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# Knowledge, Attitude and Practice of Internally Displaced Persons Towards Cholera in Selected Camps in Maiduguri Metropolis, Borno State, Nigeria.

**Kyarimi, A. & Gwarzo, A A[1]**

**Email:** alikyarimi8@gmail.com

**GSM:** (234)-08023549468

**[1]Department of Public Health, Maryam Abacha American University of Niger, Maradi, Niger Republic**

## Abstract

This research work is focused on the Knowledge, Attitude and Practice of Internally Displaced Persons towards Cholera in Selected some IDPs Camps in Maiduguri Metropolis, Borno State, Nigeria. The population of the study is Seventy-one thousand and eight (71,008) IDPs in selected IDPs camp in Maiduguri and the sample size for the study is three hundred and ninety-eight (398) IDPs in selected camps in Maiduguri Metropolis. This study selected 360 IDPs in a cross-sectional study; the IDPs were selected by stratified random sampling technique. Semi-structured, interviewer administered questionnaire to collect data on socio-demographic characteristics, knowledge, attitude and practice of Cholera among the IDPs in selected camps in Maiduguri Metropolis. The primary and secondary sources of collection was used. Data were analysed using simple percentage and Regressional Analysis as a tool to test the hypothesis. From the analysis the study found that 50% and 36.1% respondents in IPDs confirmed that they have knowledge of cholera as a watery diarrhoea, while 43.1% of the respondents opined that Proper sanitation and health education are important preventive measures. The study concluded that IDPs in Camps appear to have adequate knowledge of cholera and its preventive measure although older age groups appear to lack sufficient knowledge of cholera preventive measures. The study recommended that Interventions should be built on health education and improving access to c water, sanitation, and hygiene (WASH) practices. Individuals and households should be health educated and encouraged to practice basic hygiene behaviours; as proper hand washing and food handling, which can prevent the contraction spread of many diseases, not just cholera.

**Keywords:** Knowledge, Attitude, Practice and IDPs

## Introduction

Globally it is estimated that, Cholera claims about 1.3–4.0 million cases (21 000–143 000 deaths) annually worldwide, (Ali, et al (2015) in settings with poor access to water, sanitation and hygiene (WASH), including Nigeria. However, these reports do not adequately reflect the global cholera burden due to only approximately 5%-10% of cholera cases actually being reported within underdeveloped settings, where cholera rates are highest (Ali et al, 2012). Cholera transmission occurs through the fecal-oral route, with epidemics often occurring after natural disasters, civil unrest, violence, and wars (Zuckerman, et al., 2007). There are several risk factors for cholera outbreaks; however, a combination of poverty and displacement yields one of the most vulnerable populations (Sim, 2013). Populations of internally displaced persons are not only among the most at-risk groups for cholera outbreaks, but also are more susceptible to the negative health.

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Impacts of cholera due to scarcity of resources (such as clean water and sanitation; Sim, 2013). Within 2014, approximately 11 million people were displaced within their own countries, primarily due to violence, which equated to approximately 30,000 people perday (United Nations High Commissioner for Refugees [UNHCR], 2016). As the population of internally displaced persons increases in size, cholera outbreaks will continue to increase, which could lead to increased epidemics and pandemics (Sim, 2013). During a cholera outbreak, it is essential to the health of a population to reduce transmission and minimize infections. The World Health Organization (WHO, 2016b) indicates that proper cholera control includes access to clean water, proper waste management, effective sanitation, vector control, increased food safety practices, increased hygiene practices, and increased education and public information. In a systematic literature review, Taylor, et al., (2015) highlighted that there are few interventions (such as vaccination campaigns, educational campaigns, and the provision of safe water and sanitation supplies) that have been tested during a cholera outbreak; therefore, there is a knowledge gap regarding which interventions are the most appropriate to use during an outbreak. The effectiveness of recommended cholera control measures has been examined by several researchers, including Ivers et al., (2015) and Lopez, et al., (2014). However, cholera infections and cholera outbreaks continue to evolve, and intervention strategies need to adapt. In addition, V. cholera has evolved with two significant modifications. Over the years, including both a new lipopolysaccharide structure and a new serotype (Ryan, 2011). It is essential to understand how these changes impact current control measures and whether these measures are effective. In this study, we sought to examine prevalence of Cholera in IDPs Camp in Maiduguri Metropolis, Borno State.

