



VOL.22 NO.1

FEBRUARY 2024

ISSN - 15954455

INTERNATIONAL
PROFESSIONAL

NURSING JOURNAL

Research Oriented, Peer Reviewed and a Scholarly Nursing Journal



9 7 7 1 5 9 5 4 4 5 0 0 2 >



A Publication of

INTERNATIONAL INSTITUTE FOR NURSING RESEARCH & DEVELOPMENT
NIC MAURICE COLLEGES OF HEALTH, MANAGEMENT, SCIENCES & TECHNOLOGY
AMAMONG P.M.B 1006 OKOBO, AKWA IBOM STATE, NIGERIA

Nurses make a difference



NIGERIAN NURSES ASSOCIATION OF USA, INC



INTERNATIONAL INSTITUTE FOR
NURSING RESEARCH AND DEVELOPMENT

Supported by:



NURSE SCIENTISTS UNION
NIGERIA



NIGERIAN NURSES CHARITABLE
ASSOCIATION UK

**Correspondence E-mail:**

nursingnigeria@yahoo.com
nicmauricecollege@gmail.com

• • • •

OUR VISION

Evolving, Advancing and Sustaining a Transformed Health Policy; and Clinical Nursing Practices through Nursing knowledge Generation, Synthesis and Dissemination. (The Discover, Refine and Develop Series - DRDs) .

• • • •

OUR MISSION

- ◎ The promotion of Science, Technology, and Arts of Nursing Research;
- ◎ To educate, expose, harmonize and sensitize Nurses worldwide in the scientific approach to nursing care;
- ◎ To create a visionary balance between aggressive nursing pursuits and maintenance of professional Nursing Viability in an enhanced and qualitative health care environment.

Correspondence

International Institute for Nursing Research and Development,
Nic Maurice Colleges of Health, Management, Sciences & Technology,
Amamong P.M.B 1006 Okobo, Akwa Ibom State, Nigeria.
E-mail: nicmauricecollege@gmail.com or nursingnigeria@yahoo.com

ASSESSMENT OF NURSES PREPAREDNESS TOWARDS EMERGENCIES AND DISASTERS IN YOLA METROPOLIS, ADAMAWA STATE, NIGERIA.

Ajio, D. K. PhD Nursing, MScN, BNSC, RN/ RM, RNE, PGDE FWAPCNM
 Department of Nursing Sciences,
 Benue State University, Makurdi, Benue State, Nigeria.
 kwambeajio@yahoo.com; **GSM:** 08025577220;
 08139154111

Atser, P. PhD Nursing, MScN, BNSC, RN/RM, RNE, PGDE, FWAPCNM.
 Department of Nursing Sciences,
 Benue State University, Makurdi, Benue State.
GSM: 08036986225.
 Email: atserpauline2013@gmail.com

Oyedele, E.
 Department of Nursing Sciences,
 FHST, University of Jos, Nigeria.

Valentine T. P. BNSC, RN, PGDE.
 Department of Nursing Sciences,
 Benue State University, Makurdi, Benue State.
 Email: valentineterhemba@gmail.com

Donsanda, Solomon, BN. Sc, Msc.
 Adamawa State Hospitals Management Board,
 Yola, Adamawa State, Nigeria.

Satdomb, Ardi, BN. Sc.
 General Hospital, Shendam,
 Plateau State, Nigeria.

Adobe R. K.
 Department of Nursing Sciences,
 Benue State University, Makurdi, Benue State

Abstract

This study assessed Nurses preparedness and response towards emergencies and disasters in Yola metropolis in Adamawa state, among one hundred and fifty-four nurses. Methodology: Descriptive survey method was employed in this study, while questionnaire was used as instrument for data collection. Results: Majority of the nurses had poor knowledge on emergency and disaster preparedness. Relatedly, skills demonstrated by nurses in the management of disaster are not stably efficient. However, nurses had positive attitudinal response towards emergency and disaster situations. On practice, nurses were unable to appropriately respond to emergencies and disasters. Conclusion: Nurses had no adequate preparation and could not respond effectively to disasters and emergencies in Yola. Recommendation: It was recommended that Nurses should be exposed to proper and constant trainings through continuing education programs to prepare them to cope adequately with emergencies and disasters.

