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EMERGENCY PREPAREDNESS OF NURSES AND MIDWIVES IN ACCRA, GHANA

¹Dennisia Kafui Dzakpasu, ²Oscar Agyemang Opoku, ³Selina Achiaa Owusu ⁴Abdul Wahab Atta Bashiru, ⁵Henry Okudzeto, ⁶Jesse Azebiik Anak ¹Ghana College of Nurses and Midwives, Ghana ^{2,4,6}University of Cape Coast, Ghana ³Kwame Nkrumah University of Science and Technology, Ghana ⁵Dodowa Health Research Center, Ghana

Email: oscar.opoku@stu.ucc.edu.gh

Abstract

Nurses are often the first responders in hospital emergencies, a greater emphasis on emergency preparedness in nursing education, as well as ongoing training and capacity building, is necessary. The study focused on the emergency preparedness of nurses and midwives at the Police Hospital in Accra of Ghana. It considered the knowledge of nurses and midwives on emergency and disaster preparedness; the roles of the nurses and midwives on emergency and disaster preparedness; and relevant training programmes of the nurses midwives on emergency preparedness and management. The study employed descriptive survey of the quantitative approach. Questionnaire was employed for 133 nurses and midwives that were selected with the aid of simple random sampling technique. The data was analysed using frequencies, percentages, means and standard deviations with the aid of SPSS software version 26. About 60% of respondents indicated they have training on emergency/disaster preparedness in the last 5 years. Close to 74% also revealed that emergency/disaster planning is a preparedness on what might be needed to be done. how to be done before and after. Most (64%) of respondents indicated they have adequate knowledge on safety precaution and management during emergency and disaster occurrence, however, few respondents (34.6%) indicated that the Police Hospital have bed capacity, equipment and logistics to cater for patients in the occurrence of an emergency/disaster. The police hospital has a triage area and has a chain of command during a large scale emergency event. About 75.2% of respondent indicated they know how to triage in a large-scale and almost 79.7% of respondents know how to assess and respond to site safety issues for self, co-workers and affected people during a large-scale emergency event. About 91.7% agreed that there is a need for periodic training and lecture for the nurses and midwives whiles 88.7% indicated that emergency and disaster stimulation drills should be conducted frequently to adequately prepare the nurses and midwives for emergency events. The nurses and midwives had a moderate degree of perceived knowledge in emergency/disaster management. They were well-informed about their roles in emergency/disaster preparedness. Despite their limited knowledge and skills, the respondents were enthusiastic about emergency/disaster training and simulations.

Keywords: emergency; preparedness; disaster; knowledge

INTRODUCTION

Every day, disasters strike somewhere in the world, wreaking havoc on individuals, families, and communities (Ibrahim, 2014). Disasters can completely transform the landscape of a developing country in a matter of seconds, obliterating years of progress. Nations with more resources are usually able to reconstruct infrastructure and the economy more swiftly. No one bargains for disaster yet they do happen anyways (Feller et al., 2017). A disaster is an event that has the potential to create widespread damage and disruption, as well as to kill and injure people, damage and destroy their homes and health systems, and cut off their lifelines (Porter et al., 2018). Partridge et al., (2011) categorized disasters into natural and manmade, natural disasters includes earthquakes volcanic eruptions, hurricanes, floods, fire, and tornadoes, whereas manmade is caused by humans such as war, stampedes, fires, transport accidents, industrial accidents and conflicts.

No one is immune to tragedy, thus it is critical for countries to figure out the best ways to strengthen their health systems so that they can save more lives when disaster strikes. World Disasters Report 2020, reported 308 natural disasters worldwide in 2019, affecting 97.6 million people. About 97% of all these disasters were caused by climate and weather changes. (World Disasters Report, 2020). According to the National Disaster Management Organization (NADMO) and Red Cross Society, in 2019, the floods affected 26, 083 individuals (4,333 families) in 13 districts (116 communities) in Ghana, destroying 2218 houses and partially destroying 3743 others, resulting in 21 deaths and 19 injuries (Ghansah et al., 2021).

