ASSESSMENT OF AWARENESS AND AVAILABILITY OF UNICEF WATER, SANITATION AND HYGIENE (WASH) TOWARDS ERADICATION OF OPEN DEFAECATION AMONG COMMUNITIES IN GOMBE STATE, NIGERIA

BY

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Abstract

This study assessed the awareness and availability of UNICEF Water Sanitation and Hygiene (WASH) towards eradicating open defecation among communities in Gombe State, Nigeria.. Specifically, the study assessed the level of awareness of communities about UNICEF WASH activities towards eradication of open defaecation as well as the availability of UNICEF WASH facilities in communities towards eradication of open defaecation. Descriptive survey research design was used. The population for this study was 3,871,179 human habitats of Gombe State Nigeria. The sample size of 783 was selected using multistage sampling procedures of stratified, simple random and proportionate sampling techniques. The instrument for data collection was a structured questionnaire by the researcher. Descriptive statistics of frequency, simple percentage, mean and standard deviation were used to analyse the data collected. The result revealed that there was significant awareness of UNICEF WASH activities towards the eradication of open defaecation among communities in Gombe State, Nigeria ($t = 153.845$, $p = 0.000$); there was no significant availability of UNICEF WASH facilities ($t = 1.621$; $p = 0.71$). Based on the findings, the study concluded that community members in Gombe State, Nigeria are aware of UNICEF WASH activities towards the eradication of open defaecation; UNICEF WASH facilities towards the eradication of open defaecation are not available and the available ones are not utilized; The study recommends among others the need to enhance the awareness of UNICEF WASH activities for open defaecation eradication among community members and the need to address the factors contributing to non-compliance with UNICEF WASH campaigns against open defaecation which includes improving water supply infrastructure, and rehabilitation and maintenance of latrines to ensure they remain functional and sanitary.

Keywords: UNICEF, WASH, Open Defaecation.

Introduction

Safe Water, Sanitation and Hygiene (collectively known as WASH) are crucial for human health and well-being. Furthermore, millions of people globally lack adequate WASH services and consequently suffer from or are exposed to a multitude of preventable

illnesses. Lack of safe UNICEF WASH negatively impacts the quality of life and undermines fundamental human rights. Poor UNICEF WASH services also weaken health systems, threaten health security and places a heavy strain on economies. Safe drinking-water, sanitation and hygiene are crucial to human health and well-being. Safe UNICEF WASH is not only a prerequisite to health but contributes to livelihoods, school attendance, and dignity and helps to create resilient communities living in healthy environments. Drinking unsafe water impairs health through illnesses such as diarrhoea, and untreated excreta contaminates groundwater and surface waters used for drinking-water, irrigation, bathing and household purposes. Chemical contamination of water continues to pose a health burden, whether natural in origin such as arsenic and fluoride, or anthropogenic such as nitrate (WHO, 2012).

Awareness about UNICEF WASH activities plays a key role in their utilization. In 2013, the Planning Commission reports that the sanitation coverage and extension of sanitation services are necessary but not an improvement in hygienic behaviour and an overall feeling of wellbeing. Sufficient intervention may be required at each level to ensure that the more significant benefits of improved sanitation behaviour percolate to every member of the community, for improved quality of life anda sense of general well-being (Issaka and Enoch, 2013).Rajendran and Rajasekaran (2013)observe from field-level analyses in Salem and Thanjavur districts. The majority of people don't know the importance of toilets, though the government provides public welfare schemes and subsidies for constructing toilets. Notably, people do not have adequate awareness about toilets. Therefore, the government should take steps to create awareness with the help of local youth in rural areas. This shows that awareness plays a key role in the utilization of sanitary facilities.

There is growing attention from urban planners, health practitioners, environmentalists and international development agencies such as WHO and UNICEF about the urgent need to end the practice of open defaecation (OD) globally (Desai, McGarlane & Graham, 2015; Galan, Kim & Graham, 2013; Gertler, Shah, Alzua, Cameron, Martinez, & Patil, 2015; UNICEF/WHO, 2015). Open defaecation is the worst kind of sanitation that involves disposing human waste in garbage bins, water bodies, public areas, forests, farmlands or other open and green spaces (UNICEF/WHO, 2015). Not only that OD poses a substantial threat to environmental and human health, safety, privacy, and dignity, especially for women and children, it is one of the strongest expressions of extreme poverty (Abubakar, 2017, Desai, 2015; Giné-Garriga, Flores-Baquero, de Palencia, & Pérez-Foguet, 2017). Because it contaminates food and drinking water, Open Defaecation has been associated with higher incidence of excreta-related diseases like hepatitis, trachoma, typhoid and diarrhoea as well as child stunting and mortality (Mara, 2017; Hulland Martin, Dreibelbis, & Winch, 2015; Spears, Ghosh & Coming, 2013). Open defaecation practice is also linked to environmental pollution and loss of income and productive time including missed school days by children (Jewitt, 2011; Kerstens, Spiller, Leusbrock, & Zeeman, 2016).

