

**Knowledge and Attitude of Medical Personnel towards Disaster Preparedness and Response in Dalori IDP Clinic of Borno State, Nigeria**

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*Knowledge is gained through training. The importance of disaster training and education in the health sector has given rise to the discipline of disaster medicine, which has come about as a result of the marriage between emergency medicine and disaster management. This study was carried out to assess the factors that influence knowledge, attitude and practice of health works in disaster preparedness and prevention in IDP Camp Clinic with Dalori IDP Clinic in Maiduguri as a case study. A descriptive research design was adopted for the study and 170 respondents used a study from across the four IDP Camp Clinics in Dalori IDP Camp. The questionnaires were made up of both open and closed-ended questions. The study identified the knowledge and practice of health workers as a veritable tool in disaster preparedness and response in an IDP Camp Clinic which further positively gears health workers' attitudes to effectively execute emergency response plans. It is here recommended among others that Government should make it a priority to improve emergency preparedness for manmade and natural disasters through the formation of the emergency response team in all sectors. Government should lift the Embargo on the employment of staff for essential service providers across the state.*

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**Introduction**

The Global Report on Internal Displacement,(2018) reported that there were 6.9 million new internal displacements associated with conflict and violence in 2016, primarily in sub-Saharan Africa and the Middle East. This represents a 20 per cent decrease from 2015 estimates, due largely to fewer reported new displacements in Iraq, Syria and Yemen. That said, figures for new displacement by conflict still indicate an overall rising trend with an annual average of 5.3

million new displacements a year since 2003, with roughly 15,000 people forced to flee their homes every day. This according to the report correlates with findings that although the number of active conflicts has declined over the same period, those being fought became steadily more lethal from 2010 to 2014 and then slightly less so in 2015 ( Global Report on internal, Displacement, 2018). The downturn over the last two years should not mask significant new internal displacement not only in the Middle East but also in Afghanistan, the Democratic Republic of the Congo (DRC), Nigeria and Yemen, as well as that associated with violence perpetrated by drug gangs and other criminal groups in Central America. In 2017, there were 30.6 million new internal displacements associated with conflict and disaster across 143 countries. This means that an average of 80,000 people were displaced every day over the last year (Global Report on internal, Displacement, 2018).

Over the past eight years, the crisis has had profound, pronounced and long-standing impacts resulting from the extreme level of violence of the conflict and the widespread destruction of private and public infrastructure, devastating the Lake Chad region (Quosh, Elul and Ajlani, 2016).

As part of Nigeria's 2017 Humanitarian Needs Overview (HNO), the findings of the protection sector working group revealed a full spectrum of protection concerns in North-East Nigeria, with 6.7 million people estimated to need protection and assistance in Adamawa, Borno and Yobe States (Salama et al, 2017). Civilians in these regions face grave human rights violations and abuse including death, injuries, sexual and gender-based violence (SGBV), arbitrary detention, disappearances, forced displacement, and forced recruitment (Salama et al,

2017). According to Bruns and Spiegel (2016), Boko Haram has targeted areas with high concentrations of IDPs and refugees. The psychological and physical needs of the displaced population are particularly significant and remain largely unmet given the magnitude of the problem. Loss and fear among the displaced are aggravated by a sense of loss of dignity as many feel ashamed of their living conditions. Engaging in income-generating activities and recreational activities have emerged in UNHCR's monitoring data as important sources of relief at the individual, family and community levels (UNHCR, 2017).

The issues of disaster date back years with difficulties in undertaking disaster management assessment leading to calls for continued development of standardized tools (Brandt et al, 2009). The continued occurrence and magnitude of diseases have prompted World Health Organization (WHO) and other organizations to come up with best practice models for hospital and Disaster Management (Traub, et al 2007, Adams 2009, De Lorenzo 2007). Over the years there have been efforts by WHO and other technical bodies in promoting hospital preparedness, examples being the 2008-2009 world disaster reduction campaign of hospitals safe from disaster and more recently the 2010 – 2011“ one Million safe schools and hospitals” initiative. This is because of the need to continue strengthening the healthcare system's preparedness and response to mass casualties to save as many lives as possible where disasters should occur.