Catastrophes happen as often as possible all over, of which Ghana is no exemption. Ghana has had its fair share of catastrophes of varying degrees over the past twenty years; from the twin- calamity (flooding and Goil fuel station fire) in Accra, in 2015, the collapse of the Melcom Shopping center in Accra, in 2013, the Second-hand clothing fire tragedy in Accra, in 2013 and numerous terrible events (Poku-Boansi et al., 2020). It shows up that Ghana has not learnt her lesson when it comes to administration, moderation and anticipation of what has gotten to be perpetual calamities. No country, region, community, or person is safe to the probable destructions of a disaster (Cresswell, 2014). Calamities all through history have had critical impacts, such as deaths, serious injuries, extensive treatments, increased risk of infectious diseases, damage to sanitation facilities, harm to water bodies, food shortages, and populace developments (Giorgadze et al., 2011). Within the occasion of a major calamity, healthcare professionals are required to respond, manage, and prevent further damage. The circumstance, hence, calls for adequate preparedness towards management and care of emergencies, which would deter the events of challenges in the process (Shannon, 2015).

Emergency preparedness is all-inclusive skills, capabilities, knowledge, and activities that are needed to respond and plan for a for a danger, real or suspected, chemical, radiological, atomic, natural, or explosives (Amberson et al., 2020). Emergency Nurses Readiness for Disaster Response (2018) suggested that, intervention, which preparedness and is synonymous Emergency/Disaster Management, is pointed at guaranteeing that the resources essential for responding efficiently within the occasion of a disaster are set in place and those delegated with having the obligation to respond, know how to utilize those resources. The activities commonly, associated with emergency preparedness incorporate planning, formulating disaster plans, emergency coordination, communication, development of skills and competencies of personnel, expansion of hospitals surge capacity, availability and accessibility of equipment, stockpiles of medical supplies vital for effective response and execution of disaster-related tasks, as cited by (Veenema et al., 2016). Emergency preparedness is done at all levels and ought to be thoroughly done. Effective preparedness requires comprehensive planning and alliance among all stakeholders (Amberson et al., 2020).

Ghana's healthcare system was examined by national authorities. They discovered numerous inefficiencies in the nation's health-care system's equipment and supplies, particularly in the field of emergency medical services (Biyab, 2015). When it comes to the nursing profession's emergency and disaster readiness, there are more questions than answers. The preparedness of nurses must be assessed in order to determine their skills in the event of a disaster. This will help to prevent the loss of lives associated with such calamities. When a disaster strikes near a hospital, nurses are among the first to respond, with nurses accounting for the largest number of health-care professionals needed (Keeling, 2021). Nurses played a vital role in the Hurricane Katrina disaster response in 2005, according to one nurse, however it was out found that most registered nurses were not confident in their capacity to respond to big disaster events (Bulson & Bulson, 2011). Knowledge, education, life and professional experience, and the level of expertise of a registered nurse all play a role in disaster preparedness (Baack & Alfred, 2013).

As first line responders, nurses should have enough preparedness on knowledge and skills in caring for the victims (Flaherty, 2013). Labrague et al., (2016) states that nurses have insufficient knowledge and practices regarding the disaster management and emergency preparedness which is a weak point for nurses. The lack of knowledge of nurses on emergency preparedness and intervention can result in excessive loss of life during both, natural and man-made disasters, which ends up at the emergency unit of the hospital (Khalil et al., 2019). Most Nursing students graduate with a large gap in knowledge between what they know and what they need to know to be prepared for emergencies. Undergraduate nursing students who received emergency training had greater self-reported levels of abilities and confidence in catastrophe circumstances, according to a pre-test post-test study (Alim et al., 2015). Increased emphasis on emergency preparedness competencies among health care providers is needed to reduce the potentially devastating impact on human life and health during a disaster, thus the need to assess the current level of emergency preparedness of nurses and midwives of the Police hospital in caring for victims during emergencies

in Ghana to provide appropriate education and training on emergency preparedness in this regard.

RESEARCH METHODS

A descriptive design was employed with a quantitative method for this study. Researchers using descriptive research techniques are able to acquire information about respondents and their environments without affecting either group (Omair, 2015). The population considered by this study were about 200 nurses and midwives working at the Ghana Police Hospital. The study population included professional nurses and midwives who were working in the hospital. The participants available during the time of data collection and those willing to participate in all age and gender groups. Using the Yamane formula, 133 nurses and midwives at the police hospital were selected for this study. Probability sampling technique (simple random sampling) was used to draw subjects for the study. The main objective of simple random sampling is to provides a sample that is representative of a population, each member of the population is selected independently and has an equal chance or probability of being included in the study. It also gives room for generalisability and strengthens external validity (Taherdoost, 2016).

