A Study on Women’s Participation in Disaster Risk Reduction in Nepal: A Case Study of Training Women for Safer Homes

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ABSTRACT
This empirical study focuses on women’s potential roles in Community-Based Disaster Management through a training program developed for women based on the preliminary research, which targeted three communities within the Kathmandu Valley. The study assessed the process of developing the training program and stressed that the importance of empowering of women for disaster management, and using gender-based social networks for building disaster-resilient communities.

KEYWORDS: Community Participation, Gender, Community-Based Disaster Management, Non-Structural Measures, Kathmandu

JEL CLASSIFICATION: I12, I13

1 INTRODUCTION

The year of 2011 began with the tragic news of the devastating earthquake and tsunami that hit the eastern part of Japan, which claimed about 20,000 lives on 11 March. The Haiti Earthquake occurred a year earlier on 12 January and caused massive loss of lives and property; this was five days after the 15th anniversary of the Hanshin-Awaji Earthquake, which killed 6,434 people in 1995 in Kobe, Japan. There were 298 earthquakes and tsunamis in the world from 1999 to 2008, which claimed 473,498 lives. Of these earthquakes, 173 occurred in the Medium Human Development countries in Asia, killing 469,072 people. In these countries, many cities are densely populated, and the number of people living in slums is on the increase. With rapid urbanization, unsafe houses are being constructed, and this increases vulnerabilities. Disaster management has been an intermittent problem, especially in light of the large population and high density of people and buildings in urban centers.

Situated at the foot of the Himalayas, Nepal faces a variety of disaster risks owning both to its natural characteristics and human-induced factors. Among a total of 200 countries surveyed, Nepal stands at eleventh with regard to relative vulnerability to earthquakes. Although the Government of Nepal is working hard to enhance the nation’s capacities against future possible disasters, the risk is growing due to the growth in population, especially in urban areas like Kathmandu. It is obvious that future earthquake will cause massive loss of human lives and property.

Through the experiences of the Hanshin-Awaji Earthquake in 1995, Community-Based Disaster Management (CBDM) has been recognized to be an effective measure for saving people’s lives and

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1 International Federation of Red Cross and Red Crescent Societies (2006) World Disasters Report: Focus on neglected crises, Geneva ATAR Roto Press.

2 United Nations Development Programme in Nepal (2009) Disaster Risk Reduction. Available at WWW:<http://www.undp.org.np/pdf/factsheet/19%20Disasters.pdf>.
reducing disaster risks in a community. This paper focuses on the importance of CBDM, especially in terms of women’s participation. This article begins with preliminary research that includes questionnaires and focus group discussions, and identifies risk perception and preparedness behavior by gender groups. Based on the results of the preliminary research, the process of developing a training program on safer homes for women is described, and the results of the evaluation on the effectiveness of the training are presented. Finally, an analysis of the lessons learnt and further challenges are provided.

2 INCREASING VULNERABILITIES IN NEPAL

The country remains one of low human development countries in the world, ranked 138 out of 169 countries according to the Human Development Index.³ It has a per capita GDP of US$562, and literacy rate is 53.7%.⁴ The Kathmandu Valley has an urban growth rate of 6.5% comparing to 2.4% for the country. Nepal’s urban population accounts for around 15% of the total and this is a tremendous increment in comparison to its urban population some 50 years ago which was around 3%.⁵

According to the Nepal Disaster Risk Management Profile,⁶ seismic records for Nepal date back to 1255. Since that time, destructive earthquakes occurred in 1408, 1681, 1810, 1833, 1866, and 1934, and the 1934 earthquake was the most destructive, measuring at magnitude 8.4. It has been assessed through a simulation of a study on earthquake disaster mitigation in the Kathmandu Valley in 2001 that if a Mid-Nepal Earthquake hit Kathmandu, it would result in approximately 18,000 deaths, 53,000 injuries, and 53,000 heavily damaged buildings due to the recent increase in Nepal’s urban population. Since it has been historically observed that major earthquakes occur at 75-100 years intervals in the valley, the occurrence of a major earthquake in the valley is inevitable.

In addition to the above, Nepal is still in the process of a political transition from the period of being a Kingdom to becoming a Federal Democratic Republic in 2008. Negotiations continue over a new Constitution, so that has an effect on the overall government structure, including formulation of policies and legislation for disaster risk reduction in the country. The Natural Calamity Act that was promulgated in 1982 mainly focuses on reactive intervention in the form of relief, and it failed to mainstream disaster risk reduction perspectives, although it has been amended in 1989 and 1992. In order to integrate comprehensive disaster management into the law, the Disaster Management Act is still not in the cabinet although the basis of the law of the National Strategy on Disaster Risk Management was prepared in 2009. Therefore, nobody knows whether the new government will take up this issue as one of their priorities in this unstable political situation. It is essential to enhance CBDM at the ground level before an earthquake strikes.

