

Perception of Nurses' Regarding Role, Preparedness and Management Skills during Hospital Disasters

Afaf Abdelaziz Basal¹, Rasha Elsayed Ahmed²

Assist Prof: Medical Surgical Nursing¹, lecturer of Medical Surgical Nursing², Faculty of Nursing, Tanta University

Abstract: Disasters represent unique challenge for every medical care facility. Nurses are important members of the crisis team. Therefore, they need to be able to use their skills and take prompt action to provide the care necessary for the people involved in the accident, in order to prevent exacerbation of the problem and its complications. **Aim:** This study aims to assess the nurses' perception regarding their role, preparedness and management skills during hospital disasters. **Subjects and Method:** The study was conducted in all departments at Tanta University Emergency Hospital (Medical, Surgical, Orthopedic, ICUs, Burn, OR and Emergency departments. **Sample:** A convenience sample composed of (424) nurses working in the previous mentioned settings. **Tools:** A Structure Interview Questionnaire, which consists of three parts: Part (1) Socio-demographic Data for nurses. Part (2) Disaster preparedness questionnaire sheet for nurses to assess nurses' perception regarding their role, preparedness and management skills during hospital disasters. Part (3) Nurses' perception regarding selected disaster emergency nursing skills. **Results:** About two thirds (60.14 %) of nurses had high perception level regarding disaster emergency nursing skills. There was positive correlation between ages, years of experience and nurses' perception regarding their role, preparedness, management and emergency nursing skills during hospital disasters. **Conclusion:** The study revealed that there was a high level of nurses' perception regarding their role, preparedness, management and emergency nursing skills during disaster situations. **Recommendations:** This study should be utilized broadly to create awareness to all nurses and nursing educators by enhancing their profession's capability and competency through training and educational program about disaster management.

Keywords: Disasters, Nurses, Perception, Preparedness.

1. INTRODUCTION

Advancements in technology and industrialization increase the rate of natural and man-made disasters. Disasters are not being expected, but they happen. Nurses are at the forefront of the healthcare response to disasters. They may play several roles during a disaster, which may include: preserving open lines of communications, ensuring quality patient care, providing current education, influencing policy and financial decisions and providing security for staff, patients and families⁽¹⁾

The World Health Organization (WHO) defines disaster as "A serious disruption of the functioning of a community or a society causing widespread human, material, economic, or environmental losses, which exceed the ability of the affected community or society to cope using its own resources. Crisis has always threatened human societies.⁽¹⁻³⁾ The number and severity of crisis have been increasing in the world, however the natural and technological disasters has increased dramatically. Factors such as excessive population, urban industrialization, climate changes and spreading of infectious diseases have increased the risk of crises^(4,5)

Understanding the difference between a disaster and an emergency is important. An emergency is a situation where a sudden incident or event has occurred and normally used, local responses will suffice to care for the situation without calling in

outside help. The occurrence of catastrophic events can impact communities and hospitals negatively in both developed and industrialized countries. Many times, hospitals and healthcare facilities are not able to function during a disaster. ⁽⁶⁾

Taylor and Lemone (2006)⁽⁷⁾ classify disasters according to the magnitude of the disaster in relation to the ability of agency or community to respond. Disasters are classified by the following levels: *Level I*: If the organization, agency, or community is able to contain the event and respond effectively utilizing its own resources. *Level II*: If the disaster requires assistance from external sources, but these can be obtained from nearby agencies. *Level III*: If the disaster is of a magnitude that exceeds the capacity of the local community or region and requires assistance from state-level or even federal assets.

