

## Health needs and health seeking behaviour of Internally Displaced Persons in Dalori camp, Maiduguri, Borno State, Nigeria

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### Abstract

**Objectives:** In recent years, thousands of people have been displaced due to conflict and have been forced to live in crowded camps. The study assessed the common health problems, health needs and health-seeking behaviours of internally displaced persons in Nigeria.

**Methods:** A cross-sectional descriptive design was used to study 240 randomly selected respondents using an interviewer-administered semi-structured questionnaire. Data collected were analysed using descriptive and inferential statistical techniques.

**Results:** The prevalence of communicable disease outbreak was 59.2% and common health problems of the IDPs were malaria (97.9%), cold and catarrh (65.8%), heart diseases (56.7%), and diarrhoea (53.3%). Findings also revealed that access of IDPs to potable water, insecticide-treated nets (ITN), blankets and health care facility, as well as waste disposal, were generally poor. A large proportion of the respondents reported overcrowding (45.8%), inconducive housing (94.6%), dirty environment (54.6%) and poor food distribution (90%) in the camp. Furthermore, factors that predicted poor health among the IDPs include: educational status (OR: 0.397,  $p = 0.010$ ), poor water supply (OR: 0.343,  $p = 0.006$ ), hand washing (OR: 7.064,  $p = 0.004$ ), and overcrowding (OR: 0.055,  $p = 0.001$ ).

**Conclusion:** This study concluded that common health problems among the IDPs were malaria, cold and catarrh, heart diseases and diarrhoea and their health needs include lack of access to potable water and inadequate health care services.

**Keywords:** Health-seeking behaviour, Health – need, Internally Displaced Persons, Nigeria

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## Besoins de santé et comportement de recherche de santé des personnes déplacées dans leur propre pays Personnes dans le camp de Dalori, Maiduguri, Etat de Borno, Nigéria

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### Resume

**Objectifs:** Au cours des dernières années, des milliers de personnes ont été déplacées à cause du conflit et ont été forcées de vivre dans des camps surpeuplés. L'étude a évalué les problèmes de santé courants, les besoins en matière de santé et les comportements en matière de santé des personnes déplacées à l'intérieur du Nigéria.

**Méthodes:** Un modèle descriptif transversal a été utilisé pour étudier 240 répondants choisis au hasard à l'aide d'un questionnaire semi-structuré administré par un enquêteur. Les données recueillies ont été analysées à l'aide de techniques statistiques descriptives et inférentielles.

**Résultats:** La prévalence des épidémies de maladies transmissibles était de 59,2% et les problèmes de santé courants des personnes déplacées internes étaient le paludisme (97,9%), le rhume et le catarrhe (65,8%), les maladies cardiaques (56,7%) et la diarrhée (53,3%). Les résultats ont également révélé que l'accès des personnes déplacées à l'eau potable, aux moustiquaires imprégnées d'insecticide, aux couvertures et aux établissements de soins de santé, ainsi qu'à l'élimination des déchets, était généralement médiocre. Une proportion importante des répondants ont déclaré surpeuplement (45,8%), logements incontrôlables (94,6%), environnement sale (54,6%) et distribution de nourriture médiocre (90%) dans le camp. En outre, les facteurs prédictifs d'une santé médiocre parmi les personnes déplacées incluent: le niveau d'instruction (OR: 0,397, p = 0,010), un approvisionnement en eau insuffisant (OR: 0,343, p = 0,006), le lavage des mains (OR: 7,064, p = 0,004) et surpeuplement (OR: 0,055, p = 0,001).

**Conclusion:** cette étude a conclu que le paludisme, le rhume et le catarrhe, les cardiopathies et la diarrhée étaient les problèmes de santé les plus courants parmi les personnes déplacées à l'intérieur du territoire.

**Mots-clés:** Comportement en quête de santé, besoins en matière de santé, personnes déplacées dans leur propre pays, Nigéria

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## INTRODUCTION

Thousands of people are displaced globally every year due to armed conflict (1,2). They are forced to flee their homes in search of protection; some find refuge with families and friends, but most are crowded into camps where they become victims of further violence, mental stress, and disease (3). Internally Displaced Persons (IDPs) refer to individuals who are victims of the displacement due to violence, or natural disasters and have not been able to settle back in their place of origin (4-6).

