



An Assessment of the Relationship between Cultural Diversity and Disaster Preparedness

Sohel Mohammad ^{a*} and Suhaib Mohammad Qureshi ^a

^a Centre for Disaster Management Technology for Animals, Rajasthan University of Veterinary and Animal Sciences, Bikaner, India.

Authors' contributions

This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.

Article Information

DOI: 10.9734/JSRR/2023/v29i81773

Open Peer Review History:

This journal follows the Advanced Open Peer Review policy. Identity of the Reviewers, Editor(s) and additional Reviewers, peer review comments, different versions of the manuscript, comments of the editors, etc are available here:
<https://www.sdiarticle5.com/review-history/103485>

Opinion Article

Received: 15/05/2023

Accepted: 19/07/2023

Published: 22/07/2023

ABSTRACT

Cultural diversity is an essential aspect of human society, but it can create challenges in the context of disaster preparedness and response. Disasters can affect people from different cultures in different ways, and cultural differences can influence the way people prepare for and respond to disasters. This article assesses the relationship between cultural diversity and disaster preparedness, examining the ways in which cultural diversity can influence disaster preparedness efforts. One way in which cultural diversity can influence disaster preparedness is through attitudes towards risk. People from different cultures may have different perceptions of risk, which can influence their willingness to prepare for disasters. For example, people from some cultures may be more fatalistic about disasters, believing that they are beyond human control, while others may be more proactive in their disaster preparedness efforts. Understanding these cultural differences is essential for developing effective disaster preparedness strategies that take into account the needs and perspectives of diverse cultural groups. Another way in which cultural diversity can influence disaster preparedness is through beliefs about the causes of disasters. Different cultures may have

*Corresponding author: E-mail: sohelmohammad19@gmail.com;

different beliefs about the causes of disasters, which can influence the way people prepare for and respond to them. For example, people from some cultures may see disasters as the result of divine punishment, while others may attribute them to natural causes. Understanding these cultural differences is essential for developing effective disaster preparedness strategies that are sensitive to the beliefs and values of diverse cultural groups.

Keywords: Natural hazards; disasters; cultural diversity; disaster preparedness; management.

1. INTRODUCTION

Cultural diversity can have a significant impact on disaster preparedness efforts. Different cultures have unique beliefs, practices, and values that can influence the way they prepare for and respond to disasters. Understanding the cultural diversity of the affected community is essential to provide effective disaster relief [1-4]. Disaster responders must have a clear understanding of the cultural practices, beliefs, and values of the affected community to provide effective disaster relief. Cultural competence involves understanding and respecting the cultural differences of the affected community [5-8]. Community engagement involves the affected community in the disaster preparedness and response planning process. Community engagement ensures that the disaster preparedness and response plans and strategies developed are inclusive and take into account the unique needs of different communities. Cultural diversity can also bring benefits to disaster preparedness and response efforts. Different cultures have unique knowledge and skills that can be useful during a disaster [9-11].

Appleby-Arnold et al., [12] investigated relationships between the disaster preparedness of citizens and cultural factors with qualitative and quantitative data using real time survey in Romania and Malta. Observations of the study highlighted that the ambivalent aspects of trusting behaviour as a cultural norm on the one hand, and distrust in authorities based on experience and unmet expectations on the other hand. Similarly, several studies of preparedness (Kirschenbaum, 2002) have indicated large number of parameters that can influence the degree, to which people make themselves ready for a disaster, including: the level of destruction to which can be identified that they might be in danger of experiencing a disaster. Raheem et al., [13] developed a framework model which was based on the relationship between disaster preparedness and cultural diversity during the study which was conducted in Punjab (Pakistan). It was found that the developed model can be

replicable and reproducible for other similar disaster situation around the globe and specially in Asia.

