

The Role of Traditional Social Network in the Disaster's Vulnerabilities Reduction: Study of Pakistan's earthquake 2005 disaster

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In the traditional social structure, it has often been observed that the social networks have very much significance in the disaster vulnerabilities reduction in many ways. In this regard the present study was conducted in worst affected areas of tehsil Balakot by the earthquake of 2005. The core objective of the study was to examine the role of traditional social networks in the disaster vulnerabilities reduction. Through purposive sampling method, the sampled respondents were selected for the study. Then after providing an overview of the basic concepts of the terms and attributes, the sampled respondents were interviewed and the data was recorded accordingly. The collected data had mainly focused on the family, micro and macro based social networks. After interpreting the data the survey found that family based networks are stronger than the micro and macro networks. Immediately after the disaster, help came from the survivor's social networks, which reflected the social coherence and strength of the disaster community, and eventually reduced the vulnerabilities posed by the disaster. Social cohesion and resilience to the disaster vulnerabilities on the part of the affected community is also deeply linked with the social networks under the present study. The study finally recommended that the prevalent social networks and normative cultural coping mechanism are the social capitals, which needs proper attention in terms of conservation and institutionalization.

Key words: Disaster Community, Social network, Social Strength, Vulnerabilities Reduction

The term "Disaster" is generally defined as a physical event either man made or natural, when it affect people and disrupt the lives and livelihood resources on large scale is called disaster. On the disaster perspective 'community' has central role but after considerable debate and research the word "community" has been defined as a geographical entity where the locally oriented interactions and social network exists around a focal point (Beck, 2001). According to Bastida (2001) within the community there are distinct cohesive ties, or social networks in the form of neighbors, friends and families, which are the basis of community. Generally, whenever the disasters occurred, the affected communities primarily considered it in terms of their geographical confines. However, the disaster behaviors are usually recognized by the actions of the families and individuals within a particular region of disaster victims. Therefore, defining 'disaster community' is a widely debated issue relating to its boundaries. Some of the researchers have defined the 'disaster community' as the socio-geographic area where the disaster occurs. However, some of the researchers have ignored the geographical boundaries and have spoken about the perceived boundaries. Whereas, the perceived boundaries are extended beyond the geographical boundaries of a disaster community, the victimization or the fear of disaster could be perceived beyond the physical boundaries, such boundaries are termed as perceived boundaries of the disaster (Kirschenbaum, 1996).

According to Shippee et al (1982) sometimes people outside the actual flooded area are more fearful about their property and lives at greater level than those households that are closer to the actual endangered area. From the point of view of the perceived boundaries it might be arguable that disaster could be defined in terms of the perceptions of the inhabitants instead of its geo-physical characters. Therefore, the people who perceive themselves part of the disaster are defined as the essential part of the disaster community. (Lalli, 1992; 6 Chodlin, 1984). In real sense, the disaster not only makes destructions in the epicenter of a specific geographic localities but the nearby population is also affected. Therefore, the 'Communities' become appropriate research units for assessing the significance of the existing social networks within the particular geographical boundaries. Thus, the major consideration of the research work is to examine the role of the social network in the disaster vulnerabilities reduction.

Social Networks and its components

After defining 'disaster communities' from the viewpoint of its geographical and perceived boundaries, the significance of the social networking is more tinted with the notion of 'perceived boundaries'. From the viewpoint of disaster, the utility of social networks being considered the basic motivational imperative for 'safety' (Kadushin, 2002). The feelings of emotional and physical safety, dependency and social cohesion are enhanced by the trust and support from the people in the social network. Therefore, the social network that during the disasters gives such types of feelings for safety against the threats are reflecting a unique characteristic/behavior which can be termed as the disaster based social networks (Quarantelli, 1998). This perspective indicated that those who are involved in the disaster are the part of disaster community, irrespective of their geographical existence. Consequently, the disaster based networks are extended through the perceived boundaries of disaster communities. However, with the ease of physical accessibility and communication, the disaster based social networks are strictly dependent on the geographical proximity. In some cases, although the people of the disaster community are physically dispersed, but they might be able to keep up the basic function of the communal life (Wellman, 1999). According to Perilla et al (2002) disasters touch people, the people who are in the actual disaster may not be physically or directly involved in the disaster.

