

# Knowledge of Nurses Regarding Disaster Management in Tertiary Health Care Hospitals of Lahore

Muhammad Ali<sup>1\*</sup>, Ammara Chughtai<sup>1</sup>, Muhammad Sabir<sup>1</sup>, Abdul Wahid<sup>1</sup> and Maria Jahangir<sup>1</sup>

<sup>1</sup> Lahore School of Nursing, Faculty of Allied Health Sciences, The University of Lahore, Lahore, Pakistan

## Abstract:

This is universally accepted that nurses have inadequate awareness and knowledge regarding disaster management and dealing which is the question mark on the competence and performance of Nurses to deal the disaster in an a competent way.

## Objective:

To assess the knowledge of nurses regarding disaster management.

## Methods:

A quantitative cross sectional descriptive study was carried in Services Hospital and Jinnah Hospital of Lahore during April, 2016. 150 participants having one year working experience were selected through simple random sampling technique.

## Results:

11% respondents were taken from male nurses and 89% of respondents were female, while 76% of study participants were willing for training regarding disaster management while 24% were not willing. 60% of the participants didn't participated in any disaster management program while 40% had participated in such programs. It was portrayed from current study that nurses had inadequate and insufficient knowledge regarding disaster management in tertiary health care hospital.

## Conclusions:

It was concluded that nurses had insufficient knowledge about disaster management and there was need for updated knowledge and training.

## Keywords:

Nurses, disaster management, nursing practices, disaster training

## Introduction:

Disaster can be defined as an uncertainty that can happen in anytime, anywhere which may lead to socio economic and human loss and huge economic burden on the country to manage the disruption.<sup>1</sup> According to National Disaster Risk Reduction, Pakistan is a disaster-doomed nation, with variety of hydro-

meteorological, geo-physical and natural threats containing landslides, hurricanes and rainstorms, droughts, floods, earthquakes, tsunamis and epidemic risks to Pakistani people. In the last fifteen years the frequency of disasters has increased, it is therefore concluded that some northern areas as well as Sindh (Karachi) are more vulnerable for disasters, it include man-made disasters like, bomb blast, chemical terrorism, smoke, toxic effects, nuclear terrorism likewise multiple examples of natural disasters.<sup>2</sup> It was recommended by the World Health Organization (WHO) that all nations, no matter how recurrent disaster frequencies they face, would get ready healthcare personnel for a disaster, nevertheless, most nurses were ineffectively equipped for disaster.<sup>3</sup> It is evident from the previous results of study which stated that from last fifteen years in Pakistan including minor to major environmental disruption like bomb blast in commercial and residential areas, causing huge destruction over and above trade and human loss likewise, in chemical terrorism at Marriot hotel in Islamabad, lost a millions of economy, Lahore blast in police rescue building, in Karachi fire in garments factory at baldia town killed up to 300 workers, Suicide bombers blast in Gulshan e Iqbal Park Lahore killed up to 85 persons and hundreds of injured, in additionally natural disasters such as earth quake of 2007 killed thousands of peoples and hundreds of houses, flood damage hundreds of villages in Punjab and Sindh and many more areas like this.<sup>4</sup> Incompetence to overcome the uncertain condition of the nurses in the health care setup, and there is strong need to work on the improvement in education and adeptness to effective management in disaster.<sup>5</sup> In 2009, pandemic disaster on the whole 570 patients were registered for dengue, in 2010, 5000 positive cases were reported<sup>4</sup>. A massive economic load can be reduced if all health care personnel particularly nurses and doctors are equipped with adequate knowledge and appropriate skills to deal with disaster.<sup>5</sup> From last two eras disasters are increasing

day by day, it means that responsibility of disaster management in accurate mode of action are increasing every health care member<sup>6</sup>. Every year state overhead a huge national budget expand on the name of disaster management that estimated in large figures, disaster management necessitates to rescue in timely with in less budget, this can be possible when every single health care supporter predominantly nurses awareness assures about the disaster management.<sup>7</sup> The participation of nurses in rescue department is very crucial and an many areas of rescue are covered by male and female nurses to and they are delivering their best but still there is need to enhance nurses knowledge and practice regarding disaster dealing for which the willingness of nurses are very necessary and this the responsibility of hospital administration and government to improve their basic skills which will help in managing every disaster situation.<sup>5</sup> Requirement of the modern age is to giving enough knowledge to nurses regarding disaster management, and nurses should also understands their responsibilities on the time of uncertainty, secondly nurse should knowknow about the fundamental rules consisting rapid response, management strategies stop or minimize the further damage, by the detection of risk factors<sup>6</sup>.