Introduction

Over the years, the world has experienced different forms and dimensions of disasters, ranging from natural to man-made incidents. In effect, there have been cases of tsunami of varying magnitudes, hurricanes, earthquakes, landslides, volcanic eruptions, fire explosions, nuclear accidents, terrorist attacks and the like. These have been associated with dire humanitarian consequences.⁽¹⁾ Developing nations are particularly vulnerable due to the lack of funding for disaster preparedness and the impact of disasters on the

health care, economic and social infrastructure of the affected regions and countries. Disasters can change the face of a developing nation in seconds, wiping out years of development. No matter where disaster happens, the impact on the population and community can be devastating leaving no region, nation or community immunized.

Disaster preparedness, including risk assessment and multi-disciplinary management strategies at all levels is critical to the delivery of effective responses to the short, medium and long-range

health needs of a disaster-stricken population. Texas Board of Nursing⁽²⁾ noted that emergency preparedness pyramid identifies; planning, infrastructure, knowledge and capabilities, and training as the major components of maintaining high level of preparedness.

The United States of America is among the countries that experience frequent natural disasters⁽³⁾. With over 3.1 million nurses in the U.S⁽⁴⁾ and their importance to health care, the nursing profession plays a crucial role in the ability of the nation to prepare for and respond to disasters. Currently, however, nurses in Nigeria probably lack the knowledge, skills and attitudes needed to effectively respond to disasters, thereby placing the public at risk. This made the Nursing and Midwifery Council of Nigeria and other teaching hospitals to organize courses on disaster preparedness. These workshops and seminars would have prepared nurses in disaster situations such as the terrorist attacks in the North Eastern part of Nigeria.

It is based on this development that the researchers want to assess the nurses preparedness towards emergencies and disasters to react to disasters in terms of preparedness, mitigation, response, recovery and evaluation. Nurses need to have the knowledge and skills to employ an effective approach to respond to critical situations⁽⁵⁾. Thus, the present study aims at examining nurses' preparedness in emergency and disasters in Yola, Adamawa State, Nigeria.

Objectives of the Study

The main objective of the study is to assess the preparedness of nurses in Yola metropolis towards emergencies and disaster management.

The specific objectives are to:

- Examine the knowledge of nurses on emergency and disaster management.
- Assess the skills of the nurses in emergency and disaster management.
- Determine the nurses' attitude towards emergencies and disasters.
- Assess the practices of nurses in emergency and disaster preparedness

Research Questions

1. Are nurses properly trained in emergency and disaster preparedness?
2. What skills do nurses demonstrate in disaster management?
3. What is the attitude of nurses towards emergencies and disasters?

4. How do nurses in Specialist hospital and Federal Medical Centre Yola manage emergencies and disasters?

Significance of the Study

- The study might be beneficial to the nurses because it will expose their need and the necessity in this vital field.
- It might also benefit the policy makers in helping to sponsor nurses in disaster preparedness as well as take step in preparing for emergencies and disasters. It might also contribute to the body of knowledge.

Scope of the Study The study is limited to nurses in specialist hospital Yola, Federal Medical Centre Yola (the two major hospitals in the metropolis).

Theoretical Framework

The theory underpinning this study is that of Self Determination by Ryan & Deci⁽⁶⁾. This theory stems from social psychology and is a macro theory of motivation and personality which encompasses several micro-theories. The theory uses an organismic perspective by claiming that individuals are active organisms who seek challenges in their environment in an attempt to achieve personal growth and development.⁽⁶⁾ The desired outcome of this study is to determine which factors may influence Nurses to be prepared for major disaster events. There are four factors which influence this engagement and contribute to maintaining it over a period of time. The four basic factors are: individual differences, self-regulation of behaviour (which includes motivation and relatedness), perceived competence and Health Care Climate (Which includes autonomy and control).

