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Improvised peer networks for flash flood warning**Sudha S Arlikatti**

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Statement of the Problem: The floods of 2017 in South Asian countries including India, Nepal, Bangladesh, Pakistan, Thailand, Philippines and Indonesia are evidence that flood hazards are a serious threat to millions worldwide, claiming approximately 20,000 lives annually. Specifically, expanding our understanding of flash flood warning systems is extremely important because these are unexpected events and increasing due to the climate change phenomena.

Methodology & Theoretical Orientation: This study is used for variables from the Protective Action Decision Model to guide data collection about 316 survivors' immediate responses to the 2013 flash floods in the hilly State of Uttarakhand in North India.

Findings: Results showed that the official warnings from the police or government agencies and the media were nonexistent in the first days of the disaster. Over half the respondents were at home and their first source of warning were environmental cues like hours of heavy incessant rains, hearing the violent sounds and seeing the river flowing with debris, followed by watching their neighbors and friends evacuate. Less than the sixth of the respondents received face-to-face warnings from other villagers and a few received text messages from family members in the highlands. Surprisingly, very few villagers were injured or lost family members. A majority of the fatalities were tourists from outside the State, there on a pilgrimage.

Conclusions & Significance: Despite lack of prior flash flood hazard experience, heavy damage to homes and villages and no official warning messages with details of what to do-- evacuate uphill or downhill, shelter in place, basic survival items to carry and how much of it, information on availability of relief aid services etc., an overwhelming majority evacuated within the first four hours of receiving cues and survived. While most warning and risk communication literature focuses on what government agencies can and need to do, this study demonstrates that community members traditional knowledge of the terrain, understanding of environmental cues and integration into improvised peer warning networks determined their immediate behavioral responses and ultimate survival and recovery. Recommendations are made on how to integrate these informal networks into government initiated early warning systems.

Biography

Sudha S Arlikatti has over a decade of private sector experience as an Architectural and Planning Consultant in India and Oman and over 14 years of disaster research and teaching experience in the USA. She is currently an Associate Professor in the Business Continuity and Integrated Emergency Management programs in the Faculty of Resilience at Rabdan Academy, UAE. Her research interests include disaster warnings and risk communication in multiethnic communities, protective action decision-making, post-disaster sheltering and housing recovery, use of decision support technologies for emergency management and organizational and community resiliency to natural and intentional hazards. She has published 26 articles in notable disasters, public administration and environmental management journals, 12 book chapters, an edited book and numerous reports. She is currently serving as the Vice President of the Research Committee on the Sociology of Disasters (RC39) with the International Sociological Association.

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