



## A STUDY TO ASSESS THE KNOWLEDGE AND PRACTICES REGARDING DISASTER AND EMERGENCY PREPAREDNESS AMONG STAFF NURSES WORKING IN HOSPITALS OF SELECTED DISTRICTS OF HIMACHAL PRADESH

### Nursing

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### ABSTRACT

**Background:-** Disaster is an occurrence arising with little or no warning, which causes serious disruption of life and perhaps death or injury to large number of people. Disasters pose unique challenge for every medical care facility in terms of infrastructure, capacity, and preparedness. As nurses are the largest manpower group in the health care team they need to be trained to equip with the competencies required during disasters to rescue life and safeguard the health of the individual.

**Aim:** A descriptive study was conducted in hospitals of selected districts of Himachal Pradesh with an objective to assess the Knowledge and Practices regarding Disaster and Emergency preparedness among Staff Nurses and to find out the association of knowledge and practices with selected demographic variables.

**Methodology:** A Quantitative, non- experimental descriptive survey research approach was adopted for the study. Convenience sampling technique was used to select sample size of 350 staff nurses. The self structured knowledge questionnaire and practice checklist was developed and utilized for data collection regarding disaster and emergency preparedness.

**Result:** Maximum staff nurses 192 (54.9%) had inadequate knowledge and 214 (61.1%) staff nurses reported to perform average practices regarding Disaster and Emergency preparedness. There was statistically significant correlation ( $r = .344, p = .000$ ) between the knowledge and practices of the participants. There was no significant association between the knowledge score and selected demographic variables of staff nurses.

**Conclusion:** Nurses are the major work force in the health care settings they need to update their knowledge and skills in disaster preparedness to function efficiently in order to save lives at the time of any disaster within the hospital setting. As knowledge influences good practice and good practice saves lives, nursing curriculum should include disaster preparedness to equip nursing students to manage disaster in the hospital setting.

### KEYWORDS

#### INTRODUCTION

Disaster is an occurrence arising with little or no warning, which causes serious disruption of life and perhaps death or injury to large number of people. The United Nations office for Disaster Risk Reduction defines a disaster as a "serious disruption of the functioning of a community or society involving widespread human, material, economic or environmental losses and impacts which exceeds the ability of the affected community and society to cope using its own resources".<sup>1</sup> Globally, there has been a steady increase in the magnitude and frequency of disasters and public health emergencies in recent years. In the last decade, there has been an estimated 60% increase in disasters worldwide in which an estimated two million people lost their lives, 4.2 million were injured, 33 million were left homeless and three billion were otherwise affected.<sup>2,3</sup>

According to India's Hazard Profile 60 % of land mass prone to earth quakes, 40 million hectares that is 8 % of landmass prone to floods, 8000 kms along coastline with 2 cyclone seasons, 68 % of the total area vulnerable to drought, 2.3 million houses damaged annually, and 8041 kms coastline exposed to tropical cyclones, 1 million houses damaged annually. India is one of the highly flood prone countries in the world.<sup>4,5</sup>

State of Himachal is prone to various hazards both natural and manmade. Main hazards consist of earthquakes, landslides, flash floods, snow storms. The State has been shaken by more than 80 times by earthquakes having a magnitude of 4 and above on the Richter scale as per the recorded history of earthquakes.<sup>6</sup> Large earthquakes have occurred in all parts of Himachal Pradesh, the biggest being the Kangra Earthquake of 1905. There were two more big quakes, but they were not nearly as powerful as the 1905 jolt. The first was in 1906, a 6.4 near Kullu and the second was a 6.8 in Lahaul-Kinnaur Spiti in 1975 along the Indo-China Border.<sup>7,8</sup>

Disaster management is the key programme of any nation to prepare and face any emergency situation of natural or manmade events. Disaster preparedness and planning is an inter-sectoral exercise. It is the responsibility of the health care professionals to stimulate, coordinate the exercise.