The displacement of persons has been a serious problem in Nigeria and the world as a whole. The total number of displaced persons worldwide is currently estimated at about fifty million, with the majority of these people in Africa and Asia; approximately 26 million of these IDPs were displaced within the borders of their country of nationality (4-7).

Recently, Nigeria has experienced large-scale involuntary internal displacement caused by the terrorist group (Boko Haram) insurgency, especially in the North Eastern part of the country. The movement and settlement in improvised camps make the IDPs even more vulnerable. Internal Displacement Monitoring Centre argued that the IDPs are probably the largest group of vulnerable people in the world; they are often denied fundamental human rights; living in squalor and lacking physical security and freedom of movement (8). Moreover, IDPs are unable to improve their situation, since limited access to means of livelihood prevents them from becoming self-reliant.

In 2014, the number of IDPs in Nigeria had risen to 3.3 million persons, making Nigeria the largest country in sub-Saharan Africa with total IDP populations and among the top five worldwide (7,9). The figure is still rising owing to the increase in the occurrence of armed conflicts in many part of the country. The problem has persisted and become recalcitrant, leading to 279,000 new displacements and bringing the total number of IDPs still displaced by June 2017 to 3.7 million (10). However, a vast majority of IDPs in Nigeria reside in overcrowded IDP camps across the disturbed northern regions. These camps are mainly school facilities and empty government buildings with few or no basic amenities. Many IDPs remain deprived of the right to the necessities of life especially with regards to their health, in addition to the psychosocial impact on their well-being (11).

Although many studies have been conducted among the IDPs, little has been

documented in the area of health needs and health seeking behaviours of IDPs. This study, therefore, assessed the common health problems, health needs, hygienic practices as well as health-seeking behaviours of the IDPs. It also determined factors associated with poor health status among the IDPs. The findings of this research may serve as a tool for health education of the IDPs on personal hygiene and environmental sanitation. It will also assist policymakers in their quest to design programmes which aims at improving the live and health conditions of IDPs living in camps all over Nigeria.

## MATERIALS AND METHODS

**Design:** The study employed a cross-sectional research design.

**Study setting:** The study was conducted among the residents of Dalori IDPs camp, Maiduguri, Borno State. Dalori camp is one of the 32 IDP camps in Borno State, Nigeria (12). The untarred road that leads to the camp houses a handful of small retail shops. Most of the IDPs in the camp lived in tents made from locally sourced materials such as bags of cement, sacks and sticks, totalling 700 tents. They rely largely on foods donated by NGOs, religious organizations and individual philanthropists who come in to visit (13-14).

**Sample size determination:** The study's sample size was estimated using the formula:  $n = p(1-p)z^2/D^2$ . Where  $n$  = sample size;  $P$  = proportion of the phenomenon estimated at 11%,  $Z$  = standard normal deviate where confidence level is 1.96 at 95%;  $D$  = absolute precision or error margin (5%) (15). Approximately 11% of residents in the troubled Local Government Areas in Borno State are in displacement (7). Using a proportion of people in displacement as 11% and 10% non-response rate yielded a sample size of 165. However, the sample was increased to 240 to increase the power of the study.

**Sampling technique:** A multi-staged probability sampling technique was used to select the respondents; firstly, the entire camp was clustered into four cardinal zones – north, south, west and east, each containing one hundred and seventy – five (175) tents. Secondly, sixty (60) tents were drawn from each cluster using a systematic random technique ( $k = 3$ ), therefore, every third tent was selected. Finally, in each of the selected tents, one willing resident, male or female aged eighteen (18) years and above was

selected using a simple ballot method. A total of 240 subjects were therefore drawn from the whole camp.

**Research Instrument:** Data was collected with a validated semi-structured interviewer-administered questionnaire. The instrument was translated back-to-back to Hausa language. The instrument collected information on respondents' socio-demographic characteristics; duration of stay in camp; common health problems experienced; their perceived health needs; hygienic practices and health seeking behaviours. Health status was rated as poor health determined by the presence of at least one of the common health problems listed in table 2 versus good health.