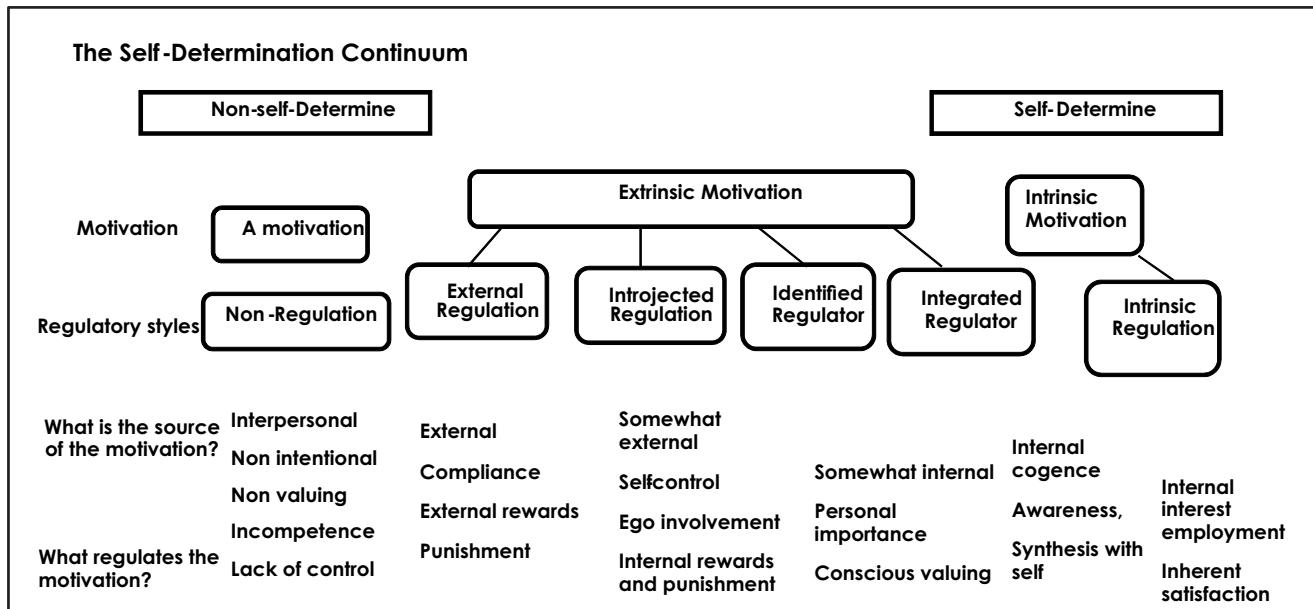
These four factors form the basis of a person's readiness, ability and commitment to making a behavioural change. The behaviour change of interest in this study involves actions taken to prepare one for response to disaster situations.

1. The individual differences are the factors pertinent to the Nurse or the Nurse group which may indicate more experience or exposure suggesting that extraneous factors can influence the person's readiness to change and maintain behaviour. Self-determination theory promotes the belief that individuals have innate Psychological needs that are the basis for self-motivation and personality integration⁽⁵⁾
2. Self-regulation refers to intrinsically generated motivation to take an action

- which will propel a person towards a specific goal.⁽⁶⁾ It refers to the motivation behind the choices people make without any external influences and interference⁽⁷⁾ and is essentially the degree to which an individual behavior is motivated by self.
3. Perceived competence – is the feeling that one can accomplish the behaviors and reach a goal.⁽⁶⁾ It refers to

the individual being effective in dealing with the actual environment⁽⁹⁾.

4. Health Care Climate includes socio-environmental conditions which facilitates the satisfaction of three basic psychological needs; relatedness, competence and autonomy⁽⁶⁾



Ryan & Deci (2000)

Theoretical Assumptions

Implicit in this model is the assumption that intrinsic and extrinsic rewards are additive, yielding total job satisfaction. It also holds the assumption that humans are inherently active organisms does not imply that this tendency can be taken for granted or happens automatically. In contrast this model maintains that the growth-oriented nature of individuals requires fundamental nutrients.

This model also holds that human beings are inherently proactive, that they have the potential to act on and master both the inner forces (viz, their drives and emotions) and the external (i.e. environmental) forces they encounter, rather than being passively controlled by those forces. It also holds the assumption that human beings are self-organizing systems and have an inherent tendency towards growth, development and integrated functioning.

This theory helps in understanding Nurses Knowledge, practice and skills towards disasters since Nurses form the bulk of workforce in any Hospital. The theory also teaches that nurses have the potential to help in times of need such as in disaster.

Methodology

Research Design

A cross-sectional design was used; it involved collection of data at one point in time to be used for opinion survey. The survey research has to do with extracting information from a target population with the aim of measuring knowledge, skills, attitudes and practices.

Kerlinger⁽⁹⁾, stated that survey design studies large population by selecting sample chosen from the population to discover the relative incidence and interrelations of sociological and psychological variables.

Research Setting

Specialist Hospital Yola and Federal Medical Centre, Yola.

Specialist hospital Yola was built in 1938 by the then British Colonial Administration as General Hospital Yola.