The investigation was conducted at the Police Hospital, located in the heart of Accra's business district. The Police Hospital is surrounded by the national headquarters and barracks of the Ghana prisons service to the east, the national headquarters of the Ghana fire service to the west, the cantonment police station and barracks to the north, and the Danquah roundabout and Koala shopping mall to the south.

Designed questionnaire was used to collect information from the participants. It began with an introductory statement, which specified the purpose of the research, and assured the respondents of confidentiality of their responses. It was grouped into two sections thus section A and B. The first section covered the demographic information whiles the second section, the main questions that is assessing their knowledge and roles in emergency preparedness. The data collection for this study was done over a period of two weeks. The issuance of the consent and questionnaires was between 8am-10am in the mornings and 5pm-7:30pm in the evening. The time of collection for day shift was between 3:00pm – 4:00pm, and for night shift between 07:00 am– 8:00am in the morning.

Reliability is the extent of accuracy in which the methodology device shows what it is continuously calculating (Bashir, 2018). The questionnaire was written in a way that guarantees all participants would be asked the same, transparent questions. The research team's supervisor and the Police Hospital Ethical Review Board both looked through the questionnaire before it was distributed. The researchers' supervisor and an emergency services expert all looked over the questionnaire before it was finalised. The researchers were the only people who could be reached for help with using the instrument, increasing its consistency. Burns & Grove, (2010), on the other hand, say that an instrument is valid if and only if it accurately represents the theoretical notion under investigation. Preliminary testing

of the questionnaire and revisions made in light of the literature, the study's aims, the researcher's clinical expertise, and the advice of a supervisor, an emergency nurse specialist, and a statistician all contributed to the instrument's reliability and validity. The data-gathering instruments was pre-tested using 6 nurses and midwives in the hospital two weeks before the actual data collection takes place. The questionnaire was then adjusted and questions rephrased where needed, more simple terms was used when respondents find some words or sentences complex or confusing.

Questionnaires that were not appropriately answered and not fully answered was rejected only when the respondent was not available to make the necessary corrections. This ensured the dependability and legitimacy of the findings of this study. Data collected from the questionnaires was collated and analysed using the SPSS version 26. Descriptive statistics was used in analyzing the data which includes simple calculations of central tendency (mean, median and mode), standard deviation and frequency distributions displayed in tables.

An ethical approval and clearance was obtained from the Ghana Police hospital's ethical review board. Participants were informed that their participation was voluntary and that they could withdraw at any time prior to or during the study. The participants were assured that withdrawing from the study would have no negative consequences. It was explained to them that the researcher is required to protect the confidentiality of study participants. All participants were informed of the research objectives and the character of the study in the cover letter before the researcher obtained their written consent. However, consent documents were not required, as the return of the questionnaire indicated that consent was given voluntarily. As a requirement for research involving human subjects, all data collection or gathering instruments were constructed and designed without subjecting or exposing research participants to any type of emotional, psychological, or physical maltreatment. The Police hospital requested an introduction letter from the Ghana College of Nurses and Midwives. The Medical director and Director of Nursing Services of the Police Hospital granted permission. Data collection was restricted to the researcher, statistician, supervisor, and co-supervisor. After the conclusion of the study, the raw data and ultimate results would be stored in a locked cabinet for a period of five years. The anonymity of the questionnaires was maintained by placing them in sealed envelopes and crates.

RESULT AND DISCUSSION

This chapter presents the results and discussions which are in line with the objectives of the study. It commences with the description of the socio-demographics characteristics of the respondents. Finally, the knowledge of nurses and midwives, their roles during emergencies and the relevant training programs they have in emergency preparedness at the Police Hospital were examined.

Socio-demographic Characteristics

In this study, the variables that were included under socio-demographics characteristics are age, gender, educational background and the department that the respondents work at. The results are presented in Table 1.

Table 1 indicates that, with reference to age about 68% of the respondents were between the ages of 20-30, close to 19% the respondents were between the ages of 31-40, 6% were between the ages of 41-50 and about 75 indicated they were between the ages of 51-60. This finding reveals that there are more youth in the nursing field.

