International Research Journal of Education and Technology (IRJEdT)
	ISSN: 2581-7795, Impact Factor 5.007	
	Peer-Reviewed	Open Access	International Journal	
	Volume: 09	Issue: 09	Sep- 2026	www.irjweb.com	

A STUDY TO ASSESS EFFECTIVENESS OF STRUCTURED TEACHING PROGRAM ON KNOWLEDGE REGARDING DISASTER MANAGEMENT AND PREPAREDNESS AMONG GNM STUDENTS IN SELECTED NURSING COLLEGE AT VIJAYAWADA.

1.AUTHOR: -[1]PROF.DR. PALAGANI NAGARAJU, PROFESSOR INCOMMUNITY HEALTH DEPARTMENT,SCPM COLLEGE OF NURSING AND PARAMEDICAL SCIENCES, GONDA, UTTAR PRADESH.

[2]MR. RACHURIHEMACHAND, ASSOCIATE PROFESSOR, ASRAM COLLEGE OF NURSING, WESTGODAVARI, ELURU, ANDHRA PRADESH.

[3] MRS. MANDALAPU JALAJA, NURSING TUTOR, SCPM COLLEGE OF NURSING AND PARAMEDICAL SCIENCES, GONDA, UTTAR PRADESH.

ABSTRACT:

Background: Disasters have become increasingly frequent across the world and often create serious challenges for healthcare systems. In such situations, healthcare professionals play an important role in providing emergency care, coordinating relief activities, and supporting affected communities. Among them, General Nursing Midwives (GNMs) serve as frontline healthcare workers at the community level, especially in rural and semi-urban areas. Their preparedness and knowledge regarding disaster management are essential for ensuring effective response and minimizing health risks during emergencies. However,limited training opportunities and inadequate emphasis on disaster management within nursing education may lead to gaps in knowledge and preparedness among GNM students.**Objectives:**1) To assess the pre-existing knowledge regarding disaster management and preparedness among GNM students in selected nursing college at Vijayawada.2)To implement a structured teaching program on disaster management and preparedness among GNM students in selected nursing college at Vijayawada.3)To evaluate the effectiveness of the structured teaching program on comparing pre-test and post-test knowledge levels among GNM students in selected nursing college at Vijayawada. **Material and methods**: Quantitative/experimental approach was considered as

International Research Journal of Education and Technology (IRJEdT)
	ISSN: 2581-7795, Impact Factor 5.007	
	Peer-Reviewed	Open Access	International Journal	
	Volume: 09	Issue: 09	Sep- 2026	www.irjweb.com	

appropriate research approach for the present study. The sample of this study GNM students at selected Nursing College at Vijayawada.Probability simple random sampling technique was used to draw the sample.

KEY WORDS:Assess, Effectiveness, Structured Teaching Program, knowledge, disaster management, preparedness

INTRODUCTION:

Disasters are unexpected and destructive events that significantly disturb the normal functioning of a community or society. Such events often result in severe human suffering, damage to property and infrastructure, economic disruption, and environmental degradation. In many situations, the magnitude of these losses is so great that the affected community cannot manage the situation using its own available resources. According to the World Health Organization, disasters can overwhelm the capacity of local systems and therefore require external assistance for effective response, relief, and recovery effort. Similarly, the United Nations Office for Disaster Risk Reduction describes disaster management as a coordinated and systematic approach that includes preparedness, mitigation, response, and recovery strategies aimed at minimizing the harmful effects of hazards and strengthening the resilience of communities.

In recent decades, the occurrence and intensity of disasters have increased significantly across the world. Several factors such as climate change, rapid urbanization, environmental degradation, and continuous population growth have contributed to the rising frequency of both natural and human-induced disasters. Reports from the Centre for Research on the Epidemiology of Disasters indicate that disasters are becoming more frequent and severe, placing greater pressure on health systems, infrastructure, and community resilience. Developing countries, including India, are particularly vulnerable to disasters because of high population density, socio-

International Research Journal of Education and Technology (IRJEdT)
	ISSN: 2581-7795, Impact Factor 5.007	
	Peer-Reviewed	Open Access	International Journal	
	Volume: 09	Issue: 09	Sep- 2026	www.irjweb.com	

economic inequalities, and limited infrastructure in some regions, which make disaster preparedness and response more challenging.

India is considered one of the most disaster-prone countries due to its diverse geographical and climatic conditions. The country frequently experiences natural disasters such as floods, earthquakes, cyclones, droughts, and landslides. According to the National Disaster Management Authority, approximately 60% of India's landmass is vulnerable to earthquakes of varying intensity, about 12% is prone to floods, nearly 8% of the coastal area is at risk of cyclones, and large regions are susceptible to drought conditions.

