Review

Interventions assessment of increase health resiliency in disaster

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Abstract

This study aimed to examine the contents of the evidence about evaluation of interventions of increase health resiliency in disaster that increases health after the disaster by using the concept of resiliency. Response to disaster is accompanied by the management, logistics, technical, medical and mobile challenges. The main obstacle is the lack of a crisis management plan for resiliency with different concepts. Analysis and preparation of a plan for crisis management in a specific resiliency is valuable. The result of certain resiliency in crisis management is very helpful. In this study, the gaps in the evidence for specific health interventions to increase the resiliency of disaster are highlighted.

Keywords: interventions, resiliency, health, disaster

INTRODUCTION

New Concepts of Resiliency

Resiliency is defined in different ways by combining keywords such as ability, modification, adaptation, improvement, shock, stress, addressed risks, and vulnerability. Many elements have been identified and compared. Resiliency fundamentally is a new concept that can be understood in different ways in different views. This is both a process and a result, resiliency encompasses of a number of internal and environmental factors (Boon et al., 2012). How to define the nature of resiliency planning affects crisis management intervention. Here, resiliency is discussed as "the inherent capacity of a system which is susceptible to shock or stress or change to adapt and survive with unnecessary features and reconstruction". Therefore, resiliency can be potentially used in a framework of public health-based approach to increase the proportion of population who experience recovery (Keim, 2008). Resiliency Framework in 2005 and 2015 has identified The International Strategy for Disaster Reduction. The Framework aims to build resiliency of Nations and Communities to Disasters (United Nations, 2012). Although understanding and measurement of the resiliency of the disaster has made progress, planned strategies to support populations affected by the disaster resiliency is unknown. People over the years had been affected by natural disasters, and many with violent conflict have been responding to humanitarian crises. Addressing the immediate needs of those affected by disasters has led to the construction of adaptive strategy through disaster risk reduction (Gibbs et al., 2013). Resiliency is coping with adverse shocks and stresses, and to adapt and learn to live with the new changes
Resiliency is a long-term approach that not only focuses on the ability to go back but also makes it to integrate and adapt to changing conditions. Shock is a sudden event that may affect the vulnerability of a system and its components. Stress is a long-term process which undermines the potential of the system and increases the vulnerability of the individuals. The effects of shock and stress at the community level are dependent on the amount of risk, along with vulnerability and capacity of those affected by and dealt with it. Adaptation is a process that involves different levels of intervention. This requires an analysis of the shock and stress of dealing with the current and future stresses (Boon et al., 2012).

In order to build resiliency, resistance, preparedness, recovery, adaptation, conversion, transformation components is required. Resistance is the capacity to resist shock, fitness, capacity to withstand temporary impairment to minimize the losses and risks of costs. Improvement of the capacity is for restoring or getting back after an event. Compatibility of conversion is capacity to manage or maintaining the basic functions and structures for the future situations. Adverse change, the capacity for building is an opportunity to change the situation. Resiliency has some limitations. Adaptation or transformation is not in favor of everyone. One of the major concerns is that the resiliency does not involve the social and power relations in society or in the household. Moreover resiliency is not directly and positively associated with well-being. Resiliency programs need better expressions of humanitarian responses and long-term interventions for handling long term stresses and short term shocks. This interaction requires a multi-sectoral approach in the second set, to ensure sustainable development. For example, the integrated actions can be associated with a shock or stress may occur at different scales to reduce the impact event.

Disaster Resiliency is measured based on the features, instead of the index

Disaster Resiliency can be measured and assessed by indexes or property as part of a monitoring system. Resiliency of society can be measured, but such a measurement must be specific to the location and risk. The "Characteristics of a Disaster-Resilient Community Disaster Resiliency" is measured based on the Hyogo Framework (Guha-Sapir et al., 2011). Disaster resiliency is measured based on features, instead of the indicators. More features are in consistent with the result used in the evaluation of the project or the output of the activities related to Disaster Risk Reduction (DRR). Indicators are measurable changes to the input of a project. Systematic monitoring of the core indicators include: process (progress), impact (outcomes), direct or indirect (proxy), qualitative or quantitative (Manyena, 2006). On the basis of the process and outcome of the 'Integrated Community Based Risk Reduction approach' and key features of community resiliency in the face of disaster, disaster resiliency of communities can be developed.

Evaluating evidence on public health interventions

Resiliency is performed at several levels, including individual, family, community, state and / or society. Adaptation Coalition Framework (ACF), targets individuals, families and communities that are affected for the first time or those who do not have sufficient resources to deal with incidents of spontaneous chronic. Focus on resilience means empowerment of societies to use the resources and strengthen their capacity to cope with shocks and stresses instead of focusing on vulnerabilities and their needs during emergencies. However, communities are not isolated and their resiliency institutions will be affected by external capacity, where ACF can strengthen their ability to better management of future risks interacts. For any kind of intervention, first the type of disaster is evaluated, for example, whether it is a technological disaster (e.g. transport accidents), natural disasters, such as geophysical (earthquake), hydrological disasters (floods), meteorological disasters (hurricanes) or climatic disaster (fire) (Guha-Sapir et al., 2011).

Intervening factors such as publication bias, provider, selection (specification of sample) diagnosis (type of measurement used in outcome), performance (provision), and a decline in numbers are evaluated by calculating an unequal percentage value for assessing risk bias in the whole studies. The standard method to evaluate the risk of bias in individual studies is to determine the accuracy of the instrument. This approach was designed using randomized control trials. However, these studies lacked the resiliency needed to recognize the numerous communities affected by public health interventions. While they may have the best design for powerful studies, they may not always be practical or appropriate (Rychetnik et al., 2002).