3 GENDER PERSPECTIVES IN DISASTER MANAGEMENT

Some researchers already acknowledged the importance of gender perspectives in disasters in the 1980s.⁷ The Platform for Action, adopted by the Fourth World Conference on Women in Beijing in 1995, also identified the need to actively involve women in environmental decision making at all

³ United Nations Development Programme (2010). Human Development Report 2010. Available at WWW:<http://hdr.undp.org/en/media/HDR_2010_EN_Tables_reprint.pdf>.
⁴ Ministry of Foreign Affairs of Japan (2011). Basic Information of Nepal. Available at WWW:<http://www.mofa.go.jp/mofaj/area/nepal/data.html>.
⁵ Subedi, Jishnu (2009). Urban Disaster Risk Management in Kathmandu. In Urban Disaster Risk Management Rajib Shaw, Srinivas Hari, and Anshu Sharma (Eds.), Emerald Group Publishing Limited.
⁶ Earthquake and Megacities Initiatives (2005). Nepal Disaster Management Profile. Available at WWW:<http://emi.pdc.org/cities/CP-Kathmandu-08-05.pdf>.
⁷ Forthergill, Alice (1996). Gender, Risk, and Disaster. International Journal of Mass Emergencies and Disasters 14 (1):35-56.
levels, and to incorporate a gender perspective in all strategies for sustainable development. The Yokohama Plan of Action, adopted at the Yokohama World Conference on Natural Disaster Reduction in 1994, did not mention the word “gender,” but it stated to “stimulate genuine community involvement and empowerment of women and other socially disadvantaged groups at all stages of disaster management programs in order to facilitate capacity building, which is an essential precondition for reducing vulnerability of communities to natural disasters. The Hyogo Framework for Action adopted at the World Conference on Disaster Reduction in 2005 also stated that “a gender perspective should be integrated into all disaster risk management policies, plans and decision-making processes, including those related to risk assessment, early warning, information management, and education and training”. And it mentioned to “ensure equal access to appropriate training and educational opportunities for women and vulnerable constituencies; promote gender and cultural sensitivity training as integral components of education and training for disaster risk reduction” as the third priority. Although these initiatives advocate inclusion of gender perspectives in national policies pertaining to disaster management, there is a need to incorporate the policy on the ground as well.

Women living in Nepalese traditional society suffer social and religious discrimination. As shown in the Gender Inequality Index in 2010, only 17.9% of females have access to secondary education, while the male rate is 39.9%. Although Nepal has set 33.3% women’s representation in parliament, which is the highest level of women’s representation at the national parliament level worldwide, it does not mean that women have a genuine voice in parliament. Many scholars acknowledged that generally low social status of women in Hindu society, indicated by women’s lack of inheritance rights, preferential treatment of males over females in the area of health and education. Women in Nepal live under a strict hierarchical structure of the traditional caste system and ethnic groups. Although caste discrimination and exclusion were agreed to an annulment legally in 1963, its practice remains unchanged. Women are brought up with the ideology of impure because they menstruate, have certain sex organs, give birth, and breast feed children. Their situations and roles, however, are vary depends on their families and caste. In fact, women from lower-caste are the most vulnerable, and will be most severely affected by most hazards events and will face difficulties to recover.

Within the National Strategy on Disaster Management, gender and women issues are emphasized with other cross-cutting issues such as people with disabilities, ethnicity, and low-caste people. In the Local-Self Governance Act, which is expected to facilitate disaster management at the local level, there is no linkage between gender and disaster management. There is very little literature on gender and disaster management in the context of Nepal. This proves that the study of CBDM from a gender point-of-view has not yet emerged in Nepal.

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8 United Nations Information Centre. (2000). Women 2000 (Tokyo). (Unofficial translation in Japanese).
9 United Nations International Strategy for Disaster Reduction. (2005). Hyogo Framework for Action 2005-2015: Building the Resilience of Nations and Communities to Disasters. Available at WWW:<http://www.adrc.asia/ISDR/wcdr.html>.
10 Miller, Barbara D. (1981). The Endangered Sex Neglect of Female Children in Rural North India. Ithaca, New York: Cornell University Press.
11 Cameron, Mary M. (1998). On the Edge of the Auspicious Gender and Caster in Nepal. Urbana and Chicago: University of Illinois Press.
4 PRELIMINARY RESEARCH

4.1 Preliminary research implementation

The research targeted the three areas shown in the map on the right. The valley comprises of one metropolis, Kathmandu, two sub-metropolises; Bhaktapur and Lalitpur, and two municipalities; Kirtipur and Madhyapur.