Cultural diversity can also help build trust and cooperation between disaster responders and the affected community. However, cultural diversity can also create challenges in disaster preparedness and response [14,15]. Language barriers can create significant challenges in communication during a disaster. Cultural practices and beliefs can also hinder disaster response efforts. Disaster responders must be prepared to address these challenges and work to ensure that disaster preparedness and response efforts are inclusive and culturally competent. Natural disasters are a significant threat to human life and property. They can have a catastrophic impact on communities, causing widespread destruction and loss of life [16,17]. Disaster preparedness and response are critical in mitigating the impact of natural disasters. Cultural diversity plays a significant role in disaster preparedness and response [18-21]. This article will assess the relationship between cultural diversity and disaster preparedness and response. The article will explore the following sub-themes:

1. **The impact of cultural diversity on disaster preparedness and response:** Different cultures have unique beliefs, practices, and values that can influence the way they prepare for and respond to disasters. Understanding the cultural diversity of the affected community is essential to provide effective disaster relief.
2. **The importance of cultural competence in disaster response:** Cultural competence involves understanding and respecting the cultural differences of the affected community. Disaster responders must have a clear understanding of the cultural practices, beliefs, and values of the affected community to provide effective disaster relief.

3. **The role of community engagement in disaster preparedness and response:** Community engagement involves involving the affected community in the disaster preparedness and response planning process. Community engagement ensures that the disaster preparedness and response plans and strategies developed are inclusive and take into account the unique needs of different communities.
4. **The challenges of cultural diversity in disaster preparedness and response:** Cultural diversity can create challenges in disaster preparedness and response. Language barriers can create significant challenges in communication during a disaster. Cultural practices and beliefs can also hinder disaster response efforts.
5. **The benefits of cultural diversity in disaster preparedness and response:** Cultural diversity can also bring benefits to disaster preparedness and response efforts. Different cultures have unique knowledge and skills that can be useful during a disaster. Cultural diversity can also help build trust and cooperation between disaster responders and the affected community.
6. **The impact of socioeconomic status on disaster preparedness and response:** Socioeconomic status can also influence the way people prepare for and respond to disasters. People who are low-income or homeless may have fewer resources to prepare for and respond to disasters, and may be more vulnerable to the impacts of disasters.
7. **The role of technology in disaster preparedness and response:** Technology can be a powerful tool in disaster preparedness and response efforts. Social media and other communication technologies can help disseminate critical information during a disaster, while drones and other advanced technologies can help with search and rescue efforts.
8. **The importance of mental health support in disaster response:** Disasters can have a significant impact on the mental health of affected individuals. Disaster responders must be prepared to provide mental health support to those who need it.
9. **The impact of climate change on disaster preparedness and response:** Climate change is expected to increase the frequency and severity of natural disasters. Disaster preparedness and response efforts must take into account the impacts of climate change and work to mitigate its effects.