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 Socio-infrastructure of the affected region and consequently, the country. Disasters can change the face of developing nations in seconds, wiping out years of development. However, no matter where the disaster

happens, the impact on the population and community can be devastating leaving no nation, region or community immune. The number of reported natural and human-made disasters continues to rise worldwide.

Disaster preparedness including risk assessment and multi-disciplinary management strategies at all system levels is critical to the delivery of effective responses to the short, medium and long-term health need of a disaster-stricken population. Meanwhile, emergency preparedness refers to preparedness which identifies planning, infrastructure, knowledge and capabilities and training as the major components of maintaining a high level of preparedness. Disaster can be divided into three categories; natural events- such as storms, drought, earthquakes, or disease epidemics, technological events – such as explosions, structure collapse, and radiological accidents, civil/political events – such as strikes, terrorism, biological warfare. This implies that not all disasters are produced by the forces of nature; many modern-day disasters involve accidents which can be traced to air, road, ships and most recently explosions due to Insurgence activities.

Emergency preparedness can be achieved through a process of planning and formulating policies training and exercise, acquisition of important equipment and infrastructure needed for emergency response; and the acquisition and improvement of the knowledge and capabilities of staff (Adini et al, 2006; Perry & Jindell, 2003) one of the major components of the hospital emergency preparedness process is that of planning. It is, however, important to note that, the written plan does not guarantee preparedness (Perry & Lindell, 2003), but should be viewed as one of the elements of preparedness activities aimed at improving emergency response.

Adequate policies in the health sector and proper funding are some key variables that can help in the knowledge, attitude and practice of health workers towards disaster preparedness.

Apart from the bomb blast victims that are brought to Dalori Clinic from ambush attacks and suicide bombings outside the camp, Dalori IDP has witnessed a series of suicide attacks within the camp and an outbreak of cholera as reported to the public health EOC located at the Eye Hospital in Maiduguri, for Malaria is common pneumonia. However, the knowledge of how prepared Dalori Clinic responds to and manages disasters is unknown. The knowledge, attitude and practice on factors influencing disaster management and preparedness in the same clinics are also lacking. Therefore, this creates the need for a study in Dalori IDP Clinics, to determine the factors that influence the knowledge, attitude and practice of health workers in respect of disaster preparedness and prevention in IDP camps (Dalori IDP Clinic/ medical fertility).

### **Study area**

Borno State is pluralistic in ethnic composition. About thirty languages are considered autonomous languages. Twenty-six of the languages spoken in Borno are classified by linguists as Chadic languages. The Kanuri with rich cultural heritage is however an exception and a member of the Saharan group of languages and is found predominantly in the central and northern parts of the state which forms the present Borno and Dikwa Emirates. The Fulfulde is an Arab language of considerable antiquity while Arabic is mainly spoken by the Shuwa Arabs. The Babur/Bura, rich in oral tradition and the second largest ethnic group mostly inhabit Biu Emirate in the southern part of the state.

Askira and Uba Emirates came into existence as independent Emirates as a result of a boundary adjustment. In 1921 when there was a boundary adjustment between the provinces of Borno and Adamawa, a piece of the grid was given to, Mai Mama under the seal of King George V in recognition of his service to the British Crown. He virtually became the founding father of the town and Emirate of “Askira” which means gratitude in the Kanuri district. Like the Gwoza Emirate, Uba Emirate is also cosmopolitan as the Marghi language is further divided into dialectical intimations grouped mainly under the north and south Marghi.

