

## The 2005 Kashmir Earthquake

Authors: Hamilton, Jennifer Parker, and Halvorson, Sarah J.

Source: Mountain Research and Development, 27(4) : 296-301

Published By: International Mountain Society

URL: <https://doi.org/10.1659/mrd.0945>

---

BioOne Complete ([complete.BioOne.org](https://complete.BioOne.org)) is a full-text database of 200 subscribed and open-access titles in the biological, ecological, and environmental sciences published by nonprofit societies, associations, museums, institutions, and presses.

Your use of this PDF, the BioOne Complete website, and all posted and associated content indicates your acceptance of BioOne's Terms of Use, available at [www.bioone.org/terms-of-use](https://www.bioone.org/terms-of-use).

Usage of BioOne Complete content is strictly limited to personal, educational, and non - commercial use. Commercial inquiries or rights and permissions requests should be directed to the individual publisher as copyright holder.

---

BioOne sees sustainable scholarly publishing as an inherently collaborative enterprise connecting authors, nonprofit publishers, academic institutions, research libraries, and research funders in the common goal of maximizing access to critical research.

Jennifer Parker Hamilton  
Sarah J. Halvorson

# The 2005 Kashmir Earthquake

## A Perspective on Women's Experiences

296



*The 2005 Kashmir Earthquake is illustrative of the intensity and scope associated with catastrophic earthquake disasters in mountainous regions. The experience of the immediate aftermath, relief and recovery, and community reconstruction underscores how this event impacted mountain women, particularly in their roles in rescue and relief efforts and in rebuilding households and communities. A situational analysis was undertaken in order to document and make recommendations for the significant challenges and concerns facing women earthquake survivors in 3 of the valleys most*

*proximate to the epicenter. Earthquake planning and mitigation strategies in northern Pakistan and elsewhere need to focus on reducing women's vulnerability and increasing their resilience, while fostering feasible interventions to reduce disaster risk across the population. We propose that the main elements should include pre-disaster vulnerability assessments; the support of women's access to resources and science-based earthquake education; active roles for women in relief, rehabilitation, and rebuilding efforts; and gender training among all disaster relief and emergency services.*

### Scope of concern

Social infrastructure and lifeways are dramatically altered in mountainous regions when catastrophic earthquakes occur (Figure 1). Earthquake impacts are typically far-reaching, leading to the obliteration of entire communities; the loss of mountain transportation networks; the collapse of livelihoods and food systems; the breakdown of medical and social infrastructure; widespread impoverishment; and social isolation.

Within the context of a larger project to assess the geological and societal impacts of the 2005 Kashmir Earthquake, we recognized a deep need to identify, document, and foreground women's expe-

riences in the aftermath of the tragedy. Qualitative research methods were employed to capture local women's voices and to identify gender-sensitive disaster risk reduction strategies.

Mountain women are differentially vulnerable to earthquake-related impacts owing to the well-documented interactions between gender, environmental hazards, and disasters (see Box 1). Women are considered a high risk social group, yet their vulnerability and resilience in the earthquake disaster process remain poorly understood and only partially acknowledged. When women's needs are not assessed and addressed in initial relief efforts, they are likely to be rendered invisible throughout the rehabilitation and rebuilding processes. Women who are victims of gender-based discrimination, disempowered through forces of modernization, occupy vulnerable built environments, and/or live in communities with high rates of male outmigration, are more likely to suffer disproportionately than men during and after earthquake disasters (Figure 2). It is also important to recognize that female survivors are often on the front lines of relief and reconstruction efforts.

### The Kashmir quake: event and impact

At 8:50 on the morning of 8 October 2005, northern Pakistan experienced a 7.6 magnitude earthquake. The earthquake was one of three large seismic events

**FIGURE 1** Critical infrastructure was impacted by landslides after the earthquake, forcing people to improvise in order to survive. (Photo by J.P. Hamilton, November 2005)



occurring in Pakistan in 75 years. Quetta (1935) and Makran (1945) also suffered large ( $M=7.5+$ ) earthquakes. The *zilzila* (Urdu for 'earth movement') that shook Azad Jammu and Kashmir's regional capital of Muzaffarabad and the surrounding area resulted in a landscape of physical destruction and humanitarian crisis. Pakistan did not have a national disaster preparedness plan in place when the earthquake struck. Critical infrastructure—hospitals, mosques, markets, power lines, and government offices—was severely affected. Children attending class in poorly constructed buildings proved to be especially vulnerable when over 7000 schools collapsed. Approximately 3.2 million people were rendered homeless. Damage estimates quickly reached US\$ 5.2 billion. News of the earthquake spread beyond the mountains, and motivated an outpouring of response from individuals and civil society organizations in Pakistan and around the world.