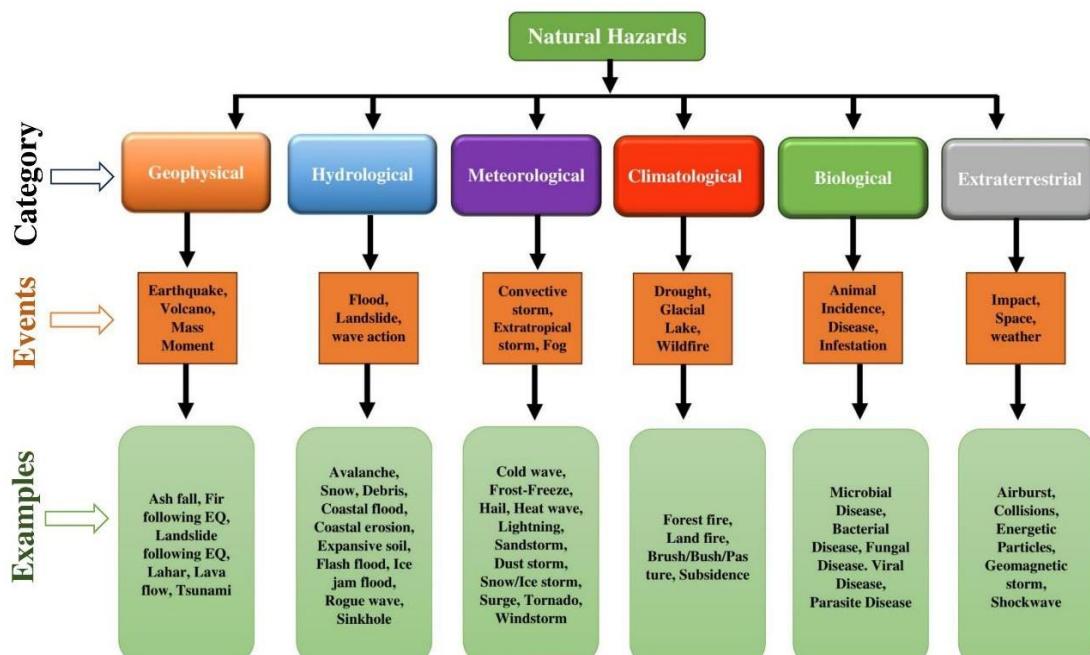


Fig. 1. Category and Event wise Classification of natural hazards with examples

- 10. The importance of disaster risk reduction:** Disaster risk reduction involves taking actions to reduce the risk of disasters. This can include measures such as building codes, land use planning, and early warning systems. Disaster risk reduction can help communities become more resilient to disasters.

Cultural diversity is an essential aspect of human society. It refers to the differences in language, customs, beliefs, and values that exist between different groups of people. Cultural diversity is a source of strength and resilience for human society, as it allows individuals to learn from one another and build upon each other's strengths. However, cultural diversity can also create challenges in the context of disaster preparedness and response. Understanding the relationship between cultural diversity and disaster preparedness is essential to ensure that disaster response efforts are effective and inclusive.

2. DISASTERS AND CULTURAL DIVERSITY

Disasters are events that cause significant damage to human life, property, and infrastructure. Disasters can be natural, such as hurricanes, earthquakes, and floods, or human-made, such as terrorist attacks, industrial accidents, and wars. Disasters can affect people from various cultures in different ways. For example, people from different cultures may have different beliefs about the causes of disasters, different attitudes towards risk, and different coping mechanisms. Cultural differences can also influence the way people prepare for and respond to disasters [22].

3. CULTURE AND DISASTER PREPAREDNESS

Disaster preparedness involves taking actions to minimize the impact of disasters on human life, property, and infrastructure. Disaster preparedness efforts can include measures such as emergency planning, evacuation planning, and emergency response training. Cultural diversity can influence disaster preparedness efforts in several ways. For example, different cultures may have different beliefs about the causes of disasters [23]. Some cultures may believe that disasters are acts of God, while others may believe that disasters are caused by human

activity. These beliefs can influence the way people prepare for disasters. For example, people who believe that disasters are acts of God may be less likely to take actions to prepare for disasters, as they may believe that there is nothing they can do to prevent them [24].

Cultural diversity can also influence the way people perceive risk. For example, people from different cultures may have different attitudes towards risk. Some cultures may be more risk-averse than others, while others may be more risk-tolerant. These attitudes can influence the way people prepare for disasters. For example, people who are more risk-averse may be more likely to take actions to prepare for disasters, such as purchasing insurance or building.

4. CONCLUSION

Cultural diversity is an important factor to consider when developing disaster preparedness strategies. This article has highlighted the ways in which cultural diversity can influence disaster preparedness efforts, including attitudes towards risk, beliefs about the causes of disasters, and coping mechanisms. By understanding these cultural differences, it is possible to develop effective disaster preparedness strategies that are sensitive to the needs and perspectives of diverse cultural groups. To promote inclusive disaster preparedness efforts, it is essential to engage with diverse cultural groups and understand their unique needs and perspectives. This can involve partnering with community organizations, religious groups, and other stakeholders to develop culturally sensitive disaster preparedness strategies. It can also involve providing culturally appropriate disaster preparedness education and outreach to ensure that diverse cultural groups have the information and resources they need to prepare for disasters.

