

PREPAREDNESS OF PRIMARY HEALTH CARE NURSES FOR DISASTER MANAGEMENT IN BAHRAIN

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Abstract- This study discusses the preparedness of the primary health care nurse's in terms of their knowledge, skills and the efficiency of their response during disasters in the kingdom of Bahrain. This descriptive correlation study used a self-determination questionnaire to assess the disaster preparedness among nurses; sample of 150 nurses selected from primary health care center of type A setting as further reasoned in this paper to be the selection criteria.

The data are analyzed using statistical package (SPSS, 2011) to describe the relationship between the study variables. One hundred and ten (110) participants completed the survey with a responding rate of 73.3%. The research finding indicated that most of the nurses responded (55.3%) reported low level of familiarity with disaster preparedness, and (38.3%) are familiar, while the remaining (6.3%) are strongly familiar. Fifty per cent of the participant are not prepared or did not attend any formal disaster education programs, and (46.3%) were not involved in any disaster mitigation drill during their work experience.

The study further elaborates on the importance of properly inducting and preparing nurses and the overall primary health care centers and how to increase their preparedness for disasters. A summary of recommendations is also raised to the higher authorities in the ministry of health in Bahrain which include the need for collaboration with world health organization for a disaster preparedness program to prepare the primary health care nurses to manage real disaster effectively.

Keywords- Nurse's Preparedness, Disaster, Management, Knowledge And Skills.

I. INTRODUCTION

The World Health Organization (2005), defines disaster as "an event which leads to damage, economic distraction and decline in health services and thus threats people lives' and their ability to survive beyond the event and may require the affected country to seek adequate or extraordinary response from neighboring countries, better-off countries or / and worldwide organizations".

The increasing level of disaster outbreak brings upon countries across the world the obligation to increase the awareness of their citizens and readiness of their societies, economies, institutions, medical and social infrastructure. There was an increase of sixty percent (60%) in the rate of disaster occurrence over the last decade (1997-2006) in comparison with the preceding decade (1987-1996). The increase in disaster occurrence rate contributed towards the increase in the number of reported deaths from 600,000 to over 1.2 million of the same period.

II. BACKGROUND

During major disaster events, the demand for nursing care services is greater than the demands for any other health care professional. Nurses anticipated an expanded role during disaster events to include; caring for the sick and injured infection control, contingency planning to prevent further damage, triage, mass immunizations, mass evacuations, and treatment for mass casualties There is no research

study in Bahrain that examine the knowledge, skills and readiness of nurses towards disaster and disaster management in general and in primary care settings in particular.

III. SIGNIFICANCE OF THE STUDY

This is the first study in the kingdom of Bahrain looking at the nurses' preparedness and level of knowledge for disaster and disaster management. The findings from this study will help in identifying the baseline knowledge about nurses' preparedness regarding their level of knowledge and preparedness for disaster. Identifying nurses' level of preparedness and skills needed to deal with disaster will be very beneficial in developing a strategies aiming to prepare nurses and other health care providers in the health care settings when disaster take a place.

A successful disaster response by health care providers can be enhanced by disaster management preparedness. This preparation can be achieved through different methods, such as continuing education courses in disaster management, disaster management drills, and integrating disaster management courses into nursing curricula . Even in the absence of a documented study for the current readiness of the healthcare systems in Bahrain to be a stepping stone, this study aims to be a referral research in this topic by offering an actual research study that examines these important aspects of disaster readiness.

IV. HISTORICAL OVERVIEW OF DISASTER WORLDWIDE

Literatures recorded that the attention towards disaster preparedness has rapidly increased over the last decade and is yet to take a further up-hill is increase worldwide. The first flag the world raised driving the focus on disaster awareness and disaster management was with the tragic world trade center attack in the united states on the 11th of September, followed by the devastating hurricane katrine in new York Orleans 2005 and few tears later Tsunami that hit south east Asia in December 2009. It was evident that countries' infrastructures around the world, which includes police force, defense force, medical force, and technological infrastructure were in a comfortable zone for quite a long time, and the September 11th attack was the first actual awakening of the decade.

V. STUDY POPULATION

The population was all registered nurses who have been working in the primary health care setting type A in the Kingdom of Bahrain during the time of the study; those had been working in treatment room for at least 5 years. The targeted population was drawn from the inclusion and exclusion criteria.

VI. SAMPLE AND SAMPLING METHOD

For the purpose of this study, a total of 150 primary care registered nurses using convince sampling method were recruited. The selection of the sample was done with the cooperation of health centre region administration and nurse supervisors. Those who had agreed to participate were recruited in the study with a consent paper taken from the participant for ethical issues.

VII. PROCEDURE OF DATA COLLECTION

The Research questionnaire is distributed to all recruited participants with the attached cover letters that explained the purpose of the study and the permission of the ethical committee and appreciation of their participation according to the selection criteria. Prior to the distribution of the questionnaire the researcher met the nurse's officers to discuss with them the aims and the objectives of the study and the process of distributing and collecting the questioners'. Then the questionnaire was handled to them as well as the consent form. For as an ethical consideration in order to distributed to all nurses in - charge of health centers which they will give to participant, in each health centre will keep a box in the main appointment disk for the participates to keep the finished questionnaire inside it within the due date which help in sustaining confidentiality of data.

Consent obtained from participants who accepted to share in this research. Participants returned the completed questionnaire through the envelope had kept in each centre which participated in this study with the address written on it so after they had completed the questionnaire they were posted the completed ones.