Social networking approach towards the disasters is indicating the social strength of a particular disaster community against the vulnerabilities posed by disasters (Hurlbert, 2000). Several researchers also found that kin tie networks are comparatively much effective than the other ties in facilitating during the disasters emergency situation (Lai & Wong, 2002). Moreover, according to Alan Kirshanbaum (2004) there are three components of a social network (1) family based network; the families members' live nearby frequently visiting and contacting with one another constitute the family based networks. (2) Micro-Neighborhood network is constituted by the familiarity, frequent contacts and good relations between the neighbors. (3) Macro-Community network is constituted by the joint activates for the larger community in the public gatherings and neighborhood committees. Thus, the basic question is that how these components of social network are important in the disaster vulnerabilities reduction?

Social Strength of Community and Disaster's Vulnerabilities Reduction

Basically the notion of social strength reveals that in the case of emergencies and crisis, communities act as collective entities. Studies pertaining to disasters demonstrated that the communities having strong social networks are expected to be better in bouncing back the affects of the disaster (McFarlane,1987). Similarly, the vulnerability to disaster has been defined as the increased susceptibility of the community to the economic, social, environmental or physical factors. (Scherer & Cho, 2003). However, the possibilities to minimize the vulnerabilities to disaster can be reduced by a combination of resources and strengths available within a community. These resources may include institutional, physical, economic and social capitals along with some communal characters such as leadership and management. Thus, the social strength of a particular network depends on density (intensity) of their ties i.e family ties and neighborhood etc which could ultimately contribute in the disaster vulnerabilities reduction. Thus, the role of social networking has not been highlighted from the standpoint of disaster vulnerabilities reduction in the worst affected community of Balakot after the earthquake disaster in 2005.

Disaster in the Context of Past

In the past, the community networks were organizing mostly in response to dangerous happenings rising in the normal situation. In the history of mankind these practices prevailed for hundred years (Ecevit & Kasapoglu 2002). Similarly, these reactions reflected the strength of the community networks in reaction to the disasters. Still it is believed that the role of existing traditional networks in response to the disasters is alive and well. Although, now a days there are specified groups of disaster management, but even then the social strength of local community network has never lost its significance. Thus the bureaucratic managers of the disaster are not the front line disaster manager but the affected individuals, their neighbors and family members are the true responders and managers (Kirschenbaum 2004).

According to Alan Kirschenbaum (2004) disaster communities from the standpoint of social networks are based on a convincing rationality that our survival and lives are merged with the fabric of community life. Being having in hand such sort of traditional organization, in the past individuals survived and there is no doubt that the social networks within the disaster community are considered powerful ingredients today. The disaster researcher claims that the social strength reflects the community's resilience and empowers the members of the community with the ability to bear up and cope with disasters (Karanci et al. 1999).

My arguments supported the assumption that community based disaster management is not only a matter of historical trial and error but also is based on the social strength generated through the social networks. People are acquainted and interact with their neighbors, and through this process they might have some clearly defined boundaries of neighborhood. Such type of networks in the community raised the basic question that why the disaster community is defined in terms of specific physical area rather than a set of certain patterned networks of relationships. However, the disaster community is the combination of both.

The basic question is about the intricate network of the relationships in the context of varying level of social strength contributing to the traditional community survival process that are initiated through family, friends, and neighbors. This sort of approach highlighted that people of a specific community are capable of devising indigenous techniques to take care of themselves. Many of the studies indicated that after the onset of the disaster the relatives, friends, and acquaintances victims are usually the first and the front line responders to the disasters (DRC 2003). To cope with the aftermaths of the disaster, the neighbors inform each other and starting organizing rapidly. The emergent helpers form the nearby always reduce the chances of harm and death. Thus, on the bases of the social strength of the disaster communities based on the varying degrees of intensity of social ties and shapes, some communities are much better than others in disasters. Hundreds of case studies indicated about the ways the affected communities and families responded to the natural disasters (Natural Hazards Center: 2002). Keeping in views the notion of the local networks, the significance of the Social Strength of Disaster Community Networks in the Vulnerabilities Reduction cannot be easily dismissed.