In addition to promoting inclusive disaster preparedness efforts, it is important to recognize the role that cultural diversity can play in disaster response efforts. Disaster response efforts should be sensitive to the needs and perspectives of diverse cultural groups, including their coping mechanisms and support networks. By recognizing the importance of cultural diversity in disaster preparedness and response, it is possible to develop more effective and inclusive disaster management strategies that can help to protect all members of society. Finally, cultural diversity can influence disaster preparedness

efforts through coping mechanisms. Different cultures may have different coping mechanisms for dealing with disasters, which can influence their preparedness efforts. For example, people from some cultures may rely on family and community networks for support during disasters, while others may rely on government agencies. Understanding these cultural differences is essential for developing effective disaster preparedness strategies that are sensitive to the coping mechanisms of diverse cultural groups.

In conclusion, cultural diversity can create challenges in the context of disaster preparedness and response. However, by understanding the ways in which cultural diversity can influence disaster preparedness efforts, it is possible to develop effective disaster preparedness strategies that take into account the needs and perspectives of diverse cultural groups.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

REFERENCES

1. Solberg C, Rossetto T, Joffe H. The social psychology of seismic hazard adjustment: Re-evaluating the international literature. *Natural Hazards and Earth System Sciences*. 2010;10(8):1663–1677. [Google Scholar]
2. Terpstra T. Emotions, trust, and perceived risk: Affective and cognitive routes to flood preparedness behavior. *Risk Analysis*. 2011;31(10):L1658–1675. [PubMed] [Google Scholar]
3. Udayangani K. Impact of culture towards disaster risk reduction'. *International Journal of Strategic Property Management*. 2010;14(4):304–313. [Google Scholar]
4. UN ISDR (United Nations International Strategy for Disaster Reduction) South Eastern Europe Disaster Risk Mitigation and Adaptive Initiative. United Nations, Geneva; 2008. [Google Scholar]
5. Armaş I, Gavriş A. Census-based social vulnerability assessment for Bucharest. *Procedia Environmental Sciences*. 2016; 32:138-146.
6. Appleby-Arnold S, Brockdorff N, Jakovljev I, Zdravković S. Disaster preparedness and cultural factors: A comparative study in Romania and Malta. *Disasters*. 2021;45(3):: 664-690.
7. Degli Esposti S, Santiago-Gomez E. Acceptable surveillance-orientated security technologies: Insights from the SurPRISE project. *Surveillance and Society*. 2015;13(3–4):437–454. [Google Scholar].
8. Hoffmann R, Muttarak R. Learn from the past, prepare for the future: Impacts of education and experience on disaster preparedness in the Philippines and Thailand. *World Development*. 2017;96:32–51.
9. Akompab DA, et al. Heat waves and climate change: Applying the health belief model to identify predictors of risk perception and adaptive behaviour in Adelaide, Australia'. *International Journal of Environmental Research and Public Health*. 2013;10(6):2164–2184. [PMC free article] [PubMed] [Google Scholar]
10. Adwell P, O'Brien S. Language, culture, and translation in disaster ICT: An Ecosystemic model of understanding. *Perspectives: Studies in Translation Theory and Practice*. 2016;24(4):557–575. Available:<https://doi.org/10.1080/0907676X.2016.1142588>.
11. Appleby-Arnold S, Brockdorff N, Jakovljev I, Zdravković S. Applying cultural values to encourage disaster preparedness: lessons from a low-hazard country. *International Journal of Disaster Risk Reduction*. 2018;327–344. [Google Scholar].
12. Appleby-Arnold S, Brockdorff N, Callus C. Developing a culture of disaster preparedness: The citizens' view. *International Journal of Disaster Risk Reduction*. 2021;56:102133.
13. Raheem HMJ, Mayo SM, Kamel AY, Maqbool R, Mohamed MMA, Maraqa MA, et al. Assessing the relationship between cultural diversity And disaster preparedness: A case study of flood hazard for Northern and Southern Punjab. *International Journal of Disaster Risk Reduction*, 2023;84:103452.
14. Koeffler TJ, Demeter NE, Kysh L, Reeb J, Stayton A, Spears R, Burke RV. Evaluation and gap analysis of pediatric disaster preparedness resources. *Disaster Med Public Health Prep*. 2019;13(2):330–337. Available:<https://doi.org/10.1017/dmp.2018.23> Epub 2018 Mar 7. PMID: 29510775. A review of US pediatric disaster preparedness resources identified gaps in

