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## International Journal of Graduate Research and Review

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ISSN: 2467-9283



### *Indexing and Abstracting*

*InfoBase Index, Cosmos, Open Academic Journals Index (OAJI),  
InfoBase Index, Cosmos, ResearchGate, CiteFactor, Scholar  
Stear, JourInfo, ISRA: Journal-Impact-Factor (JIF), Root  
Indexing etc*

### **Impact Factors\***

IBI factor: 3

Impact factor (OAJI): 0.201

**Vol-7, Issue-1**

**February 2021**





## Research Article

# Knowledge, Attitude and Practice Regarding Disaster Preparedness and Management Among Nurses at Lahore General Hospital

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### Article Information

Received: 10 January 2021  
Revised version received: 18 February 2021  
Accepted: 20 February 2021  
Published: 25 February 2021

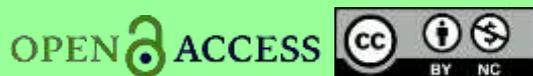
#### Cite this article as:

S. Younas et al. (2021) Int. J. Grad. Res. Rev. Vol 7(1): 36-43.

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Peer reviewed under authority of IJGRR  
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### Abstract

**Background:** A disaster is an accident that may be a source of enormous harm and disturbance. The nurse's role is very important during disaster management and emergency preparedness.

**Objective:** To evaluate the knowledge, attitude and practice regarding disaster management among nurses of Lahore General Hospital Lahore.

**Study Design:** Descriptive cross sectional study design was used.

**Place and Duration:** This study conducted in Emergency and Triage department of Lahore General Hospital, Lahore from 15<sup>th</sup> March to 30<sup>th</sup> June 2020.

**Results:** The results of this study showed that participants had moderate level of knowledge, which was 78.1%, participants had high positive attitude level that was 79.6%. However, their practices were poor and overall poor practices were 54.8%.

**Conclusion:** Current study showed that nurses had moderate level of knowledge and high level of positive attitude but poor practices regarding disaster preparedness and management in hospital setting. So, therefore it should be need to work on practices.

**Keywords:** Knowledge; attitude; practice; disaster; disaster management.

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## Introduction

Several studies reported that disasters may be sources of enormous harm and disturbance, and are globally familiar affairs in these days to kill and injured the people, destroyed their houses, health system and intersperse their confidant (Babaie et al., 2015). The frequency of natural disasters has raised, particularly next to 1970's there was a 80% rise in the growth of natural disasters from 1980 to 20009 (Annis, et al., 2016). The nurse's role is very important during disaster preparedness and management to decrease the casualties and harm with their knowledge, attitude and

practices. As revealed by world health organization (WHO) Asian countries climate was most prone for natural disasters and Pakistan is one of them where disasters occurred frequently. It is confirmed by numerous studies that nurse's knowledge, attitude and practice regarding disaster preparedness and management is a global concern because nurses play an important role during disaster preparedness and management in hospital settings. It is improved globally by the Florence Nightingale that nurse's performance is outstanding during both community health and disaster so



they implement new abilities in every step of disaster such as preparedness, response and rehabilitation (Bella Magnaye *et al.*, 2011). This available literature suggests that nurses play vital role in each step of disaster preparation and management at both community and healthcare setting levels. Disaster preparedness is a vital role of nurses and also concentrated by International Nursing Coalition for Mass Casualty Education (INCMCE) (2003) announced globally that nurses should have efficient knowledge and skills to cope with different disasters and if the nurses are prepared for emergency situations so they can provide an efficient role in disasters (Fung *et al.*, 2008). This literature shows the importance of nurse's preparation for emergency situations. Nurse's performance is an essential part in any disaster. Nurse's knowledge, attitude and practices in disaster preparedness and management are vital role. Nurses has inadequate knowledge, attitude and practice related to disaster preparedness and management that is nurse's imperfectness and there are no any ongoing structured activities to increase their knowledge, attitude and practices. It is necessary for nurses bring up to date their knowledge and skills regarding disaster preparedness and management. There was a need to check knowledge, attitude and practice regarding disaster preparedness and management among nurses of Lahore General Hospital Lahore. Thus, this study aimed to evaluate the knowledge, attitude and practice of nurses in disaster preparedness and management and also to determine attitude of insufficiency and capabilities of the nurses in disaster preparedness. Give the new decisions for nurses working in emergency department. Conclusion shared with study participants to upgrade their knowledge, attitude and practices in disaster preparedness and management. This study aimed to empower the charge nurses to obtain correct knowledge of the system of disaster preparedness and management to establish capabilities and expertise of public health care settings systematically in disasters and emergencies. Research conclusion also shared with management, and that are beneficial for them to organize educational and training activities to improve their knowledge, establish positive attitude and upgrade their practices in accordance with basic nursing care that is too much important for the patients in disasters management. Current study aimed to find knowledge, attitude and practice regarding disaster preparedness and management among nurses working in emergency department.