**Validity and Reliability of the research instrument:** The face and content validity of the questionnaire were ascertained through scrutiny by experts in the field of Nursing, Public health, Epidemiology and Statistics. The reliability of the instrument was determined with a test-retest method following a pilot study of 10 respondents from Bakassi IDPs' camp, Borno State. The instrument yielded a Cronbach's alpha 0.70, therefore, it was deemed suitable for use in the current study.

**Method of data collection:** Data was collected by two trained research assistants who were local residents of Dalori town and who were proficient in English and the local languages (Hausa and Kanuri). Selected residents were approached individually and the purpose of the study was explained to them. Each of the items with the appropriate options was read to the respondents and responses were given accordingly.

**Ethical consideration:** Ethical clearance for the study was obtained from the Human Research Ethics Committee, Institute of Public Health, Obafemi Awolowo University, Ile-Ife (IPH/OAU/12/1017). Also, approval was obtained from the local authorities and managers of the IDP camp. In addition, informed consent was obtained from each respondent after the purpose of the study was explained to them, prior to data collection.

**Data analysis:** Data collected were analysed descriptively and inferentially using Stata 12.0 statistical program and the level of statistical significance was set at  $p < 0.05$ .

## RESULTS

A total of 240 respondents were recruited into the study. Findings revealed that the age of the respondents ranged from 18 to 57 years with a mean (SD) of  $34.47 \pm 11.14$  years. More than 30% of the respondents were aged between 21 – 30 years and female gender accounts for more than half of the respondents. Almost half (47.5%) of the respondents practice Islam and were already married (46.3%). A sizable proportion (37.1%) of them had no formal education while more than two – thirds of them (72.1%) had been in the camp for more than 5 months (Table 1).

Results from the study showed that almost all the respondents (99%) reported to have experienced at least one form of ailment or the other in the past one to three months. Common health problems among the IDPs were malaria fever (97.9%), infection such as common cold and catarrh (65.8%), heart diseases (56.7%) and diarrhoea (53.3%). Also, a large proportion of the respondents (80.8%) claimed to have witnessed incidence of communicable disease outbreak in the camp before (see table 2).

The hygienic practices of the IDPs are presented in table 3. It revealed that the major source of water in the camp is well/borehole (44.6%), and 80.0% of the respondents said that they did not treat the water before use and 84.6% did not practice regular hand washing. More than three-quarters (76.3%) practiced open dumping of refuse. All the respondents claimed they did not consume regular meals at the camp. This may be as a result of poor access to food supply as they only depend on aid by humanitarian organisations. Similarly, two-third (66.6%) claimed that they did not have insecticide-treated nets (ITN). In addition, there was an absence of enforcement of good hygiene and environmental sanitation in the camp (93.8%) (Table 3).

Findings from the study also revealed the living and environmental conditions of the camp. These include: overcrowding (45.8%) unconducive housing (94.6%), lack of privacy and dirty environment (54.6%). Majority of the respondents (90%) also claimed that they experienced poor food distribution both in regularity of supply, as well as adequacy in quality and quantity (Table 4).

Table 5 presents the coping strategies employed by camp residents. It revealed that 28.3% were involved in menial jobs. They were involved in activities such as sweeping (50%), hawking (20.6%) and truck pushing (17.6%) while 11.8% were involved in digging well for residents of the neighbouring villages. In

addition, 15.8% of the participants were involved in sexual activities in the camp.

Results on the health-seeking behaviours of the respondents are presented in table 6. More than 60% of the respondents reported visiting hospital/health worker when they were ill; however, a majority (82.9%) of the respondents reported inadequate health facility, in time of human and material resources to meet the health need of the people within the camp (see Table 6).

Logistic regression analysis was done to predict the health status from demographic characteristics of respondents and other factors. These variables significantly predicted poor health,  $\chi^2(10) = 211.88, p < 0.000$  and  $R^2 = 0.69$ . The following factors: educational status (OR: 0.397,  $p = 0.010$ ), source of water supply (OR: 0.343,  $p = 0.006$ ), hand washing (OR: 7.064,  $p = 0.004$ ), and overcrowding (OR: 0.055,  $p = 0.001$ ) were statistically significant (Table 7).