- culturally sensitive resources, especially those for children with disabilities.
15. Méndez M, Flores-Haro G, Zucker L. The (in) visible victims of disaster: Understanding the vulnerability of undocumented Latino/a and indigenous immigrants. *Geoforum; Journal of Physical, Human, and Regional Geosciences*. 2020;116:50–62.
Available:<https://doi.org/10.1016/j.geoforum.2020.07.007>
16. Wachinger G, Renn O, Begg C, Kuhlicke C. The risk perception paradox—implications for governance and communication of natural hazards. *Risk Analysis*. 2013;33(6):1049–1065. [PubMed] [Google Scholar]
17. Weinstein ND, Nicolich M. Correct and incorrect interpretations of correlations between risk perceptions and risk behaviors. *Health Psychology*. 1993;12(3): 235–245. [PubMed] [Google Scholar]
18. Paton D, et al. Making sense of natural hazard mitigation: Personal, social and cultural influences. *Environmental Hazards*. 2010b;9(2):183–196. [Google Scholar].
19. Phillips BD. Cultural Diversity in Disasters: Sheltering, housing, and long term recovery. *International Journal of Mass Emergencies & Disasters*. 1993;11(1):99–110.
Available:<https://doi.org/10.1177/028072709301100108>.
20. Reuter C, Kaufhold M. Fifteen years of social media in emergencies: A retrospective review and future directions for crisis informatics. *Contingencies and Crisis Management*. 2018;26(1):41–57. [Google Scholar]
21. Rohrmann B. Comparisons of Risk Perception in Different Cultures: Profile and Synopsis of a Social Science Research Venture Conducted in 9 Countries. Reports, Roman Research Road, Melbourne; July 2013.
Available:<http://www.rohrmannresearch.net/pdfs/Rohrmann%5B%5DReportCRD-SynopsisRiskPerceptionResearch-Final-260713.pdf>
(Last accessed on 20 October 2020).
22. Busà MG, Musacchio MT, Finan S, Fennel C. Trust-building through social media communications in disaster management. In Gangemi A. (ed.) *Proceedings of the 24th International Conference on World Wide Web Companion*: May 18–22, 2015, Florence, Italy. Alliance for Community Media, New York, NY. 2015;1179–1184.
23. Becker JS, Paton D, Johnston DM, Ronan KR, McClure K. The role of prior experience in informing and motivating earthquake preparedness. *International Journal of Disaster Risk Reduction*. 2017;179–193. [Google Scholar].
24. Cornia A, Dressel K, Pfeil P. Risk cultures and dominant approaches towards disasters in seven European countries. *Journal of Risk Research*. 2014;19(3):288–304. [Google Scholar].

© 2023 Mohammad and Qureshi; This is an Open Access article distributed under the terms of the Creative Commons Attribution License (<http://creativecommons.org/licenses/by/4.0>), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Peer-review history:
The peer review history for this paper can be accessed here:
<https://www.sdiarticle5.com/review-history/103485>