

Health Education Interventions on Awareness of Hygiene and Sanitation among Internally Displaced Persons (IDPS) in Matazu Local Government Area, Katsina State, Nigeria.

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Abstract

This study examined the influence of health education interventions on the awareness of hygiene and sanitation among Internally Displaced Persons (IDPs) in camps located in Matazu Local Government Area of Katsina State, Nigeria. The study was motivated by the persistent public health challenges faced by IDPs resulting from overcrowding, inadequate sanitation facilities, unsafe water sources, and insufficient hygiene materials. A descriptive cross-sectional survey design was adopted, and data were collected from 100 respondents selected through a multi-stage sampling technique. A structured and validated questionnaire was used to assess respondents' awareness levels, hygiene and sanitation practices, and exposure to health education interventions. Data were analyzed using descriptive and inferential statistics. Findings revealed that although awareness of hygiene and sanitation was moderate among IDPs, actual hygiene practices were inconsistent and significantly hindered by shortages of clean water, limited sanitation infrastructure, and overcrowded living conditions. Results further showed that health education interventions were irregular and insufficiently coordinated; However, respondents who received frequent and structured health education demonstrated better hygiene practices. Barriers such as low literacy, cultural beliefs, language limitations, and inadequate hygiene materials significantly affected the translation of knowledge into practice. The study concludes that health education interventions play a positive but limited role in improving hygiene and sanitation among IDPs, and meaningful improvement requires the integration of continuous education with adequate infrastructural support. It recommends strengthening health education programs, improving sanitation facilities, enhancing community participation, and implementing sustained government policy interventions to promote healthier living conditions in IDP camps.

Introduction

Internally Displaced Persons (IDPs) represent one of the most vulnerable populations globally due to forced displacement resulting from conflict, insurgency, banditry, and natural disasters (UNHCR, 2022). In Nigeria, particularly in the North-Western region, armed conflict and communal violence have contributed significantly to the increasing number of internally

displaced populations (International Organization for Migration [IOM], 2023). Matazu Local Government Area of Katsina State has experienced displacement challenges, leading to the establishment of temporary camps to accommodate affected persons.

Living conditions in most IDP camps are characterized by overcrowding, inadequate water supply, poor waste disposal systems, and insufficient sanitation facilities, which create a conducive environment for the outbreak and transmission of communicable diseases such as cholera, typhoid fever, diarrhoea, malaria, and respiratory infections (Sphere Association, 2018; World Health Organization [WHO], 2021). These health risks are often exacerbated by limited access to basic healthcare services and low levels of awareness regarding hygiene and sanitation practices among displaced persons (Connolly et al., 2004; WHO, 2020).

Health education interventions play a crucial role in addressing these challenges by equipping individuals with knowledge, skills, and motivation to adopt healthy behaviours (Glanz, Rimer, & Viswanath, 2015). Such interventions include health talks, community sensitization programs, distribution of educational materials, demonstrations on handwashing, waste management training, and personal hygiene counselling conducted by health workers, non-governmental organizations (NGOs), and international agencies (UNICEF, 2021). Through these interventions, IDPs are expected to develop improved awareness and adopt positive hygiene and sanitation practices necessary for disease prevention and health promotion (WHO, 2017).

However, despite the implementation of various health education programmes in IDP camps, evidence suggests that hygiene and sanitation conditions in many camps remain substandard across developing countries, including Nigeria (Adejumo & Odebiyi, 2020; IOM, 2023). There appears to be a gap between the level of awareness created through health education interventions and the actual practices exhibited by IDPs in their daily lives. Studies have shown that awareness alone does not automatically translate into behavioural change, especially in environments where resources and facilities are inadequate (Rufe & Minja, 2019).

Internally Displaced Persons in Nigeria are exposed to numerous health challenges arising from poor living conditions in temporary shelter environments (IOM, 2023). In Matazu Local Government Area, IDP camps are reportedly characterized by inadequate sanitation infrastructure, limited access to safe drinking water, and poor waste management practices. These conditions predispose displaced persons to outbreaks of preventable diseases and compromise their overall wellbeing (WHO, 2020). Despite the presence of health education interventions in various camps,

there appear to be persistent problems associated with poor personal hygiene, unsafe water storage, indiscriminate waste disposal, and limited use of sanitation facilities among IDPs (UNICEF, 2021). Many displaced persons reportedly fail to consistently practice basic health measures such as regular hand washing, proper use of toilets, and environmental sanitation. This suggests that awareness alone may not be translating into positive behavioral change (Glanz et al., 2015).