Effective disaster management requires a well-coordinated and multidisciplinary approach in which healthcare professionals play a vital role. Among them, nurses and midwives are often the first healthcare providers to respond during emergencies and disasters. They are responsible for delivering immediate medical care, conducting triage, providing psychological support, and ensuring continuity of community health services during crisis situations. According to the International Council of Nurses, nurses play a crucial role in disaster response by managing patient care, coordinating relief services, and supporting affected communities during emergencies

NEED FOR THE STUDY:

Disaster preparedness is an essential component of effective healthcare delivery, particularly during emergencies when healthcare professionals are required to respond quickly and efficiently. In disaster situations, timely and well-coordinated medical care plays a crucial role in minimizing loss of life and reducing human suffering. However, inadequate knowledge and lack of preparedness among healthcare workers may lead to poor coordination, delayed medical interventions, increased morbidity and mortality, and inefficient use of limited healthcare resources. As per Global Report on Food Crises 2024 (FSIN-2024) Over the last 30 years, an estimated USD 3.8 trillion worth of crops and livestock production has been lost as a result of disaster events, corresponding to an average loss of USD 123 billion per year or 5 percent of

International Research Journal of Education and Technology (IRJEdT)
	ISSN: 2581-7795, Impact Factor 5.007	
	Peer-Reviewed	Open Access	International Journal	
	Volume: 09	Issue: 09	Sep- 2026	www.irjweb.com	

annual global agricultural GDP. Lower-income and lower-middle-income countries sustained the highest losses due to extreme events, up to 10 percent of their agricultural GDP. Losses in SIDS account for about 7 percent of their agricultural GDP.

The World Health Organization emphasizes that strengthening the preparedness of healthcare personnel is fundamental for developing resilient health systems capable of responding effectively to disasters and public health emergencies. When healthcare professionals are not adequately trained, disaster response efforts may become fragmented and less effective, which can compromise both patient safety and community well-being.

In developing countries such as India, disasters frequently disrupt healthcare services, particularly in rural and semi-urban areas where healthcare infrastructure and resources are often limited. India is one of the most disaster-prone countries in the world due to its diverse geo-climatic conditions. According to the United Nations Development Program, nearly 60% of India's landmass is prone to earthquakes, about 40 million hectares is flood-prone, around 8% of the area is vulnerable to cyclones, and 68% of the area is susceptible to drought. These statistics clearly highlight the country's high exposure to multiple hazards. Historical data further shows the severity of disaster impacts in India. Studies indicate that disasters affect an average of 30 million people annually, causing significant loss of life and property. Over a longer period (2001–2021), disasters have impacted over 100 crore people (1 billion) and resulted in approximately 83,000 deaths, demonstrating the scale of vulnerability and the urgent need for improved preparedness systems.

The total geographical area of Uttar Pradesh is 240.93 lakh hectares. Recurring natural disasters in the State over the years have been causing severe damage and adversely affecting human, plant and animal life, property and environment Approx. 27 lakh hectares affected annually due to Floods. Annual estimated loss due to floods is Rs. 432 crores. The recurrence period of highly deficient rainfall in East U.P. has been calculated to be 6 to 8 years whereas in West U.P. it is 10 years.The Terai belt districts of UP and entire districts of Saharanpur, Muzaffarnagar, Bagpat,

International Research Journal of Education and Technology (IRJEdT)
	ISSN: 2581-7795, Impact Factor 5.007	
	Peer-Reviewed	Open Access	International Journal	
	Volume: 09	Issue: 09	Sep- 2026	www.irjweb.com	

Bijnor, Meerut, Ghaziabad, Gautambuddh Nagar, JP Nagar, Rampur, Moradabad, Bulandshahr in western UP are in the Earthquake High Damage Risk Zone-IV

OBJECTIVES OF THE STUDY

1. To assess the pre-existing knowledge regarding disaster management and preparedness among GNM students in selected nursing college at Vijayawada.
2. To implement a structured teaching program on disaster management and preparedness among GNM students in selected nursing college at Vijayawada.
3. To evaluate the effectiveness of the structured teaching program by comparing pre-test and post-test knowledge levels among GNM students in selected nursing college at Vijayawada.

HYPOTHESIS: -

H_1: There will be a significant difference between pre and posttest knowledge level of GNM students after implementation of the structured teaching program.

H_2: There will be significant association between knowledge level with selected socio demographic variables.

MATERIAL AND METHODS:

Research Approach

Quantitative/experimental approach.

Research Design

One group Pre-test and Post-test (Pre experimental) design.

Sampling Technique

Purposive sampling technique was used this study.

Inclusion Criteria

The inclusion criteria were established to identify participants who were suitable and relevant for the objectives of the study.