In 1978, the hospital was upgraded to a teaching hospital which was later changed to a specialist hospital in the same year by the then Military governor, Group Captain Jonah David Jang. In 1999, the Federal Government took over the hospital and renamed it Federal Medical Centre, Yola. In 2004, the state Government took over the hospital and renamed it as Specialist Hospital.

The specialist hospital is headed by a medical director but the hospital is under the Hospital Management Board.

The hospital has various wards and departments such as gynaecological, obstetrics, paediatrics, ophthalmic, psychiatric unit, medical record department, physiotherapy and tuberculosis centre. The hospital has 502 beds with two hundred and fifty-two nurses (252), twenty-five medical officers, four pharmacists and other paramedic staff.

The hospital is located in Yola North local government which doubles as the state capital of Adamawa state. It is located in Jimeta town, surrounded by private residential buildings and business outfits. The hospital serves as a referral centre for most primary health centres and other hospitals in the state.

The Federal Medical Centre Yola was established in 1999. The hospital operated temporarily within the Specialist hospital Yola until 2006 when it moved to its permanent site in Yola town which was part of college of Nursing and Midwifery Yola. The state government allocated part of the classes and administrative blocks which is being developed as the permanent site of the hospital. It is situated along Fufure-Yola road. It has 150 bed capacity and a staff strength of 245 nurses, 150 medical officers, 20 pharmacists, laboratory scientists and other paramedics. The centre has dialysis centre, Ear, Nose and Throat, Medical, surgical wards, obstetrics and gynaecological wards, paediatrics, intensive care units etc.

Target Population

The target population are nurses and midwives working in all the wards and units of the two hospitals (four hundred and ninety-seven) in number.

Sample and Sampling Technique

Sample refers to the small or part of the population which is selected and from whom data is collected in a research.

For the purpose of the study the nurses were divided into four categories based on their current positions. The categories to be used are as follows: general nurses/midwives, specialist nurses, graduate nurses (clinical) and nurse administrators.

Sample size was calculated using Taro Yamane Sample size formula as:

$$n = \frac{N}{1+N(e)^2}$$

Where n = is the sample size
 N = is the total population and
 e = is the confidence level, which is given as 0.05.

Therefore, the sample size is

$$\begin{aligned} n &= \frac{497}{1+497(0.05)^2} \\ n &= \frac{497}{1+1.24} \\ n &= \frac{497}{2.24} = 221.87 \\ n &\approx 222 \end{aligned}$$

Since the calculated size is greater than 5% total population, Finite Population Correction Factor formula was used to decrease sample size thus:

$$na = \frac{nr}{1 + (nr-1)} \cdot \frac{N}{N}$$

Where:

nr = original required sample size
 N = Population size
 Na = adjusted sample size

$$\begin{aligned} na &= \frac{222}{1 + (222-1)} \cdot \frac{497}{497} \\ na &= \frac{222}{1 + (221)} \cdot \frac{497}{497} \\ na &= \frac{222}{1 + 0.44} \\ na &= \frac{222}{1.44} \quad na = 154 \end{aligned}$$

Instrument for Data Collection

The following research instruments were used to collect data:

- Questionnaires with open ended and closed ended questions.
- Semi-structured interviews of key informants
- A checklist was also used for checking the major components of the disaster plan.
- The use of questionnaires enabled the researchers to collect data by engaging in a special type of conversation with respondents in which the researchers asked questions relevant to the study problem ⁽¹⁰⁾ in the conversation.
- Face-to-Face key informant interviews enable the researchers to establish rapport with the participants and gain their co-

operation. The interviews were semi-structured, allowing the researchers to probe for clarification and ask follow-up questions in order to gain a better understanding of the research problem⁽¹¹⁾.

- Using open-ended questions, the respondents were allowed to express their opinions and understanding of disaster preparedness and offer more information.
- A checklist is a list of behaviours, characteristics, or other entities that a researcher is looking for⁽¹¹⁾. Using a checklist, the researchers were able to list the major components of a hospital disaster plan and compared them with those of the participating hospital. The major components of the disaster plan were obtained from a checklist developed by Association for Professionals in Infection Control and Epidemiology (APIC).

Validity

Validity is the ability to measure what it is supposed to be measured or looked at whether we are measuring what we are to measure⁽¹²⁾. It was ensured that, the drafted questionnaire contains a representative sample of the content being assessed; evidence of validity was ensured by experts in the field of health research and medical statisticians for review, critiquing, necessary amendments and corrections.