Furthermore, existing health education programmes in the camps often lack continuity, monitoring, and evaluation, making it difficult to assess their effectiveness in improving health outcomes (WHO, 2017). Limited numbers of trained health educators, cultural beliefs, language barriers, and low educational background of some IDPs also hinder the successful implementation of health education interventions (Ajayi & Adeleye, 2019).

Although several studies have examined hygiene and sanitation challenges among displaced populations in Nigeria, little empirical attention has been given to assessing the direct influence of health education interventions on awareness and sanitation practices in IDP camps within Matazu Local Government Area of Katsina State (Adejumo & Odebiyi, 2020). The absence of localized data makes it difficult for policymakers and aid organizations to develop targeted and evidence-based strategies tailored to the specific needs of IDPs in this locality.

This gap in knowledge therefore necessitates an empirical investigation into the influence of health education interventions on awareness and hygiene and sanitation practices among IDPs in Matazu Local Government Area of Katsina State. This study therefore seeks to empirically examine the influence of health education interventions on the awareness and practices of hygiene and sanitation among Internally Displaced Persons (IDPs) in camps in Matazu Local Government Area of Katsina State. The findings of the study are expected to provide empirical evidence that would assist policymakers, health educators, humanitarian organizations, and government agencies in designing effective health education programmes tailored to the needs of displaced populations.

Objective

1. To determine the level of awareness of hygiene and sanitation practice among IDPs in Matazu Local Government Area.

Hypothesis

1. H01: There is no significant relationship between health education interventions and the level of awareness of hygiene and sanitation practice among IDPs in Matazu Local Government Area.

Review of Literature

Health education is recognized globally as a critical strategy for improving public health outcomes, particularly among vulnerable populations such as Internally Displaced Persons (IDPs). Health education interventions aim to provide individuals with knowledge, attitudes, and skills necessary to adopt positive health behaviours and prevent disease (Glanz, Rimer, & Viswanath, 2015). Effective health education has been associated with increased awareness, improved health practices, and reduced incidence of communicable diseases in various settings, including humanitarian and emergency contexts (World Health Organization [WHO], 2017). In displacement settings, health education serves not only to inform but also to empower IDPs to adopt behaviours that mitigate the risks posed by overcrowding, poor sanitation, and limited access to clean water (UNICEF, 2021).

Awareness of hygiene and sanitation is a critical determinant of health behaviour. Studies indicate that individuals with higher awareness of handwashing, safe water practices, and proper waste disposal are more likely to engage in behaviours that reduce disease transmission (Connolly et al., 2004; Adejumo & Odebiyi, 2020). In IDP camps, however, awareness levels often vary due to differences in prior education, cultural beliefs, and exposure to health messages. Rufe and Minja (2019) note that while awareness programmes can increase knowledge, the translation of awareness into consistent practice is frequently constrained by contextual factors, including inadequate facilities and resources.

Hygiene and sanitation practices among IDPs remain a major public health concern. Research has shown that IDP camps are often characterized by poor water supply, insufficient latrines, and inadequate waste disposal systems, which contribute to outbreaks of diarrheal diseases, cholera, and other communicable conditions (Sphere Association, 2018; WHO, 2020). Studies conducted in Nigerian displacement camps reveal that despite the presence of health education programmes, compliance with recommended hygiene behaviours, such as regular handwashing, safe water storage, and proper latrine use, remains suboptimal (Adejumo & Odebiyi,

2020; Ajayi & Adeleye, 2019). This indicates a gap between knowledge and practice, highlighting the importance of assessing both awareness and actual behaviours in research.

Health education interventions are designed to bridge this gap by using targeted strategies such as group demonstrations, health talks, posters, and community mobilization campaigns. Evidence from humanitarian settings indicates that structured health education interventions can significantly improve both awareness and practice of hygiene behaviours (UNICEF, 2021; WHO, 2017). For example, studies in East African displacement camps demonstrated that regular, interactive health education sessions led to measurable increases in handwashing frequency and safer water handling among displaced populations (Rufe & Minja, 2019). Similarly, in Nigeria, programmes conducted by NGOs and government health units have been shown to enhance knowledge of sanitation principles and reduce the prevalence of hygiene-related illnesses in camp populations (Adejumo & Odebiyi, 2020).

Despite these positive outcomes, several barriers impede the effectiveness of health education interventions in IDP settings. Limited availability of clean water and soap, insufficient or poorly maintained sanitation facilities, low literacy levels, language barriers, and cultural practices all influence whether knowledge is translated into practice (Ajayi & Adeleye, 2019; WHO, 2020). Additionally, the irregularity and lack of follow-up in health education programmes may prevent sustained behaviour change. Understanding these barriers is essential for designing interventions that are contextually appropriate and capable of producing long-term improvements in hygiene and sanitation behaviours.