International Research Journal of Education and Technology (IRJEdT)
	ISSN: 2581-7795, Impact Factor 5.007	
	Peer-Reviewed	Open Access	International Journal	
	Volume: 09	Issue: 09	Sep- 2026	www.irjweb.com	

- The study included ANM students from both first year who were currently enrolled in the institution at the time of data collection.
- Students who were willing to participate in the study and provided informed consent were included.
- Those students who were available during the data collection period, including pre-test, structured teaching program, and post-test sessions, were selected.

Exclusion Criteria

The exclusion criteria were defined to avoid incomplete data and ensure the validity of the findings.

- ANM students who were absent during the period of data collection were excluded from the study, as they could not participate in all phases of the intervention.
- Students who were unwilling to participate or did not provide informed consent were also excluded.

Tools and technique

Part I: Demographic Proforma

A structured demographic proforma was developed to collect background information of the participants. This proforma consisted of items related to age, educational background, previous experience or exposure to disasters, and prior training in disaster management, if any. The purpose of collecting demographic data was to describe the characteristics of the study sample and to examine the association between selected demographic variables and knowledge levels regarding disaster management preparedness.

Part II: Structured Knowledge Questionnaire

A structured knowledge questionnaire was developed to assess the level of knowledge regarding disaster management preparedness among ANM students. The questionnaire consisted of 30 multiple-choice questions covering essential aspects of disaster management, including types of

International Research Journal of Education and Technology (IRJEdT)
	ISSN: 2581-7795, Impact Factor 5.007	
	Peer-Reviewed	Open Access	International Journal	
	Volume: 09	Issue: 09	Sep- 2026	www.irjweb.com	

disasters, disaster management cycle, preparedness measures, emergency response, triage, infection control, referral systems, and community-level roles of healthcare workers.

Data Collection Procedure:

The data collection procedure was carried out in a systematic and organized manner to ensure accuracy and consistency of the findings. Prior to the commencement of data collection, formal permission was obtained from the institutional authorities

Data Analysis:

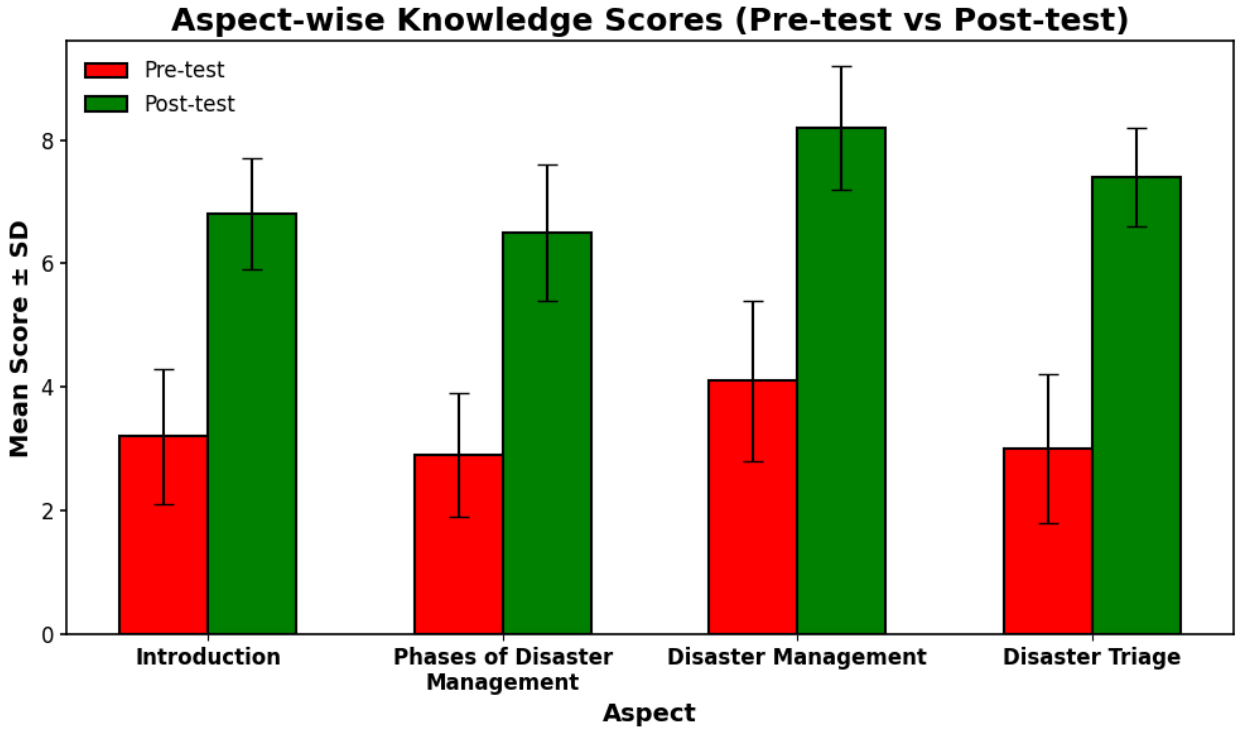
Descriptive statistics like frequency, mean, SD, mean percentage was used for description of demographic characteristics and assessment of knowledge. Inferential statics like paired t test was used to evaluate the effectiveness of planned teaching Programme and chi-square test was used to find out the association between Knowledge with Demographic Variables.