Nurses, as the largest group of health personnel, often working in difficult situations with limited resources, play vital roles when disasters strike, serving as first responders, triage officers, care and first aid providers, coordinators of care and services, providers of information and psychological support or education, and implementation of infection control procedures. However, health systems and health care delivery in disaster situations are only successful when nurses have the fundamental disaster competencies or abilities to rapidly and effectively respond.^(8,9)

With the growing threat of a naturally occurring or man-made global pandemic (terrorism), many public, private, state and local institutions have begun to develop some form of preparedness and response plans. Among those in the front lines of preparedness are hospitals and medical professions who will be among the first responders in the event of such a disaster ⁽⁹⁾. Previous experiences and trainings of nurses affect their preparedness, awareness, self-confidence and skills in disaster response and decrease their vulnerability to unpredictable events. Most nurses are not ready to face mass casualties, and their preparedness, education and skills are not adequate for an appropriate response. ⁽¹⁰⁾

The objective of disaster preparedness is to ensure that appropriate systems, procedure and resources are in place to provide prompt effective assistance to disaster victims, thus facilitating relief measures and rehabilitation of services. It includes all of the activities that need to be carried out prior to a disaster to ensure that disaster response activities run as smoothly.⁽⁵⁾

Nurses are important members of the crisis team. Therefore, they need to be able to use their skills and take prompt action to provide the care necessary for the people involved in the accident, in order to prevent exacerbation of the problem and its complications. Nurses should be aware of their limitations in knowledge, skills, abilities, independence, and self- efficacy before a critical disaster. The assessment of knowledge, skills, and abilities of nurses and identification of the existing gaps in their knowledge and skills, before participating in critical situations, can minimize the risks associated with crisis response. ⁽¹¹⁻¹³⁾

Significance of the study:

With the rising in number and frequency of disasters globally and nationally, hospital staffs working in any capacity need to be aware of the concept of disaster management and well prepared to handle a disaster. This is one of the vital ways to mitigate the loss of human life due to disasters. For this reason the study was conducted in all departments at Tanta University Emergency Hospital to assess the nurses' perception regarding their roles, preparedness, management and emergency nursing skills during hospital disaster situations.

Aim of the study:

To assess the nurses' perception regarding their role, preparedness, management and selected emergency nursing skills during hospital disasters.

Research Questions:

- 1- What is the perception level of nurses' regarding their role, preparedness, management and emergency nursing skills during hospital disasters?
- 2- What is the association between nurses' socio-demographic variables and their roles, preparedness, management and emergency nursing skills during disaster situations?

Operational definition:

Preparedness: are actions that are taken as precautionary measures in the face of potential disasters.

Nurses' perception: It refers to the ability of nurse to aware of the elements of environment through physical sensation.

2. SUBJECTS AND METHOD

Research design: descriptive research design was utilized in this study.

Setting: The study was conducted in all departments at Tanta University Emergency Hospital, which include: Medical, Surgical, Orthopedic, ICUs, Burn, Operating theater (OR) and Emergency department.

Subjects:

A convenience sampling of (424) nurses from total (563) from above mentioned settings, who were willingness to participate in the study and distributed as follow: Medical (50 nurses), Surgical (45 nurses), Orthopedic department (34 nurses), Burn (30 nurses), OR (70 nurses), ICUs (95 nurses) and Emergency department (100 nurses).

Tools of the study:

A Structure Interview Questionnaire for nurses was developed by the researchers based on relevant literature ⁽⁶⁾. It consists of three parts as follow:

-Part (1): Nurses' Socio-demographic Data: It includes nurses' name, age, qualification, marital status, years of the experience and work department.

-Part (2): Hospital Disaster preparedness questionnaire sheet for nurses. It was developed by the researchers after reviewing related literature ^(8,14,15,16) and consulting experts. It was designed to assess the nurses' perception regarding their role, preparedness and management skills during hospital disasters. It was written in simple Arabic language. The total questionnaire consisted of 30 items classified into 3domains:

-Role of nurses in disaster situations (10 items).

-Preparedness of nurses in disaster situations (10 items).

-Management of nurses in disaster situations (10 items).

Scoring system:

The response will be in five point Likert scale which ranges from 1= strongly disagree to 5 = strongly agree. The total score ranged from 30- 150 (strongly disagree to strongly agree).