Also, with regards to sex, it was revealed that almost 81% of the respondents were females and only 19.5% were males. This is in line with previous assertions that, there are more females in the nursing field than of males. The nursing discipline has been a female's dominant field which is now been arrowed by males gradually entering. Furthermore, in terms of academic background in nursing, it was revealed in the study that, majority (51%) of respondents were diploma holder, probably attest to the fact why most of the respondents were within their early twenties. About a quarter of the respondents (27%) had degrees whiles only19.5% had their masters, meanwhile about 3% of the respondents had the PhDs.

Table 1: Respondent's Socio Demographic Characteristics

characteristics	Frequency (N=133)	
Sex		
Male	26	19.5
Female	107	80.5
Age		
20-30	91	68.4
31-40	25	18.8
41-50	8	6.0
51-60	9	6.8
Education background		
Diploma	68	51.1
Degree	36	27.1
Masters	26	19.5
PhD	3	2.4
Department		
Emergency and OPD	23	17.3
Executive ward	5	3.8
Children Ward	27	20.3
Male Ward	15	11.3
Female Ward	11	8.3
Maternity/labor ward	8	6.0
ICU	9	6.8
Theater	9	6.8
Dialysis Unit	2	1.5
Public Health	14	10.5
Consulting Room	6	4.5
Covid/isolation center	4	3.0

The respondents were mainly from the children's ward (20%) followed by the emergency and OPD unit (17.3%). A little over 11% of respondents were from the male ward with only 8.3% from the female ward. Meanwhile, close to 11% of respondents were from the public health unit whereas 6.8% or respondent were from the ICU and same for the theater. Almost 5% of the respondents were from the consulting rooms and only 3% were from the Covid/Isolation center.

Knowledge of Nurses and Midwives at the Police Hospital on Emergency and Disaster Preparedness

Various researchers have explored the knowledge of nurses and midwives on emergency and disaster preparedness from various settings. On that account, the study also sought to examine the knowledge of nurses and midwives at the Police Hospital on emergency and disaster preparedness.

Table 2 illustrates that close to 73% of the respondents have worked as nurses and midwives for about 1-10 years. It was also revealed that about 17% of respondents had worked for about 11-20 years. Meanwhile about 5% of the respondents indicated they have worked for 21-30years whereas only 6% had worked for 31-40 years. This attest to the youthful strength of nurses and midwives at the Police Hospital.

Table 2: Knowledge of Nurses and Midwives at the Police Hospital on Emergency and Disaster Preparedness

Item	Frequency	Percentage
How many years of professional experience do you have	1 1	8
1-10	97	72.9
11-20	22	16.5
21-30	6	4.5
31-40	8	6.0
How long have you been at your current unit		
1-5	104	78.2
6-10	24	18.0
11-20	3	2.3
21-30	2	1.6
What level of training have you reached in your current unit		
Orientation	52	39.1
Regular refresher course	20	15.0
Professional courses	47	35.3
No training	14	10.5
Have you had any training on education on emergency/disaster		
preparedness in the last 5 years		
Yes	80	60.2
No	53	39.8
Is emergency/disaster planning, a preparedness on what might be		
needed to be done, how to be done, before and after		
Yes	98	73.7
No	35	26.3
Is emergency /disaster planning a preparedness on what might be		
needed to be done, how to be done, before and after?		
Yes	98	73.7
No	35	26.3
Do you have adequate knowledge on safety precaution and		
management during emergency and disaster occurrence		
Yes	83	62.4
No	50	37.6
Does your hospital have a triage area		
Yes	95	71.4
No	38	28.6
Do you have knowledge on the chain of command during a large-scale		
emergency event		

Yes	60	45.1
No	73	

Most respondents (78.2%) indicated they have been at their current unit between 1 – 5years. Only 18% of respondents indicated they have been in their current unit for a period between 6-10 years. The study further revealed that about 39% of respondents indicated that they engage in orientation courses, meanwhile 35.3% of respondents revealed they have attended various professional courses. Furthermore, some respondents (15%) indicated they engage in regular refresher courses whereas close to 11% revealed they do not engage in any training.

It was further revealed in the study that only 60% of respondents indicated they have training on emergency/disaster preparedness in the last 5 years. Close to 74% also revealed that emergency/disaster planning a preparedness on what might be needed to be done, how to be done before and after. Most (64%) of respondents indicated they have adequate knowledge on safety precaution and management during emergency and disaster occurrence, however, few respondents (34.6%) indicated that the Police Hospital have bed capacity, equipment and logistics to cater for patients in the occurrence of an emergency/disaster. It was further revealed that the police hospital has a triage area (s). Contrary to prior studies, most respondents indicated that they do not know the chain of command during a large -scale emergency event.

