

A REVIEW ON THE ROLE OF NURSES IN DISASTER MANAGEMENT IN INDIA

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Abstract

Due to its ecological, India is the second most vulnerable country in the world to natural disasters like cyclones, earthquakes, droughts, rain falls, hurricanes, and so on. Between 2000 and 2009, disasters affected 65 million people, and between 2012 and 2019, the mortality rate was 79732. Disaster management is a four-step process that requires all levels of government organisations to plan, prepare, and respond to any natural disaster. The review material was collected from online databases, i.e., Research Gate, PubMed, Scopus, CINHAI, and Google Scholar. During disaster management, the nurse's role includes decide the extent of the event, prioritise the health needs of affected people, identifying actual and potential health problems, and estimating the resources required to respond to the psychological, physical, economical and other needs identified.

Keywords: Disaster, natural disaster, disaster management, nurses' role.

INTRODUCTION

A disaster is a natural occurrence that causes significant loss of human life or property. It also has societal and economic consequences because it makes it difficult for people to use their own resources. India is the second country in the world that is highly exposed to natural disasters due to its geographic location. Earthquakes, cyclones, snowstorms, hurricanes, and landslides occur on a regular basis. The WHO defines disasters as any event that cause damage of property or land, ecological disruption, loss of human and animal life, and health services. Millions of people are affected by these disasters, which also result in significant financial, agricultural, and infrastructure losses. Natural disasters threaten nearly 80% of India's geographical areas. India has also become much more prone to tsunamis since 2004. Between 2000 and 2009, disasters affected 65 million people. As per UNICEF, out of affected people, more than 8.5 million were under 5 children, 3.25 million were pregnant women or lactating mothers, and 1.25 million were malnourished people.

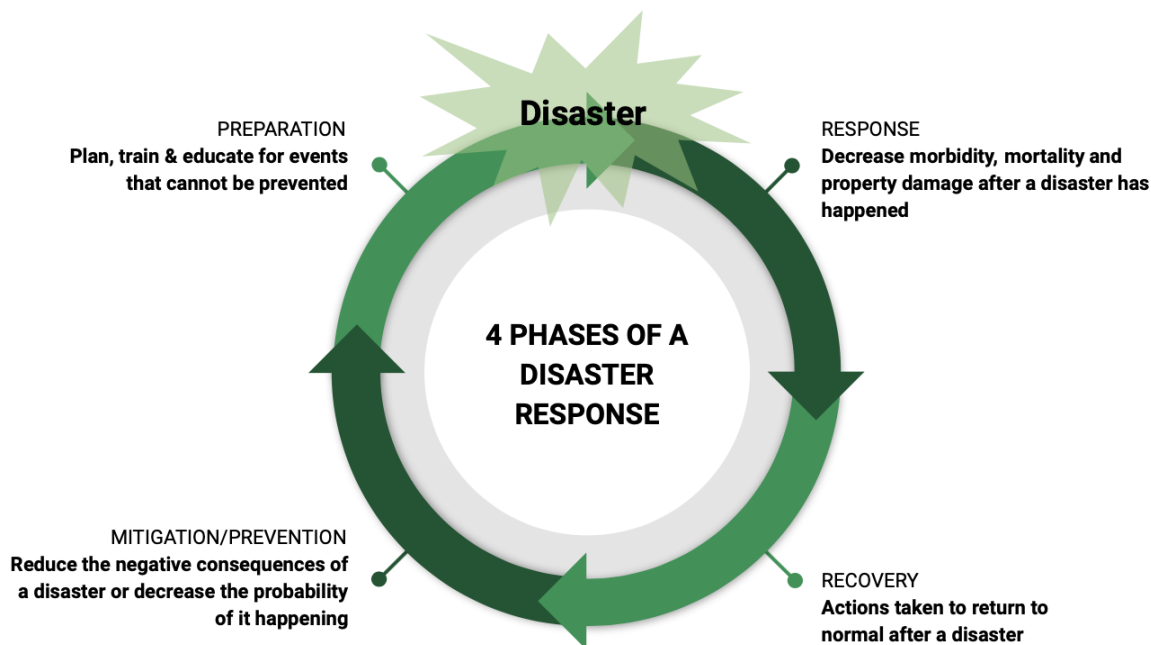
United Nations Office for Disaster Risk Reduction (UNDRR) reported that the total number of people who died between 2012 and 2019 is 79732. During the same time period, India reported 321 catastrophic events; in the same report, it is also stated that 80 billion USD of economic loss has occurred in the last 20 years.