In Nigeria, however, the 2016 World Development Indicators reveal that Open Defaecation prevalence has increased from 24% of the total population in 1990 to 25.1% in 2015, compared with an average of 20% among the least developing countries (World Bank, 2016). Due to poor sanitation, Nigeria loses about ? 455 billion annually or about 1.3% of its GDP, in addition to public exposure to acute excreta-related illnesses, some of which were mentioned above (WSP, 2012). The researcher observed that most members of communities in Gombe State have a routine of defaecating in the open very early in the morning when the place is still dark and do not make use of the available toilets or latrines. Casual interactions with some members of the communities revealed that some practice open defecaetion for fun, not minding the risks/consequences associated with this practice. Others do it as a matter of convenience as it does not confine them to any odour or the risks of sharing latrines with others.

The researcher also observed that most children have not been taught the proper use of latrines, hence, they grow up being scared of using pit latrines as some of them are deep pits and are mostly located in dark corners. Others believe that children defaecating openly does not really constitute a health hazard as compared to those of adults. Culture plays a significant role in promoting the practice of open defaecation in Gombe State,as some people claimed they were brought up seeing their elders defaecating in the open and the faeces were viewed as manure and were never educated about the associated risks of this dangerous practice. Some houses were built without provisions for latrines and other sanitary facilities, as it is believed that whoever wishes to answer the call of nature should do so in the available bushes and whoever wanted to bath goes to the stream.

Another very crucial factor that promotes open defaecation is the non-availability of water and poor state of sanitary facilities among communities in Gombe State. The few households that had latrines do not have access to water for their proper usage. The few that uses latrines finds it difficult to evacuate it once it is full. They therefore resort to open defaecation. Most communities in Gombe Stateare sited in rural areas, where there are bushes, farmlands, and forests, and generally, sanitation facilities are absent. This implies that these communities defaecate in these available bushes as a culture. Some communities in Gombe State defaecate on bare ground in bushes, dark corners and even rivers that pass through their communities. Observations by the researcher revealed that most rural households in communities in Gombe State do not have any access to toilet facilities at home and resort to the use of available bushes, uncompleted buildings and open spaces within their neighbourhood. Human faeces are found in open spaces and in between houses, some rapped inside black polythene bags, with the resultant stench and flies nuisance. The sight and smell of faeces within residential neighbourhoods is common and reduces the aesthetic quality of the environment and causes embarrassment to residents in the communities.

The purpose of this study was to assess the awareness and availability of UNICEF Water Sanitation and Hygiene (WASH) towards eradicating open defaecation among

communities in Gombe State, Nigeria. Specifically,this study assessed:

i. the level of awareness of communities about UNICEF WASH activities towards eradication of open defaecation among communities in Gombe State, Nigeria;
ii. the availability of UNICEF WASH facilities in communities towards eradication of open defaecationamong communities in Gombe State, Nigeria;

This study attempt to answer the following research questions:

1. What is the awareness about UNICEF WASH activities towards eradication of open defaecation among communities in Gombe State, Nigeria?
2. What are the availability ofUNICEF WASH facilities towards eradication of open defaecation among communities in Gombe State, Nigeria?

The study tested the following hypotheses:

H_{01}: There is no significant awareness of UNICEF WASH activities towards eradication of open defaecation among communities in Gombe State, Nigeria.

H_{02}: There is no significant availability of UNICEF WASH facilities towards eradication of open defaecation among communities in Gombe State, Nigeria.

Methodology

The study assessed awareness and availability of UNICEF's Water, Sanitation and Hygiene (WASH) towards eradicating open defaecation among communities in Gombe State, Nigeria. A survey research design was used for this study.

Population for this study comprised all the human habitants in the eleven (11) local government areas in the three (3) senatorial districts of Gombe State which are Gombe North, Gombe Central and Gombe South. According to the population census (2006), the population of Gombe State was 3,871,179 with an annual population change of 3.3% (National Bureau for Statistics, 2021).

