

Assessment of Disaster Preparedness Knowledge Among Nursing Interns in a Tertiary Care Teaching Hospital

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Abstract: **Background:** Disaster preparedness is a critical component of healthcare delivery, requiring healthcare professionals to possess adequate knowledge and skills for effective emergency response. Nursing interns, as future healthcare providers, play an important role in disaster management. **Objective:** To assess the knowledge regarding disaster preparedness among nursing interns at PES Hospital, Kuppam. **Methods:** A descriptive cross-sectional study was conducted among 93 nursing interns from 17 November 2025 to 29 November 2025 using a non-probability purposive sampling technique. Data were collected using a structured questionnaire comprising demographic variables and 30 multiple-choice questions on disaster preparedness. Descriptive and inferential statistics were used for data analysis. **Results:** Among the participants, 56.99% demonstrated good knowledge, 15.05% had moderate knowledge, and 27.96% had inadequate knowledge regarding disaster preparedness. Significant associations were found between knowledge level and age ($p = 0.030$) as well as duration of training ($p = 0.006$). No significant association was observed with other demographic variables. **Conclusion:** Although most nursing interns had good knowledge regarding disaster preparedness, a substantial proportion exhibited moderate or inadequate knowledge. Regular training programs, mock drills, and simulation-based learning are recommended to strengthen disaster preparedness among nursing interns.

Keywords: Disaster preparedness, nursing interns, knowledge, disaster management, emergency response, nursing education.

1. Introduction

Disasters pose significant challenges to healthcare systems and require healthcare professionals to respond effectively to protect lives and maintain essential services. Nurses play a vital role in disaster management through emergency care, triage, patient evacuation, and coordination of healthcare services. Nursing interns, as future healthcare providers, must possess adequate knowledge and skills related to disaster preparedness to ensure effective response during emergencies. Assessing their knowledge is essential for identifying educational needs and strengthening disaster readiness within healthcare settings.

A. Need for the Study

The increasing occurrence of natural and man-made disasters highlights the importance of disaster preparedness among

healthcare professionals. Despite their crucial role in emergency response, nursing interns may have varying levels of knowledge regarding disaster management. Identifying knowledge gaps can help develop targeted educational interventions, training programs, and simulation-based learning activities. Therefore, the present study was undertaken to assess knowledge regarding disaster preparedness among nursing interns and to provide evidence for improving disaster preparedness education and training.

B. Statement of the Problem

A descriptive study to assess the knowledge regarding disaster preparedness among nursing interns at PES Hospital, Kuppam, Andhra Pradesh.

C. Objectives

1. To assess the level of knowledge regarding disaster preparedness among nursing interns.
2. To determine the association between knowledge scores and selected socio-demographic variables such as age, gender, place of residence, and prior exposure to disaster training.
3. To identify the need for educational programs to enhance disaster preparedness among nursing interns.

2. Research Methodology

A. Research Design

A descriptive cross-sectional research design was adopted to assess knowledge regarding disaster preparedness among nursing interns.

B. Study Setting

The study was conducted at PES Hospital, Kuppam, Andhra Pradesh, a NABH- and NABL-accredited 1100-bedded multispecialty tertiary care hospital providing comprehensive inpatient and outpatient services.

C. Population and Sample

The target population comprised all nursing interns undergoing internship training at PES Hospital. The accessible population included nursing interns who met the inclusion

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criteria and were available during the study period. A total of 93 nursing interns were selected using a non-probability purposive sampling technique.

D. Data Source

Primary data were collected directly from the nursing interns using a structured questionnaire administered.

E. Variables of the Study

The dependent variable was knowledge regarding disaster preparedness among nursing interns. Demographic variables included age, area of posting, previous training on disaster preparedness, type of training attended, duration of training, and source of information regarding disaster preparedness.

F. Data Collection Tool

A structured and expert-validated questionnaire was used for data collection. The tool consisted of:

G. Section A: Demographic Variables

Information related to age, area of posting, previous training, type of training attended, duration of training, and source of information regarding disaster preparedness.

H. Section B: Knowledge Questionnaire

Thirty multiple-choice questions assessing knowledge regarding disaster preparedness. Each correct answer was awarded one mark, and each incorrect answer received zero marks. Knowledge scores were categorized as:

- Good knowledge: 24–30
- Moderate knowledge: 16–23
- Inadequate knowledge: ≤ 15

I. Data Collection Procedure

Ethical clearance and administrative permission were obtained before the commencement of the study. Participants were informed about the purpose of the study, and informed consent was obtained. The questionnaire was distributed and participants completed it within approximately 40–45 minutes. Confidentiality and anonymity were maintained throughout the study.