Nurses have inadequate knowledge regarding disaster dealing, Furthermore studies showed that very less number of the participants know to deal with uncertainty in appropriate way by their own interest and qualifications, study result showed that majority of the participants did not know to deal with tough conditions faced in health care setting, the author suggest to the higher authority of the hospitals was to make sure the disaster awareness and drill practice in hospitals.<sup>8</sup> Effective disaster coping ability can be possible when nurses are qualified and interested to seek the drill, results of this study shows that majority of the study participants have low level of knowledge regarding disaster management but they are willing to know about uncertainty management, Drill practices are not accurate as the requirement of management and needs to be refreshed.<sup>9</sup> Disaster management is complete when all health care team knows their responsibility and work as a team, by command of the leader. Finding of the study passing to the health care administration for the planning the arrangement of teaching sections or classes to uphold the nurses knowledge and skill necessary to manage the disaster.<sup>10</sup> It is revealed from many studies that nurses

knowledge is the key factor that directly influence on the disaster management in government hospitals as well as in community setting.<sup>11</sup> Nurses' effective practice of disaster management in emergency is the key factor to success via dealing disaster situation, it is revealed from the results of this study that nurses have not enough knowledge and practice regarding dealing disaster in hospitals.<sup>12</sup> It is universally accepted that nurses have unsatisfactory level knowledge about disaster management it is due to the poor consideration toward nursing basic curriculum.<sup>13</sup> The comparison study in Saudi Arabia between the government hospital nurses and military nurse, literature support that strong relation between the two variable nurses awareness directly influence the disaster dealing capabilities, in broad-spectrum they determined that military nurses have more qualification as well as they have adequate knowledge regarding disaster management then civilian nurses, clearly mentioned the reason of poor knowledge of government hospital nurses is to less occurrence of uncertainty of disastrous situation, weak nurses' curriculum, less interest to take knowledge and practices and un availability of drill practices in hospitals<sup>14</sup>.

The significance of current study was the identification of various factors affecting on nurses awareness regarding disaster management. The results of this study would be helpful for the hospital administration to estimate the nurses' awareness level to dealing with disaster.

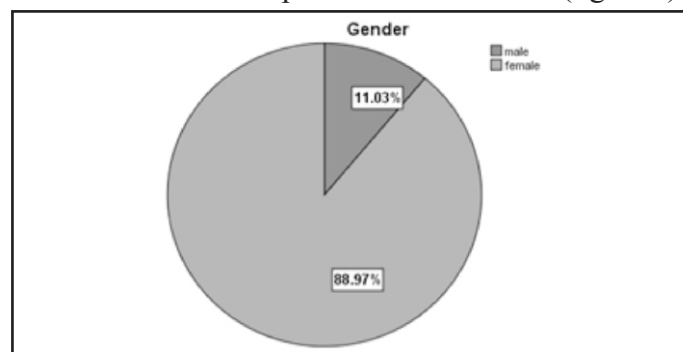
### Methods:

A quantitative cross sectional descriptive study design was selected to carry out this study in 02 tertiary care Hospitals of Lahore, Services Hospital and Jinnah Hospital, during April 2016. The study participants were Regular Nurses (RNs), specialized nurses and general nursing having three years diploma, from emergency departments, medical intensive care units (ICU) and surgical ICU. Total sample size was 150 with minimum one year of working experience through simple random sampling technique. Data were obtained through five point likert scale self-administered questionnaire adopted from use to assess the nurses awareness among disaster management questionnaire (developed the DPET in 2007).<sup>8</sup> No modification was done in questionnaire for data collection. Questionnaire was converted into Urdu, for easy interpretation of participants. Furthermore

information was delivered to the study participants, about disaster management by researcher before collecting data, 13 knowledge base items and 5 demographic questions were asked from the participants. Data were presented in the form of frequencies and percentages. Data were analyzed by using SPSS version 21.0.

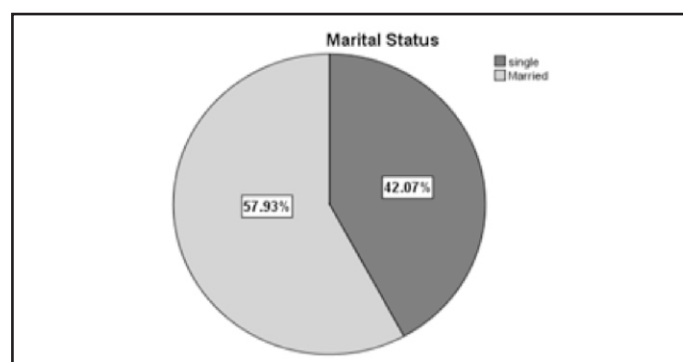
## Results:

Data were collected from both genders. Statistical analysis showed that 11% responses were the male nurses and 89% of respondents were female (figure 1).