Reliability

This is the extent to which a test or measuring procedure yields the same result on repeated trials. A Split-half method was used to ascertain the reliability of the instrument. 20 respondents from a different facility from the research target population but having similar characteristics were administered with the instrument, 17 was responded to and 3 was left blank, the data collected was coded and analysed which yielded reliability of the instrument with Cronbach's alpha value of 0.790.

Method of Data Collection

A research assistant was recruited to assist with data collection. A nurse who specializes in Accident and Emergency having knowledge in Emergency and disaster response was used to assist in data collection.

The assistant was trained in order to familiarize her with data distribution and administration of study instruments as well as in upholding the confidentiality of the respondents.

Method of Data Analysis

Quantitative data from the questionnaire were

coded and then analysed using descriptive statistics with SPSS version 20.1. Tables, charts and simple percentages were used for data presentation of numerical information into rows and columns in order to make the physical presentation.

Results

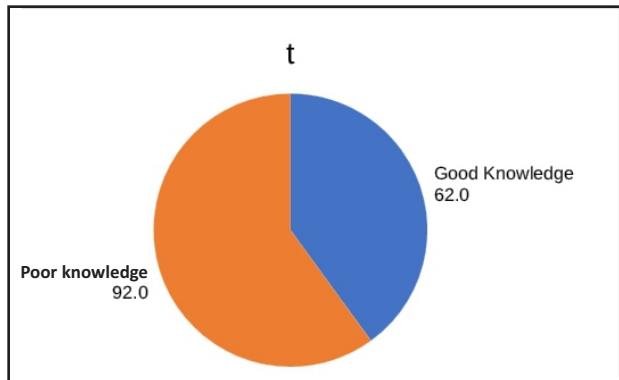


Figure 1.1 Knowledge Level of Nurses on Emergency and Disaster preparedness

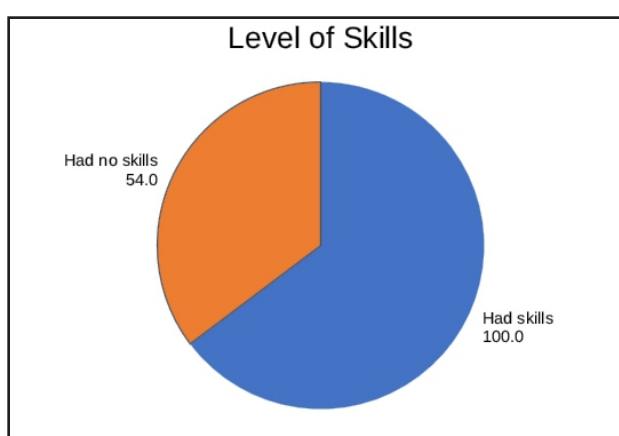


Figure 1.2 Skills Level of Nurses on Emergency and Disaster preparedness

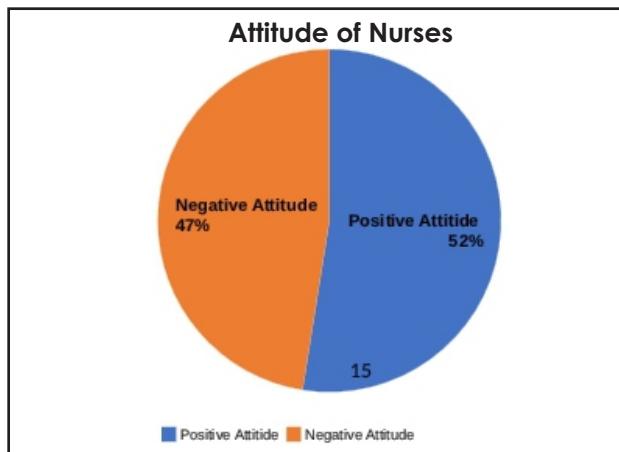


Figure 1.3 Attitude Level of Nurses on Emergency and Disaster preparedness

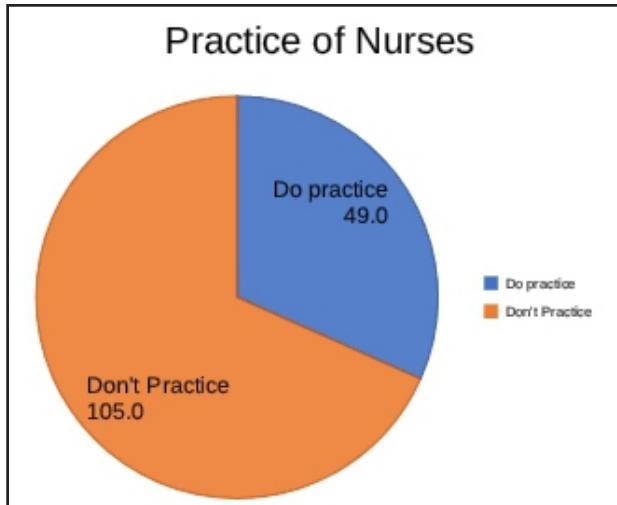


Figure 1.4 Practice of Nurses on Emergency and Disaster preparedness

Discussion of Findings

Research question 1- The knowledge level of nurses on emergency and disaster management in Federal Medical Centre, and Specialist Hospital Yola, Adamawa state. Majority (92) of respondents (59.7%) had poor knowledge on emergency and disaster preparedness. While 62respondents (40.3%) with a Mean score 4.94 had fair knowledge. This supported Syahirul et al ⁽¹³⁾ who noted in their study that their participants had inadequate training for disaster management and as such, only provided some helps in disaster and emergency situations.

Are nurses properly trained in emergency and disaster preparedness? The response to this question can be inferred from the various familiarity responses where by the findings revealed the percentages of variables under the "familiarity with emergency preparedness" as; 38.3% of respondents are moderately familiar with the signs/symptoms of exposure to different biological agents while 13.0% are not, for matching antidote and prophylactic medications to biological/chemical agents, 31.2% are moderately familiar with the emergency preparedness and 11.0% are not familiar with its preparedness. Regarding basic first aid in a large-scale emergency event (including oxygen administration and ventilation), 33.1% of respondents are moderately familiar with such emergency preparedness while 3.9% are not. For percentages under the "familiarity with ethical issues in triage", 34.4% and 31.8% of respondents