-Part (3): Nurses' perception regarding disaster emergency nursing skills: it was developed by the researchers after reviewing related literature ⁽¹⁷⁾ to assess nurses' awareness regarding selected emergency nursing skills related disaster: life saving measures, physical assessment, and level of consciousness, first aid management, universal precaution, triage technique, medication administration, intubation, oxygen administration, safety measures, immobilization and transfer of victims. (11 items)

Scoring system:

Each question was granted two point for the "yes" answer, one point for "to some extent" answer and zero for the "no" answer. The total score for all questions was 22. Total scores were expressed as percentages. The nurse was considered " satisfactory perception" if percent score was 60% or more, and " unsatisfactory perception if percent score was less than 60%.

Method:

1- Validity and reliability of the tool:

-**Validity:** Tool of data collection was translated into Arabic and reviewed for their content validity by five experts was selected to test the content and face validity of the instruments. The panel included three experts from Medical Surgical Nursing department and two experts from nursing administration department at Tanta University.

- **Reliability:** The reliability was assessed in a pilot study by measuring their internal consistency using Cronbach's alpha coefficient method. Coefficient test was 0..81

2- Ethical consideration:

-To carry out the study, the necessary official approval was obtained from the director of the above mentioned setting.

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-All nurses were informed about the purpose of the study and their rights according to medical research ethics that they were free to decide whether or not they would participate in the study. Then a written informed consent was obtained from each nurse who agreed to participate in the study.

3- Pilot study:

A pilot study was conducted on 42 nurses from study settings to test the applicability and clarity of the tool and to estimate the time needed. On the basis of the pilot study results the researcher determined the feasibility of data collection procedures. Nurses who had participated in the pilot study were excluded from the total number of the study sample.

4- Method of data collection:

-Sampling was started and completed within 4 months at the beginning of January to the end of April 2017 .

-The tool of the study (Structure Interview Questionnaire for nurses) was developed after reviewed of literatures as follow:

- Part1 (Socio-demographic sheet) was administered for each nurse to fill the personal data as age, sex. Part two (Disaster preparedness questionnaire sheet) and part three (Nurses' perception regarding selected disaster emergency nursing skills) were handed to all participant nurses (n=424) in the previous mention settings to assess their perception regarding roles, preparedness, management and selected emergency nursing skills during hospital disasters.

- The questionnaires were distributed to the nurses in each department. The researchers were present during collection of data twice time /week for two weeks in each department for guidance and clarification. The questionnaire collected immediately after filled and it consume about 16 weeks

- Responding times to all questions in the tool consumes (15-20) minutes to each nurse.

-The data were collected in the morning and afternoon shifts by the researchers

Limitation of the study:

Some nurses (139) refused to participate in the study.

Statistical Analysis:

The collected data was analyzed, tabulated using the statistical package for the social sciences (SPSS) for windows version 20. Number and percent distribution, arithmetic mean and standard deviation were used for descriptive purposes. Correlation between variables was also calculated for statistical significance.

3. RESULTS

Table (1): Shows the distribution of the studied nurses according to their socio-demographic data, the mean of age of the studied nurses was 29.93 ± 9 years and ages ranged from 19 to 55 years and the mean years of experience was 9.28 ± 9.20 and ranged from 1- 36 years. More than one third (37%) of nurses had a bachelor degree. Nearly three quarters (74.3%) of the studied nurses were married. The higher percentage of studied nurses (23.6%) were worked in the emergency department.

Table (2): Illustrates percent distribution of studied nurses' perception regarding their role during hospital disasters. More than half (58.5%) of nurses were agree/strongly agreed about their role regarding item (1): "provide quality health care for people regardless of their age, sex and type of disease". More than one third of nurses were disagree/strongly disagree about their role regarding item (6): "Prepared for future acts of terrorism" and item (8): "Totally equipped to care for victims in their respective nursing environments" (37.5% & 38.4%) respectively.

Table (3): Shows the percent distribution of nurses' perception regarding their preparedness during hospital disasters. It was observed that the highest percentages (44.1% & 47.4% respectively) of agree / strongly agree of nurses' preparedness

during hospital disaster were regarding items (5) and (7) "I believe that not all nurses will be first responders but they are prepared to recognize what actions should be helpful in stages of response" and "I am educated enough to have knowledge and skill related to mass casualty events". While the lowest percentage (32.3%) of agree and strongly agree of nurses' perception of preparedness was regards item (2) "Prepared with competency training to respond in a critical system of scenarios".