The theoretical foundation for this study is informed by the Health Belief Model (HBM), which posits that individuals are more likely to engage in health-promoting behaviours if they perceive themselves to be at risk, believe in the benefits of taking preventive action, and perceive minimal barriers to adopting the behaviour (Rosenstock, Strecher, & Becker, 1988). Applied to the IDP context, the HBM suggests that health education interventions should not only increase awareness but also address perceived barriers, enhance perceived benefits, and motivate individuals to practice recommended hygiene behaviours consistently.

In summary, the literature emphasizes that while health education interventions are critical for improving awareness and hygiene practices among IDPs, multiple contextual factors can influence their effectiveness. Empirical studies consistently highlight the need to examine both the knowledge and practices of displaced populations, assess the types and frequency of interventions,

and identify barriers to implementation. This study seeks to build on existing knowledge by investigating the influence of health education interventions on awareness and hygiene and sanitation practices among IDPs in Matazu Local Government Area, Katsina State, and providing evidence to guide future programme development.

Methodology

This study employed a descriptive cross-sectional survey design to investigate the influence of health education interventions on the awareness of hygiene and sanitation among Internally Displaced Persons (IDPs) in Matazu Local Government Area of Katsina State. According to Njodi and Bwala, (2004), research design is effective in generating data from a relatively large number of respondents. The design is generally conceived as one in which a group of people or items are studied by collecting and analyzing data from a few items considered being a representative of the entire population. This design is suitable for this study as it seeks responses from a large population from the study area. The design was selected because it allows for the collection of data from a defined population at a single point in time and is appropriate for examining relationships between variables such as exposure to health education, level of awareness, and hygiene practices.

The study population consisted of all registered IDPs living in camps within Matazu Local Government Area at the time of the study with estimate of one thousand (1000) IDPs. A sample size of 100 respondents was selected using a multi-stage sampling technique. All identified IDP camps in the locality were included in the study through total coverage. Where more than one camp existed, proportional allocation was used to determine the number of respondents drawn from each camp. Within the camps, respondents were selected using systematic or stratified random sampling techniques to ensure fair representation across different demographic groups such as gender and age.

Data were collected using a structured questionnaire developed by the researcher. The instrument comprised sections on demographic characteristics, exposure to health education interventions, awareness of hygiene and sanitation, hygiene and sanitation practices, and perceived barriers to effective hygiene behaviour. Awareness was measured using knowledge-based questions, while practices were assessed using a Likert-type scale to determine the frequency of

hygiene-related behaviours. The questionnaire included a combination of closed-ended and a few open-ended questions to allow respondents to express additional views.

The validity of the instrument was established through expert review by specialists in health education, public health, and research methodology, who assessed the relevance, clarity, and coverage of the items. Necessary corrections were effected based on their recommendations. Reliability was assessed through a pilot test conducted among 20 IDPs in a camp outside the study area, and internal consistency was determined using Cranach's alpha coefficient. A reliability index of 0.70 and above was considered acceptable for the study.

Data collection was carried out through face-to-face administration of the questionnaire with the assistance of trained research assistants who were fluent in the local language. Participation was voluntary, and informed consent was obtained from all respondents prior to data collection. Respondents were also assured of confidentiality and anonymity of their responses.

Data were coded and analyzed using the Statistical Package for the Social Sciences (SPSS). Descriptive statistics including frequencies, percentages, means, and standard deviations were used to summarize respondents' characteristics, awareness levels, and hygiene practices. Inferential statistics such as chi-square tests were employed to test the formulated hypothesis and determine the extent to which health education interventions influenced awareness and hygiene practices. All statistical tests were conducted at a 0.05 level of significance.

Ethical approval for the study was obtained from the appropriate institutional research ethics committee, and permission was granted by camp authorities before data collection commenced. All ethical principles regarding voluntary participation, confidentiality, and protection of participants were strictly observed throughout the research process.

