

An Analysis of Individual Resilience of Informal Settlement Residents against Environmental Hazard (Case study: Urmia City)

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Extended abstract

Introduction

The cities in all stages of development are faced with the pressures due to globalization, urbanization, climate change, and resource depletion. Environmental threats (climate change, earthquakes, floods, landslides, etc.), environmental degradation, and resource shortages are just some of the threats that are different in nature and affections. Some of them may cause long-term changes in urban systems (such as lack of resources) and some other can create shock to the city (such as earthquakes, hurricanes, etc.). Hence, the ability to return to normal state in the face of these shocks of urban settlements is different and may have a direct correlation with socio-economic status dwellers. Informal settlements are one of the biggest challenges that the urban sustainable development threatens a global scale. The settlements dependent upon socio-economic situation of residents and their physical characteristics are the most vulnerable cities against the environmental hazards. The urban poor as a most vulnerable group in natural hazards (floods, earthquakes, climate change, etc.) are a new dimension to the challenges and create more difficulties in achieving the millennium development goals.

Therefore, it can be said that in the event of environmental hazards, individual resilience of informal settlements is low. Given that individual resilience is one of the levels of social resilience that affects the mental characteristics of individuals, it can be affected by socio-economic characteristics. Hence, identification of the factors affecting individual resilience in informal settlements can lead to an increase in social resilience. In fact, explaining the resilience of societies against the threats is to understand how social, economic, institutional, political and executive capacities are influenced by the resilience of societies.

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Methodology

The purpose of the study is to analyze the differences in socio-economic indices and individual resiliency on the informal settlements residents in Urmia. This is an applied research by a descriptive and analytical method. We have used documentary and surveying (questionnaire) method to collect data. The study area of the research is Haji Pirlo, Vakilabad and Islamabad as 2 informal settlements of Urmia city, in the West Azarbaijan Province. Therefore, to complete the questionnaire on the basis of revised expenditure using Cochran, 380 households have been selected for the survey to respond questionnaire. To analyze the data, we have also used Analysis Of Variance (ANOVA).

Results and discussion

The purpose of this present research is to analyze the different aspects between the economic and social indicators in the resiliency of households in informal settlements of Urmia. Characteristics of respondents have been presented as following in aspects of gender, 58.3% of the respondents are men and 41.3% are women, in aspect of age, 23.4% are 19-30 years old, 27.1% 31-40 years old, 21.3% 41-50 years old, 28.2% more than 51 years old and in terms of education level, 26.3% of the respondents have diploma, most of the respondents are also illiterate (2.6%). In addition, among respondents in term of marital status, 83.4% are married, 16.1% were single and 0.5% of undeclared, in terms of staying time, 81.3% were residents here less than twenty years, 18.7% more than twenty years. In terms of gender of household, 95.3% were male and 4.7% women.

The result of this study showed that among the economic indicators, the employment index has relationship with the components of "Self-sufficiency" and "Feeling unique" in 0.000 sig and 0.002 sig, respectively. Income index is related with "Self-efficacy" and "self-confidence" components in 0.002 sig and 0.000 sig, respectively. Housing ownership index has also relationship with "positive emotions" component in 0.000 sig. and car ownership index with "sense of sociality" component in 0.001 sig. These have indicated significant differences. Among the socio-demographic indicators, only the education index has relationship with the components of "Self-sufficiency" and "confidence", respectively.

Conclusion

Individual resilience is the primary level of social resilience that has been addressed in recent years in crisis management issues. This aspect of resilience is directly related to the economic, social, cultural, psychological, and social characteristics, beliefs, and so on. These characteristics can enhance or weaken an individual resilience. Therefore, individual resilience can be considered as the pillar of social resilience. Informal settlements in Iran, due to the weakness of physical structures as superstructures and socioeconomic structures as infrastructures, are more vulnerable to the environmental hazards than the formal part of the cities. Socioeconomic characteristics of inhabitants of these settlements, such as unemployment, informal employment, low incomes, lack of social services, etc. can undermine their individual resilience including confidence, anxiety control, problem solving, coordination, positive emotions, self-esteem, etc., against environmental hazards. Thus, this can lead to difficulties in returning to normal state. The results of the research showed that employment, income, housing ownership, automobile ownership and education of individuals with some of the components of individual resilience, such as self-efficacy, feeling of uniqueness, self-efficacy, self-confidence, positive emotions, social feeling and trust is a meaningful difference. This could make the settlement more vulnerable to natural hazards. Therefore, in order to increase the individual's resilience to residents of these settlements, the following suggestions are presented:

- Planning for job empowerment of these settlements as one of the important components to achieve a resilience society, especially in informal settlements.
- Providing basic services such as health insurance and retirement communities.

- Preparing comprehensive crisis management program for informal settlements due to their different structure than the formal sector of the city.
- Training courses and informing the public about environmental hazards and the need to prepare for them.

Keywords: individual resilience, informal settlements, environmental hazard, Hajipirlo, Vakil Abad and Eslam Abad 2.

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