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IP Journal of Paediatrics and Nursing Science

Journal homepage: <https://www.jpns.in/>

Original Research Article

Knowledge regarding disaster preparedness among nursing interns undergoing clinical training at R.L. Jalappa Hospital and Research Center. Kolar, to develop information handout

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ARTICLE INFO

Article history:

Received 21-11-2023

Accepted 23-12-2023

Available online 03-04-2024

Keywords:

Disaster

Descriptive

Nursing officers

ABSTRACT

Purpose/Aim: The study was to understand knowledge regarding disaster preparedness among nursing interns and to determine the association between the knowledge scores with socio demographic variables.**Materials and Methods:** A descriptive survey design was adopted by using Purposive Sampling techniques among 75 Nursing Interns and collected data using structured knowledge questionnaire was used to collect the data based on expert's validation and inclusion criteria of the study.**Results:** The study highlighted that majority 58.66% (44) of the samples belongs to moderate knowledge and 38.6% (29) samples belongs to inadequate knowledge, 2.66% (2) samples belong to adequate knowledge. There are many studies conducted which supporting to the study.**Conclusion:** Finally, the researchers concluded the findings of the study clearly showed that there was Moderate Knowledge on disaster preparedness among nursing interns, thus study recommended to conduct seminar and simulation training programme to the nursing interns on current practice to save the lives of the nation through disaster preparedness.

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1. Introduction

A disaster is defined as any event that results in enough harm to the environment, human casualties, or degradation of health and medical services to necessitate an exceptional reaction from outside the impacted community or area. The effects of catastrophes extend beyond mortality to include an individual's and societies functional condition.¹

One of the crucial organisations that has to keep running in the case of an emergency is the hospital. Despite their significance, healthcare facilities can sustain damage from natural catastrophes and put the lives of patients and medical personnel at danger.²

India's development graph seems to be constantly rising as of late. Paradoxically, catastrophes have become more frequent at the same period. Natural and man-made disasters have occurred in recent decades, further obfuscating the distinction between the two. The institution and the community have fallen short in terms of disaster-related preparedness, relief, rebuilding, and recovery as a result of the extensive devastation and fatalities caused by these calamities.³

People's lives are impacted by significant catastrophes and disasters in a variety of ways, including their housing, security, food and water availability, and general well-being. As a result, it is critical to improve both emergency and disaster preparedness as well as reaction to both natural and man-made calamities. Reducing the effects of a disaster

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is largely dependent on effective disaster management. The goal of disaster management is to assist nations in strengthening their ability to respond to natural disasters.⁴

India has varied degrees of catastrophe susceptibility. Approximately 5,700 km of India's 7,516 km coastline is vulnerable to cyclones and tsunamis; 68% of its cultivable area is vulnerable to droughts; its hilly areas are at risk from landslides and avalanches; and more than 58.6% of the landmass is prone to earthquakes of moderate to very high intensity. In addition, over 40 million hectares (12% of the country's land) are prone to floods and river erosion.⁵

India's vulnerability to disasters is exacerbated by factors such as shifting demographics and socioeconomic conditions, unplanned urbanisation, development in high-risk areas, environmental degradation, climate change, geological hazards, and epidemics. Taken together, these factors put India's economy, population, and sustainable development at serious risk from disasters.⁶

Patient safety culture needs to be built as a national policy to reduce hospital errors, readmissions, and adverse events. Incident reporting measures are to be utilized efficiently to enhance a SAFE -patient safety culture.⁷

A comprehensive analysis of research papers published between 2006 and 2016 on nurses' readiness for emergencies. The following keywords were utilised in this review: "nurse," "disaster," "preparedness," "emergency," "disaster nursing," "disaster role," and "disaster competencies." The seventeen (17) articles that made up this review were chosen. The review's conclusions have consequences for academics, hospital management, and nursing education as well as for the expanding body of research about nurses' readiness for disasters. Nurse educators and administrators may find the review's conclusions useful in improving their ability to educate nurses for disaster response.⁸

Among all healthcare professionals, nurses are the most numerous and essential in providing disaster relief to impacted communities. To support people in the wake of a disaster, nurses must thus possess a set of competences that direct the growth of their knowledge and abilities.⁹

Global data indicates that the annual toll from natural catastrophes can vary greatly; some years have very few deaths before a major catastrophic event takes many lives. 0.1% of deaths in the last ten years were caused by natural disasters. The globe visualization of the long-term worldwide trend in mortality from natural disasters shows that this was very varied, ranging from 0.01% to 0.4%. The EMDAT International Disaster Database's estimated yearly death toll from catastrophes starting in 1900 is displayed below.¹⁰

