

ABSTRACT

Introduction: Floods and landslides lead to catastrophic losses and destruction. Geographic differences, heavy rainfall and the presence of Kalu river basin make Ratnapura District highly vulnerable for both these disasters. Currently early warnings for flood disasters are formulated by the Irrigation Department. Landslide early warnings are generated by the National Building Research Organization. However, last mile communication systems for early warnings need to be fine-tuned.

Objectives: The aim of the study was to describe the awareness, practices and preference related to the existing early warning systems on flood and landslide disasters among residents in Ratnapura MOH area.

Methodology: A community based cross-sectional study was carried out in Ratnapura MOH division from September to October 2018. Three staged sampling method was used to select the participants. A sample of 336 disaster prone participants was recruited. An interviewer administered questionnaire was used to collect data. The data was transformed in to data sheets in SPSS version 20. Quantitative data was described using mean and standard deviation (SD). Qualitative data was described in proportions and percentages. Scoring systems were used to assess the knowledge on good practices associated with early warnings and preparedness and items to include in the emergency evacuation package.

Results: The majority of (n = 125, 37.2%) of the sample was recruited from Ratnapura old town area. The population was relatively young with 52.1% of the participants (n = 175) being above the age of 37 years. The mean age was 39.3 years (SD = 14.6). The sample was female dominant. A large percentage (n = 215, 64%) had witnessed floods in their lifetime. Landslide exposure was only seen in 20% of the participants. Above 40% believed there was no such early warning system available for both floods (n = 148, 44%) and landslides (n = 122, 36.3%). Most respondents rightfully chose to evacuate immediately upon receiving the warning (n = 304, 90.5%). Knowledge on good practices related to early warnings and preparedness was satisfactory in most of the participants (n = 239, 71.1%). A significant association was seen between the knowledge on warning and preparedness and the level of education () where participants qualified with Advanced level or more had better knowledge. Nearly equal numbers preferred Sirens (n = 103, 30.7%) or Television (n =94, 28%) as warning methods for floods and landslides.

Conclusions and recommendations: This study demonstrated lack of awareness, and underuse of existing early warning methods in vulnerable areas. Knowledge on disaster preparedness and related practices were satisfactory. Community centered early warning systems needs to be generated and practiced. Knowledge on disaster preparedness requires to be strengthened.

Keywords: Early warnings, Floods, Landslides, Ratnapura, disaster