## Methodology

A descriptive cross-sectional study evaluated the knowledge, attitude and practice regarding disaster preparedness and management among nurses. Diploma holder, generic nursing and BSN post RN degree holder nurses were included and nursing students and nurses on leave were excluded from the study. Seventy-nine (79) nurses included, having different age group, qualification,

experience and department. The sample of the nurses was taken from emergency and triage departments of Lahore General Hospital. Sampling technique was convenient sampling. Time duration for study conduction was from 15<sup>th</sup> March to 30<sup>th</sup> June 2020. Research tool was questionnaire which was adopted from (Shabbir *et al.*, 2017) having four sections of demographic information, knowledge, attitude and practice, each section contains different items. This study evaluated the nurse's knowledge regarding disaster, disaster plan, drills, disaster preparedness and management, attitude regarding disaster plans, management, training, update disaster plans, management simulation, drills conduction and disaster management evaluation. This study also evaluated the nurse's practices regarding drills application and their types, latest disaster preparedness and management, ongoing training and its practices. On the basis of percentages the scores classified into five degrees by (McDonald 2002) which were as follows: very high (90-100%), high (80-89.99%), moderate (70-79.99%), low (60-69.99%) and very low (< 60%). Higher score revealed the higher level of knowledge, positive attitude and good practices of nurses regarding disaster preparedness and management. Knowledge, attitude and practice sections included force-choice different items. Knowledge had 10 force-choice (know/don't know) items and score ranged 10 to 20. Minimum score was 10 and maximum score was 20, attitude had 13 close-ended (agree/disagree/unsure) items and score ranged 13 to 39, minimum 13 and maximum 39 and practice had 10 (yes/no/don't know) close ended items and score ranged 10 to 30, minimum 10 and maximum 30 (Erniyati 2002).

## Statistical Analysis

Data analysed by using statistical program for social sciences (SPSS) version 20. Frequency and percentage applied on different variables and also portrayed in tables and charts.

## Results

During study period, seventy-nine (79) nurses included. In this study 79 questionnaires were distributed to the nurses which included consent section, demographic data as well as knowledge, attitude and practice regarding disaster preparedness and management information of the study participants. After data collection it was entered on SPSS version 20 to analyse it. Frequency test was applied on different variables and also presented in tables and charts. The knowledge of the participant was moderate regarding disaster preparedness and management as shown in the Table- 1 which described responses of participants 96.2% were known and 3.8% didn't know about what is disaster, 81.0% were known and 19.0% didn't know disaster plan, 54.4% were known and 45.6% didn't know where to find the plan, 69.6% were known and 30.4% didn't know what are drills?, 75.9% were known and 24.1% didn't