According to official statistics released in mid-November 2005, 73,318 people perished as a result of the earthquake; however, estimates of fatalities provided by other sources are as high as 87,000. Based on our findings and those of other studies, women made up a larger proportion of the injury and mortality figures. Several inter-related factors contributed to women being at risk. First, the earthquake occurred when many women were inside cleaning up after the morning meal. Second, cheaply and shoddily constructed cement block houses and apartments collapsed, trapping or killing women inside while they worked. The practice of *purdah* (ie gender segregation and female seclusion from public space) was another factor that further contributed to the location of most women inside the private spaces of the home. In areas where *purdah* was not as strictly enforced, women were more likely to flee their homes at the first indication of the earthquake.

The reality of families and villages being partially or completely buried by rubble and landslide debris overwhelmed the physical and psychological capacity of traditional social-support systems. The surviving women and their families experienced dramatic reductions in food, fuel,

**FIGURE 2** An emergency tent village on the outskirts of Balakot provides little privacy and personal space for women. (Photo by J.P. Hamilton, November 2005)



### Useful online resources on women, gender, and disaster management

- Chew L, Ramdas KN.** 2005. *Caught in the Storm: The Impact of Natural Disasters on Women*. San Francisco, CA: The Global Fund for Women. <http://www.globalfundforwomen.org/cms/images/stories/downloads/disaster-report.pdf>  
*Overview of post-disaster impacts faced by women and suggestions for gender-based considerations in preparedness, relief, and recovery.*
- Enarson E.** 2006. *The Gender and Disaster Sourcebook*. Newcastle upon Tyne, UK: Gender and Disaster Network, University of Northumbria. <http://www.gdnonline.org/sourcebook/index.htm>  
*Compilation of resources focused on the link between gender equality and disaster risk reduction.*
- Enarson E, Meyreles L, Gonzalez M, Hearn Morrow B, Mullings A, Soares J.** 2004. *Working With Women at Risk: Practical Guidelines for Assessing Local Disaster Risk*. Miami, FL: International Hurricane Center, Florida International University. <http://www.ihc.fiu.edu/Issr/workingwithwomen.pdf>  
*Action oriented step-by-step approaches to carrying out risk assessments among vulnerable women and to applying related outcomes to disaster planning and preparation.*
- Gender and Disaster Network.** 2007. *Practical Guides and Checklists*. Newcastle upon Tyne, UK: Gender and Disaster Network, University of Northumbria. [http://www.gdnonline.org/wot\\_practical.htm](http://www.gdnonline.org/wot_practical.htm)  
*Listing of various gender and disaster-related materials promoting gender sensitivity in post-disaster assessments and reconstruction efforts.*
- Yonder A, Akcar S, Gopalan P.** 2005. *Women's Participation in Disaster Relief and Recovery*. SEEDS Pamphlet 22. New York: The Population Council. <http://www.popcouncil.org/pdfs/seeds/Seeds22.pdf>  
*Summarizes information about the situation of women in post-disaster contexts and provides a number of innovative methods for enhancing women's roles in relief and recovery.*

clothing, and other basic necessities, thereby leading to cases of exposure, infant and child mortality, cold stress, and other medical emergencies. In the midst of this chaos, women became a fundamental force in the struggle for survival and as



**FIGURE 3** Women in tent camps, such as the elderly woman pictured here, took on the roles of surrogate mothers and childcare providers for mothers who had been injured or died as a result of the earthquake. (Photo by J.P. Hamilton, June 2006)

first responders caring for the injured and the dying (Figure 3).

#### Relief and response

As the shock consumed the region days and weeks following the earthquake, women played a critical role in spontaneous and organized relief efforts, digging out survivors, feeding those in need, and building and maintaining temporary shelters. In the spirit of self-reliance, women's kinship and friendship networks provided earthquake victims a means of moral support, security, comfort, and access to resources. A major coping strategy employed by earthquake survivors and displaced families was to take refuge with relatives in areas that either suffered minimal damage or were quickly stabilized. However, the scale of damage and trauma left many mountain women and their families without access to even the basic security that social networks typically provide. Thousands were forced to reside in tent camps for extended periods of time.

As the relief effort was unfolding, the highly patriarchal social structure and *purdah* made it extremely difficult for women to evacuate mountain villages and to access aid materials, healthcare, and compensation for their losses. Some families living in remote areas at higher elevations

were reluctant to travel down to relief camps set up in Muzaffarabad, partly out of fear for the safety and security of women. NGO field teams based in the area estimated that 17,000 women were expected to give birth within two months of the earthquake and 50% of the married women in Kashmir were pregnant at the time of the earthquake. These women faced an overall lack of obstetrical care and squalid conditions for delivery. Medical and relief teams noted a critical lack of female medical personnel to evaluate and attend to women's health needs.