The Social Context of 2005 Earthquake Disaster

According to the National Disaster Management Authority (2007) the 2005 earthquake of 7.6 magnitude jolted Pakistan, India and Afghanistan. In Pakistan, five districts of Khyber Pakhtunkhwa and three districts in AJK social services, housings, communication, commerce and shelters were either destroyed or damaged. The total deaths recorded in Pakistan were about 73,000 and about 70,000 were injured severely or disabled. Consequently, about 2.3 million persons became without adequate shelters and food (NDMA, 2007). Usually the disaster situation is very intense and terrifying moment for the victims, but it does not mean that the survivors lose their rationality and become helpless victims. Different studies suggested that *"immediately after a disaster the desire to help other people is very strong"* (Aptekar-1994). After the onset of the disaster the local community comes to help the disaster survivors. They meet, help and share each others problems. Different studies gave us the idea that regular meetings and discussions among the victims as well as with the aid providers is a therapeutic way of dealing with grief and sorrow. The meetings and discussions are also an opportunity to rebuild community ties and networks which may have been lost due to the disaster. Hence, the Social Strength of Disaster Community Networks in the Vulnerabilities Reduction is a crucial factor for the success of every disaster recovery (Asian Development Bank Report: 2005: P-12).

Objective of the study:

The core objective of the present study was to examine the role of traditional social networks in the disaster vulnerabilities reduction.

Method

On October 08th 2005, the earthquake seriously stricken Pakistan and the neighboring countries. The epicenter of the earthquake was Balakot. In order to study the role of the traditional social networks, the overall rural community of tehsil Balakot was selected for the study in question. Therefore, purposively 1012 sampled respondents were selected out of 21 worst stricken villages on the bases of more damage by the earthquake. Equal number of respondents were selected from each village. Moreover, for exploring the role of traditional social networks in the disaster's Vulnerabilities reduction two pronged research strategy has been devised. First different items indicating the measures of community involvement for assessing the social strength of the targeted community has been examined. Secondly, the responses of the respondents related to the role of already defined family network, micro-neighborhood network and macro-neighborhood network are examined in terms of supply of goods, provision of skills to the survivors, planning and protection in the post-disaster scenario as the key items in the disaster vulnerabilities reduction (Rubin 1985). Through an interview Schedule which was pre-tested, the desired data was collected and then the data was analyzed and interpreted accordingly.

Main Findings of the Study

In order to have a complete picture of the coherence and strength and social structure of the disaster community, survey was conducted in order to have first hand information about the involvement of the community. The following information is given in the tabulated form.

Measurement of Community Involvement

To evaluate the community involvement, a pre-tested questionnaire was used. The questionnaire was designed in such a way that could highlight the social coherence of the survivor's community in Balakot.

Measures of Community Involvement

S. No.	ITEMS / MEASURES	RESPONSES				TOTAL	
		YES		NO		YES+NO	
		<i>Frequency</i>	<i>%age</i>	<i>Frequency</i>	<i>%age</i>	<i>Frequency</i>	<i>%age</i>
1	Know most of your neighbors	991	97.9	21	2.1	1012	100.0
2	Neighbor rush to help at the time of Adversity	860	85.0	152	15.0	1012	100.0
3	When request, neighbors help	858	84.8	154	15.2	1012	100.0
4	Neighborly relations are good	806	79.6	206	20.4	1012	100.0
5	Neighbor's involvement is good in general gatherings, community centers etc.	705	69.7	307	30.3	1012	100.0
6	Active in neighborhood watch	817	80.7	195	19.3	1012	100.0
7	Active in community committee	757	74.8	255	25.2	1012	100.0
8	Family members live close by in the neighborhood	758	74.9	254	25.1	1012	100.0