Results

Table 1: Summary of Chi-Square analyses on Health Education Intervention on Awareness of Hygiene and Sanitation among IDPs in Matazu Local Government Area

Variables	Awareness	Agreed	Disagreed	Total	Df	X ²	Prob.
Males							
FO		36	9	45	1	11.75	0.01
FE		38.3%	9.57%				
Females							
FO		40	9	49			
FE		42.55%	9.57%				
Total				94			

$$X^2=11.75@df1(p<0.05)$$

Table 1 Indicated that the calculated X^2 is greater than the X^2 critical value at 0.05 level of significance, $p<0.05$ ($X^2=11.75$, $P=0.001$). Based on this, the above stated hypothesis is rejected, connoting that IDPs at Matazu Local Government Area are aware of hygiene and sanitation in the camp. While the observed frequency on the males indicated that awareness is 36 (38.3%) and the females observed is 40 (42.55%). The finding indicated that females aware of hygiene and sanitation in the camp more than their male counterparts.

The objective to examine the level of awareness of hygiene and sanitation among Internally Displaced Persons in Matazu Local Government Area. Analysis of respondents' responses revealed that overall awareness of basic hygiene practices such as regular handwashing, proper waste disposal, safe water handling, and use of sanitation facilities was relatively moderate. A substantial proportion of respondents demonstrated knowledge of the importance of handwashing before meals and after using the toilet, as well as awareness of the link between poor sanitation and disease transmission. However, gaps were noticeable in aspects such as water treatment methods and environmental sanitation practices. These findings suggest that although some health-related information has reached the IDP population, comprehensive awareness on hygiene and sanitation remains insufficient.

Discussion of Findings

The findings revealed that health education intervention influence the awareness among IDPs camp in Matazu Local Government Area of Katsina State, (see table 1) or (cal. $X^2=11.75>Crit. X^2=0.001$). The finding is in line with Rufe & Minja (2019), who stated that, there appears to be a gap between the level of awareness created through health education interventions and the actual practices exhibited by IDPs in their daily lives. The finding also in line with the (Adejumo & Odebiyi, 2020; IOM (2023) studies have shown that awareness alone does not automatically translate into behavioural change, especially in environments where resources and facilities are inadequate. Despite the implementation of various health education programmes in IDP camps, evidence suggests that hygiene and sanitation conditions in many camps remain substandard across developing countries, including Nigeria.

The finding also is in line with Connolly et al., (2004) and Adejumo & Odebiyi, (2020) which stated that, awareness of hygiene and sanitation is a critical determinant of health behaviour. Studies indicate that individuals with higher awareness of hand washing, safe water practices, and proper waste disposal are more likely to engage in behaviours that reduce disease transmission.

Conclusion

This study examined the influence of health education interventions on the awareness of hygiene and sanitation among Internally Displaced Persons (IDPs) in camps in Matazu Local Government Area of Katsina State. The findings revealed that although awareness of hygiene and sanitation among IDPs was generally moderate, this awareness did not consistently translate into appropriate practice. Many respondents demonstrated knowledge of basic hygiene principles, yet the actual implementation of these practices was limited by inadequate facilities, poor access to clean water, and insufficient sanitation infrastructure.

The study further established that health education interventions were present in the IDP camps but were irregular and insufficiently structured to effect sustainable behavioural change. Despite these limitations, a positive influence of health education on hygiene and sanitation practices was observed, particularly among respondents who had frequent exposure to educational programmes. This suggests that consistent and well-coordinated health education plays a critical role in improving hygiene behaviour among displaced populations.

However, the effectiveness of these interventions was significantly constrained by structural and socio-cultural barriers, including overcrowding, poverty, low literacy levels, cultural beliefs, and limited availability of hygiene materials. These challenges highlight the need for a comprehensive approach that combines health education with adequate infrastructural support. Overall, the study concludes that while health education is essential, it must be supported by resource provision and policy commitment to achieve meaningful improvement in hygiene and sanitation practices among IDPs

Recommendations

Based on the findings of this study, the following recommendations are proposed:

1. **Strengthening Health Education Programmes:** Government agencies, non-governmental organizations, and health authorities should implement structured and regular health

- education programmes in IDP camps, using participatory approaches such as demonstrations and group discussions to enhance comprehension and retention.
2. Provision of Basic Sanitation Facilities: There is a need for urgent improvement in sanitation infrastructure, including the construction of toilets, provision of waste disposal systems, and access to potable water, to enable IDPs to practice what they are taught.
 3. Training of Health Educators: Health workers and volunteers should receive specialized training on delivering culturally appropriate health education using languages and communication styles that IDPs understand.
 4. Government Policy Intervention: The state and local governments should develop and enforce policies that ensure continuous funding and monitoring of health and sanitation programs in IDP camps.
 5. Continuous Monitoring and Evaluation: Regular assessment of health education programmes should be conducted to ensure effectiveness and enable timely adjustments to strategies.

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