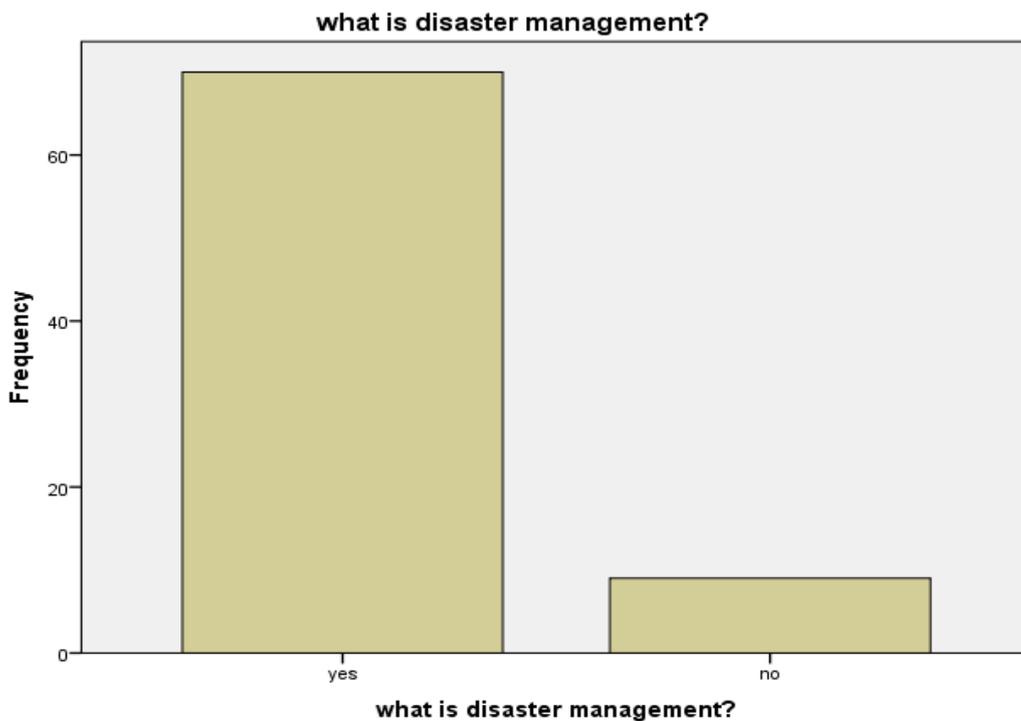


know that staff members understand their functions during drills, 81.0% were known and 19.0% didn't know disaster preparedness and 88.6% were known and 11.4% didn't know disaster management also shown in Fig. 1. The

overall good knowledge was 78.1% and poor knowledge of the study participants was 21.9%. So, results showed that study participants had moderate level of knowledge regarding disaster preparedness and management.

**Table- 1:** Knowledge regarding disaster preparedness and management.

Knowledge questions		Frequency	Percent
What is disaster?	Know	76	96.2
	Don't know	3	3.8
	Total	79	100.0
What is disaster plan?	Know	64	81.0
	Don't know	15	19.0
	Total	79	100.0
Where to find the plan?	Know	43	54.4
	Don't know	36	45.6
	Total	79	100.0
What are drills?	Know	55	69.6
	Don't know	24	30.4
	Total	79	100.0
Staff members understand their functions during drills?	Know	60	75.9
	Don't know	19	24.1
	Total	79	100.0
What is disaster preparedness?	Know	64	81.0
	Don't know	15	19.0
	Total	79	100.0
What is disaster management?	Know	70	88.6
	Don't know	9	11.4
	Total	79	100.0



**Fig. 1:** Participant's knowledge regarding disaster management



Attitude of the participants was positive regarding disaster preparedness and management as shown in Table 2, it described the responses of study participants 92.4% agreed, 6.3% disagreed and 1.3% were unsure to I need to know about disaster plans, 77.2% agreed, 19.0% disagreed and 3.8% were unsure to management should be adequately prepared should a disaster occur, 79.7% agreed, 12.7% disagreed and 7.6% were unsure to disaster planning is for all people in the healthcare setting, 68.4% agreed, 26.6% disagreed and 5.1% were unsure to potential hazards likely to cause disaster should be identified and dealt with, 78.5% agreed, 17.7% disagreed and 3.8% were unsure to training is necessary for all healthcare team, 94.9% agreed, 5.1% disagreed and 0% were unsure to it is necessary to have a disaster plan, 65.8% agreed, 25.3% disagreed and 8.9% were unsure to disaster plans need to be regularly updated,