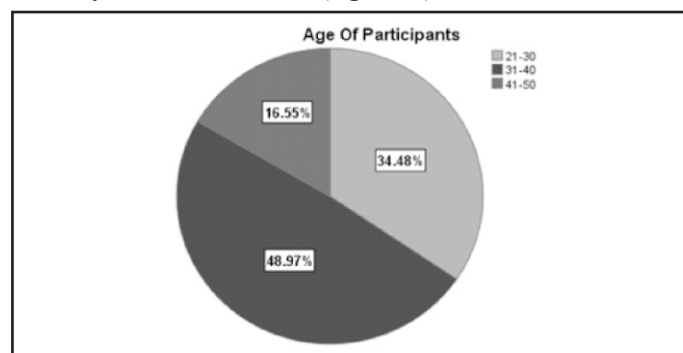
**Figure 1:** Gender of respondents

42.1% of the participants were unmarried while 57.9% were married (figure 2).



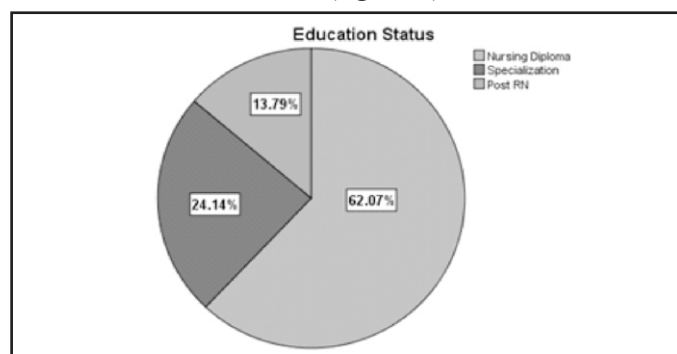
**Figure 2:** Marital status of respondents

Participants aged between 21-30 years were 34.5%, 31-40 years were 49.0% while the participants from 41-50 years were 16.5% (figure 3).



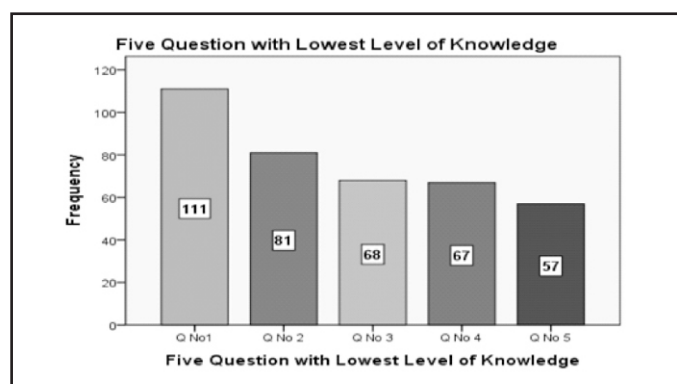
**Figure 3:** Age range of respondents

62.1% of the participants were having nursing diplomas, 24.1% were having specialization 24.1% and 13.8% were Post RN (figure 4).



**Figure 4:** Education of respondents

Participants had the lowest level of knowledge about five questions which was shown in Figure 5. Q No 1 was interest about educational classes on disaster awareness and preparedness. Q No 2 was related to list of contacts in the medical or health community in which they practice or they know Referral contacts in case of a disaster situation. Q No 3 was about accessibility of research literature on disaster preparedness and management. Q No 4 was that they read journal articles related to disaster preparedness. Q No 5 was either they had knowledge about where to find relevant research or information related to disaster preparedness and Management. The response of the participants had shown in figure 5.



**Figure 5:** Participants' response to each Question

## Discussion:

Regardless of the fact that nurses in tertiary hospitals had low level of awareness for disasters dealing, facts and figures showed clearly that they were interested to actively involved in academics activities such as lectures, reading informative content and disaster exercises, demonstrative drills, workshops and seminars. The outcomes of current study showed that nurses were willing to learn, getting more education in disaster dealing. Items related to disaster awareness'