In 2022, there were more instances of dengue, Zika, and chikungunya recorded in numerous countries in the area than there were in 2021. South America saw high-magnitude dengue and chikungunya fever outbreaks in

the first few months of 2023. The Pan American Health Organization/World Health Organisation (PAHO/WHO) recommends that Member States review and modify their preparedness and response plans to face potential outbreaks of dengue and other arboviral diseases before the start of the high season of dengue transmission in Central America and the Caribbean. This will help to prevent deaths and complications from these diseases.¹¹

Based on the available literature with gaps identified and the personal experience of the investigator most of the Nursing Interns in preliminary survey conducted on 30 Nursing Interns were found to have inadequate knowledge about disaster preparedness and action plan in the process of trauma individuals.¹² Thus, the researcher strongly felt the need to explore the level of knowledge among nursing interns to improve the knowledge and contribute to the healthcare sectors by empowering the Novice Nurses i.e., Nursing Interns for Emergency preparedness to save the Nation's health in times of disaster and crisis.

This study was to evaluate the basic knowledge regarding Disaster Preparedness among Nursing Interns Tertiary hospitals by providing Information Handout.

2. Materials and Methods

2.1. Study design

Quantitative approach descriptive survey design at R.L. Jalappa Hospital and Research Centre, Tamaka, Kolar, Institutional ethics committee approval and written permission obtained from concerned hospital authorities were obtained. Informed consent was obtained from all participants by using purposive sampling technique.

A disaster preparation knowledge questionnaire was created as part of the product. It underwent peer evaluation by our institute's knowledgeable faculty. The research instrument was used to gather data on a semi-structured, predesigned, pretested, and validated questionnaire. After making a few adjustments based on the advice of experts, the questionnaire ultimately had 25 knowledge-based questions and data was analysed with a descriptive and inferential statistics using SPSS 22.0 version.

3. Results

Participating in the knowledge questionnaire survey were 75 nursing interns from various specialties. According to the results, the participants' total knowledge level was statistically significant and indicated that they possessed strong theoretical knowledge. Table 1

In the present study, the knowledge towards Disaster preparedness is essential. We could infer from the above studies that Knowledge regarding Disaster preparedness is a must among all Nursing Interns.

Table 1: Knowledge on disaster preparedness.

Aspect	Knowledge scores	Score range	f	%
Knowledge Level	Inadequate knowledge	<50% (<18)	29	38.6%
	moderately adequate knowledge	51-75% (19-27)	44	58.66%
	Adequate knowledge	>76% (28-36)	2	2.66%

4. Discussion

A great resource for gathering and reporting catastrophe incidents is nursing interns. The knowledge-based questions in this research had an extremely positive response overall. Comparably, research by Kulmi et al. demonstrated a sound theoretical understanding of disaster readiness.¹³

The study suggests that nurse interns receive education in a safe and practical manner as a guideline to raise proficiency levels. A systematic review of 26 studies found evidence suggesting that interventions are essential to improve knowledge.¹⁴

Therefore, health-care professionals are encouraged to report Disaster preparedness for a better understanding of the risk associated adverse events and to safeguard the health of the Indian population.

5. Limitations

One of the study's shortcomings was that it only included nursing personnel at R.L. Jalappa Hospital and Research Centre; thus, its conclusions could not be extended to a larger community. Therefore, it was necessary to regularly conduct periodic educational interventions to emphasise the importance of readiness to all nurses. It is thus recommended that internship and undergraduate training programmes include such educational intervention programmes. A number of such research including all medical experts have to be carried out.¹⁵

5.1. Strengths

Only a very few studies have been done to assess knowledge and competency among the nursing officers in a tertiary care teaching hospital to the best of our knowledge.

6. Conclusion

Disaster preparedness-related interventions have shown to be a useful instrument for raising research participants' levels of knowledge. The current academic curriculum has to be revised to incorporate the use of reporting and documenting in medical practice.

With this knowledge, they may identify negative impacts and notify the appropriate authorities. Regular education for medical workers might lead to a rise in the frequency of

adverse event reports in tertiary care facilities. The signals may be strengthened by the general increase in reporting. For regulatory bodies to take any kind of safety or regulatory action, signals must first be strengthened. Improving patient safety is a critical component in a medical environment.

7. Source of Funding

None.

8. Conflicts of interest

None.

Acknowledgment

The writers like to express our gratitude to the administration of R.L. Jalappa Hospital and Research Centre for their assistance in helping us carry out this study. Additionally, we would like to express our gratitude to each and every nursing officer who took an active part in this research. We would especially want to thank the research guide for their professional advice and recommendations.

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Cite this article: Taj N, Zeanath CJ, Vani R. Knowledge regarding disaster preparedness among nursing interns undergoing clinical training at R.L. Jalappa Hospital and Research Center. Kolar, to develop information handout. *IP J Paediatr Nurs Sci* 2024;7(1):4-7.