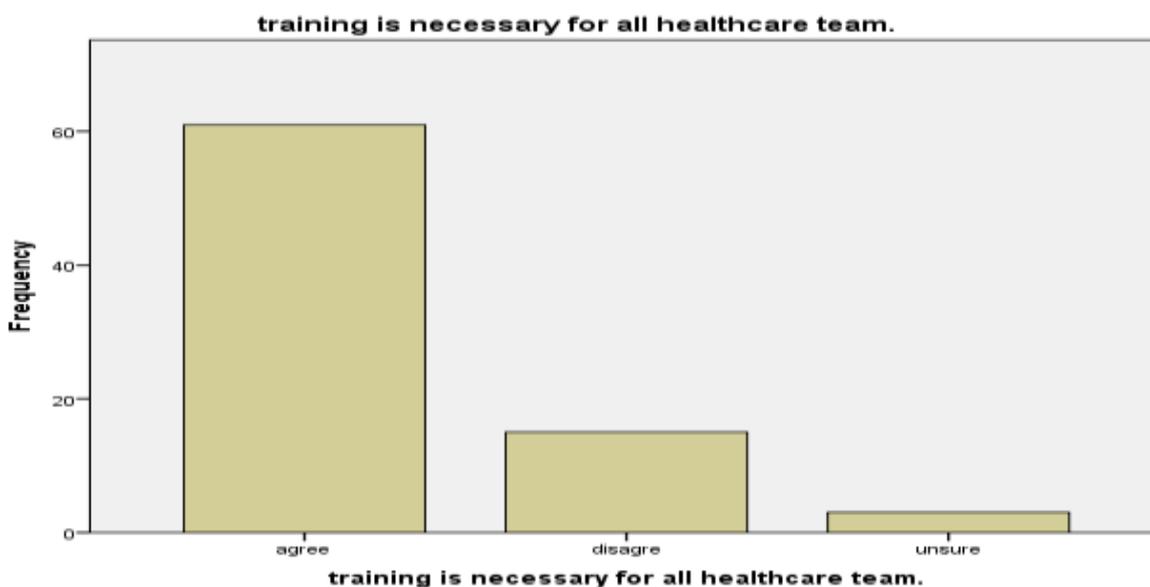
77.2% agreed, 15.2% disagreed and 7.6% were unsure to disasters are likely to happen in any healthcare setting, 88.6% agreed, 3.8% disagreed and 7.6% were unsure to disaster management is not limited to nurses and doctors, 64.6% were agreed, 20.3% disagreed and 15.2% unsure to disaster simulations should occur frequently in the healthcare setting, 83.5% agreed, 11.4% disagreed and 5.1% were unsure to drills should be conducted in the hospital, 74.7% agreed, 11.4% disagreed and 13.9% were unsure to disaster management should be continuously evaluated, 88.6% agreed, 10.1% disagreed and 1.3% study participants were unsure to make SOPs for disaster preparedness and management in future. All results are shown in Table- 2. Overall positive attitude was 79.6% and negative attitude was 20.4%. So, the results showed that study participants had moderate level of positive attitude.

**Table- 2:** Attitude variables regarding disaster preparedness and management.

Attitude variables		Frequency	Percent
I need to know about disaster plans.	Agree	73	92.4
	Disagree	5	6.3
	Unsure	1	1.3
	Total	79	100.0
Management should be adequately prepared should a disaster occur.	Agree	61	77.2
	Disagree	15	19.0
	Unsure	3	3.8
	Total	79	100.0
Disaster planning is for all people in the healthcare setting.	Agree	63	79.7
	Disagree	10	12.7
	Unsure	6	7.6
	Total	79	100.0
Potential hazards likely to cause disaster should be identified and dealt with.	Agree	54	68.4
	Disagree	21	26.6
	Unsure	4	5.1
	Total	79	100.0
Training is necessary for all healthcare team.	Agree	62	78.5
	Disagree	14	17.7
	Unsure	3	3.8
	Total	79	100.0
It is necessary to have a disaster plan.	Agree	75	94.9
	Disagree	4	5.1
	Unsure	0	0
	Total	79	100.0
Disaster plans need to be regularly updated.	Agree	52	65.8
	Disagree	20	25.3
	Unsure	7	8.9
	Total	79	100.0
Disasters are likely to happen in any healthcare setting.	Agree	61	77.2
	Disagree	12	15.2
	Unsure	6	7.6
	Total	79	100.0
Disaster management is not limited to nurses and doctors.	Agree	70	88.6
	Disagree	3	3.8

