Disaster Risk Reduction Knowledge of School Students in Nepal

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1 Introduction

Because of extreme vulnerability to natural disasters, Nepal is considered a disaster hotspot in the world. Due to predominant mountainous terrains in the north and low lying plains in the south drained by some of the large rivers on the earth originating from the Himalaya, and due to dominant strong monsoonal rains, the country is overwhelmed by floods and landslides. Likewise, situated at the boundary of the colliding Indian and Eurasian plates, the Himalaya and its neighborhood are geologically one of the most earthquake prone regions of the world, which have experienced devastating earthquakes in the past and do expect a large earthquake within this century (Bilham et al. 1995, Paudyal et al. 2012). All over the world, Nepal is placed in the seventh position in terms of number of deaths as a combined consequence of floods, landslides and avalanches, and in the eighth position in terms of number of flood related deaths alone (Nepal disaster report 2009). Also, as a matter of fact, each time a disaster occurs, masses of school children are victimized and many of them never return. Disaster scenario in Nepal clearly suggest that the school children of Nepal are also in extreme risk of natural disasters, especially when they should be in schools.

When the schools are hit by a disaster in Nepal, the hard won educational right of the children is always disrupted. Moreover, the instruction time is largely lost after a disaster, which results in an irrecoverable drop in education quality. Sometimes, some children cannot even continue their schooling leading to permanent drop out. When the educational records miss due to the disaster loss, students often fail to enroll again, which leads to their discontinued education. Damage in school buildings and loss of income and lack of reinvestment may also affect the continuation of the children’s education.

Therefore, disaster risk reduction (DRR) education to school students and teachers is very important for building an understanding of the teachers and students about the causes, nature and effects of natural hazards. It also fosters a range of competencies and skills to enable teachers and students to contribute proactively for the prevention and mitigation of disasters.

This research is intended to explore the DRR knowledge of school students in Nepal. Moreover, this is an impact study intended to examine the effect of pre-disaster education programs on a number of aspects including risk perceptions, emotion-focused components (e.g., disaster-related fear in students, present coping ability in the event of a disaster), knowledge on available safety system in the event of a disaster, disaster preparedness of the families and communities, and the disaster adaptations up until today. This study also explores future perspectives, and demands the underpin relationship between existing education programs and perception of the students towards disaster risk.

2 Methodology

A questionnaire data sheet was prepared, and a total of 124 students (participants) from the randomly selected schools were interviewed. The students were asked to indicate whether or not they had any experience of disasters in their life and any specific terrible disaster they experienced. Additionally, the students were asked to indicate the source of disaster information in their area. The students were asked a series of 20 questions that addressed their knowledge on a number of issues related to disasters.

The various questionnaires asked during the survey were accommodated within various groups of DRR issues and statistical analyses were performed. Histogram analysis, distribution analysis, bivariate correlations and independent sample t-tests were conducted to examine the relationship between the students in disaster education-related programs and the following key DRR issues-related dependent (criterion) variables: disaster-related knowledge, readiness behaviors of students, disaster awareness, disaster adaptations, and risk perceptions. A series of independent
sample t-tests were conducted to examine the effects of age, gender, and disaster events on the dependent variables.

3 Results and Discussion

An independent t-test suggested that there is no statistically significant difference between disaster knowledge, disaster readiness, disaster awareness and disaster risk perception of the female and male students because the significance of t-test results are greater than 0.05 (two-tailed) for almost all kinds of key disaster issues. Only for the case of adaptation, the male students are found to be more confused (significance of the t-test results are less than 0.05) than the female students. The interviewed students were categorized in two age groups (i.e., <15 years and ≥15 years) so as to evaluate the effect of age on the knowledge of key DRR issues. The analysis showed that younger students (i.e., <15 years) are surprisingly well familiar with disasters than the older students (i.e., ≥15 years). A total of 94% (Fig. 1) students said they had come across disasters, and most of them responded that earthquake, fire, and landslide disasters are the most prominent disasters they had ever felt in their life. About 13% students however responded that they had come across drought disaster. Disaster risk perception of the students was also evaluated using correlation matrix (Table 4). Pearson correlation of the responses between various kinds of disasters suggests that the students having fears of flood equally have fears of landslide, earthquake, fire, and hail. Similarly, the students who felt insecurity from earthquakes were also frightened by fire.

Fig. 1. Figures and tables should be placed in upper part of this page. Use style and formatting option available in Format menu. Figures and should be in “Figure” style. Similarly, Figure legend should be “FigLgd” style.

The analysis shows that most students do not have a correct knowledge of disasters and their mitigation methods. Although 94% of the questioned students have experienced a disaster, their opinions towards disaster adaptation and readiness behaviors are somewhat unexpectedly surprising. They do not think that disaster readiness behaviors and disaster adaptation are important tools for DRR. Nearly two-third of the students think that disaster risk perception is not really important, and they are kind of confused about it. Likewise, they are not aware of associated or secondary disasters that usually follow a major disaster.

The findings of this study support the value of DRR knowledge in school students of Nepal. Although line agencies (i.e., the organizations working in DRR sector) claim that DRR concept and disaster education are already incorporated in the school curricula and the students receive DRR knowledge through awareness campaigns, trainings, meetings, and so on, the real scenario is different.

4 Concluding remarks

National Strategy for Disaster Risk Management promulgated by the Ministry of Home Affairs (MoHA) under the Government of Nepal in March 2008 has pointed out that the level of DRR is conspicuously low at all levels of schools in Nepal. Although few exception of DRR education programs have been initiated, it was not included thoroughly in the formal curriculum at any level of school through university. As a result, MoHA has recommended strategic activities to develop and modify national policy on education and implementing it such a way as to recognize schools as important center for propagating knowledge of DRR issues (MoHA et al. 2008). It is well known fact that for the developing country like Nepal, government alone cannot take all actions for DRR in community. Thus, the disaster education should not be confined within the school student itself, but it must be promoted to families and communities which is very essential to elaborate knowledge of DRR and it will contribute disaster safety society in the country.

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References