**Objective of the Study**

1. Assess the knowledge of cholera and determine the main source of information during an episode of cholera outbreak among IDPs.
2. Determine the IDPs attitude to reporting and investigation of outbreak

**Research Question**

From the forgoing, the following research questions become pertinent.

1. What is the knowledge of cholera and the main source of information during an episode of cholera outbreak among IDPs?
2. What is the IDPs attitude to reporting and investigation of outbreak?

**Methodology** The study adopted a descriptive survey design. The administration of the questionnaire took place at IDP Camps in Maiduguri Metropolis, Borno State, where the participants were purposively drawn from the IDPs.

**Sample Frame**

The selected IDPs Camp population in Maiduguri Metropolis Borno State was (398)

| IDPs Camp | Population | Sample |
|---|---|---|
| Dalori IDPs CampFTC | 22,335 | 114 |
| Teachers Village IDPs Camp | 6,105 | 64 |
| Bakkassi IDPs Camp | 21,208 | 105 |
| EYN/CAN SEC. | 7,497 | 45 |
| Muna IDPs Camp | 13,863 | 70 |
| **TOTAL** | 71,008 | 398 |

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**Sources: Field Survey, 2022**

Population includes IDPs Camp in Maiduguri include; Dalori IDPs Camp, Teachers Village IDPs Camp, Bakkassi IDPs Camp, EYN/CAN SEC.Camp and Muna IDPs Camp.

**Sample Size**

Kombo (2006) define sample as a finite part of statistical population whose proper ties are studied to gain information about the whole.

To get the sample size, the Taro Yamani formula will be used. Due to the enormous large population size, this formula will be used in order to get the sample size of the population.

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

n = Number of sample size
N = Population size
1 = constant
e = Level of significance of error assumed to be 0.05.
Therefore

$$n = \frac{71{,}008}{1+ 71{,}008(0.05)2}$$

$$n = \frac{71{,}008}{1+ 71{,}008(0.0025)}$$

$$n = \frac{71{,}008}{397.8}$$

n = 398

**Results**

The questionnaire was a 5-point rating scale (likert scale) the questionnaire was designed to elicit relevant information from the respondents. The population was three hundred and ninety eighty (398) IDPs in selected IDPS Camps and sample of the three hundred and ninety eighty (398) respondents that questionnaire were administered to them and three hundred and sixty were returned.

**TABLE 4.1:** Bio Data

| S/NO | Variable | Frequency | Percentage (%) |
|---|---|---|---|
| 1 | **Gender** | | |
| | Male | 240 | 66.7 |
| | Female | 120 | 33.3 |
| 2 | **Age Bracket** | | |
| | 16-20 | 50 | 13.9 |
| | 21-25 | 80 | 22.2 |
| | 26-30 | 70 | 19.4 |
| | 31-35 | 120 | 33.3 |
| | 36 and above | 40 | 11.1 |
| 3 | **Marital Status** | | |
| | Single | 240 | 66.7 |
| | Married | 120 | 33.3 |
| 4 | **Family Structure** | | |

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| | | | |
|---|---|---|---|
| | Nuclear | 180 | 50 |
| | Monogamous | 50 | 13.9 |
| | Polygamous | 130 | 36.1 |
| 5 | **Religion** | | |
| | Islam | 340 | 94.4 |
| | Christianity | 20 | 5.6 |
| | Others | 0 | 0 |
| 5 | **Qualification** | | |
| | Non-formal Edu | 170 | 47.2 |
| | Primary Edu | 110 | 30.6 |
| | Secondary Edu | 60 | 16.7 |
| | Tertiary edu | 20 | 5.6 |

**Source: Field Survey, 2022**

Table 4.1 item 1 revealed that 66.7% of the respondents are male while 33.3% of the respondents. This indicated that majority of the respondents are male.

The findings of the shows that 50 respondents representing 66.7% of responses fall between the age 16-20, 80 respondents representing 22.2% fall between the age 21-25, 70 respondents representing 19.4% of the respondents fall between 26-30years, 120 respondents representing 33.3% responses fall between 31-35 and11.1% of the respondents fall between 36 and above.

Item 3 shows that 240 respondents representing 66.7% responses are single while 120 respondents representing 33.3% responses are married.

item 4 indicated family structure of the respondents. 180(50%) of the respondents were Nuclear family, 50(13.9%) of the respondents were monogamous family while 130(36.1%) of the respondents were polygamous family.