Natural disasters in India as per the World Bank Report

Type of disaster	Natural disaster	Material loss	Human loss
Flood	52%	16%	32%
Hurricane	30%	19%	32%
Landslide	10%	-	2%
Earthquake	5%	10%	33%
Drought	3%	5%	1%
Total	100%	100%	100% ⁱ

Disaster management, according to the International Federation of Red Cross and Red Crescent Societies, is the management of resources and responsibilities in disaster mitigation, preparedness, response, and recovery in order to reduce the impact of disasters. It also refers to measures taken to prepare for disasters in advance as well as responses after disasters. Mitigation refers to steps taken by the government or any organisation before a disaster takes place to protect people and property. Mitigation includes property inspection, fortifying the damage-proof building, and revising land use management. Disaster

preparedness activities include education, drills, hosting training, and tabletop exercises for risk reduction measures aimed at saving the maximum number of lives during any disaster situation. Disaster relief or response includes a response plan, escape strategies, the provision of temporary housing, power, and water supplies, and stabilisation of the physical and emotional conditions of those affected. Disaster recovery refers to the restoration phase after impact and includes an action plan, programs, and initiatives to reduce financial burdens, rebuild infrastructure, provide health care and rehabilitation services to the affected, and reduce vulnerability to future disasters.



A systematic review on nurses' disaster management knowledge and preparedness demonstrates that nurses are neither prepared for disasters in advance nor confident enough in their ability to respond during them. It was also seen that factors that we need to increase are the preparedness of nurses for disasters and the level of education to strengthen the knowledge and skills related to disasters. An another systematic review of nurses' challenges on disaster management identified six main new challenges: lack of preparedness, newness of disaster management in the field of nursing, legal and ethical issues, poor formal education, unclear roles, and lack of research. As disaster nursing was new for the nurses, there were few evaluation tools, no previous experience with disaster, no availability of experts, limited training for nurses, and few evaluation tools available, so it was a major challenge for nurses to manage disaster.

A study shows that nurses play a vital role in managing disasters in three stages: before, during, and after a crisis. Before the crisis, nurses play a role in preparation for the disaster and identify the magnitude of the incidence; during the disaster, nurses understand the needs of the affected person, set objectives and priorities for the patient, provide care to patients, and manage the emergency situation. After the crisis situation, nurses start the evacuation of the individuals to a specialised hospital and try to deal with the restoration and rehabilitation of the affected person.

A recent study on disaster management in India in 2022 and found that natural hazards are a result of imbalances in the climate; disasters are not preventable, but we can reduce the risk of them and minimise their effects by generating warning systems.

Priyanka Banerji (2013) conducted a study comparing the speed of recovery after disaster management in Japan and India and found India is lacking behind compared to Japan.

A descriptive study on the role of 250 nurses in preparedness before, during, and after disasters conducted, and the result of the study revealed that the majority of the respondents had good knowledge, attitude, and skills for facing any disaster situation in real life so that they could help the affected individuals. Nurses provide care to patients without regard to their demographic profile; they are always aware of their roles and responsibilities in managing any situation during a disaster.

Dewa Gede Sanjaya Putra (2020) found six factors responsible for disaster preparedness among nurses: perception and working experience in past disasters; experience in the field; disaster simulation training; self-regulation; and family readiness and support.

