</th>
<th>Cronbach's alpha coefficients</th>
<th>Number of items</th>
</tr>
</thead>
<tbody>
<tr>
<td>Satisfaction with residential units at Ghorghi town (Mehregan settlement)</td>
<td>0.961</td>
<td>11</td>
</tr>
</tbody>
</table>

Source: The author

3. Research history

Saeedi Rezvani and Kazemi (2011), in a study called "endogenous development framework in proportion to critique of current policies to recognize the development of housing (Mehr housing) case study: city of Natanz" concluded that in cities where there is a possibility of infill development, deployment and locating of Mehr Housing structures are formed beyond the city imposes additional costs in providing infrastructure and municipal services to municipal administration.

Poormohamadi and Asadi (2013), in a scientific research named "public housing policy assessments in urban low-income groups (Case Study: Zanjan city)", stated that the government's housing policy has been adopted with a quantitative attitude and it has also influenced on its success rate. This policy had a positive role in reducing the informal settlements, but in the public housing projects, land use patterns and providing needs of residents have not been successful.

Rafieian et al (2014), in an article entitled "Measuring the satisfaction of residents of Mehr housing's residential quality; case study: Zahedan city", examined residential satisfaction with Mehr housing units. The results show that satisfaction with Mehr housing residential environment is low at all levels.

By study the literature, we can see that so far there isn't any research in the field of pathology of low-income groups housing and determining the satisfaction of low-income groups housing in Khorasan Razavi province; so, this is not a recurring theme and this justifies the need to do research in the field of housing.

4. Discussion and Findings

Adopt a decentralized focusing policies in Mashhad approved in 2005 by the Supreme Council for Planning and Architecture of Iran, and the Mashhad Urban Complex Plan approved in 2009 by the Supreme Council, distribution of the population of Mashhad for Horizon 1405 considered in seven areas of performances and strengthening Mashhad and municipal collection was placed solely on providing superior service and been approved that a part of the tasks be gradually transferred to existing towns or settlements located in these seven areas; including the potential development of villages and formation of city, Ghorghi (Mehregan) located at a distance of 10 km north of Mashhad and which is created by combining Hussain Abad Ghorghi villages, Lower Ghorghi, Upper Ghorghi and Siask. The town of Mehregan in the North East of Mashhad and in the privacy of Iran's High Council for urban planning (which has recently been approved), approved and implemented as Area 4 in 3rd District of Mashhad (Figure 1).
While, according to the studies, location of Mehr housing in Mashhad city was predicted on the land owned by the state and covers an area of approximately 180 hectares and the executive measures initiated (land preparation and then delivering to construction companies for the construction of housing units for low-income groups) (Farnahad Consulting Engineers, 2008). Hence, given the significant role and importance of planning for low-income housing in the area, as one of the principles of enforcement actions taken by the government and works on residential satisfaction of residents, the impact of satisfaction of residential units, residential, neighborhood and housing management practices on residential neighborhoods satisfaction in this area were determined in order to plan better in future approaches.

Figure 1. Location of Ghorghi detached area in relation to Mashhad

Source: The author

Therefore, to achieve effective factors on residential satisfaction in the range of Ghorghi detached area (Mehregan settlement), the extracted data from the questionnaires were entered in Excel and then SPSS and then each of the effective variables on residential satisfaction in Mehr housing were evaluated by the following regression analysis:

Table 3 as the first output shows that a regression model and Inter method were used to predict variable changes dependent on residential satisfaction based on four independent variables.

<table>
<thead>
<tr>
<th>Method</th>
<th>The removed variables</th>
<th>The entered variables</th>
<th>Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Inter</td>
<td></td>
<td>In general, how satisfied are you with the actions of Mehr housing in your neighborhood? In general how satisfied are you with the overall condition of</td>
<td>1</td>
</tr>
</tbody>
</table>
your housing units? In general how satisfied are you with the overall condition of your neighborhood? In general, how satisfied are you with the condition of the residential complex?

Source: the author

Table 4 shows the model. The amount of correlation coefficient between variables is equal to 0.815, which indicates that there is a strong correlation between independent variables and the dependent variable (residential satisfaction). But the amount of adjusted coefficient of determination which is equal to 0.663, shows that 6.63 percent of total changes in residential satisfaction among residents are dependent to these 4 four independent variables that were mentioned in this equation. In other words, independent variables predict more than half of the variance in residential satisfaction.