A sample size of seven hundred and eighty-three (783) respondents from Gombe State communities was used for this study. This was arrived at using research advisor (2006) which opined that for a population of 3,871,179, the right sample size of 783 based on the confidence level of 95.0% with a marginal error of 0.035 was used. The researcher adopted multi-staged sampling procedure to draw a sample for this study.

A researcher-developed closed-ended questionnaire on assessment of awareness, availability and utilization of UNICEF's Water, Sanitation and Hygiene (WASH) towards eradicating open defaecation among communities in Gombe State, Nigeria was used as an instrument for data collection.

The data were sorted, coded and analyzed. Descriptive statistics was used to computesthe demographic characteristics of the respondents using frequencies and simple percentages. Mean and standard deviation were used to answer Research questions.

Inferential statistics of one-sampled t-test was used to test hypotheses at 0.05 level of significance.

Results

Seven hundred and eighty-three (783) copies of questionnaire were administered, filled and collected for the analysis. Descriptive statistics of frequencies and simple percentages were used to analyse the demographic characteristics of respondents. Mean and standard deviation were used to answer Research questions. Inferential statistics of one-sample t-test was used to test hypotheses at 0.05 level of significance.

Table 1: Demographic Characteristics of the Respondents

VARIABLES	FREQUENCY	PERCENTAGE (%)
Age		
16 – 21	147	18.8
22 – 27	221	28.2
28 – 33	205	26.2
34 and above	210	26.8
Total	**783**	**100.0**
Gender		
Male	380	48.5
Female	403	51.5
Total	**783**	**100.0**
Marital Status		
Single	274	35.0
Married	410	52.4
Divorce	36	4.6
Widow	63	8.0
Total	**783**	**100.0**
Level of Education		
Non-formal	148	18.9
Primary	174	22.2
SSCE	292	37.3
NCE/ND	144	18.4
B.Sc/HND and above	25	3.2
Total	**783**	**100.0**

Table 1 showed the demographic characteristics of the respondents. The analysis revealed that 147 (18.8%) out of 783 respondents were between 16 – 21 years of age, 221 (28.2%) were between 22 – 27 years old, 205 (26.2%) were between 28 – 33 years old, and the remaining 210 (26.8%) were 34 years old and above. The table also revealed that the majority of the respondents (403) are female accounting for 51.5% of the respondents and the remaining 380 (48.5%) are male. The marital status analysis of respondents showed that 274 (35.0%) out of 743 respondents were single, 410 (52.4%) were married, 36 (4.6%) were divorcees, and the remaining 63 (8.0%) were widowed. This indicates that the majority of the respondents were married. The analysis of respondents' level of education showed that 148 (18.9%) have non-formal education, 174 (22.2%) have primary education, 292 (37.3%) have secondary education, 144 (18.4%) have NCE/ND and 25 (3.2%) have B.Sc/HND and above.

Research Question One:What is the awareness about UNICEF WASH activities towards the eradication of open defaecation among communities in Gombe State, Nigeria?

Table 2: Mean and Standard Deviation on Awareness about UNICEF WASH Activities towards Eradication of Open Defaecation among Communities in Gombe State, Nigeria

S/N	Item	Mean	Std Dev
1.	UNICEF WASH is a Non -Governmental Organization concerned with Sanitation.	3.83	1.13
2.	UNICEF WASH is a non -governmental organization concerned with providing public toilets.	3.83	1.01
3.	UNICEF WASH is a non -governmental organization that is concerned with inspecting toilet facilities in communities.	3.81	1.02
4.	UNICEF WASH is concerned with hygiene and types of latrines used in a community.	3.86	0.96
5.	UNICEF WASH is basically concerned with stopping people from defaecating close to water sources.	3.96	1.02
6.	UNICEF WASH is primarily concerned with safe drinking water and contamination from faeces.	4.03	1.01
7.	UNICEF WASH ensures optimal healthy conditions in shared and private latrines.	3.85	1.03
8.	UNICEF WASH is an organization that works to prevent the spread of diseases through ensuring hand washing facilities after using latrines.	3.89	1.16
9.	UNICEF WASH educates women about the risk of open defaecation.	3.94	1.08
10.	UNICEF WASH sensitizes communities on the risks of open defaecation.	3.90	1.10
11.	UNICEF WASH sensitizes communities about the use of urinals.	3.85	1.02
12.	UNICEF WASH sensitizes communities on the importance of food coverage.	4.07	1.06
13.	UNICEF WASH educates communities on the benefits of clean water as well as hygienic water supply environment.	4.04	1.18
14.	UNICEF WASH encourages and supports clean households, abattoirs and the community	3.92	1.16
15.	UNICEF WASH encourages and monitors the proper disposal of solid and liquid wastes.	3.77	1.17
16.	UNICEF WASH encourages and monitors safe siting of latrines (30m/100ft) from wells or water sources.	3.87	1.19
	Aggregate	**3.90**	**1.08**