The population of the targeted areas is summarized below:

| Area | Thamshipaka | Ward 3, Bhaktapur | Bunmati VDC |
|------|-------------|-------------------|-------------|
| Population | 23,850 | 5,450 | 6,438 |

One hundred men and 100 women were selected by using the random sampling method from election registration lists. The questionnaire with 26 query items was conducted from December 2007 to January 2008 by 20 local staff members, including a facilitator, community workers, and volunteers. The survey was carried out by asking questions and recording by staff what was said by the respondents.

4.2 Results

The survey showed different gender perspectives on reliability of obtaining disaster-related information (Table 1). The men ranked mass media as the most reliable source, followed by neighbors and local people, and local administration; while the women stated that the most reliable source for obtaining disaster-related information was their neighbors and local people, followed by mass media, and family and relatives. These findings show that female members tend to rely on their personal networks such as friendship and social support based on their relationship of closeness and trust within a community. This finding is a key for utilising women’s networks for effective dissemination of disaster-related information, knowledge and skills to other community members. In terms of mitigation measures, the 56 female respondents answered that either she or her family have applied measures to properly place and fix furniture, while only the 38 men answered that they had. On the other hand, the 67 male respondents answered that they had learned about disaster risks and risk reduction measures, while only the 47 women stated that they had (Table 2).

![Figure 1: Map of areas under study](image)

Table 1. What is the most reliable source for you to obtain disaster related information?

|               | Male                                     | Female                                    |
|---------------|------------------------------------------|-------------------------------------------|
| 1             | Mass Media                               | Neighborhood and Community members         |
| 2             | Neighborhood and Community members       | Mass Media                                |
| 3             | Local government                          | Family and relatives                       |

Table 2. What mitigation measures have you/your family used? (Multiple answers allowed)

| Mitigation measures                                      | Male | Female |
|----------------------------------------------------------|------|--------|
| Settled in officially permitted land                     | 64   | 65     |
| Construction quality of family housing                   | 58   | 52     |
| Proper maintenance of the building                       | 72   | 60     |
| Proper placement/fixing of housing goods and furniture   | 38   | 56     |
| Learn about disaster risks around and risk reduction measures | 67   | 47     |
| Share mitigation information with family and community   | 63   | 48     |
| Others                                                   | 3    | 7      |
The study resulted in the following conclusions;
1) Need to develop a training program on disaster risk reduction in order to acquire appropriate knowledge and sharing it at the community level;
2) Need to consider the appropriate contents of the training program, which promote disaster risk reduction by using the capacities of men and women; and
3) Need to establish a relationship between the local government and community leaders.

5 TRAINING FOR SAFER HOMES FOR WOMEN

5.1 Objectives and selection of the participants for the training

Based on the results of preliminary research and a series of consultative meetings with stakeholders, the Author developed a three-day training program on “safer homes for women” in June 2009. The training was organized receiving technical support from the National Society for Earthquake Technology (NSET) to provide training on practical non-structural measures that can be applied at the household level. The following objectives were pursued through the training: 1) to understand the importance of disaster management for women, 2) to be able to carry out non-structural measures in their homes, 3) to be able to support other housewives in carrying out non-structural measures in their communities, and 4) to be able to support rescue and search in times of emergency.

Twenty female members of the target communities participated in the training. As described in Figure 2, the seventeen participants gave their background before the training; the participants’ age is between 20s and 50s, eleven of them are housewives at the time of the training, most of them never had working experiences before marriage, and thirteen of the participants belong to Newar, which is the major indigenous group of the Kathmandu Valley. All participants except one are married. They showed their interests in participating in the training when the counterpart advertised it in their networks. Although some of them had participated in several disaster exercises in the past, it is the first training program, which targeted women only and provided training on practical non-structural measures. It was organized at a hotel in Kathmandu from 10:00-16:00 for three-days, so the family members of the participants were also needed to understand their participation to the training. The organizer arranged their transportation by hired bus and lunches during the training; this also encouraged the participants to show their commitments to be in the “formal” training.