The Shani Emirate is widely acclaimed for their Menware Festival mostly inhabited by the Dera speakers. There are also Hausas and Fulanis spread across the State. Borno state has an estimated area of 69,436 km<sup>2</sup> it is located between latitude 11° N and 15° N and longitude 11 E° and 14° 4 E (Ngala, 2007) ([www.bornonigeria.com](http://www.bornonigeria.com)). With a projected population of 5,860,200 Konduga has a projected population of 246,900. However, this research is narrowed to health workers of Dalori IDP Clinic.

## **Method**

A descriptive survey will be used for this study. 2) The design is appropriate as it will describe the state of affairs as it exists. The target population of this study will be 310 Staff at Dalori IDP Clinics composed of different cadres, among them being doctors, laboratory technologists, nurses, clinical officers, CHEWS, JCHEWS and supportive staff amongst others. An estimated sample size of 170 will be used in this study, 170 for the confidence interval of 95% and imaging error of 5%. A simple random sampling was used to select a study from Dalori IDP Clinic. The list of respondents to be used as a sampling frame will be obtained from

the staff returns database. This instrument will gather both open and closed-ended questions. The closed-ended questions will be used to ensure objectivity and clarity of the subject “Responses” for ease of statistical analysis while the opened ended items will allow the respondents some room for an independent opinion. The Data Collected from the respondents will be coded, transformed and analyzed using Statistical package for social Scientist (SPSS) software version 21.

## **Result**

**Table 1: socio-demographic characteristics of respondents**

<b>Gender</b>	<b>Frequency</b>	<b>Percentage %</b>
<b>Male</b>	83	48.83%
<b>Female</b>	87	51.17%
<b>Marital status</b>		
<b>Married</b>	79	46.47%
<b>Single</b>	59	34.71%
<b>Divorced</b>	23	13.53%
<b>Widowed</b>	9	05.29
<b>Age</b>		
<b>Below 25b years</b>	21	12.35%
<b>25 - 30 years</b>	19	11.18%
<b>31 – 35 years</b>	43	25.29%
<b>36 - 40 years</b>	49	28.82%
<b>Above 40 years</b>	38	22.35%
<b>Level of Education</b>		
<b>SSCE/GCE</b>	21	12.35
<b>College</b>	105	61.76

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<b>Undergraduate</b>	31	18.24
<b>PG certificate</b>	13	07.64

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Source: fieldwork 2020

The table on socio-demographic data of respondents which shows that, which shows that 83 questionnaires were given to the main respondents representing 48.83%, while 87 female respondents representing 51.17% were given the questionnaire. The above table indicates that 79 married persons representing 46.47% were given the questionnaire, 57 single respondents representing 34.71% were also considered, 23 of the respondents representing 13.53% were divorcees and 9 representing 05.00% were widows. In table 4, 21 respondents representing 12.35% were below 25 years, 19 respondents representing 11.18% are between the age of 25 – 30 years. 43 of the respondents representing 25.29% are between the age of 31-35 years, and 49 out of the 170 respondents representing 28.82% are between the age of 36 and 40. 38 respondents representing 22.35% are above 40 years. The above table, which is on the education level of respondents indicates that 21 respondents representing 12.35% had secondary education 105 respondents representing 61.76% are the product of colleges. This number is large because Nurses and other Paramedical staff constitute the greater number of technical personnel in the IDP Camp. 31 of the respondents representing 18.24% are graduates from different universities. 13 of the respondents representing 07.64% are postgraduate.

**Table 2: The distribution of respondents' positions in the Dalori IDP Clinic and duration of stay**

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Position	N=170	%=100
<b>Top manager</b>	16	09.41%
<b>A doctor</b>	14	08.24%
<b>Laboratory technologists</b>	21	12.35%
<b>Nurse</b>	47	27.64%
<b>Clinical officers</b>	8	04.71%
<b>Supportive staff</b>	28	16.47%
<b>Emergency response team</b>	36	21.18%
<b>Other capacities stated</b>	Nil	0.00%
<b>Period of service</b>		
<b>Less than a year</b>	19	11.18%
<b>1 year</b>	31	18.24%
<b>2 years</b>	25	14.70%
<b>Above 2 years</b>	95	55.88%