## DISCUSSION

This study assessed the common health problems, health needs, hygienic practices and predictors of poor health status among the residents of Dalori IDP camp. The poor general state of the camp, evidenced by overcrowding, unhealthy, unhygienic and in-hospitable environments, indicates economic impoverishment brought about by the displacement. Previous studies also agreed with these findings (17,18). In addition, there were reports of the breakout of epidemic and widespread of diseases among the residents especially among children and women which is often complicated by lack of healthcare facilities. Similarly, incidence of communicable disease outbreak has also been reported within the Ugandan IDP camp (19,20).

The lack of basic infrastructure in the IDP camps is indeed a substantial problem which collective efforts of governments, non-governmental organization and individual philanthropy have not adequately addressed (21). Many countries still lack the appropriate resources to address these health needs inherent in IDP populations, which Fielden (4) has described as very precarious with little or no hope for a durable solution. Paquet and Hanquet (22) observed that the public health implications of infectious diseases in IDP camps are still difficult to address both in developed and developing nations.

Findings from this study also revealed an alarming incidence of infectious diseases such as malaria, common cold and catarrh and diarrhoea

among the residents of Dalori camp. The most prevalent health condition is malaria which may have been heightened by unavailable or insufficient Insecticide Treated Nets, which would have provided covering against mosquitoes bite at night. Several authors have also supported the assertion that malaria fever is the highest ranking health problem of IDPs camp across Africa (18,23).

Infectious diseases occurrence in Dalori camp is particularly prevalent among the IDPs owing to infrastructural collapse, deplorable environmental condition, lack of basic health knowledge, and/or promotion practice. It also includes poor feeding in the camp which could result in weakening of their immune systems thus making them to be more susceptible to infection.

Furthermore, the results revealed that the residents lacked access to potable water and were unable to make the available subterranean water fit for drinking. In addition, the practice of effective and regular hand washing particularly after using the toilet is very poor. This was also complicated by the lack of a system for enforcing hygiene practices and environmental sanitation among the IDPs. These findings agree with previous study that revealed that environmental problems including water, sanitation, and overcrowding are responsible for health-related problem among the IDPs (20). Findings from study conducted by Mooney *et al* revealed that IDPs lack access to food, water and Medicare due to shortages (24). This was also supported by other authors the findings of (23,25) who reported that most of the IDP camps are characterised by the absence of shelter, food shortages and poor access to healthcare. This may be so because each unit of the camps contains more than an average number of people expected in a family setting. Thus, making planning and logistics difficult for government and well spirited individuals.

Some camp residents engage in negative and unwholesome behaviours such as promiscuous sexual activities to earn a means of survival. Durosaro and Ajiboye (26) documented in their study among the IDPs that female adolescents succumb to commercial sex and sexual molestation and the male also give themselves to being recruited for armed conflicts in order to survive harsh economic realities. Furthermore, strategies employed by the respondents in meeting their health needs include visiting the hospital/health workers within the camp or in the neighbouring village. The also patronise traditional healers as well. This agree

with the findings of Roberts and Odong (20) who reported that respondents use biopsychosocial health services such as health centres, hospitals, and health workers. However, the available facilities in this camp were largely inadequate, crippled and non-functional.

## CONCLUSION

The findings of this study revealed that residents of IDP camps live in a deplorable and unhygienic environment which exposes them to a constant outbreak of infectious disease. Factors such as educational status, water supply, hand washing, overcrowded living conditions and dirty environment significantly contributed to the poor IDPs' health status. It is therefore recommended that efforts from all quarters should be geared towards reinforcing hygienic practices in the camp, providing adequate water supply, ameliorating overcrowding and providing adequate access to healthcare.

**Conflict of interest:** None to declare

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**Table 1:** Socio-demographic characteristics of respondents (n = 240)

<b>Characteristics</b>	<b>Frequency</b>	<b>%</b>
<b>Age (34.47 ± 11.14 years)</b>		
≤20	31	12.9
21-30	76	31.7
31-40	52	21.7
41-50	57	23.8
51-60	24	10.0
<b>Gender</b>		
Male	99	41.3
Female	141	58.8
<b>Religion</b>		
Christianity	92	38.3
Islam	114	47.5
Others	34	14.2
<b>Marital Status</b>		
Married	111	46.3
Single	55	22.9
Divorced	24	10.0
Separated	25	10.4
Widowed	25	10.4
<b>Educational Status</b>		
No Formal Education	89	37.1
Primary	68	28.3
Secondary	55	22.9
Tertiary	28	11.7
<b>Duration of stay in the Camp</b>		
1-4 months	67	27.9
5-8 months	88	36.7
9-12 months	36	15.0
1 year and above	49	20.4