Figure 2. Demographic data of the participants (17 participants out of 20 participants)
5.2 Implementation

The training consisted of four parts; 1) lectures on basic information on earthquake causes, effects and existing earthquake risks in Nepal, 2) education on earthquake preparedness and mitigation measures, 3) demonstration of non-structural measures at the household level, and 4) community-level search and rescue training. Participants learned about the basic science of earthquakes, the importance of disaster risk reduction, and how to apply non-structural risk mitigation measures in their homes. The participants visited several houses to learn practical ways of securing refrigerators and shelves by using brackets and props from engineers, and to ask questions to engineers on-site. At the end of the training, all the participants received fixtures for their households for applying non-structural measures. On the last day, they also received brief rescue and search training to be able to help someone in times of emergency.

5.3 Evaluation

After the training, follow-up evaluation meetings were held with the participants. A pre-structured questionnaire was used to analyse effectiveness of the training. Basically, all the participants and family members were satisfied with the training, and evaluated that it was practical. The 19 participants reported that they applied non-structural measures in their homes within one to two weeks after the training by themselves (13 people) and/or with the help of male members in the family (16 people). There was only one person who hired a professional to apply the measures. This showed that the tools and measures were appropriate for initiating risk reduction at the household level.

Other findings from the evaluation were that 17 participants responded that they talked about the training to relatives and/or friends, and 15 participants said they actually showed what kind of non-structural measures they carried out in their homes to their relatives and/or friends. It should be noted that 14 participants said that they knew of relatives/friends who applied non-structural measures in their homes after observing how they were carried out at the participants’ homes. Among the participants, seven participants originally have inhabited in their areas before marriage, and 5 participants are married within the same city, it means most of their relatives and friends live in the same localities. Some of the participants said that the best time of chatting with other women is when they fetch water from a well since many families in villages still use public wells. Therefore, it can be said that 70% of the participants influenced other community members to apply non-structural measures within two weeks after the training.

In her comment, a woman said, “My husband sometimes attended disaster mitigation training, but he has never shared with the family what he has learned. But I talked about and discussed with my husband, friends, and relatives what I learned, so my husband also recognized the importance of sharing information.” Several women requested holding a Training of Trainers on Disaster Management for Housewives, so that they can gain more confidence in disseminating basic information on disaster management and how to apply non-structural measures at the household level.

Two years after the training, a brief interview was conducted to evaluate effectiveness of the training program to the participants. All women answered that they have still keep the non-structural measures in their homes. The problem, however, is that only four women said that they have had further training opportunities after the training, most of the participants requested that they would like to participate in disaster management training courses again.

5.4 Findings and Challenges

Through the training program, the participants have gained an adequate understanding of gender perspectives. After the training program, women applied disaster mitigation strategies in their...
households in line with their usual responsibilities. The results proved that it is much easier for women to make a disaster risk reduction contribution in their spheres of responsibility than elsewhere. The evaluation of the training program illustrated how women’s strong capacity for networking and communication was crucial for disseminating effective disaster-related knowledge and simple measures for disaster risk reduction. Most of the women encouraged their relatives and friends to apply non-structural measures and they recognized their capacity to be able to influence community members, and this encouraged the women to learn more. They showed that their different ways of networking and disseminating information in society.

The number of participants was limited to twenty people, so the range of disseminating appropriate information on disaster risk reduction was also restricted. Unfortunately, training courses and/or workshops, which focus on women have not recognized its importance yet in the society, there are lack of opportunities for women to participate in disaster related activities despite of their desire. It should have been involved the local government officials and community leaders at the same time of the training for advocating the importance of women’s involvement in disaster management.

Another challenge is to recognize the vulnerability of housing structures. Although the training focused on women’s spheres of inside of homes, it should not mean that the matter of vulnerability of their houses pertains to men’s responsibility. If the houses totally collapsed in times of earthquake, non-structural measures have less or no meaning. Through the training, the women gained basic knowledge on earthquakes, and the current vulnerable situation in the Kathmandu Valley, it is expected to start discussing their living environment.

6 CONCLUSION

Women have the tendency to be more vulnerable than men, especially due to their social status, but they are not only passive victims as many are thought to be. They bear the burden behind-the-scenes in times of emergency and following rehabilitation. More focus should be given to women’s capacity and reduce their vulnerabilities, which exist in their day-to-day lives in order to make a disaster-resilient community. It is important to identify their root causes such as less capacity to gain to access resources, less control over property, less power for decision making, and so on. Gender mainstreaming in CBDM is thus one of the critical components for all community members to receive equal benefits by ensuring equal opportunity for ownership, control of resources, and access to information. The effective utilisation of gender-based social networks is an essential strategy to reduce disaster vulnerabilities. The strategy must be based on participatory planning, which will lead the local people towards initiating action. This process can be a window of opportunity for both men and women to reduce their vulnerabilities and strengthen their capacities. In order to promoted regional development, women – who make up over half of the population in the world - cannot be ignored.

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