**Source: fieldwork, 2020**

In table 6, which is a distribution by cadre in the case that 16 respondents 09.41% are from top management, 14 respondents representing 08.24% are medical doctors while 21 respondents representing 12.35% are laboratory technology/technicians, 47 respondents representing 27.64% are Nurses/Midwives, 8 respondents representing 04.71% are Clinical officers, there are 28 support staff representing 16.47% as part of the Respondents 36 of the respondents representing 21.18% are emergency response team cutting across different cadre. From table 7 above, 19 respondents representing 11.18% worked for less than 1 year in the Camp Clinic, 31 of the respondents representing 18.24% spend a year in the Clinic, and 25 of the respondents representing 14.70% were in the clinic for two years. 95 of the respondents representing 55.88% were in the IDP Camp Clinic for more than 2 years.

### **Influence of Knowledge, Attitude and Practices on Disaster Preparedness and Response**

Table 3.1: Respondents' distribution on the understanding of disaster preparedness

<b>Responses</b>	<b>Frequency</b>	<b>Percentage %</b>
<b>Yes</b>	153	90%
<b>No</b>	17	10%
<b>Total</b>	170	100%

Source: fieldwork, 2020

The table indicates that 153 respondents representing 90% understood what Disaster preparedness was, while 17 respondents representing 10% answered did not understand the meaning of disaster preparedness. Table 3.2: Respondents' distribution training necessary for Disaster Preparedness?

<b>Response</b>	<b>Frequency</b>	<b>Percentage %</b>
<b>Yes</b>	112	65.88%
<b>No</b>	58	34.12%
<b>Total</b>	170	100%

Source: fieldwork, 2020

From the table, the majority of the respondents 112 representing 65.88% agreed that training is necessary for disaster preparedness while 58 representing 34.12% said No.

**Table 3.3: Respondents' responses on the kind of training needed for disaster management and response**

<b>Responses</b>	<b>Frequency</b>	<b>Percentage %</b>
<b>Continue Medical Education</b>	36	21.18%
<b>Training in Medical Emergency</b>	134	78.82%
<b>Total</b>	<b>170</b>	<b>100%</b>

**Source: fieldwork 2020**

In the table respondents representing 21.18% mentioned that there is a need for continued medical education, while 134 respondents representing 78.82% identified the need to be trained in Medical Emergencies for Bomb blast victims. This shows that respondents were ever ready to offer their service during an emergency.

**Table3.4: Respondents' responses on receiving disaster management training**

<b>Responses</b>	<b>Frequency</b>	<b>Percentage %</b>
<b>Yes</b>	102	60.00%
<b>No</b>	68	40.00%
<b>Total</b>	<b>170</b>	<b>100%</b>

**Source: fieldwork, 2020**

The table shows that the respondents representing 60% have received such training, while 68 respondents representing 40% did not receive such training. This shows that medical personnel in this clinic were trained to handle emergency cases emanating from the crisis

**Table 3.5. Respondents' responses on staff responsible for disaster management and response**

<b>Responses</b>	<b>Frequency</b>	<b>Percentage %</b>
<b>Yes</b>	42	24.70
<b>No</b>	128	75.29
<b>Total</b>	170	100

Source: fieldwork, 2020

The table indicates that 42 respondents representing 24.70% answered yes they have received training, while the majority 128 respondents representing 75.29% answered they have not received Staff training on disaster management.

**Table 3.6: Respondents' responses on how well prepared could help reduce the number of lives lost during an emergency**

<b>Questionnaire</b>	<b>Frequency</b>	<b>Percentage %</b>
<b>Yes</b>	162	95.29%

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<b>No</b>	8	04.71%
<b>Total</b>	170	100%

**Source: fieldwork, 2020**

From the table, it can be inferred that the majority of the respondents 162 respondents representing 95.29% agreed that being well prepared could help reduce the number of lives lost while only 8 respondents representing 04.71% opposed it.