Table 1 indicated that multiple measuring items have been used. Majority of the respondents reported about the familiarity of their neighbors. People living in a comparatively populated area were not mostly familiar with all of their neighbors. Similarly, the data highlighted that at the time of adversity the neighbors rushed to help them. The population where the urban characteristics are more prominent the people have often loose social contacts and relations. In Balakot people are often calling their neighbors for help, because of the good relationships with the people living in their close proximity. Most of the people were of the view that the survivor's community was participating willingly in community centers and in the general public gatherings in order to share the general issues and problems of the community. The survivor's community about the neighborhood watch showed highest degree of the sense of responsibility. The most important thing was that the people of the purely rural cultures were very much keen about their neighbors as compare to the densely populated areas. Similarly, the survivor's community was active in the local committees of the areas. Table showing the social cohesion and social strength of the affected communities showed us that the disaster had greatly united the people for coping with the disaster; on the disaster perspective the affected community revealed greater social involvements which is clearly indicating social cohesion on the part of the disaster community.

Network's Strength of the Disaster Community at Balakot

In order to evaluate the strength of the social networks of the disaster communities, the study focused on social networks within the disaster community of Balakot. The role of the social networks has been examined in terms of the supply of goods, provision of skills to the survivors, planning and protection in the post-disaster scenario (Rubin, 1985). The interaction with friendly neighbors living within close physical proximity is described as micro-neighborhood disaster community networks. They on whom we rely for the mutual help and they may be the first responders to the disaster (Smith, 2000). The macro-neighborhood network is the third type; such a disaster community is seen at its broadest level and is linked up with the basic community services that are usually available in most urban neighborhoods. Networks based on common interests dominating the network. (Carter, 1979).

Family-Based Disaster Communities/ Networks

SOCIAL STRENGTH OF DISASTER COMMUNITY NETWORKS											
	Networking component	Supply		Skill		Planning		Protection		Total	
		Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent	Frequency	Percent
Family based disaster community	Family Based Networks <ul style="list-style-type: none"> Family members live nearby Frequently visit family members Contact family by telephone Good family relation 	152	15.0	202	20.0	205	20.3	453	44.8	1012	100
Micro-Neighborhood disaster community	Micro-Neighborhood Networks <ul style="list-style-type: none"> Familiar with neighbors Neighbor are helpful Good relations between neighbors 	254	25.1	151	14.9	152	15.0	455	45.0	1012	100
Macro-Service based disaster community	Macro-community Networks <ul style="list-style-type: none"> Active in community gatherings or centers Active in neighborhood watch Active in neighborhood committees etc. 	348	34.4	202	20.0	411	40.6	51	5.0	1012	100

The main attributes of the family based network in terms of the social strength of the disaster communities are the intricate and intense family network, more contribution in terms of supplies of essential survival goods and materials, planning, and the protection of vulnerable. The respondents reported that family based social networks had significant role in the supply of items of daily usage. Twenty percent reported that the families based networks have transferred the knowledge and skills of survival through the ancestors to the new generations so that they could cope with the adversities of life. Similarly, about 20 % respondents reported that in the planning process the family based networks have significance. Likewise, these networks have also contribution in the protection of the vulnerable in the pre and post disaster scenarios. Similarly, the family based networks have basic role in the disaster scenarios. On the sociological perspective family is the basic institution and it has significant role in the traditional social structure of Pakistan. Therefore, family based networks has multi-dimensional role in the disaster mitigation and disaster resilience.

Micro-Neighborhood Disaster Communities/ Networks

The social strength of the disaster community of Balakot is assessed in terms of the Micro-neighborhood networks. The attribute of the assessment was devised by asking some questions pertaining to the supply, skills, planning and protection of the vulnerabilities of the disaster communities. Micro-neighborhood indicates the frequent contacts and relationships that explicitly show the stronger social ties among the neighbors. The data in the table showed that 14.9 % respondents were of the opinion that micro-based networks had provided skills to the community for coping with the disaster by themselves or helping those who are the serious victims of the disaster. Thus, the study revealed that the indigenous skills are the viable sources of survival at the time of disasters. The major role that was played by the micro-based social networks was the transfer of cultural knowledge to the present generation. These skills motivated the local community for participation in the shared helping mechanism on the community level. Many of the respondents reported that the micro-based social networks have significant role in the supply of items to the victims of the disaster. Similarly, in the planning of different activities these networks have also the most important function. The micro-neighborhood network had most importantly played role in the protection of the most vulnerable children, virgins and widows of the completely destroyed households.