The Roles of Nurses/midwives at the Police Hospital on Emergency and Disaster Preparedness.

The study sought to examine the roles nurses and midwives play at the Police Hospital during emergency and disaster preparedness. Questions were placed on a yes or no dichotomy for respondent to select from. The results are presented in Table 3.

About 75% of respondent was of the affirmative that they know how to triage in a large-scale. It was indicated that, almost 74% of respondents know how to assess and respond to site safety issues for self, co-workers and affected people during a large-scale emergency event.

Table 3: Roles of Nurses/midwives at the Police Hospital on Emergency and Disaster Preparedness

Item	Frequency	Percentage
"Do you know how to triage in a large-scale emergency event?"		_
Yes	100	75.2
No	33	24.8
"Do you know how to assess ad respond to safety issues for self,		
co-workers and affected people during a large-scale emergency		
event"		
Yes	98	79.7
No	35	26.3
"Do you know how to perform a rapid physical assessment of		
victims of a large-scale emergency event"		
Yes	106	79.7
No	27	20.3

"Do you know how to provide health counselling education to		
patients regarding the long-term impact of chemical, biological,		
radiological, nuclear and explosive agents"		
Yes	86	64.7
No	47	35.3
"Can you identify key players in the hospital's emergency		
operations plan"		
Yes	93	69.9
No	40	30.1
Do you know the specific roles these key players play during an		
emergency situation		
Yes	79	59.4
No	54	40.6
Is the role of the nurse/midwife during an emergency event to		
use communication devices such as phone, fax, email, personal		
digital assistant		
Yes	84	63.2
No	49	36.8

Most respondents also indicated that they know how to perform a rapid physical assessment of victims of a large-scale emergency event. Also, most respondents (64.7%) of respondents indicated the know how to provide health counselling education to patients regarding the long-term impact of chemical, biological, radiological, nuclear and explosive agents, only 35.3% were of the contrary. About 70% of respondents revealed they cam identify players in the hospital's emergency operations plan. Specifically, majority of respondents (59.4%) know the specific roles these players play during an emergency situation. Even though some respondents (36.8%) indicated their displeasure on the use of communication devices such as phone, fax email, personal digital assistant during emergency and disaster situations, most of the respondents (63.2%) indicated otherwise.

Relevant Training Programs in Emergency Preparedness by the Nurses and Midwives at the Police Hospital

Initially respondents' views on relevant training programs in emergency preparedness was captured using a five-point Likert scale (1=strongly disagree, 2=disagree, 3= uncertain 4= agree, 5= strongly agree) of which they were asked to indicate their extent of agreement to the statements or otherwise. Holding on the views of Creswell & Poth, 2016; Pétrier et al., (2010) and Couto, (2011), who opine that the extreme points of strongly disagree and strongly agree show mere extent and as such do not have much bearing on reason, the scale was subsequently collapsed into 3 points of disagree, uncertain and agree. Therefore, the presentation of the results involved the percentage in agreement, means and standard deviations in Table 4.

According to Table 4, the majority of respondents agreed (M= 4.65, SD=0.91) that they the hospital management should be adequately prepared in terms of skilled personnel, beds, equipment and logistics should an emergency occur. It was generally agreed that (M=4.62, SD= 0.89), there is a need for a well-structured emergency operation plan for emergency and disaster events at the facility. Most respondents agreed (M= 4.63, SD=0.86) that periodic training and lecture are necessary for the

nurse/midwife to ensure they are adequately prepared for emergencies and disaster events. Furthermore, majority of respondents (M=4.33, SD=0.95) agreed that emergency and disaster stimulation drills should be conducted in the hospital very frequently to adequately prepare the nurses and midwives for emergency events. Almost 92% of respondents were of the view that it is necessary to know their duty and role during emergency/disaster response in their facility. In line with this, majority of the respondents were of the affirmative that, it was necessary to have an emergency/disaster management committee at the hospital.

Table 4: Training Programs in Emergency Preparedness by Nurses and Midwives

at the Police Hospital.