As the largest manpower group in the healthcare team, nurses play an important role in disaster care. Nurses' roles are not only in the emergency phase of a disaster, to rescue life and safeguard the health of

the disaster sufferers, but in fact, nurses have special roles in disaster preparedness and aftermath long-term recovery. By providing leadership and guidance in different phases of a disaster, nurses can safeguard the health of the general public and reduce death tolls. So Nurses should be equipped with the necessary knowledge and abilities to work in a disaster and to meet the needs of the respective serving community.

#### OBJECTIVES

1. To assess the level of knowledge regarding Disaster and Emergency preparedness among Staff Nurses
2. To assess the Practices regarding Disaster and Emergency preparedness among Staff Nurses.
3. To find out the association of Knowledge score with selected demographic variables.
4. To find out the correlation between Knowledge and Practices regarding disaster and emergency preparedness among Staff Nurses.

#### METHODOLOGY

A Quantitative, non- experimental descriptive survey research approach was adopted for the study. The target population for the present study was staff nurses working in hospitals of selected districts of Himachal Pradesh. Sample for the study was 350 staff nurses using convenience sampling technique. Staff Nurses, who were not present at the time of data collection, were not willing to participate in research study excluded from the study. The self structured questionnaire was developed and utilized for data collection regarding disaster and emergency preparedness. The tool consisted of three parts, the demographic variables of the participants, knowledge questionnaire and a practice checklist on disaster preparedness.

To ensure the content validity of the tool (structured questionnaire), it was submitted to ten experts. Reliability of the tool on disaster and emergency preparedness was calculated using split half method, followed by the application of Karl Pearson's Correlation Coefficient. The 'r' was found to be 0.80.

Blooms cut off point were used to determine knowledge and practice levels. The range of knowledge score was from 0- 30. Based on sum scores, level of knowledge was classified in 3 categories i.e. Good knowledge 80% - 100% (24-30 score), average knowledge 60% - 79% (18-23 score) and poor knowledge 59% or less (17 or less score). The

range of practice score was from 0-28. Based on sum scores, level of practices was classified in 3 categories i.e. Good practices 80% - 100% (22 - 28 score), average practices 60% - 79% (16 - 21 score) and poor practices 59% or less (15 or less score).

Ethical approval was taken from Director Health Services Himachal Pradesh to conduct the study. Written informed Consent was taken for the study sample regarding their willingness to participate in the research study and the purpose for carrying out research study was explained to the participants. Confidentiality of the information of the sample was maintained.

Data was analyzed by descriptive and inferential statistics i.e. frequency and percentage distribution, mean percentage, median, chi square to determine the association between knowledge with selected variables and Karl Pearson correlation coefficient to determine the correlation between knowledge and practices.

**RESULT**

Frequency and percentage distribution of Staff Nurses according to socio-demographic variables revealed that majority (73%) had done G.N.M, 41% had clinical work experience of 0-5 years, 66% were working in wards and 26% had information from health personnel regarding disaster and emergency preparedness.

**TABLE 1: Frequency and Percentage Distribution of Staff Nurses as per their Knowledge Score regarding Disaster and Emergency preparedness**

**N=350**

CRITERIA MEASURE OF KNOWLEDGE SCORE		
Level of Knowledge score	Frequency (f)	Percentage (%)
Good Knowledge (24-30)	31	8.9%
Average Knowledge (18-23)	127	36.3%
Poor Knowledge (0-17)	192	54.9%

**Maximum score = 30                      Minimum score = 0**

Table 1 revealed that 31 (8.9%) staff nurses had good knowledge, 127 (36.3%) staff nurses had average knowledge and 192 (54.9%) had poor knowledge regarding Disaster and Emergency preparedness.

**Table 2: Mean, Standard Deviation, Median, Maximum, Minimum, Range and Mean of knowledge score of Staff Nurses regarding Disaster and Emergency preparedness.**

**N=350**

Descriptive Statistics	Mean	SD	Median	Maximum	Minimum	Range	Mean %
Knowledge Score	17.01	4.98	17.00	28	4	24	56.7

**Maximum score=30                      Minimum score=0**

Table 2 depicted that Mean score of knowledge was 17.01, Standard Deviation was 4.98, Median score was 17, Maximum value was 28 and Minimum value was 4, Range was 24 and Mean percentage was 56.7%.