Table (4): Shows percent distribution of nurses' perception regarding their management skills during hospital disasters. The highest percentages (42.7% & 41.7% respectively) of nurses' agreement toward their perception of management skills were regards item (9) "I identify the signs and symptoms of traumatic injury or incident when responding to disasters" and item (4) "I respond to disasters but consider that the government resources are not fully apportioned to each patient.". But the lowest percentage of nurses' agreement (34.2 %) was regards item (1) "I consider that planning is needed for incoming, evacuation and provision of care to patients during disaster".

Table (5): Shows Presentation of satisfactory nurses' perception regarding emergency nursing skills. All nurses (100%) had a satisfactory perception regarding performing of medication administration, while the lowest percent (20% & 30% respectively) of nurses' satisfactory perception were regarding triage and safety measures skills.

Table (6): Shows percent distribution of nurses' perception levels regarding their role, preparedness, management and emergency nursing skills during hospital disasters. Nearly half of studied nurses (49.30%, 47.6%, 48.83 %) had high perception's level regarding their role, preparedness and management skills in disaster situations. While about two third (60.14 %) of nurses had high perception level regarding disaster emergency nursing skills.

Table (7): Shows correlation of total nurses' perception regarding their role, preparedness, management and emergency nursing skills during hospital disasters with age and years of experience. There was statistical significance positive correlation between total nurses' perception regarding their role, preparedness, management and performing emergency nursing skills during hospital disasters with age and years of experience, where the years of experience recorded highly positive correlation.

Table (1): Distribution of the studied nurses according to their socio-demographic data

Categories	The studied nurses (n=424)	
	N	%
Age in years	(19-55)	29.93± 9
Mean±SD Range		
Qualification:		
▪ Diploma	101	23.8
▪ Technician	151	35.6
▪ Bachelor	157	37.0
▪ Postgraduate	15	3.5
Work department:		
▪ Medical	50	11.8
▪ Surgical	45	10.6
▪ Orthopedic	34	8.0
▪ Burn	30	7.1
▪ OR	70	16.5
▪ ICUs	95	22.4
▪ Emergency	100	23.6
Marital status:	315	74.3
▪ Married	92	21.7
▪ Single	10	2.4
▪ Divorced	7	1.6
▪ Widow		
Years of experience : Mean±SD	9.28± 9.20.	
Range	(1- 36)	

Table (2) Percent distribution of studied nurses' perception regarding their role during hospital disasters. (n=424)

Items of nurses' Role	disagree/strongly disagree		Neutral		Agree /strongly agree	
	N	%	N	%	N	%
1- Provide quality of health care regardless of their age, sex and type of disease.	76	17.9	100	23.6	248	58.5
2-Compassion with professionalism, while identifying the problems and care.	161	38	75	17.7	188	44.3
3- Conducting investigations, reporting, medication and educating the community	141	33.3	96	22.6	187	44.1
4- Be key players in local and national level emergency response.	142	33.5	127	30	155	36.5
5- Take responsibilities on prevention, surveillance and response during disasters.	148	35	120	28.3	155	36.5
6- Prepared for future acts of terrorism.	159	37.5	123	29	142	33.5
7-Have better plans for silent disasters that may evolve over time.	133	31.4	132	31.1	159	37.5
8-Totally equipped with confidence and knowledge and work to integrate efforts into the team.	163	38.4	114	26.9	147	34.7
9 -Respond timely to emergency situations, communication and medical therapeutic intervention.	158	37.3	121	28.5	145	34.2
10-Perform tasks with professionalism, efficiency and above all caring.	145	34.2	110	26	169	39.8

Table (3) Percent Distribution of nurses' perception regarding their preparedness during hospital disasters.(n=424)