Ya Su, Xi Vivienwu, and others (2022) conducted a review study on the required skills for managing natural and man-made disasters and found that nursing skills are required for managing five types of disasters: earthquakes, tsunamis, typhoons, marine disasters, infectious diseases, bioterrorism, war, and radiation. In the study that is shown for all disasters, nurses are required to have different skills for each one.

METHODOLOGY

The present study aims to specify the role of nurses in disaster management. The study literature was gathered from books, journals, and online databases; for online database search engines, the keywords disaster, natural disaster, disaster management, and nurses' role in disaster management were used. Between January and March 2023, systematic electronic database searches were carried out. Studies were screened and included as per the inclusion criteria; studies were appraised and extracted by 3 reviewers. Findings from the study were synthesised narratively.

RESULT

As per the narrative finding, it's been analysed that natural hazards are a result of imbalances in the climate; disasters are not preventable, but we can reduce the risk of disaster and minimise its effects by generating warning systems. Nurses' roles in disasters could be classified into three stages: before, during, and after the crisis.

Prior to a disaster, the role of nurses in disaster preparedness is critical. The preparation includes physical training, mental training, and familiarity with the situation to identify a crisis; clinical skills training, including care of trauma, triage, simulation training, and evacuation methods; work with equipment and units; professional group training; operational capability; disaster management knowledge; leadership and supervision skills; and interaction and communication skills with affected persons and the unit. During a disaster, nurses play a pivotal role in managing it. During a disaster, nurses provide care to patients and manage the emergency situation. They understand the needs of the affected person, set objectives and priorities for the patient, identify the magnitude of the incidence, and provide needed resources for the affected group. Nurses provide care to patients without regard to their demographic profile; they are always aware of their roles and responsibilities in managing any situation during a disaster. During a crisis, nurses' roles and responsibilities include handling and providing emergency communication through bulletins, creating triage and caring for trauma victims, facilitating transport, linking agents in different stages from injury admission to discharge, and planning to escape danger. After the crisis situation, nurses start the evacuation of the individuals to specialised hospitals and try to deal with the restoration and rehabilitation of the affected person, but nurses are not that well prepared for disasters and are not always confident in responding during disasters. Following the crisis, nurses' roles include providing care for victims undergoing trauma in specialised hospitals, reconstructing and repairing damaged infrastructure, property, and equipment, evaluating and redeveloping disaster property and death plans, providing emotional support to survivors, and coordinating surveys, streamlining, and rehabilitation to return their patients to normal life.

It was also seen that factors that we need to increase are the preparedness of nurses for disasters and the level of education to strengthen the knowledge and skills linked to disasters. Because nurses lack the skills required to manage cataclysmic situations, nurses must have different skills and training for each type of disaster, such as earthquakes, tsunamis, typhoons, marine disasters, infectious diseases, and man-made disasters such as bioterrorism, war, and radiation. For nurses, evidence-based practise is also needed to overcome the situation of disaster, and more efforts are also needed to avoid any kind of confusion during disaster, as well as to make guidelines about legal and ethical matters and to clarify the role of nurses and the scope of disaster nursing.

For holistic disaster management, nurses must work in coordination with the disaster management team in estimating, identifying, preparing, and activating the plan of management and play a vital role in mass health education for disaster management, which requires sufficient knowledge and intensive skill training on all expected issues that may arise before, during, and after the disaster and drill simulations of different types of disaster scenarios.

CONCLUSION

This study's findings confirm that nurses are required in the heroic phases of the disaster (rescue and relief). According to the review analysis, nurses are key stakeholders in policy construction, public advocacy, and disaster management activities, which will help us be better prepared for disasters. Nurses also face challenges in managing any disaster situation due to a lack of training, modified skills, practical matters, research, education, ethical, and legal issues. It has been determined that nurses require special training, education through the development of a disaster nursing curriculum, and evidence-based practise to avoid confusion during disasters. All of these efforts will assist nurses in dealing with any catastrophic situation as an emergency response. To respond to any disaster, a global nursing workforce with cognitive, conative, and affective abilities is required.

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