Item 5 shows the religion of the respondents 340(94.4%) of the respondents were Islam, 20(5.6%) of the respondents were Christians and known other religion existed.

Item 6 shows the qualification of the respondents. 170(47.2%) of the respondents attended non-formal education, 110(30.6% of the respondents have Primary Education, 60(16.7%) of the respondents have secondary education while 20(5.6%) of the respondents have tertiary education.

**Table 4.2:** Knowledge of cholera and determine the main source of information during an episode of cholera outbreak among IDPs

| S/N | Statement | SA | % | A | % | U | % | SD | % | D | % | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Have knowledge of cholera as a watery diarrhea. | 180 | 50 | 130 | 36.1 | 12 | 3.3 | 18 | 5 | 20 | 5.6 | 360 |
| 2 | Proper sanitation and health education are important preventive measures. | 175 | 48.6 | 155 | 43.1 | 8 | 2.2 | 4 | 1.1 | 18 | 5 | 360 |
| 3 | cholera could be prevented through | 190 | 52.8 | 130 | 36.1 | 20 | 5.6 | 8 | 2.2 | 12 | 3.3 | 360 |

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| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | cleaning the house and toilet. | | | | | | | | | | | |
| 4 | washing hands before and after serving food prevents cholera | 200 | 55.6 | 140 | 38.9 | 2 | 0.6 | 8 | 2.2 | 10 | 2.8 | 360 |
| 5 | The most common perceived causes mentioned were unsafe water and food hygiene. | 185 | 51.4 | 95 | 26.4 | 15 | 4.2 | 25 | 6.9 | 40 | 11.1 | 360 |

**Source:** Field Survey, 2022

Table 4.2 which sought to find out the knowledge about acute watery Diarrhea. Five questions were raised and analyzed, from which the first question shows that 180(50%) of the total respondents strongly agreed that Have knowledge of cholera as a watery diarrhea, 130(36.1%) agreed to that assertion, 12(3.3%) of the respondents fails to agreed, while only 18(5%) of the respondents strongly disagreed and 20(5.6%) of the respondents disagreed, which implies that the IDPs in Maiduguri Metropolis have knowledge of cholera as a watery diarrhea. \

The second question shows that 175(48.6%) of the respondents strongly agreed that Proper sanitation and health education are important preventive measures, 155(43.1%) agreed with the statement, 8(2.2%) of the respondents fail to decide, while only 4(2.2%) of the respondent disagreed to these statement and 18(5%) of the respondents disagreed with the statement.

The third question also shows that 190(52.8%) and 130(36.1%) of the total respondents strongly agreed and agreed that cholera could be prevented through cleaning the house and toilet. while 20(5.6%) of the total respondents disagreed and 8(2.2%) of the respondent strongly disagreed to these statement while 12(3.3%) respondents disagreed with the statement.

The fourth question of the analysis table shows that 200(55.6%) of the total respondents strongly agreed and 140(38.9%) of the respondents agreed that washing hands before and after serving food prevents cholera, while 2(0.6%) of the respondents failed to decide, 8(2.2%) of the respondents strongly disagreed to these assertion and 10(2.8%) of the respondents disagreed to the assertion.

Lastly, fifth question of the analysis reveals that 185(51.4%) of the respondents strongly agreed that The most common perceived causes mentioned were unsafe water and food hygiene. 95(26.4%) of the respondents agreed to these statement, 15(4.2%) of the respondents fail to decide, while 25(6.9%) of the respondents strongly disagreed and 40(11.1%) of the respondents disagreed to these statement.

**Table 4.3:** IDPs attitude to reporting and investigation of outbreak

| S/N | Statement | SA | % | A | % | U | % | D | % | SD | % | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 1 | Practice food safety by having fresh food | 160 | 44.4 | 170 | 47.2 | 15 | 4.2 | 10 | 2.8 | 5 | 1.4 | 360 |
| 2 | The social distancing policy caused social-economic burdens. | 145 | 40.3 | 135 | 37.5 | 10 | 2.8 | 30 | 8.3 | 40 | 11.1 | 360 |

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| | | | | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 3 | Avoiding rotten food and maintained good-hygiene | 180 | 50 | 125 | 34.7 | 5 | 1.4 | 20 | 5.6 | 30 | 8.3 | 360 |
| 4 | Use safe water for drinking and household purposes | 155 | 43.1 | 147 | 40.8 | 15 | 4.2 | 18 | 5 | 25 | 6.9 | 360 |
| 5 | Effectiveness of hygiene measure to prevent cholera | 140 | 38.9 | 160 | 44.4 | 5 | 1.4 | 15 | 4.2 | 40 | 11.1 | 360 |