**Table- 2:** Attitude variables regarding disaster preparedness and management. (Contd.).

Attitude variables		Frequency	Percent
	Unsure	6	7.6
	Total	79	100.0
Disaster simulations should occur frequently in the healthcare setting.	Agree	51	64.6
	Disagree	16	20.3
	Unsure	12	15.2
	Total	79	100.0
Drills should be conducted in the hospital.	Agree	66	83.5
	Disagree	9	11.4
	Unsure	4	5.1
	Total	79	100.0
Disaster management should be continuously evaluated.	Agree	59	74.7
	Disagree	9	11.4
	Unsure	11	13.9
	Total	79	100.0
Should make SOPs for disaster preparedness and management in future.	Agree	70	88.6
	Disagree	8	10.1
	Unsure	1	1.3
	Total	79	100.0



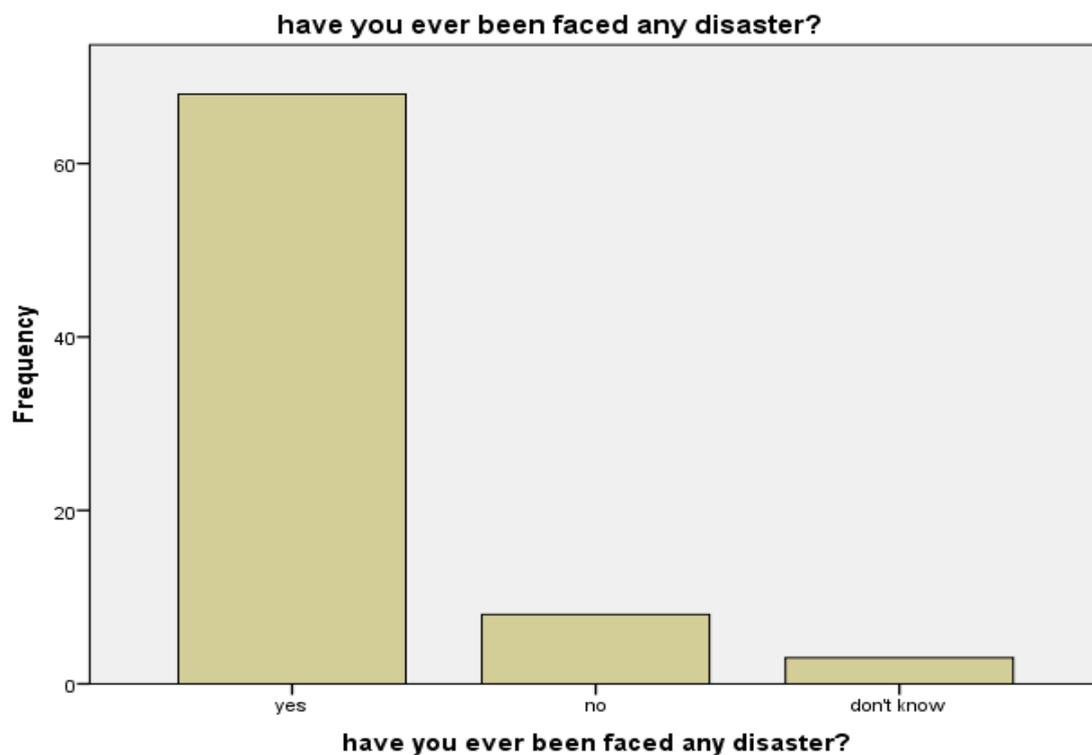
**Fig. 2:** Training is necessary for all healthcare team