DRR aims to minimize or avoid losses caused by natural and human hazards which are obtained by the preparation, reduction and prevention of efforts while trying to build the resiliency. Another important point is the assessment of the quality of revised changes in creation of resiliency in disaster. The information includes the type of publication, source country, type of disaster, aims / objectives, design of the study, internal and external criteria, sampling, characteristics of the sample, characteristics of intervention control group, control intervention, Measurement tools or methods used, the
Interventions of increase health resiliency

In many studies, there is no standard protocol for interventions to increase resiliency. Intervention methods are not separated from one another. Creating resistance of individuals, families and communities to disasters needs the simultaneous interaction of both the urgent need to control shock and permanent needs to target the structural causes of trauma. In addition, a parallel approach to strengthen the resiliency of the population at risk, through the development of the capacity of organizational level and community is helpful. Experimental studies have shown that promote resiliency is accompanied by a result of public health in a disaster setting (khankeh 2011a, 2011b;2010; Pérez-Sales et al., 2005).

Studies have shown different interventions. Reducing structural vulnerability to disaster and malnutrition, risk management and enhance resiliency of the community are examples of important interventions. Communities of collective action promote equity and trust of the shareholders while a variety of living in environment is responsible for the reduction of risk of disaster and vulnerability to malnutrition. Adjustment of multi-sectoral programming combined with DRR, climate change adaptation (CCA), social protection and prevention of malnutrition in order to increase the resiliency of livelihood systems (eg participatory capacity and vulnerability assessment), ensuring of the proven risk of livelihood and infrastructure encompasses the necessary actions. Promoting a healthy environment, adequate access to health services, improvement of food production, better access to income, and balanced diet, access to safe water, and the promotion of the knowledge of communication behavior change in families and communities (e.g. awareness about health and methods of caring after a disaster), attention to the proper training and learning activities to enhance risk management and building resiliency is also valuable (Huang & Wong, 2013; Bonanno et al., 2010). Financial and food-based safety nets (social protection), seed, grain or forage stocks and banks, agriculture and animal diversity, agriculture and watershed management environmental safety culture is important for disaster risk reduction and needs intervention and attention. Improvement of government’s support of communities and empowerment of the capacity of communities and institutions help focusing on the improvement of positive relationship between the authorities and the society and also to empower and strengthen the capacity of government, Creating or strengthening policies, capabilities and mechanisms for coordinating and prioritization of nutrition, disaster risk reduction and climate change adaptation, supported by institutions (eg the joint program of DRR and CC A).

Community organizations involved with foreign activists help to promote community-based initiatives in disaster risk reduction and climate change adaptation (e.g. local development planning, and special events) (Rung and Broyles, 2011).

Conduct advocacy and shaping policies include supporting campaign that covers supporting the key issues and needs in disaster situations. Support of community development planning and updating the technical capacity of local institutions in the development of national and regional policies and strategies can help. DRR prioritization of resources and improvement of crisis management to facilitate the initial response to the crisis, increasing social support and prepare seasonal food crisis is important in supporting resiliency after disaster. There is a specific solution to hunger in every site and region (Coppock et al., 2011).

What is important to tackle the root causes of the crisis and not just their symptoms incorporate contingency plans for development and increase stability of humanitarian intervention. Ambitious national social protection schemes, multi-sectoral approach to prevent damage, additional funding for long-term and sustained high-level political will is needed (Becker et al., 2008).

Studies have shown different interventions. Resiliency was more obvious in targets of the study not in their methods. There were ambiguous relationships in study design was and measurements. The Results of strategies were to enhance disaster resiliency in the disaster environment, or to provide information, build social capital (through social integration), or supporting competency-based society. The information prior to happening of the disaster leads to prevention of health problems and as a result helps the resiliency support (Morin et al., 2008). Strategies including movies, posters from previous accidents help to maintain awareness of the tragedy. The use of radio transmitters information about disaster preparedness and informing with the aim of educating people about the risks and measures to minimize the impact of a disaster is beneficial (Romo-Murphy et al., 2011; Sugimoto et al., 2010). Previous studies have shown that this information promoted the individuals’ preparedness (Sugimoto et al., 2010; Morin et al., 2008). The information provided through radio has had limited success, as far as villagers have reported that they have not learned anything because they did not have access to technology (Romo-Murphy et al., 2011).

CONCLUSION

Considering resiliency as the main approach to deal with
the disaster means identifying different areas of work that can complement and reinforce each other. These include disaster risk reduction, adaptation to climate change, social support, working on fragile contexts and humanitarian preparedness and responses. It starts with focusing on the key challenges and it needs for common analysis that has a coherent approach to the risk. Financial mechanisms provide the predictable and stable basic obligations (Norris et al., 2008; De Jong, 2002). Early warning systems will lead to early actions; political commitment among governments in countries at risk of natural disasters and donor organizations; and a strong interface between development and humanitarian actors. Disaster resiliency is an important step in disaster management and it is operating along with the global financial crisis and has become a concern at the highest level. Increased efforts in social protection, disaster risk reduction and adaptation to the changes made, with the aim of building resiliency in poor and vulnerable communities in developing countries. Increased attention to issues such as resiliency affects the macroeconomic growth in a community (Paton and Johnston, 2001).

Figure 1 show an outline of a certain resiliency and it highlights a set of frameworks for the improvement of the understanding of different elements considered in creation of specific resiliency in the process of a disaster management. This figure emphasize a particular concept of resiliency and a group of health interventions to increase the resiliency to a disaster. And it is possible that any specific concept of resiliency needs a series interventions in a disaster and a collection of these resiliency interventions will lead to public health.

A wide range of resiliency interventions can provide a strategic leadership all across the international system. We believe that the combination of these interventions can lead to the highest and fastest improvement in increase of health resiliency in disaster.

REFERENCES


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