Items of nurses' perception for preparedness	Disagree/strongly disagree		Neutral		Agree/strongly agree	
	N	%	N	%	N	%
1-Use basic and continuing education for competency in emergency response.	156	36.8	95	22.4	173	40.8
2- Prepared with competency training to respond in a critical system of scenarios.	172	40.6	115	27.1	137	32.3
3- Balance knowledge on emergency response of the injuries and illnesses caused by specific agents of disasters.	144	34	112	27	165	39
4- Have practical experience to a small or large scale disaster to facilitate care to patients.	155	36.6	96	22.6	173	40.8
5- I believe that not all nurses will be first responders but they are prepared to recognize what actions should be helpful in stages of response.	134	31.6	103	24.3	187	44.1
6- I believe that my institution develops a better preparation for emergency to improve coordination between public health and hospital based sectors.	153	36.1	98	23.1	173	40.8
7- I am educated enough to have knowledge and skill related to mass casualty events.	149	35.1	74	17.4	201	47.4
8- I must stress the importance of being mentally prepared and having deep reserves of empathy for people who are much affected by the catastrophe.	167	39.4	92	21.6	165	39
9- I can prepare and learn together with others resulting in smoother team.	145	34.2	103	24.3	176	41.5
10- I believe that there is a lack of emergency preparedness in some institutions and instances where nurses are involved.	156	36.7	109	25.8	159	37.5

Table (4): Percent distribution of nurses' Perception regarding their management skills during hospital disasters.(n=424)

Items of nurses' perception for management skills	Disagree/strongly disagree		Neutral		Agree/strongly agree	
	N	%	N	%	N	%
1 -I consider that planning is needed for incoming, evacuation and provision of care to patients during disaster.	189	44.6	90	21.2	145	34.2
2- All sectors of health care, including myself and other responders are required to utilize incident management.	131	30.9	142	33.5	151	35.6
3- I develop mechanisms to increase rush capacity capability, noting that nurses are the largest group professionals during disaster.	152	35.8	123	29	149	35.2
4- I respond to disasters but consider that the government resources are not fully apportioned to each patient.	94	22.2	153	36.1	177	41.7
5- I believe that in handling of emergency situations, especially in case of mental health patients who are prone to violence requires the expertise of a disaster management team.	163	38.4	103	24.3	158	37.3
6- Cultural competences must become part of disaster management to every community because not all times, there will be outsiders arriving to help.	145	34.2	122	28.8	157	37
7- In my institution, there is a knowledge deficit in health care since the assessment of the patient and where they are coming from are not fully understood.	155	36.6	93	22.0	176	41.5
8. When catastrophe strikes, I work systematically to ensure that no one is abandoned.	151	35.6	111	26.2	162	38.2
9- I identify the signs and symptoms of traumatic injury or incident when responding to disasters.	126	29.7	117	27.6	171	42.7
10. I remain calmed even the situation is difficult to handle.	154	36.3	107	25.2	163	38.4

Table (5): Presentation of satisfactory nurses' perception regarding disaster emergency nursing skills

Items of selected disaster emergency nursing skills	Satisfactory perception	
	N=424	%
-CPR Skills (Cardiopulmonary resuscitation)	296	69.8%
-Triage	85	20%
-Care of unconscious	288	67.9%
-O2 supplement	339	80%
-First aid	339	80%
-Intubation	322	75.9%
-Medications administration	424	100%
-Universal precautions of infection control	331	78.1%
-Physical assessment	254	60%
-Safety measures	127	30%
-Immobilizing and transportation	322	75.9%

Table (6) Percent distribution of nurses' perception levels regarding their role, preparedness, management and emergency nursing skills during hospital disasters (n=424)

Level of nurses' perception	Role		Preparedness		Management skills		Disaster emergency nursing skills	
	No	%	No	%	No	%	No	%
High	209	49.30	202	47.6	207	48.83	255	60.14
Moderate	144	33.96	142	33.49	152	35.84	124	29.24
Low	71	16.74	80	18.8	66	15.56	45	10.06

Table (7) Correlation of Total Nurses' perception regarding their Role, Preparedness, Management and emergency nursing skills during hospital disasters with Age and years of experience

Items of socio-demographic Data		Nurses' role	preparedness	Management Skills	Emergency nursing skills
Age in years	R	0.086*	0.095*	0.084*	0.092*
	P	0.038	0.026	0.042	0.023
Years of experience	R	0.118**	0.128**	0.115**	0.117**
	P	0.007	0.004	0.009	0.008

** Correlation is significant at the 0.01 level.

* Correlation is significant at the 0.05 level.