**Table 2:** Common Health Problems among the IDPs

<b>Health Problems</b>	<b>Yes (%)</b>	<b>No(%)</b>
Malaria disease	235(97.9)	5(2.1)
Heart diseases	136(56.7)	104(43.3)
Catarrh	158(65.8)	82(34.2)
Diarrhoea	128(53.3)	112(46.7)
Epidemic outbreak	194(80.8)	46(19.2)

**Table 3:** Hygiene practices of the IDPs (n = 240)

<b>Variables</b>	<b>Frequency</b>	<b>%</b>
<b>Water Sources</b>		
Well/Borehole	107	44.6
Tap water	-	-
Buying of sachet water	45	18.8
Other such as stream	88	36.7
<b>Method of keeping water safe for drinking</b>		
By boiling	4	1.7
By letting the water settle	192	80.0
By filtering	19	7.9
Others methods (Use of alum)	25	10.4
<b>Hand washing after toileting</b>		
Yes	20	8.3
No	203	84.6
I am not sure	17	7.1
<b>Method of disposal of refuse</b>		
Dustbin/bags	24	10.0
Rubbish pit	32	13.3
Open space	183	76.3
Others	1	0.4
<b>Consumption of regular meals at the camp</b>		
Regular	0	0.0
Not regular	240	100.0
<b>Accessibility of drugs/health facilities when sick</b>		
Accessible	47	19.6
Non-accessible	193	80.4
<b>Adequate provision of insecticide-treated nets, blankets</b>		
Provided	80	33.3
Not provided	160	66.7
<b>Enforcement of good hygiene and environmental sanitation</b>		
Enforced	15	6.3
Not enforced	225	93.8
<b>Exposure to strong heat/sunlight</b>		
Exposed	6	2.5
Not exposed	234	97.5

**Table 4:** General state of the camp

<b>Overcrowding</b>	<b>Frequenc y</b>	<b>%</b>
Always	110	45.8
Sometimes	116	48.4
Never	14	5.8
<b>Dirty Environment</b>		
Always	131	54.6
Sometimes	84	35.0
Never	25	10.4
<b>Poor Food Distribution</b>		
Always	216	90.0
Sometimes	16	6.7
Never	8	3.3
<b>Lack of Conducive Housing</b>		
Always	240	100.0

**Table 5:** Coping strategies adopted by the IDPs

Variables	Frequency	%
<b>Involvement in menial jobs (n = 240)</b>		
Involved	68	28.3
Not involved	172	71.7
<b>Types of menial jobs involved in (n = 68)</b>		
Hawking	14	20.6
Digging	8	11.8
Sweeping	34	50.0
Truck pushing	12	17.6
<b>Involvement in Sexual Activities</b>		
Yes	38	15.8
No	202	84.2

**Table 6:** Health seeking behaviour of the Respondents during illness

Health seeking behaviour (n = 240)	Frequency	%
Go to a hospital/health worker	156	65.0
Consult counsellors	19	7.9
Visit Traditional healers	43	17.9
Visit clinic in the neighbouring village	22	9.2
<b>Adequacy of Health Facility</b>		
No	199	82.9
Yes	41	17.1

**Table 7:** Logistic regressions model predicting the Health Status of the IDPs

Poor health	OR	SE	Z	P>z	[95% C I]	
Age	1.009	0.031	0.3	0.764	0.95	1.07
Gender	0.540	0.215	-1.55	0.121	0.25	1.18
Marital Status	1.381	0.403	1.11	0.268	0.78	2.45
Educational Status	0.397	0.143	-2.56	<b>0.010</b>	0.20	0.81
Source of water supply	0.343	0.132	-2.77	<b>0.006</b>	0.16	0.73
Hands washing	7.064	4.760	2.9	<b>0.004</b>	1.89	26.46
Refuse disposal	0.444	0.285	-1.27	0.205	0.13	1.56
Overcrowding	0.055	0.047	-3.4	<b>0.001</b>	0.01	0.29

p value in bold is significant at  $p < 0.05$