are moderately and extremely familiar respectively, on how to perform a rapid physical assessment of victim of a large scale emergency event while 3.9% are not and as for general issues related to the proper handling of the dead during a large scale emergency event (ethical, legal, cultural, and safety) 30.5% of respondents are both moderately and extremely familiar while 4.5% are not. It therefore means from these findings that to a reasonable extent nurses are not properly trained in emergency and disaster preparedness.

The research question 2 explored into what skills nurses demonstrate in disaster management? Among nurses in Federal Medical Centre Yola, and Specialist Hospital Yola, Adamawa state. The findings showed that 33.1% are extremely familiar with Selection of the appropriate personal protective equipment (PPE) when caring for patients exposed to a biological, chemical or radiological agent, 30.5% are moderately familiar while 5.2% are not familiar.

On procedures used to document provision of care in large scale, 28.6% of respondents are moderately familiar, 26.6% are somewhat familiar while 8.4% are not familiar, it further shows that providing health counselling/ education to patient regarding the long-term impact of chemical, biological, radiological, nuclear and explosive (CBRNE) agents and for the appropriate care of sensitive/vulnerable patient groups during a large-scale emergency (i.e..aged, pregnant, women and the disabled), 27.3% are somewhat familiar, 26.6% are slightly familiar, 24.7% are moderately familiar while 5.2% are not. The inference that can be drawn from these random variables of familiarities is that skills demonstrated by nurses in the management of disaster are not all that efficient. This finding agreed with the result of the work of Labrage,⁽¹⁴⁾ that nurses insufficiently prepared do not feel confident responding effectively to disasters.

The research question 3 states: what is the attitude of nurses towards emergencies and disasters? The study revealed that the attitude of nurses towards emergencies and disasters in the community was up to 53% positive. To some extent, 34.4 % were even extremely willing to assume the risk of involvement in disaster situation. This therefore means that nurses had positive attitudinal response towards emergency and disaster situations. This is in line with ANA's standards for practice ⁽¹⁵⁾. Nurses should at least be very willing for concern and responsibility towards children, the elderly and

community. It is important that nurses are educated and trained on the expectations of the hospitals and that they have their own disaster plan.

Lastly, the findings in response to how nurses in Specialist hospital and Federal Medical Centre Yola manage or practice emergencies and disasters, 4% responded for arrangement of mock disaster situation to assess preparedness to act in a disaster situation, 23% responded towards making available at all times equipment for the management of disaster, 35% are of the opinion to engage in training organized to meet the management of emergency disaster while 35% of respondents would want workshop to be organized in the management of disaster situations. In view of this, it can be said that since nurses here are unable to practice effectively, they should be exposed to proper and constant training/workshops through continuing education, seminars, conferences etc.