The United Nations High Commission for Refugees (UNHCR) attempted to incorporate women's perspectives into the relief and response phase early on by establishing a women's committee in Muzaffarabad. Nevertheless, women confined to tent camps faced tremendous hardship. A needs assessment conducted in November 2005 by the Shirkat Gah Women's Resource Center, a women's rights organization based in Lahore, identified a number of critical issues facing earthquake-impacted women including:

- Accentuated gender barriers;
- An increase in personal insecurity;
- Unmet reproductive needs;
- Inadequate bathing and latrine facilities;
- Insufficient accommodation for hygiene needs; and
- Problems in obtaining compensation because of lost identification cards and relocation.

Stories circulated about physical violence and abuse in tent villages and about young girls and infants being abducted and illegally put up for adoption. Others spoke of girls, who at the time were separated from their families, being naively handed over to men posing as male relatives.

#### Rebuilding lives and communities

The reconstruction process has been critical for determining how and when families have been able to regain a sense of normalcy. In May 2006, inconsistent progress on the rebuilding of homes, shops, and government buildings was evident. A general sense of confusion mixed

with disdain regarding the rebuilding effort was conveyed in conversations and interviews conducted with women residing in tent camps and taking shelter in partially destroyed homes:

“We have to make a decision between shelter and food right now. It could take 1000 years [for the community to recover].”

*(G.J., a mother caring for her family in their partially destroyed home in Patika, May 2006)*

“We didn’t receive any money or a fan for our tent. The government has informed us that we must leave the tent village.”

*(S.S., a resident of Muzaffarabad living with her family in a local tent camp, May 2006)*

For women still caring for their families in the tent camps, scabies, inadequate sanitation, poor hygiene conditions, and constant fears of waterborne disease outbreaks persisted (Figure 4). Women interviewed during our field research seemed especially responsive to the suggestions and recommendations of the government and NGOs about the manner in which buildings should be reconstructed (for example, lightweight wood and metal sheeting shelters as opposed to un-reinforced concrete structures). The recommended shelters are potentially safer during seismic events than cinderblock and concrete structures; however, they lack proper insulation against the cold found in the mountains. One and a half years after the earthquake (March 2007), over 30,000 people were still living in 44 tent camps slated to be closed at the end of May 2007. Those choosing to stay in the tent villages past the deadline were instructed that they would receive no further relief aid.

### Positive outcomes

As the quotation from a local woman indicates (see margin), people have demonstrated an amazing amount of resilience and optimism despite the devastation and personal tragedy. Local examples of the ways in which women’s status and gender inequality have been challenged stand out as small victories for some. New centers were established to give women the



**FIGURE 4** Limited access to potable water, inadequate sanitation facilities, and dismal environmental health conditions are challenges women face in caring for their families in the tent villages. (Photograph by J.P. Hamilton, November 2005)

opportunity to learn a variety of handicraft skills and income-generating activities. The media attention drawn to the area prompted donors to revitalize ailing school systems and to open a number of new girls’ schools throughout the region. Though gender and vulnerability studies are not new to hazards research, the event has opened a door for an increase in discussions among government agencies, non-governmental organizations, and social activists in Pakistan about the need to bring women’s ideas, concerns, and perspectives to the forefront of disaster risk planning and mitigation as well as to relief, recovery and reconstruction efforts.

### Recommendations

Based on the findings of this Kashmir earthquake situation analysis as well as suggestions by local women that have been recorded by other action research initiatives, we recommend the following strategies to local communities and disaster relief agencies and organizations. The intent of these recommendations is to ensure that the specific needs and contributions of mountain women are institutionalized in earthquake disaster risk reduction plans:

*“God took everything away, but God helped us and gave us all of these things. We even get mineral water.” (H.J., a local woman from Balakot residing in a Balakot tent camp, May 2006)*

FIGURE 5 The physical processes that cause earthquakes and the actions that will keep household members safe are the topics of this educational poster distributed in Urdu. (Courtesy of Dr Rebecca Bendick, Department of Geosciences, The University of Montana)

# زلزلہ



1. *Conduct pre-disaster vulnerability and needs assessments*

The socioeconomic and cultural context of vulnerability and gender-based needs in pre-disaster settings should be evaluated and incorporated into disaster preparedness plans.

2. *Support women's access to health and livelihood resources*

Women should be entitled to emer-

gency medical training, land rights, essential health services, income-generating activities, vocational training, and micro-credit programs. Infrastructure, responsive institutions, and access to markets are vital to expanding disaster-resistant livelihood options for women.