Table 4. Summary of Model

<table>
<thead>
<tr>
<th>Model</th>
<th>Amount of correlation coefficient</th>
<th>Amount of adjusted coefficient of determination</th>
<th>Standard error</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.815</td>
<td>0.663</td>
<td>0.25381</td>
</tr>
</tbody>
</table>

Source: The author

According to Table 5, according to significance test amount F (48.788) at the level of error smaller than 0.01, it can be concluded that the regression model in the present study consists of four independent variables and one dependent variable (residential satisfaction) was a good model and the set of independent variables can explain changes in residential satisfaction.

Table 5. The amount of F test

<table>
<thead>
<tr>
<th>Model</th>
<th>sum of squares</th>
<th>average of squares</th>
<th>F</th>
<th>Level of error</th>
</tr>
</thead>
<tbody>
<tr>
<td>regressio n</td>
<td>12/5728</td>
<td>3/143</td>
<td>48/788</td>
<td>0.000b</td>
</tr>
<tr>
<td>Remaining</td>
<td>6/378</td>
<td>0/064</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>18/949</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: The author

Table 6 indicates the results related to the effect of each variable in the model as well as the correlations between them. In fact, this table is made up of two main parts:

In the first part, the interpretation of regression coefficients be done based on beta coefficient. Because these statistics represent standardized regression coefficient of each independent variable on the dependent variable. So, we can use it to determine the relative contribution of each independent variable in the model.

Table 6. Coefficients of a
In general how satisfied are you with the overall condition of your housing units?
0/115 0/027 0/266 4/259 0/000 0/502 0/394 0/248

In general, how satisfied are you with the condition of the residential complex?
0/139 0/028 0/340 5/064 0/000 0/603 0/454 0/295

In general how satisfied are you with the overall condition of your neighborhood?
0/080 0/026 0/201 3/034 0/003 0/510 0/292 0/177

In general, how satisfied are you with the actions of Mehr housing in your neighborhood?
0/236 0/037 0/392 6/441 0/000 0/567 0/543 0/376

The effect of satisfaction with the actions of Mehr housing in the neighborhood on the residential satisfaction was significant.

The second part of the table shows the result of three types of correlations:

1. Zero-order correlation: this type of correlation is equal to the Pearson correlation coefficient and shows the correlation between the variables without control variable.

2. Split / partial correlation: partial correlation coefficient is a statistical control through which one or more variables can be managed.

3. Half-partial correlation / pseudo-partial correlation: half-partial correlation is a statistical control through which one or more variables can be managed (Sarmad, 2005: 301).
This coefficient shows the correlation between an independent variable and the dependent variable, after excluding the linear effect of other independent variables on the desired independent variable of interest (not the dependent variables) (ibid: 303).

In the correlation, there is plenty of half-partial correlation in the satisfaction with the actions of the Mehr housing in the neighborhood, but it is at a low level in other variables.

The results in the tables above shows that the satisfaction from the actions of Mehr Housing in the neighborhood has the greatest impact on the residential satisfaction.

5. Conclusions
Mehr housing scheme is known as the policy to provide affordable housing for low-income groups in mass scale (one and a half million housing units).

In this policy, the economic dimension is superior to the other aspects of housing. Due to the fact that housing is something higher than a roof over head, attention to other characteristics of housing in order to solve needs of residents and access to residential satisfaction seems necessary. In fact, disregarding the quality of the residential environment and consequently, needs of residents will face the residents in these area with serious crises and failure to achieve the goals.

Accordingly, this study focuses on understanding the capabilities and limitations and determines the residential satisfaction of Mehr housing as the independent variable and the satisfaction expressed by the residents as a dependent variable by using regression analysis and SPSS software.

Thus, in the first step, the correlation coefficient between variables were determined; in the second step, the nonstandard and standard regression coefficient were evaluated and in the third step, the regression coefficient of each independent variable on the dependent variable were studied.

According to the views and opinions of residents in Ghorghi detached area (Mehregan settlement) and by examining Figure 2, residential satisfaction regression analysis in this area shows that the actions of Mehr housing in the neighborhood affect the residential satisfaction more than satisfaction in the unit, residential complex and neighborhood.

Figure 2. The impact of residential satisfaction on unit, residential complex, neighborhood and management practices
Finally, the present study results show that satisfaction with the quality of the urban environment in Mehr housing is evaluated very low, which means that there isn't any full satisfaction from these four levels of analysis.
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