**Table3.7: Distribution of respondents on the availability of facilities for quick response**

<b>Response</b>	<b>frequency</b>	<b>Percentage</b>
<b>Available</b>	50	29.4
<b>Poorly available</b>	90	52.9
<b>Not available</b>	30	17.7
<b>Total</b>	170	100

Source: fieldwork, 2020

The table sought to find out the availability of facilities that can aids service readiness among the workers. The data indicates that the majority of the respondents 52.9% said the facilities were poorly available. This means availability but not functional or not enough, 29.4% said such facilities were available and 17.7% said they are not available. This may affect service delivery hence the importance of facilities cannot be overemphasized in any working environment.

**Table 3.6: Distribution of respondents on the assessment of staff strength**

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Responses	frequency	Percentage
Adequate	20	11.8
Inadequate	150	88.2
Total	170	100

**Source: fieldwork, 2020**

The table indicates that the majority of the respondents 88.2% averred that there was inadequate manpower to effectively carry out their designated service. This factor might be a barrier to quick emergency response.

### **Discussion**

In this study, respondents agreed that training which leads to knowledge is necessary for disaster preparedness. This finding is similar to research conducted by Moabi (2008) in South Africa on attitudes towards disaster preparedness. In his study, Moabi stated that there should be regular plans for updating staff knowledge through training and stimulation which should frequently occur in the hospital. The respondents however differ in opinion as to the type of training as presented, in which 78.82% identified training on emergency preparedness while 21.18% opted for continued medical education. However, it was found that inadequate staff and the poor state of facilities in the camp can go a long way in hindering effective response services.

The importance attached to training can further be seen in the table as 60% of respondents in the IDP Camp clinic have received training on disaster management and response. But not all the IDP Camp Clinic staff received training regrettably not all staff is trained on

disaster management and response. Also, 56.47% noted that it is very necessary to train the remaining staff. Similar to this finding, the frontline Health workers coalition a journal posted in its December 10<sup>th</sup> 2013 online publication, a paper presented by Rebecca Bailey of Inter-Health International on improving health worker in-service training to better deliver quality services, stated that training often represents Lion's Share of Investments for strengthening Human Resource for Health (HRH) and that training is a clear and important contribution towards the development and maintenance of Health worker competence for delivering quality services.

Tables have it that, for better disaster preparedness and response emergency theatre equipment is needed as presented by 51.18%. This study also showed that being well-prepared could help reduce the number of lives lost during emergencies as can be seen in table 16. Closely linked to this, is a study conducted by Olivia, et al (2008) in Japan which says disaster preparedness is not a responsibility of a person, a particular profession, one organization or a government. The study continued that it involves effort and contribution for all. In other words, to achieve the best possible outcome, members of the general public also need to learn ways to look after themselves effectively and efficiently during a disaster. The above premise is likely to be achieved through good funding for emergency response and preparedness.

## **Conclusion**

In Nigeria, the recurrent and increasing occurrences of disasters have presented the critical need for a more effective, holistic and proactive approach to disaster management. This approach ought to be community-based and federally funded and coordinated. There is the need therefore to focus on disaster risk and the vulnerability of communities with an emphasis on

multi-level and multi-dimensional coordination. More collaboration between all stakeholders and the private sectors particularly the insurance companies will also be necessary as mitigation measures of the disaster plan ought to include preparation for a terrorist threat which possess new and further unimaginable concern in Nigeria.

### **Recommendations**

It is here recommended that;

1. Government should make it a priority to improve emergency preparedness for manmade and natural disasters through the formation of the emergency response team in all sectors.
2. Government should lift the Embargo on the employment of staff for essential service providers across the state.
3. Government should maintain the pool of experts that have gained experience from the respective IDP Camps to prepare for future unforeseen disasters.

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