Macro-Neighborhood Disaster Communities/ Networks

The Macro-neighborhood based community networks represent the disaster community in the broader level. Networks based on common interests are dominating this sort of network; the people involved in this network may have started out by simply joining community centers and clubs which might lead to the social contacts that put the people linked together. And it is because of this reason that this sort of social network is the weakest and most diffuse among the three types

of networks under the present study. This network mostly focused on the larger community's affairs and the local community center and in neighborhood committees. Talking about the provision of the skills, 20 % respondents reported that to the disaster stricken community the macro-based networks had mostly provided the necessary coping skills. Just like the other networks the macro-based community network has also important role in the provision of skills, supply of items, protection and planning during the disaster. Through these processes the resilience capacity of the local affected community is improving. Majority of the respondents were of the opinion that the macro-based social networks have significant role in the planning and supply of items required for the daily usages. The planning component is also provided mostly in the bureaucratic disaster management by the macro-based community networks. The data in the table indicated that macro-community network shows maximum role in the supplies of different items and planning of different coping mechanisms. However, the table shows that in the protection it has minimum role, contrary to the family-based networks. The overall data in the table indicated the social strength networks of the disaster communities, the affected communities are having strong social networks and these networks have strongly contributed towards the disaster vulnerabilities reduction and the enhancement of the resilience of the community. What we have apparently managed to learn and implement over thousands of years has been passed on to us through community-based social institutions and reinforced through the intricate interrelationships that generate social networks. According to Allan Kirsschenbaum (1984) in the traditional social structures these community based social networks are considered the fundamental building blocks of the existing social milieu.

Conclusion

The study was focused on the traditional social networks of the disaster community's in the face of a disaster. The study analyzed the social coherence and strength of the disaster communities in the light of different social networks. The role of the social networks have also been examined from the standpoint of the basic attributes that are significant in the disaster's vulnerabilities reduction. These attributes are supply of goods, provision of skills, planning for coping with the threats and protection of the vulnerable victims. The entire work concluded that the communities under study were enough strong and had significantly contributed in the vulnerabilities reduction posed by the disaster. In addition, these networks may be the family, micro or macro neighborhood networks, are generated by the social source that highlighted the cohesion and social strength of the disaster communities. Thus, Family network having viable and strong social tie which is subsequently followed by a lessening of the strength of ties of the micro and macro-neighborhood networks. Comparatively the family network is stronger from the standpoint of the social cohesion and involvement. In the context of the October 08 earthquake the vigorous response that was the result of the initiatives of the local communities and the local social networks re-confirmed the essence of helping mechanism of the traditional social life that exists in history of mankind, such type of helping behaviors are inherent trait throughout the world among the people. Similarly, the significance of the social networks and social institutions in the mobilization of social structure and front line responder has also been highlighted by the reports of World Bank (2005). According to the reports, the phenomena of the social cohesion was very much prominent among the affected neighbors, families and communities. The vulnerabilities reduction of the disaster was the result of the strong support of their extended family and traditional Baradari system. Such a rapid display of organizing in the disaster situation is the result of neighborhood ties and social networks (NDMA, 2007). The post disaster study of the Balakot highlighted that the community is socially strong and due to the social strength it was resilient to the disaster. The overall strength of the disaster community networks has greatly contributed in the form of supply, skills, planning and protection. Therefore, due to the role of these traditional social networks, the survivors coped with the vulnerabilities of the disaster by utilizing their own social and cultural capitals. Consequently, the study recommended the institutionalization, conservation and enhancement of the traditional disaster coping norms and values within the prevalent social milieu.

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