Implication of Findings for Nurses Preparedness towards Emergencies and Disasters

The findings of this study revealed that the respondents demonstrated little knowledge towards emergencies and disaster preparedness among nurses working in Yola, Adamawa State. While a good number of nurses had positive attitude towards issues of disaster and emergency preparedness, significant number of nurses in Yola do not practice emergency and disaster preparedness. Therefore, deliberate commitment towards emergency and disaster preparedness should be considered. Whereas, nurses usually receive formal training in school in disaster but this study revealed that there are no efforts in place to help implement such in practice. Thus, factors affecting emergency and disaster preparedness should be considered and addressed appropriately.

The institutions, management and policy makers should wake up to their responsibilities so that emergency and disaster preparedness among qualified nurses can be completely addressed by further education. Nurses need more training on emergency and disaster preparedness through seminars or workshops so as to prepare them to be able to meet up with the most recent challenges of disasters and emergencies.

Limitations

Data for this study were collected among nurses working at Specialist and Federal Medical

Centre Yola. Hence findings may not be able to be generalized to other State Specialist hospitals. A comprehensive study could yield further conclusive data. Caution should be used in generalizing the findings to other hospitals or areas of the country.

The capricious nature of disasters and the specific needs of different hospitals and states of the country related to the types of anticipated and unanticipated disasters make broad generalizations risky. All data will be self-reported, so there is no verification of actual competence in disaster methods and techniques.

Conclusion and Recommendations

The purpose of this study is to assess Nurses preparedness in emergencies and disaster situations in Yola metropolis, Adamawa State, Nigeria. This study postures that actual participation in disaster events may improve Nurses competence in disaster and emergency responses. It is apparent that Nurses themselves know that when they are trained on emergency and disaster, they can also respond well.

Nurses should be encouraged to participate and seek opportunities for training in disaster and also participate in mock drills. They should also participate in research and publish findings in national and international journals so that their experiences can be shared globally.

States, hospitals and communities should take advantage of the experiences of those that have been trained to assess the possible disasters that might occur and plan or prepare for disasters.

Nurses in all countries should understand their roles in the planning, mitigation, responses and recovery aspects of disasters and make a rational contribution by creating awareness, and participating (volunteering) in disaster events and trainings. They should be encouraged to step out of their comfort zones and assume positions such as emergency operations coordinators and other positions of leadership in the emergency operation centres during a mock drill or actual event. The American Nurses Association code of ethics (2nd provision) states that Nurses primary commitment is to the patient ⁽¹⁵⁾; while the 5th provision states that Nurses owe the same duties to self and others, including the responsibility to preserve integrity and safety. ⁽¹⁶⁾

The Nurse must be clear regarding personal responsibility during a major disaster event which will include being faced with ethical considerations. These considerations, as well as the emotional and physical aspects of disasters, should be incorporated into the training process. The responsibility of caring for the injured and afflicted during a major disaster is important, but Nurses cannot take care of others if they do not take care of themselves as well. The National Association of Nurses and Midwives should be proactive in disaster preparedness legislation and policies.

Among communities, it is clear that Nurses do not feel prepared to deal with disasters. Most Nurses working in hospitals may not be ready to step into disaster response role. Public health organization should also include disaster mitigation and contingency planning seminars and forums that include Hospital Nurses. Public health Nurses are often responsible for setting up shelters, infection control, and seeing to the needs of the public.

Apart from providing direct care to those in need, Nurses should be aware of the potential disease threats in the aftermath of disasters including short- and long-term illness that disasters leave in their wake⁽¹⁷⁾.

Consequences of disasters are often managed in the Hospital setting. Increasing Hospital Nurse competence in managing disasters is one way of providing local response and management which may help prevent unnecessary admissions and utilizations of limited hospital resources during surge situations.

Hospitals must invest in providing time to send Nurses for further education on disaster preparedness so that they can make significant contributions to their profession and organizations. They should also encourage Nurses to be involved in community disaster planning and preparedness activities. Organizations must have contingency plans for social isolation during pandemic and direct or indirect care of the Nurses' family member⁽¹⁷⁾.