Item	% in	M	SD
	agreement		
Hospital management should be adequately prepared	91	4.65	0.91
in terms of skilled personnel, beds, equipment and			
logistics should an emergency occur			
The need for well-structured emergency operations	91	4.62	0.89
plans for emergency and disaster events at the facility			
Periodic training and lecture are necessary for the	91.7	4.63	0.86
nurse/midwife to ensure they are adequately prepared			
for emergencies and disaster events			
Emergency and disaster stimulation drills should be	88.7	4.33	0.95
conducted in the hospital very frequently to adequately			
prepare the nurses and midwives for emergency			
events.			
Is it necessary to know your duty and role during	91.7	4.42	0.90
emergency/disaster response in the hospital			
it is necessary to have an emergency/disaster	85.7	4.52	0.94
management committee at the hospital.			

Scale: 1.0-2.49=disagree, 2.5-3.45=uncertain and 3.5-5.0= agree. M- Mean SD – Standard deviation.

Emergency Preparedness

Various researchers have explored the knowledge of nurses and midwives on emergency and disaster preparedness from various settings. Most of the respondents (73%) have worked as nurses and midwives for about 1-10 years. It was also revealed that about 17% of respondents had worked for about 11-20 years. Meanwhile about 5% of the respondents indicated they have worked for 21-30 years whereas only 6% had worked for 31-40 years. This attest to the great experiences of nurses and midwives at the hospital. These findings agreed with Nibbelink & Brewer, (2018) that nurses with some number of years' experience bring a lot of previous patient experiences to their practice, which influences their intuitiveness and helps them make better clinical decisions.

It was further revealed in the study that only 60% of respondents indicated they have had training on emergency/disaster preparedness in the last 5 years which corroborate Wolf, (2012) study that states that nurses must pursue opportunities to partake in real disaster events, mock drills, and aspire to gain more knowledge and professional development specific to emergency/disaster preparedness. Majority of respondents indicated that the Police Hospital as well as many hospitals in Ghana

now are not prepared for any emergencies/disasters due to inadequate infrastructure such bed capacity, equipment and logistics to cater for patients in the occurrence of an emergency/disaster (Norman et al., 2012).

Most (64%) of respondents indicated they have adequate knowledge on safety precaution and management during emergency and disaster occurrence which disagrees to the study by McKibbin et al., (2011) which looked at South Carolina nurse's perceptual knowledge of emergency preparedness. The nurses had a low degree of self-reported awareness of emergency preparedness, and they were most comfortable with triage and least knowledgeable with clinical decision making during disasters and emergencies.

The Roles of the Nurses and Midwives in Emergency and Disaster Preparedness.

Baack & Alfred, (2013) opine that nurses should expect to play a larger role in disasters, such as caring for the sick and injured, infection control, contingency planning to minimise more damage, triage, mass immunisations, mass evacuations, and mass casualty treatment, which is supported by the fact that the majority of respondents indicated that they know how to triage on a large scale, assess and respond to site safety issues for themselves, co-workers, and affected individuals.

A nurse with extensive disaster preparedness knowledge and awareness of his/her roles can make a significant contribution to providing healthcare at all levels of emergency events (Kalanlar, 2021). Therefore, the findings of this study show that most respondents (64.7%) indicated they know how to provide health counselling education to patients regarding the long-term impact of chemical, biological, radiological, nuclear and explosive agents. Other responsibilities of the nurse in emergency preparedness include maintaining and usage of communication devices at the scene of an emergency, identifying key players and their functions in the hospital's emergency operations plan in assuring quality patient care which respondents were affirmative they had knowledge of. This is similarly to the study conducted by Sham et al., (2018) for 27 government clinics in one of Malaysia's states, with 260 participants selected using a suitable sample method. This study found that nurses in these community clinics had a moderate impression of knowledge (65.8%) and skills (75.7%) when it came to disaster preparedness.

Relevant Training Programmes on Emergency Preparedness and Management

Holding on the views of Vieira de Figueiredo & Pereira, (2021) who opine that the extreme points of strongly disagree and strongly agree show mere extent and as such do not have much bearing on reason, the scale was subsequently collapsed into 3 points of disagree, uncertain and agree. The majority of respondents agreed (91%) that the hospital management should be adequately prepared in terms of skilled personnel, beds, equipment and logistics should an emergency occur and (91%) indicated the need for a well-structured emergency operation plan for emergency and disaster events at the facility which agrees with Norman et al., (2012) discussion that part of establishing an effective hospital emergency management, there is a need to implement a periodic evaluation of health facilities capability and response when it comes to emergency and have a functioning well structured emergency operations plan. Ayuba et al.,(2015) in his study found out that 55% of 120 respondents indicated that insufficient training, education and simulation of personnel's on emergency preparedness were factors affecting emergency preparedness hence the