**TABLE 3: Frequency and Percentage Distribution of Staff Nurses as per their Practice Score regarding Disaster and Emergency preparedness**

**N=350**

CRITERIA MEASURE OF PRACTICE SCORE		
Practice Score	Frequency	Percentage
Good Practices (22-28)	74	21.1%
Average Practices (16-21)	214	61.1%
Poor Practices (0-15)	62	17.7%

**Maximum score=28                      Minimum score=0**

Table 3 revealed that 74 (21.1%) staff nurses had good practices, 214 (61.1%) staff nurses had average practices and 62 (17.7%) had poor practices regarding Disaster and Emergency preparedness.

**Table 4: Mean, Standard Deviation, Median, Maximum, Minimum, Range and Mean of knowledge score of Staff Nurses regarding Disaster and Emergency preparedness.**

**N=350**

Descriptive Statistics	Mean	SD	Median	Maximum	Minimum	Range	Mean %
Practice Score	18.61	3.45	19.00	28	5	23	66.5

**Maximum score=28                      Minimum score=0**

Table 4 revealed Mean score of practices was 18.61, Standard Deviation was 3.45, Median score was 19, Maximum value was 28 and Minimum value was 5, Range was 23 and Mean percentage was 66.5%.

No significant association found between knowledge score and selected socio-demographic variables

**Table 5: Correlation between Knowledge and Practices regarding disaster and emergency preparedness**

**N=350**

Correlation	Karl Pearson's coefficient	Interpretation
Knowledge and Practices regarding disaster and emergency preparedness	r =0.344 p = 0.000**	Statistically significant correlation

**Level of significance \*\*p ≤ .01**

Table 5 depicts correlation between knowledge and practice regarding disaster and emergency preparedness among staff nurses. Karl Pearson's Correlation Coefficient (r) was 0.344 and correlation was found to be statistically significant at p ≤ .01 level. This clearly indicates that when knowledge regarding disaster and emergency preparedness increases the practices regarding disaster and emergency preparedness also improve.

**CONCLUSION**

The study aim to assess the Knowledge and Practices regarding Disaster and Emergency preparedness among Staff Nurses working in hospitals of selected districts of Himachal Pradesh. The results of the study concluded that Maximum staff nurses 192 (54.9%) had inadequate knowledge, 127 (36.3%) staff nurses had moderate knowledge and 31 (8.9%) staff nurses had adequate knowledge regarding Disaster and Emergency preparedness. Mean knowledge score was 17.01 with Standard Deviation of 4.98. The present study findings showed that 214 (61.1%) staff nurses reported to perform average practices, 74 (21.1%) staff nurses reported to perform good practices, and 62 (17.7%) were exhibiting poor practices regarding Disaster and Emergency preparedness. Mean practice score was 18.61 with standard deviation of 3.45.

Disasters have been integral parts of the human experience since the beginning of time, causing premature death, impaired quality of life, and altered health status. The main goal of nursing in crisis is to achieve best possible level of health for the individuals and communities affected by crisis. Lack of in-service education and inadequate training on disaster preparedness makes the nurse to function ineffectively during the disaster. As nurses are the major work force in the health care settings they need to update their knowledge and skills in disaster preparedness to function efficiently in order to save lives at the time of any disaster within the hospital setting. As knowledge influences good practice and good practice saves lives, nursing curriculum should include disaster preparedness to equip nursing students to manage disaster in the hospital setting.

**ACKNOWLEDGEMENT**

It is a great privilege to express my special gratitude Director Health Services for granting permission to conduct our research study and thus facilitating the execution of the study. I wish to extend my heartfelt thanks with much appreciation for my study sample for their willingness and full cooperation in participating in research study and for their honest information without which it would have been impossible to complete this study.

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