The findings were discussed under the following headings

1.Comparison of Pre-test and Post-test Knowledge ScoresAspect-Wise Comparison of Pre-Test and Post-Test Knowledge Scores among ANM Students (n = 80)

Aspect	Observation	Mean Score	Standard Deviation (SD)
Introduction	Pre-test	3.2	1.1
	Post-test	6.8	0.9
Phases of Disaster Management	Pre-test	2.9	1.0
	Post-test	6.5	1.1
Disaster Management	Pre-test	4.1	1.3
	Post-test	8.2	1.0
Disaster Triage	Pre-test	3.0	1.2
	Post-test	7.4	0.8

International Research Journal of Education and Technology (IRJEdT)
	ISSN: 2581-7795, Impact Factor 5.007	
	Peer-Reviewed	Open Access	International Journal	
	Volume: 09	Issue: 09	Sep- 2026	www.irjweb.com	



Aspect-wise comparison of knowledge scores before and after intervention. The bar graph presents the mean knowledge scores (± SD) of participants across different aspects of disaster management, including introduction, phases of disaster management, disaster management, and disaster triage, during pre-test and post-test assessments. A marked improvement in post-test mean scores across all aspects is observed, indicating the effectiveness of the structured teaching programme.

RECOMMENDATION

Based on the findings of the study, the following recommendations are proposed:

1. **Curriculum Integration**

   Disaster management education should be formally integrated into nursing and allied health curricula at the undergraduate and pre-service level.

International Research Journal of Education and Technology (IRJEdT)
	ISSN: 2581-7795, Impact Factor 5.007	
	Peer-Reviewed	Open Access	International Journal	
	Volume: 09	Issue: 09	Sep- 2026	www.irjweb.com	

2. **Regular Training Programmes**

   Periodic structured teaching programmes, workshops, and refresher courses on disaster preparedness should be conducted for students and healthcare personnel.

3. **Simulation and Practical Training**

   Simulation-based training, mock drills, and disaster triage exercises should be incorporated to enhance practical skills and confidence.

CONCLUSION

The study concludes that baseline knowledge regarding disaster management among participants was inadequate, largely due to lack of formal training, limited exposure to disasters, and reliance on informal information sources. The structured teaching programme proved to be highly effective in significantly improving knowledge levels across all assessed domains of disaster management.

The substantial increase in post-test knowledge scores and the shift of participants from poor and average knowledge categories to the good knowledge category clearly demonstrate the effectiveness of the intervention

REFERENCES:

1. World Health Organization. Emergency and disaster risk management for health: framework. Geneva: WHO; 2019.
2. United Nations Office for Disaster Risk Reduction. Human cost of disasters: an overview of the last 20 years (2000–2019). Geneva: UNDRR; 2020.
3. National Disaster Management Authority. National disaster management plan. New Delhi: Government of India; 2019.
4. World Health Organization. Health emergency and disaster risk management framework. Geneva: WHO; 2019.

5. International Council of Nurses. Nurses and disaster risk reduction, response and recovery. Geneva: ICN; 2021.
6. Ministry of Health and Family Welfare. Guidelines for auxiliary nurse midwives in community health services. New Delhi: Government of India; 2018.
7. Sharma S, Singh S, Gupta R. Assessment of knowledge regarding disaster preparedness among nursing students. Int J Nurs Educ. 2018;10(3):45–49.
8. Kumar R, Sharma P, Verma S. Knowledge and preparedness regarding disaster management among nursing students. J Nurs Health Sci. 2020;9(2):30–35.
9. International Council of Nurses. Core competencies in disaster nursing. Geneva: ICN; 2019.
10. Paton D. Disaster preparedness: a social-cognitive perspective. Disaster Prev Manag. 2003;12(3):210–216.
11. Alim S, Kawabata M, Nakazawa M. Evaluation of disaster preparedness training among nursing students. Nurse Educ Today. 2015;35(1):25–31.
12. National Disaster Management Authority. Guidelines on disaster preparedness for healthcare institutions. New Delhi: NDMA; 2017.
13. World Health Organization. Strengthening health systems for disaster risk management. Geneva: WHO; 2017.
14. Ronan KR, Johnston DM. Promoting community resilience in disasters. Int J Emerg Manag. 2010;7(1):34–45.
15. Cutter SL, Boruff BJ, Shirley WL. Social vulnerability to environmental hazards. Soc Sci Q. 2003;84(2):242–261.