A major message of this study is that training for nurses must be a consistent on-going aspect of their career and should be commensurate with the possibilities of both human-induced and natural disaster events. Nurses should also encourage their facilities to host all aspects of disaster training, especially mass casualty, mass

evacuation, triage and mass fatality training. In addition to being patient advocates, Nurses must speak up for their colleagues, the community, and themselves so that the health needs associated with disasters which are rather increasing and greatly posing great challenges to humanity are quickly and efficiently addressed.⁽¹⁸⁾

Suggestions for Further Studies

The needs for further studies have been revealed through these study findings. Therefore, further study should be directed towards:

1. A comprehensive study on factors hindering emergency and disaster preparedness among nurses should be explored
2. The comparative study of Federal Medical Centre and State Specialist Hospital Nurses on emergency and disaster response should be explored.

Reference

1. Okoli A C. (2014} Disaster Management and National Security in Nigeria: The Nexus and the Disconnect. International Journal of Liberal Arts and Social Science Vol. 2 No. 1 January, 2014
2. Texas Board of Nursing. https://www.bon.texas.gov/pdfs/law_rules_pdfs/nursing_practice_act_pdfs/NPA2021.pdf
3. Guha-Sapir (2012) Classification of natural disasters<https://www.researchgate.net> p-9_2_283084843
4. SCHMIDT M, CHERYL K, .DAVIS J, ENNIFER M.; SANDERS S, JENNA L, CHAPMAN D, LAURA A, CATHERINE C, MARY; H, ARLENE R., {2011) EXPLORING Nursing Students' Level of Preparedness for Disaster Response. *Nursing Education Perspective* 32(6):p 380-383, November 2011.
5. Weiner E, (2006) Preparing nurses internationally for emergency planning and response. *Online J Issues Nurs* 2006;11
6. Ryan R. M, & Deci E L, (2000). Self-determination theory and the facilitation of intrinsic motivation, social development, and well-being. *American Psychologist*, 55(1), 68-78. <https://doi.org/10.1037/0003-066X.55.1.68> examined that enhance versus und psychological needs and processes within domains such as health care, education
7. Hagger MS, Rentzelas P, & Chatzisarantis N, Effects of individualist and collectivist group norms and choice on intrinsic

- motivation. *Motiv Emot* **38**, 215–223 (2014). <https://doi.org/10.1007/s11031-013-9373-28>.
8. WHYTE WF, CORNER S 20140 Society and social organisation Journal of the History of the Behavioral Sciences, Vol. 50(1), 79–103 Winter 2014Journal of the History of the Behavioral Sciences, Vol. 50(1), 79–103 Winter 2014
 9. Kerlinger FN, (1986) Foundations of Behavioral Research. 3rd Edition, Holt, Rinehart and Winston, New York.
 10. Olsen, C. and St George, D.M. (2004) Cross-Sectional Study Design and Data Analysis. College Entrance Examination Board, New York.
 11. Leedy P, and Ormrod J, (2001) Practical Research: Planning and Design. 7th Edition, Merrill Prentice Hall and SAGE Publications, Upper Saddle River, NJ and Thousand Oaks, CA.
 12. Chika O O, (2012). ICT knowledge and utilization as determinants of job performance of Health Information Managers in health institutions in South-East Nigeria. International Journal of Library and Information Science Published by Academic Journals Online ISSN: 2141-2537 DOI:[10.5897/IJLIS2021.0984](https://doi.org/10.5897/IJLIS2021.0984)
 13. Syahirul A, Masato K, Minato N, (2014) **Evaluation of disaster preparedness training and disaster drill for nursing students. Nurse educator today.** PMID: 24832532 2015 Jan;35(1):25-31. doi: 10.1016/j.nedt.2014.04.016. Epub 2014
 14. Labrague L, Hammad K, CENA, DM, McEnroe-P, Obeidat AA, Leonard A.R, Cayaban E.C, Mirafuentes R, Disaster preparedness among nurses: a systematic review of literature **International Nursing Review Volume 65, Issue 1** p. 41-53
 15. ANA The Code of Ethics For Nurses As in Iranian Journal of Public Health (2013). PMC3712593. Ncb.nlm.nih.gov
 16. Townsend Duty of care <https://www.lawteacher.net/lectures/tort-law/negligence/duty-of-care/>
 17. Jones C, Disaster after math https://www.bbnetwork.com/technologies/cons-truction-methods/?gclid=EA1aIQobChMI9PzNo5mq_QIVFxYGAB2-fgDDEAEYASAAgKMY_D_Bx
 18. WHO Regional directorate for eastern Mediterranean. (2012).Emergency preparedness and response <https://www.emro.who.int/annual-report/2012/emergency-preparedness-and-response.html>