3. *Utilize women's indigenous knowledge*

Women's traditional knowledge-based



The University of Montana

insights should be considered and integrated into early warning plans. Given their intimate connections to the environment, women are well-placed for identifying and monitoring potential disaster precursors such as behavioral changes among animal populations and changes in weather and water levels. Elderly women may have memories of past disasters and, given the opportunity, could pass life-saving information on to younger generations.

4. *Provide science-based earthquake education*

Extending formal and informal earthquake education initiatives to Pakistani women is imperative. A starting point should be promoting literacy, developing appropriate curriculum materials, and training teachers and women leaders. Training should address life-saving earthquake drills, basic earthquake science, risk awareness, and information about building seismically appropriate dwellings (Figure 5). Women should be respected as able community defenders and disaster management professionals.

5. *Give women active roles in relief, rehabilitation, and rebuilding*

Female liaisons need to be identified early to act as representatives for villages or neighborhoods. Aid distribution methods should be culturally sensitive and recognize households headed by women, the number of members, and the special dietary needs of pregnant women. More training courses similar to the Pakistan Red Crescent Society training course on disaster preparedness that

was offered the month before the Kashmir Earthquake are needed.

6. *Provide physical and legal protection*

Accountability for the safety and the protection of women and their land and inheritance rights must be upheld by all organizations and agencies. Tent village residents must be accurately registered, and detailed records of arrivals and departures must be maintained. Widows and girls are particularly at risk of being 'married off' by force and social pressure in post-disaster situations. Provisions must be made for women who are illiterate and/or lack personal identification documents.

7. *Ensure psychological care*

Research suggests that depression and anxiety-related disorders after a disaster are more prevalent in women than in men. Standards for treating trauma in earthquake-related crises should be culture-, gender-, and age-sensitive. Male members of the population should also be recipients of psychological care and appropriate therapy in order to reduce the risk of gender-based violence and exploitation.

8. *Provide gender training to military and disaster relief organizations*

While the majority of displaced adults during earthquakes are women, most aid and relief operations work through channels that are biased towards if not dominated by men. Gender awareness training should be routine for all military and relief organizations and is critical for securing the full protection of mountain women and their access to aid and relief.

## AUTHORS

**Jennifer Parker Hamilton and Sarah J. Halvorson**  
Department of Geography, Social Science Building 203,  
The University of Montana, Missoula, MT, 59812-5040,  
USA.

jennifer.parker.hamilton@gmail.com;  
sarah.halvorson@umontana.edu

Jennifer Hamilton has served as a research assistant with the Mountain Geography Research Group at The University of Montana since 2005. Her interests include hazards and disasters, indigenous knowledge, and gender studies.

Sarah Halvorson is an associate professor of geography, specializing in environmental hazards, water

resources, development studies, and gender geography. She has carried out research in the mountainous regions of Central and South Asia since 1994.

## ACKNOWLEDGMENTS

The authors wish to acknowledge financial support from The University of Montana and the National Science Foundation Small Grant for Exploratory Research Program (EAR #0602675) awarded to Lewis Owen, University of Cincinnati, and Ulrich Kamp, The University of Montana. The insights and suggestions of Susanne Wymann, Anne Zimmermann, Jeffrey Gritzner, and Ulrich Kamp are also greatly appreciated.

## FURTHER READING

- Halvorson SJ.** 2005. Growing up in Gilgit: An exploration of girls' life-worlds in northern Pakistan. In: Nagel C, Falah GW, editors. *Geographies of Muslim Women: Gender, Religion, and Space*. New York: Guilford Press, pp 19–44.
- Hicks E, Pappas G.** 2006. Coordinating disaster relief after the South Asia Earthquake. *Society* 43(5): 42–50.
- International Federation of Red Cross (IFRC).** 2006. Gender issues in emergencies. In: Walter J, editor. *World Disaster Report: Focus on Neglected Crises*. Geneva, Switzerland: International Federation of Red Cross and Red Crescent Societies, pp 140–163.
- IUCN [The World Conservation Union].** 2006. *Hearing Their Voices: The Women and Children in the Earthquake Affected Areas of Pakistan*. <http://www.duryognivaran.org/duryog/images/newsindex/Rport%20on%20women%20&%20Childeren%20by%20IUCN.pdf>; accessed on 28 August 2007.
- Mehta M.** 2007. *Gender Matters: Lessons for Disaster Risk Reduction in South Asia*. Kathmandu, Nepal: ICIMOD [International Centre for Integrated Mountain Development].
- Shirkat Gah Women's Resource Center.** 2006. *Rising From the Rubble: Special Bulletin on the 2005 Earthquake in Pakistan*. Lahore, Pakistan: Shirkat Gah.