Source: Field Survey, 2022

Table 4.3 of the analysis which sought to find out the Attitudes and Practices towards Acute Water Diarrhea. Five questions were raised and analyzed, from which the first question shows that 160(44.4%) of the total respondents strongly agreed that they practice food safeaty by having fresh food 170(47.2%) agreed to that assertion, 15(4.2%) of the respondent fail to decide, while only 10(2.8%) and 5(1.4%) strongly disagreed and disagreed to that statement,

The second question of the analysis revealed that 145(40.3%) of the respondents strongly agreed that the social distancing policy was caused social-economic burdens. 135(37.5%) agreed to that statement, 10(2.8%) of the respondents fail to decide, while 30(8.3%) and 40(11.1%) strongly disagreed and disagreed.

The third question also shows that 180(50%) and 125(34.7%) of the total respondents strongly agreed and agreed that Avoiding rotten food and maintained good-hygiene, 5(1.4%) of the respondent fail to decide on this statement, while only 20(5.6%) and 30(8.3%) of the respondents strongly disagreed and disagreed, with this statement.

The fourth question shows that only 155(43.1%) strongly agreed, 147(40.8%) agreed that Use safe water for drinking and household purposes, while 15(4.2%) undecided, while only 18(5%) and 25(6.9%) strongly disagreed and disagreed to these statement.

While question five of the analysis table shows that 140(38.9%) of the total respondents strongly agreed that Effectiveness of hygiene measure to prevent cholera, 160(44.4%) of the respondents agreed to this assertion, 5(1.4%) of the respondent fail to decide on this statement, while only 15(4.2%) of the respondents strongly disagreed and 40(11.1%) of the total respondents disagreed to that assertion

**Discussion**

In this study, we first determined the aspects of knowledge of IDPs toward cholera as watery diarrhea that the participants were having knowledge about cholera as watery diarrhea. , this is in-line with the findings of Paraïso MN, Adekpedjou R, Flénon J, Makoutodé M 2015).which stipulated that the respondents have poor knowledge of acute watery diarrhea.

The results from the focus groups indicate that Proper sanitation and health education are important preventive measures, this is in line with the study undertaken by Wahed et al., (2013). Which stipulated that proper sanitation and health education are important preventive measures. As stressed in other studies that cholera could be prevented through cleaning the house and toilet this is in line with that Study carried out by (Goni chamba, 2016). Which

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posited that the respondents knew that washing hands before serving food prevents cholera cholera could be prevented through cleaning the house and toilet, washing hands before and after serving food prevents cholera.

In this study, we found that the respondents in IDPs camp opined that boiling or treating drinking water to make it safer this is in line with the study carried out by (Scobie HM, Phares CR, Wannemuehler KA, Nyangoma E, Taylor EM, et al. 2017) which stipulated that reported boiling or treating drinking water to make it safer.

## Conclusion and Recommendations

IDPs in Camps appear to have adequate knowledge of cholera and its preventive although older age groups appear to lack sufficient knowledge of cholera t preventive measures. However, targeted health education has been idenliliec necessary tool to enhance the application of their knowledge and also to cc some misgivings they have about some preventive factors of cholera. If pror utilized, Health Education will help to further curtail cholera infection ir community.

Interventions should be built on health education and improving access to c water, sanitation, and hygiene (WASH) practices. Individuals and households should be health educated and encouraged to practice basic hygiene behaviors; as proper hand washing and food handling, which can prevent the contraction spread of many diseases, not just cholera.

Health education will also stress the importance of social mobilization dissemination of messaging on cholera prevention through several media channels to widely spread the need to maintain and reinforce use of safe drinking water, 5 food, good personal hygiene, and adequate sanitation.

Intense Behaviour Change Communications (BCC) education should be incorporated through television radio broadcasts, public announcements declared in market information c< and house-to-house inspections and sensitizations should also be throughout the community. BCC education is critical in curbing the outbreak future cholera.

A Multisectoral approach needs to be emphasized and participation encouraged. This would include ensuring proper medical waste management by the Ministry of Health and access to clean portable water by the Ministry of resources.

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