

Developing a framework for community resilience to drought in Isfahan through qualitative research method and ATLAS-ti software

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Extended abstract

Introduction

Over the past few decades, studies on local communities have been increasingly developed. In these studies, there is an emphasis on the role of social interactions between community members and the bottom-up approaches to encourage local communities' participation and identify human agents on community level. Amongst the most recent approaches, there is community resilience. Despite considerable progress in defining community resilience and its attributes, there are several ambiguities in the theorization of this concept. Due to the nature of resilience as a complicated and multi-dimensional concept, which is strongly linked to the cultural context of a society, the investigation of the beliefs, attitudes, and values of stakeholders is essential in its conceptualization. Thus, this study conceptualizes community resilience and develops a framework for resilience assessment through the qualitative analysis of various stakeholders' viewpoints and experiences in regard to the matter. Although, before entering the research field, diverse studies related to this concept were reviewed. After reviewing the literature on community resilience and its conceptualizations, research method is presented.

Materials and Methods

The current literature on community resilience mostly focuses on the reaction of communities to the external risks, pressures, changes, and stresses that threaten their welfare, physical and mental health, and identities. The majority of these studies examine the local and small communities with limited geographical extent, such as neighborhoods or small towns.

Finding appropriate indicators for resilience assessment highly rely on developing an appropriate conceptual model for conducting the research on community resilience. Thus, after reviewing the prior conceptualizations, an initial conceptual model was extracted. However, this diagram is merely a primary model and due to the exploratory nature of the study, it is modifiable, and its components can be eliminated or added during the study process.

Since community resilience is a complex and multi-dimensional phenomenon, which is significantly affected by the stakeholders' attitudes, it can be defined differently in diverse communities. Therefore, it is essential to target the identification of participants' beliefs, attitudes, and values. It is also necessary for the researcher to develop a close relationship with the participants, and he/she has to consider the participants as collaborators. In order to achieve this goal, this study utilized the interpretive paradigm and qualitative research method.

Several in-depth semi-structured interviews were conducted with key stakeholders including local residents, government officials, non-government organizations, consulting firms, university lecturers, and researchers. The residents were recruited via available sampling technique and other participants were recruited via purposive sampling technique based on an initial list that was developed including key stakeholder categories. This was followed by sequential sampling to identify more participants relevant to each stakeholder group on the list. The snowball sampling began with the recommendations of the first group of respondents. Lastly, to be able to include stakeholders outside the social network of the first respondents, all key stakeholders on the initial list were also contacted. Each interview was completely recorded and during interviews notes and memos were written.

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The gathered data were analyzed through qualitative content analysis using ATLAS-ti software. ATLAS-ti was mainly used for accuracy and comfort of data analysis process. There were three main steps in data analyses: (1) the initial coding of interviews' texts, (2) the concepts' categorization and themes' identification, (3) the reduction/ modification of codes and themes to achieve the research model.

Case studies were two local communities in the vicinity of Madies (neighborhood aqua-ducts from Zayandehrood River) in Isfahan, namely Abbasabad and Barazandeh districts.

Discussion of Results

Overall, 32 interviews were conducted from May to September 2018. The average time of each interview was 57 minutes. After initial content analysis, 96 codes were extracted. Following several reviews and modifications, some of these codes were combined and integrated into mutual categories. The study conceptualized the resilience of both cases in two major social and communal levels. Additionally, 48 sub-themes and 10 major themes were identified. Therefore, this study confirms the prior conceptual frameworks. However, some other themes and sub-themes also were identified in two selected communities. The main themes of social level include urban governance, economic situation, sustainable development, and laws. The major themes of local community level consist of economic, socio-cultural, political (local governance-institutions), natural, spatio-physical, and informational and communicational.

The main difference between the final model and the initial model involves the addition of social level and its sub-themes. In addition, social and cultural domains were combined and according to the data analysis, spatio-physical domain was added to the model. Finally, due to the critical role of informational and communicational domain, it is placed in the center of the final model.

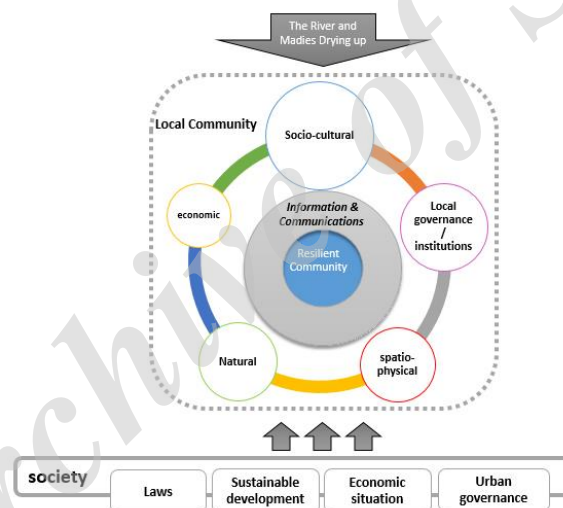


Fig. 1. Isfahan's Resilient Communities Framework

Conclusion

Recently, many studies have examined conceptualization of different natural and urban systems' resilience. One of the recent approaches in the resilience literature is community resilience. Despite developing various community resilience frameworks, few studies have highlighted the role of stakeholders and just few of them have focused on a unique slow-onset hazard, such as drought or rivers and aqua-ducts' drying up. Whereas, resilience is a complicated and multi-dimensional concept that is strongly linked to the cultural context of a society. Thus, this study studied the stakeholders' beliefs, attitudes, and experiences about the main contributing factors to the resilience of two diverse communities in Isfahan.

The study conceptualized the community resilience of the selected communities in two major levels. These levels included society and local community. Additionally, 48 sub-themes and 10 major themes were identified. The main themes of social level critical for community resilience include urban governance, economic situation, sustainable development, and laws, and the major themes of local community level consist of economic, socio-cultural, political (local governance-institutions), natural, spatio-physical, and informational and communicational factors.

Amongst all of the identified themes in this study, the most contributing factor to the resilience of selected communities in Isfahan is socio-cultural domain. This domain included 16 sub-themes and 289 quotations of all

the 32 conducted interviews. Lastly, it is suggested that the qualitative research methods be utilized by researchers working on development of urban and community resilience frameworks.

Keywords: ATLAS-ti, community resilience, Isfahan, qualitative content analysis, resilience conceptualization.

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