need for periodic training and stimulations. This study agrees with the findings of this research which illustrated that majority of the respondents agreed that periodic training and lecture are necessary (91.7%), emergency and disaster stimulation drills should be conducted in the hospital very frequently (88.7%) to adequately prepare the nurses and midwives for emergency events. Almost 92% of respondents were of the view that it is necessary to know their duty and role during emergency/disaster response in their facility. In line with this, majority of the respondents were of the affirmative that, it was necessary to have an emergency/disaster management committee at the hospital.

CONCLUSION

The nurses and midwives had a moderate degree of perceived knowledge in emergency/disaster management, according to the current study. They were well-informed about their roles in emergency/disaster preparedness. Despite their limited knowledge and skills, the respondents were enthusiastic about emergency/disaster training and simulations. The respondents had a positive opinion of their abilities, but they still need to enhance their abilities because they are still unsure how to handle and conduct themselves in emergency or disaster events. The hospital response to emergencies situations calls for improvements in emergency preparedness and effective operational emergency plant. The hospitals' inability to handle large scale emergencies would be compromised by the lack of logistics and infrastructure and undertrained front liners.

The following suggestions are given based on the findings of this study All nurses and midwives in both public and private health hospitals should receive proper training and retraining from the Ministry of health and Ghana Health Service in order to equip them with knowledge on how to prepare for and handle any emergency/disaster events.

Stakeholders must recognize the importance of nurses' and midwives' emergency preparation, the Ministry of health and Ghana Health Service should make policies to guarantee that nurses and midwives should be appropriately equipped to offer the services required by the community.

Administrators and Medical Directors of hospitals should sponsor emergency preparedness education, training as well as conduct periodic simulations and regular drills for their personnel in order to equip them for any eventualities

It is strongly suggested that the GHS and MOH should develop a template for hospital operational emergency plans, surge capacity planning, and provide the necessary funds for personnel training in emergency/disaster risk reduction and mitigation.

BIBLIOGRAPHY

- Alim, S., Kawabata, M., & Nakazawa, M. (2015). Evaluation of disaster preparedness training and disaster drill for nursing students. *Nurse Education Today*, 35(1), 25–31.
- Amberson, T., Wells, C., & Gossman, S. (2020). Increasing disaster preparedness in emergency nurses: a quality improvement initiative. *Journal of Emergency Nursing*, 46(5), 654–665.
- Ayuba, S. B., Danjuma, A., Nassa, Y. G., Joseph, I., Matthew, A. W., & Micheal,