4. DISCUSSION

The occurrence of catastrophic events can impact communities and hospitals negatively in both developed and industrialized countries. Many times, hospitals and healthcare facilities are not able to function during a disaster. (18)Nurses are team players and work effectively in interdisciplinary teams needed in disaster situations; nurses should be aware of primary, secondary, and tertiary prevention, which means that nurses can play key roles at the forefront in disaster prevention, preparedness, response, recovery, and evaluation. Nurses historically integrate the psychological, social support and family-oriented aspects of care with psychological needs of patients/clients; and nurses are available in different settings and can be mobilized rapidly if necessary (19)

In the current study, the mean of age of the studied nurses was nearly thirty years. This means that nurses still young and can provide care during disaster. The emergency nurses represent a higher number of the study sample. This may be due to the emergency department include high capacity of nurses in Tanta Emergency Hospital. In relation to years of experience of the current study mean of the years of experience was nearly ten year and ranged from 1- 36 years. This constant with the study of **Loke and Fung(2014)**(20) who stated that nurses experienced with 3 to 23 years, averaging of years of experience in the medical/surgical, critical and community specialty respectively. Also Regarding the experience of responding to crisis as a member of the care team, the findings of the study showed that almost one-third of the participants in the study had the experience of showing their skills 82% reported the experience of providing care to victims of critical incidents. (21)

In the current study nearly half of studied nurses had high level of perception toward their role, preparedness and management respectively, but about two thirds of them represent a high perception level regarding performing of emergency nursing disaster skills. This may due to nurses in the current study had willing to introduce care during disaster in their hospital or city and they practicing most of these skills. This was corresponding to **Veenema et al.(2008)** (22)who state that the participants would have a good level of competence required in performing basic clinical skills, triage, or life support, but their competence was less than expected. But this result contrast with the study of **Considine et al.(2009)**(23)who reported that nurses might have conflicts between their professional, private and community role, respectively. Nurses might be therefore less willing to respond to work during a disaster. Other reasons influencing the willingness to respond are low baseline knowledge, low perception of personal safety, and low perception of clinical competence.

The present study reported highest percentage(more than half) of nurses' role during disasters was regarding "provide quality health care for people regardless of their age, sex and type of disease" this constant with the **American Holistic Nurses'**

Association (2003)⁽²⁴⁾ reported that the fundamental roles and responsibilities of the nurse are to promote health, facilitate healing, and alleviate suffering. Inherent in nursing is the respect for life, dignity, and the rights of all persons. (**World Health Organization (WHO) and International Council of Nurses(ICN), (2009)**⁽²⁵⁾ stated that nursing care is given a context mindful of the holistic nature of humans, understanding the body-mind-spirit. The fundamental attributes of nursing practice consist of providing nursing care to the injured and ill, assisting individuals and families to deal with physical and emotional issues, and working to improve communities.

Regarding the role of nurses during hospital disasters, the present study reported that more than one third of nurses' perception regarding their role were disagree/strongly disagree about (Prepared for future acts of terrorism and equipped to care for victims in their respective nursing environments). This may due to nurses need training and education to deal with the disaster situations related to future acts of terrorism.