VIII. STUDY INSTRUMENT

Choosing an appropriate method and instrument is difficult and must be appropriate to the study research. Questionnaire consists of a set of questions presented to a respondent for answers. The main aim of the study is to clarify primary care nurse's preparedness regarding knowledge, skills and level of disasters management.

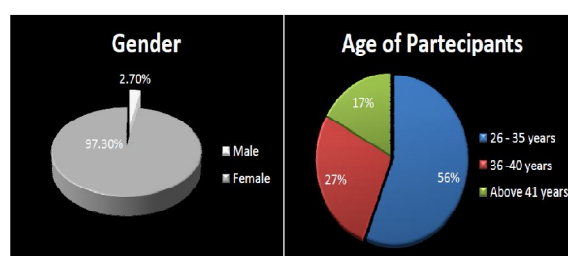
According to this study, "the questionnaire has 49 items to measure Nurses preparedness for disaster management. It has four main sections; demographic data then 'nurse's level of knowledge for disaster management' contain 13 Liker type questions; then nurses level of skills for disaster management contain 10 Liker type questions. Finally nurses level of preparation for disaster management contain 21 Liker type questions.

IX. DATA ANALYSIS:

In this research, the SPSS statistical programmed used to analysis data and to help for the purpose of graphical depiction of the raw data. The data gathered from the participants presented in descriptive statistical analysis (Frequency, Parentage, Mean and Standard Deviation). The analyses of the findings of the study were presented in tables, charts and graphs followed by written analysis to answer the research questions.

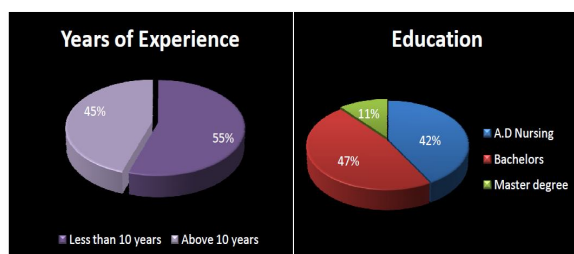
X. DEMOGRAPHIC DATA

Descriptive statistics were used to describe the demographic and personal characteristics of the study participants. Age of participants range from 26 to 60 year with the mean of 35.3. The participants of age from 26 to 35 represent 56% and those age from 36 to 40 years represent 27%. The participants who are 41 years and above represent 17% of the sample. The majority of the research sample was mainly females (97.3%).while the remaining represent Males.



The majority of the participants hold bachelors degree in nursing (47%). 47 of the sample hold Associated degree of General Nursing (42%) and only 11 hold master degree in nursing (10%).

In regards working experience, the majority of the participants in the study had less than ten years of working experience (55%). 45% of the participants had more than 10 years of working experience in the primary health care.



XI. NURSES KNOWLEDGE ABOUT DISASTERS PREPAREDNESS

The overall mean of the participant's level of knowledge regarding to their readiness for disaster management was ($m=2.6$), which indicated that the participants have moderate knowledge to disaster and disaster related information.

XII. LEVEL OF SKILLS ABOUT DISASTERS PREPAREDNESS

In general the mean of this study regarding skills in disaster management was ($M=2.45$) which indicate that the participants have moderate preparedness of their management to disaster. The majority of participants 64% which they are unfamiliar with skills related to disaster management while 29% of the participant show that they are familiar with the skills related to disaster, moreover 6% of the participant strongly familiar with skills related to disaster management.

XIII. LEVEL OF PREPAREDNESS FOR DISASTER MANAGEMENT

The majority of participant answers were mainly limited to unfamiliar and strongly unfamiliar, with mean of ($M= 2.42$). Most of participants were unfamiliar regarding the preparedness in disaster management with percentage of 57%, while the familiar in preparedness in disaster management were formed 37% and the minor were strongly familiar with preparedness on disaster management 6%.

XIV. RELATIONSHIP BETWEEN YEARS OF EXPERIENCE AND LEVEL OF KNOWLEDGE

Pearson Correlation coefficient was used to examine the relationship between the participants' years of experience and level of knowledge about disaster

management. This is answer research question no. 3 the findings indicate that there was mild positive relationship ($p = 0.381$) between years of experience and the level of knowledge

XV. RELATIONSHIP BETWEEN YEARS OF EXPERIENCE AND LEVEL OF SKILLS

Pearson Correlation coefficient was used to examine the relationship between the participants' years of experience and level of skills about disaster management. The findings indicate that there was mild positive relationship ($p = 0.385$) between years of experience and the level of skills

XVI. RELATIONSHIP BETWEEN YEARS OF EXPERIENCE AND LEVEL OF PREPAREDNESS

Participant who have more years of experience reported high level of preparedness in disaster management, as there is a strong relationship between the preparedness and the years of experience ($P = 0.419$), which may be related to the same factors that improved their level of knowledge as explained under the knowledge section, these factors can be summarized as frequent exposing to real emergency cases, attending more educational courses and seminars, and evolved in simulated or disaster drills. All these factors help the nurses to gain more experience in handling emergency situations at their work place and remain more prepared to response to any type of disaster in their community.

CONCLUSION

In summary, this study shows the nurses' reflection of their levels of preparedness for disaster management. Based on their self-determination this study recognized a gap in their knowledge, skills and preparedness for disaster. Despite of the variations in the nurse's age, gender, level of education and years of experience, nurses evident considerable awareness of their qualified nursing responsibilities during disaster.

The study showed that the difference in the mean score of knowledge, skills, and level of preparedness was statistically significance. However, the result of this study showed no significant differences in knowledge, skills and preparedness scores with respect to demographic character like age, gender and level of education, except with the years of experience which indicate significant difference in knowledge, skills and preparedness in disaster management score.

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