- S. N. (2015). Role of the nurse in emergency preparedness: a survey of secondary health facilities in Northern, Nigeria. *World*, *3*(3), 54–60.
- Baack, S., & Alfred, D. (2013). Nurses' preparedness and perceived competence in managing disasters. *Journal of Nursing Scholarship*, 45(3), 281–287.
- Bashir, J. (2018). Reliability & validity of the research. *Scientific Journal of India*, *3*(1), 66–69.
- Biyab, J. K. (2015). Preparedness of the Medical Corps of the Ghana Police Service toward Emergency Management and Care: An Assessment of the Emergency Unit of the Ghana Police Hospital, Accra. Citeseer.
- Bulson, J. A., & Bulson, T. (2011). Nursing process and critical thinking linked to disaster preparedness. *Journal of Emergency Nursing*, *37*(5), 477–483.
- Burns, N., & Grove, S. K. (2010). *Understanding nursing research-eBook: Building an evidence-based practice*. Elsevier Health Sciences.
- Couto, M. (2011). Raiz de orvalho e outros poemas. Leya.
- Cresswell, T. (2014). Place: an introduction. John Wiley & Sons.
- Creswell, J. W., & Poth, C. N. (2016). *Qualitative inquiry and research design: Choosing among five approaches*. Sage publications.
- Feller, R., Furin, M., Alloush, A., & Reynolds, C. (2017). *EMS immobilization techniques*.
- Flaherty, E. A. (2013). Emergency preparedness: School nurses leading the way. *NASN School Nurse*, *28*(4), 192–196.
- Ghansah, B., Nyamekye, C., Owusu, S., & Agyapong, E. (2021). Mapping flood prone and Hazards Areas in rural landscape using landsat images and random forest classification: Case study of Nasia watershed in Ghana. *Cogent Engineering*, 8(1), 1923384.
- Giorgadze, T., Maisuradze, I., Japaridze, A., Utiashvili, Z., & Abesadze, G. (2011). Disasters and their consequences for public health. *Georgian Med News*, 194, 59–63.
- Ibrahim, F. A. A. (2014). Nurses knowledge, attitudes, practices and familiarity regarding disaster and emergency preparedness–Saudi Arabia. *American Journal of Nursing Science*, 3(2), 18–25.
- Kalanlar, B. (2021). A PRISMA-driven systematic review for determination of earthquake and nursing studies. *International Emergency Nursing*, *59*, 101095.
- Keeling, A. W. (2021). Nurses on the front line: The 1918 influenza and COVID-19 pandemics. *Nursing2022*, *51*(8), 32–37.
- Khalil, N. S., Atia, A. S. M., Moustafa, M. F., & Soliman, H. T. T. (2019). Emergency nurses' knowledge and practice regarding preparedness of disaster management at a university hospital, Egypt. *Nurs. Healthc. Int. J*, *3*, 1–12.
- Labrague, L. J., Yboa, B. C., McEnroe-Petitte, D. M., Lobrino, L. R., & Brennan, M. G. B. (2016). Disaster preparedness in Philippine nurses. *Journal of Nursing Scholarship*, 48(1), 98–105.
- McKibbin, A. E., Sekula, K., Colbert, A. M., & Peltier, J. W. (2011). Assessing the learning needs of South Carolina nurses by exploring their perceived knowledge of emergency preparedness: evaluation of a tool. *The Journal of Continuing Education in Nursing*, 42(12), 547–558.
- Nibbelink, C. W., & Brewer, B. B. (2018). Decision-making in nursing practice: An integrative literature review. *Journal of Clinical Nursing*, *27*(5–6), 917–928.

- Norman, I. D., Aikins, M., Binka, F. N., & Nyarko, K. M. (2012). Hospital all-risk emergency preparedness in Ghana. *Ghana Medical Journal*, 46(1).
- Omair, A. (2015). Selecting the appropriate study design for your research: Descriptive study designs. *Journal of Health Specialties*, *3*(3), 153.
- Partridge, R. A., Proano, L., Marcozzi, D., Garza, A. G., Nemeth, I., Brinsfield, K., & Weinstein, E. S. (2011). Oxford American handbook of disaster medicine. Oxford University Press.
- Pétrier, C., Torres-Palma, R., Combet, E., Sarantakos, G., Baup, S., & Pulgarin, C. (2010). Enhanced sonochemical degradation of bisphenol-A by bicarbonate ions. *Ultrasonics Sonochemistry*, 17(1), 111–115.
- Poku-Boansi, M., Amoako, C., Owusu-Ansah, J. K., & Cobbinah, P. B. (2020). What the state does but fails: Exploring smart options for urban flood risk management in informal Accra, Ghana. *City and Environment Interactions*, *5*, 100038.
- Porter, K. E., Singleton, J. A., Tippett, V., & Nissen, L. M. (2018). Ready, willing and able: the role of pharmacists in natural and manmade disasters—can we do more? *International Journal of Pharmacy Practice*, 26(2), 195–196.
- Sham, F., Musa, L. H., Mohamed, N. M., & Othman, N. (2018). Perception towards the preparedness for disaster management among nurses in community clinics. *Scientific Research Journal*, 15(2), 67–80.
- Shannon, C. (2015). Understanding community-level disaster and emergency response preparedness. *Disaster Medicine and Public Health Preparedness*, *9*(3), 239–244.
- Taherdoost, H. (2016). Validity and reliability of the research instrument; how to test the validation of a questionnaire/survey in a research. *How to Test the Validation of a Questionnaire/Survey in a Research (August 10, 2016)*.
- Veenema, T. G., Losinski, S. L.-A., & Hilmi, L. M. (2016). Increasing emergency preparedness. *AJN The American Journal of Nursing*, *116*(1), 49–53.
- Vieira de Figueiredo, C., & Pereira, C. R. (2021). The effect of gender and male distinctiveness threat on prejudice against homosexuals. *Journal of Personality and Social Psychology*, 121(6), 1241.
- Wolf, T. (2012). Managing a nonprofit organization: Updated twenty-first-century edition. Simon and Schuster.

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