The practices of the study participants were poor. Table-3 shows the practices of participants in percentages. 29.1% agreed, 41.8% disagreed and 29.1% replied don't know that disaster drills done at their hospital, 27.8% knew, 34.2% did not know and 38.0 don't know that what type of drills is done, 25.3% knew, 39.2% shown negative response and 35.4% didn't know about ongoing training, 6.3% participants were known that how often training was done in their hospital and 32.9% were don't know, 31.6% were known that disaster plan periodically updated, 38.0% said not updated and 30.4% were didn't know, 11.4% known how often plan updated, 34.2% said not updated and 54.4%

didn't know when updated, 87.3% said they had been faced disaster, 10.1% were didn't face and 2.5% didn't know, 87.3% had been a worker for disaster management team, 11.4% were not and 1.3% didn't know, 81.0% were known the latest disaster in which hospital involved, 12.7% were agreed no involvement and 6.3% didn't know, 65.8% believed that their practices were insufficient for disaster preparedness, 24.1% believed sufficient and 10.1% participants didn't know. All results shown in Table- 3 and also shown in Fig.- 3. Overall good practices were 45.2% and poor practices of study participants were 54.8%. The results showed good practices level was very low.

**Table- 3:** Practices regarding disaster preparedness and management.

Practice questions		Frequency	Percent
Are disaster drills done at your hospital?	Yes	23	29.1
	No	33	41.8
	Don't know	23	29.1
	Total	79	100.0
Do you know what type of drills is done?	Yes	22	27.8
	No	27	34.2
	Don't know	30	38.0
	Total	79	100.0
Is there ongoing training?	Yes	20	25.3
	No	31	39.2
	Don't know	28	35.4
	Total	79	100.0
How often?	Yes	5	6.3
	No	26	32.9
	Don't know	48	60.8
	Total	79	100.0
Disaster plan periodically updated?	Yes	25	31.6
	No	30	38.0
	Don't know	24	30.4
	Total	79	100.0
How often?	Yes	9	11.4
	No	27	34.2
	Don't know	43	54.4
	Total	79	100.0
Have you ever been faced any disaster?	Yes	69	87.3
	No	8	10.1
	Don't know	2	2.5
	Total	79	100.0
Have you ever been a worker for disaster management team?	Yes	69	87.3
	No	9	11.4
	Don't know	1	1.3
	Total	79	100.0
Do you know about the latest disaster in which your hospital involved?	Yes	64	81.0
	No	10	12.7
	Don't know	5	6.3
	Total	79	100.0
Do you believe your practice for disaster preparedness is insufficient	Yes	52	65.8
	No	19	24.1
	Don't know	8	10.1
	Total	79	100.0



**Fig. 3:** Have you ever been faced any disaster?

## Discussion

The objective of this study was to evaluate nurse's knowledge, attitude and practice regarding disaster preparedness and management at Lahore General Hospital. The results of this study shows that the study participant's knowledge regarding disaster preparedness and management was 78.1% at moderate good level. They knew about disaster, drills, disaster preparedness and management. The attitude of the participants was also positive at moderate level related to drills conduction, disaster plan evaluation and up gradation and training and the positive attitude was 79.6%. But the practice was 54.8% poor ongoing training, usage of drills and types of drills regarding disaster preparedness and management among nurses.

A study was conducted earlier on knowledge, attitude and practice regarding disaster preparedness among healthcare workers and almost similar results were obtained. The participants had good knowledge about what a disaster is, what disaster plan, where to find the plans, what drills are, what their functions during drill and what disaster preparedness (Moabi 2008).

The practices of the study participants were very poor regarding disaster preparedness and management. The participants didn't know about the types of drills and there was no ongoing training. Poor practices were 25.3%.

Another study conducted and almost similar results were obtained that practices of participants were poor (Singhal, Bhatnagar *et al.* 2016).

A study conducted and results showed that nurses were not prepared and didn't know about disaster management SOPs at workplace (Labrague *et al.*, 2016).

## Conclusion

The findings of our study suggest that the participants have moderate level of good knowledge and positive attitude but very low good practice regarding disaster preparedness and management.

## Recommendation

This is an alarming situation, so there should be a disaster management committee to make and update disaster management plans. On-going educational activities must be introduced for nurses and other healthcare workers in every hospital for disaster management. Revise nursing curriculum by putting disaster plans and management. To check the disaster plans regularly. Proper communication is very important for disaster plans making committee. Such a data will help to hospital management to improve patient's nursing care.

## Acknowledgement

This study is part of BSc Nursing project of Miss Shazia Younas, funded by Superior University Lahore. The author



is thankful to Department of Nursing Superior University Lahore.

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