response, planning & enquiry, and finding resources for gaining disaster knowledge had the lowest ratings by respondent. Another study clearly exposed that nurses in government hospitals were interested in enhancing their information related to disaster preparedness and showed their interest to learn the skill through drill prentices.<sup>10</sup> Nurses' lack of Knowledge' may be a result of their low understanding in that area and the deficiency of nurses' curriculum and informal education in syllabuses and hospitals universally. There was evidence that very short information had been written related to nurses disaster management.<sup>14</sup> The result of the current study showed that nurses in government hospitals had inadequate knowledge required for disaster dealing in appropriate way. Reasons of inadequate awareness' of the nurses were: due to knowledge deficit, lack of opportunities of drill practices, unavailability of informative content related to disaster preparedness on the work place, lack of experience, unsatisfactory syllabus in diploma and graduation level, less interest to taking part of training program. Current research finding also showed that availability of authentic knowledge must be assured in every educational program including diploma of graduation level, as well as post-graduation level of education. The study conducted in Saudi Arabia revealed that military nurses had skills and practice to deal with uncertain situation as compared to civilian nurses that was because of their updated knowledge; regular basis workshops and drill enhance their knowledge. However, it was suggested that disaster management would be included drill practices must be up dated every year for the continuity of accurate responsiveness.<sup>7</sup> The study from Hong Kong revealed that disaster drills were very essential and necessary for building disaster skills. Interesting fact were found that nurses understood the importance of disaster drill practices , but the unavailability of training and demonstration nurses were not able to improve their skills.<sup>13</sup>

### Conclusions:

Current research work was conducted to assess the knowledge of Nurses regarding disaster management in tertiary health care hospitals of Lahore. Results revealed that nurses of tertiary health care setup had insufficient knowledge about disaster management; every health care staff particularly nurses must have adequate knowledge about uncertainty management. It was necessary fact that they should have authentic information and practices to overcome the uncertain situation in and out of the hospital.

### References:

- 1- Usher K. Editorial: Are we ready? Preparing nurses to respond to disasters and emerging infectious diseases. *Journal of clinical nursing*. 2010 Jun 1;19(11-12):1483-4.
- 2- Al Thobaity A, Plummer V, Innes K, Copnell B. Perceptions of knowledge of disaster management among military and civilian nurses in Saudi Arabia. *Australasian Emergency Nursing Journal*. 2015 Aug 31;18(3):156-64.
- 3- World Health Organization, Expert Consultation Report (2006). Emergency preparedness for the health sector and communities – challenges and the way forward. Pre-hospital and Disaster Medicine 21(Suppl. 4), P.97–109.
- 4- Fatima Z, Idrees M, Bajwa MA, Tahir Z, Ullah O, Zia MQ, Hussain A, Akram M, Khubaib B, Afzal S, Munir S. Serotype and genotype analysis of dengue virus by sequencing followed by phylogenetic analysis using samples from three mini outbreaks-2007-2009 in Pakistan. *BMC microbiology*. 2011 Sep 10;11(1):200.
- 5- Gebbie KM, Hutton A, Plummer V. Update on competencies and education. *Annual review of nursing research*. 2012 Oct 1;30(1):169-92
- 6- Moabi RM. *Knowledge, attitudes and practices of health care workers regarding disaster preparedness at Johannesburg hospital in Gauteng Province, South Africa* (Doctoral dissertation).
- 7- Hussain M, Arsalan MH, Siddiqi K, Naseem B, Rabab U. Emerging geo-information technologies (GIT) for natural disaster management in Pakistan: an overview. In *Recent Advances in Space Technologies, 2005. RAST 2005. Proceedings of 2nd International Conference on 2005 Jun 9* (pp. 487-493). IEEE.
- 8- Schultz CH, Koenig KL, Whiteside M, Murray R, National Standardized All-Hazard Disaster Core Competencies Task Force. Development of national standardized all-hazard disaster core competencies for acute care physicians, nurses, and EMS professionals. *Annals of emergency medicine*. 2012 Mar 31;59(3):196-208.
- 9- Fung OW, Loke AY, Lai CK. Disaster preparedness among Hong Kong nurses. *Journal of advanced nursing*. 2008 Jun 1;62(6):698-703..
- 10- Chapman K, Arbon P. Are nurses ready?: Disaster preparedness in the acute setting. *Australasian Emergency Nursing Journal*. 2008 Aug 31;11(3):135-44.

- 11-** Davies K. Disaster preparedness and response: more than major incident initiation. *British Journal of nursing*. 2005 Sep 8;14(16).
- 12-** Ranse J, Shaban RZ, Considine J, Hammad K, Arbon P, Mitchell B, Lenson S. Disaster content in Australian tertiary postgraduate emergency nursing courses: A survey. *Australasian emergency nursing journal*. 2013 May 31;16(2):58-63.
- 13-** Tichy M, Bond AE, Beckstrand RL, Heise B. Nurse practitioners' perception of disaster preparedness education. *American Journal of Nurse Practitioners*. 2009;13(1):10-22.
- 14-** Weiner E, Irwin M, Trangenstein P, Gordon J. Emergency preparedness curriculum in nursing schools in the United States. *Nursing Education Perspectives*. 2005 Nov 1;26(6):334-