The transition from the daily activities of nursing practice to a disaster operation is challenging, but for nurses without disaster training or education, it is even more difficult. Providing care in a field hospital, administering first aid in a corner store, working in an unfamiliar community hospital, and managing the health needs of a large population in a shelter under less-than-ideal conditions can be difficult for any nurse, especially those without knowledge. Most nurses are not ready to face mass casualties, and their preparedness, education and skills are not adequate for an appropriate response.⁽¹⁰⁾

In the present study nearly less than half of nurses' perception agreement regarding their disaster preparedness were for item (5) "I believe that not all nurses will be first responders but they are prepared to recognize what actions should be helpful in stages of response ",and item (7)"I am educated enough to have knowledge and skill related to mass casualty events. This may be due to the nature of nurses' work are assistant and care providers, also more than two thirds of studied nurses had a technical and bachelor educational level but they need more training and education to deal with the emergent disaster situations and become the first responders during these events. This constant with **Bergin et al., Baack et al.,(2013)**^(26,27) reported that, nurses are among the first people who are present at the site after an accident. Therefore, they need to be able to use their skills and take prompt action to provide the care necessary for the people involved in the accident, in order to prevent exacerbation of the problem and its complications.

In the current study nearly less than half of nurses' response of disaster management was regarding item (9):"I identify the signs and symptoms of traumatic injury or incident when responding to disasters." This may due to more than two third of nurses had technical and university education of nursing. Also other highest percent (less than half) of nurses' response was for item (4):"I respond to disasters but consider that the government resources are not fully apportioned to each patient". This may due to experiences of nurses with dealing with crisis, this experience is used to facilitate care to patients.

The present study is constant with **Piercey(2002)**⁽²⁸⁾who revealed that significance of training and continuing education in the nurses' further acquisition of professional competencies. As professionals who solve problem for service in their particular discipline, nurses should continue striving for professional growth and development through enhancement of technical or specialized knowledge and skills. Through education and training nurses can be equipped with the competencies required during disasters.

The current study reported that the lowest percent nearly one third of nurses' management during disaster was regarding item (1): (I consider that planning is needed for incoming, evacuation and provision of care to patients during disaster.) This reflects need of nurses for planning and education about management of disaster. This constant with the study of **Adelman and Legg (2011)**⁽⁶⁾ who revealed that hospitals should train their employees to follow each kind of disaster plan. They should also have routine "disaster training" with other departments throughout their community to ensure that each group understands what to do in an emergency.

Regarding nurses' perception towards emergency nursing skills during disaster situations, this study reported that all nurses had satisfactory perception regarding administration of medication skill, while they scored lower percent less than one third of satisfactory perception regarding safety measures and triage skills. This result may be due to a lot of the studied nurses didn't perform triage technique in their hospital and had poor knowledge due to safety measures. **Jakeway et al., (2008)**⁽²⁹⁾ cited that nurses should be knowledgeable about his or her role during disaster. This may include triage, coordination of the first aid response team, and direct hands-on care to victims of the emergency. As licensed health care professionals, they should respond to all serious adverse events that threaten the health, safety, or well-being of a population. The nurse has an important role before, during, and after an emergency. Also, **Hegazy et al.,(2012)**⁽¹⁵⁾stated that a highly significant difference was

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observed pre/post training between levels of students' knowledge and practice regarding selected emergency skills related disaster.

There was significant and positive correlation between nurses' role, preparedness and management of disaster with their age and years of experience in the present study. This constant with the study of **Loke and Fung (2014)**⁽²⁰⁾ who noted a significant relationship between the nurses' demographic profile variables and their performance of nursing functions. More specifically, a close level of performance among nurses grouped by age, educational attainment, civil status and length of experience in the nursing profession. Also, **Landesman (2011)**⁽³⁰⁾, ensures that the nurses during disasters are organized according to specific functions and professional qualifications. Systematic procedures are necessarily followed to avoid overlapping of functions and responsibilities.

5. CONCLUSION

In the light of the current study it can be concluded that, there was a high level of nurses' perception regarding their role, preparedness, management and emergency nursing skills during disaster situations. In addition, there was a significant positive correlation between nurses' age, years of experience and perception regarding their role, preparedness, management and emergency nursing skills during hospital disasters.

6. RECOMMENDATION

Based on the results of the present study, it can be recommended that:

- This study should be utilized broadly to create awareness to all nurses and nursing educators by enhancing their profession's capability and competency through training and educational program about disaster management.
- Availability of guided booklet regarding disaster management in each hospital department for all nurses.
- The concept of disasters must be included in the undergraduate curricula of nursing students.
- Further studies in the field of disaster nursing are to be carried out.

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