J. Statistical Analysis

The collected data were entered into Microsoft Excel and analyzed using JAMOV statistical software. Descriptive statistics such as frequency, percentage, mean, and standard deviation were used to summarize demographic characteristics and knowledge scores. Inferential statistics, specifically the Chi-square test, were used to determine the association between knowledge levels and selected demographic variables. A p-value of less than 0.05 was considered statistically significant.

3. Results and Discussion

A. Demographic Characteristics of Nursing Interns

The demographic characteristics of the participants are presented in Table 1. The majority of nursing interns belonged to the age group of 20–22 years (87.10%), while 12.90% were aged 23–25 years. Most participants were posted in the Medical

Ward (40.86%), followed by the Surgical Ward (12.90%) and Emergency Ward (10.75%). More than half of the participants (55.91%) had received previous training on disaster preparedness, whereas 44.09% had not attended any training. Seminars (22.58%) and workshops (15.05%) were the most common forms of training attended by the participants. Classroom teaching (35.48%) was the major source of information regarding disaster preparedness among nursing interns.

Table 1
Level of knowledge regarding disaster preparedness among nursing interns (N = 93)

Knowledge level	Frequency	Percentage
Good knowledge	53	56.99
Moderate knowledge	14	15.05
Inadequate knowledge	26	27.96

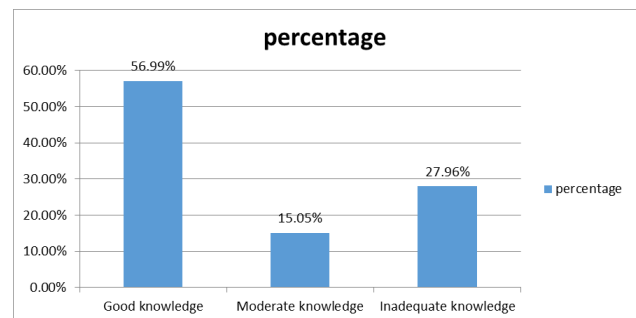


Fig. 1.

B. Level of Knowledge Regarding Disaster Preparedness

The level of knowledge regarding disaster preparedness among nursing interns is presented. The findings revealed that 53 (56.99%) nursing interns had good knowledge, 14 (15.05%) had moderate knowledge, and 26 (27.96%) had inadequate knowledge. These findings indicate that although the majority of nursing interns possessed good knowledge regarding disaster preparedness, a considerable proportion still demonstrated moderate and inadequate knowledge.

C. Association between Knowledge Level and Selected Demographic Variables

The association between knowledge level and selected demographic variables was analyzed using the Chi-square test and is presented in Table 2. A statistically significant association was found between knowledge level and age ($\chi^2 = 7.0451$, $p = 0.030$) as well as duration of training ($\chi^2 = 18.1959$, $p = 0.006$). However, no statistically significant association was observed with area of posting, previous training on disaster preparedness, type of training attended, and source of information regarding disaster preparedness.

Table 2
Association between knowledge level and selected demographic variables

Variable	X ² Value	p Value	Result
Age	7.0451	0.030	Significant
Area of Posting	28.4478	0.441	Not Significant
Previous Training	3.2295	0.199	Not Significant
Type of Training Attended	14.7142	0.143	Not Significant
Duration of Training	18.1959	0.006	Significant
Source of Information	8.9438	0.177	Not Significant

D. Discussion

The present study assessed the knowledge regarding disaster preparedness among nursing interns at PES Hospital, Kuppam, Andhra Pradesh. The findings revealed that the majority of nursing interns possessed good knowledge regarding disaster preparedness. Age and duration of training showed a significant association with knowledge level, indicating that experience and training exposure contribute to improved preparedness. The findings emphasize the importance of regular disaster preparedness training programs, workshops, seminars, simulation exercises, and mock drills to strengthen the knowledge and readiness of nursing interns in managing disaster situations effectively.

4. Conclusion

The present study was conducted to assess the knowledge regarding disaster preparedness among nursing interns at PES Hospital, Kuppam, Andhra Pradesh. The findings revealed that the majority of nursing interns (56.99%) possessed good knowledge regarding disaster preparedness, while 15.05% had moderate knowledge and 27.96% had inadequate knowledge. These findings indicate that although most nursing interns had an acceptable level of knowledge, there remains a need to improve disaster preparedness among a considerable proportion of interns.

The study further revealed a statistically significant association between knowledge level and age ($p = 0.030$) as well as duration of training ($p = 0.006$). However, no significant association was found with area of posting, previous training, type of training attended, or source of information. The findings emphasize the importance of regular, structured, and comprehensive disaster preparedness training programs, including workshops, seminars, mock drills, and simulation-based learning, to enhance the knowledge and readiness of nursing interns in managing disaster situations effectively.

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