(Decision Mean =3.5)

Analysis of data in Table 2 showed the mean scores of the responses on the awareness about UNICEF WASH activities towards eradication of open defaecation among communities in Gombe State, Nigeria. From the table, UNICEF WASH is a Non-Governmental Organization concerned with Sanitation had a mean score of 3.83 and standard deviation of 1.13, which is above the decision mean of 3.5,therefore this item is considered agreed.

The responses for each item were computed and item 12 had the highest mean score of 4.07 indicating that the majority of the respondents affirmed that UNICEFWASH sensitizes communities on the importance of food coverage. However, the aggregate

mean score of 3.90 was obtained which is greater than the benchmark score of 3.5. This implies that the level of awareness about UNICEF WASH activities towards the eradication of open defaecation among communities in Gombe State, Nigeria is high.

Research Question Two:What are the available UNICEF WASH facilities towards the eradication of open defaecation among communities in Gombe State, Nigeria?

Table 3: Mean and Standard Deviation on the Availability of UNICEFWASH Facilities towards Eradication of Open Defaecation among Communities in Gombe State, Nigeria

S/N	Item	Mean	Std Dev
1.	There are sufficient boreholes in my community.	1.85	1.21
2.	There are good wells in my community.	1.99	1.17
3.	There is tap water in my community.	1.93	1.08
4.	The quality of water in my community is excellent.	2.07	1.26
5.	The pit latrines in my community are good.	2.14	1.26
6.	There are UNICEF WASH public latrine facilities in my community.	2.21	1.26
7.	There are waste disposal sites in my community.	2.26	1.24
8.	The drainage networks in my community are good.	2.09	1.16
9.	Waste disposal pits are used for waste disposal in my community.	2.20	1.19
10.	There are functional water system toilets in my community.	2.25	1.28
	Aggregate	**2.10**	**1.21**

(Decision Mean =3.5)

A careful observation of Table 3showed the mean scores of the responses on the availability of UNICEF WASH facilities towards the eradication of open defaecation among communities in Gombe State, Nigeria. The responses for each item were computed and all the items are below the 3.5 benchmark score. The aggregate mean score of 2.10 was obtained which is lower than the benchmark score of 3.5. This implies that UNICEF WASH facilities towards the eradication of open defaecation among communities in Gombe State, Nigeria are not available.

Hypothesis One:There is no significant awareness of UNICEF WASH activities towards the eradication of open defaecation among communities in Gombe State, Nigeria.

Table 4: One-Sample t-test on the awareness of UNICEF WASH activities towards eradication of open defaecation among communities in Gombe State, Nigeria

Variable	N	Mean	Std. Dev.	Df	t-value	p-value
Awareness	783	3.90	1.08	782	153.845	0.000
Test Mean	783	3.50	0.00			

Calculated p < 0.05, calculated t-value > 1.972 at df782

Hypothesis Two:There is no significant availability of UNICEF WASH facilities towards the eradication of open defaecation among communities in Gombe State, Nigeria.

Table 5: One-Sample t-test on the availability of UNICEF WASH facilities towards eradication of open defaecation among communities in Gombe State, Nigeria.

Variable	N	Mean	Std. Dev.	Df	t-value	p-value
Availability	783	2.10	1.21	782	1.621	0.71
Test Mean	783	3.50	0.00			

Calculated p > 0.05, calculated t-value < 1.972 at df782

Hypothesis one revealed that the awareness of UNICEF WASH activities towards the eradication of open defaecation among communities in Gombe State, Nigeria is significant. This is because the calculated p-value of 0.000 is lower than the 0.05 level of significance and the calculated t-value of 153.845 is higher than the 1.972 critical t-value at 782 degree of freedom (df).This means that community members in Gombe State, Nigeria are aware of UNICEF WASH activities towards eradication of open defaecation.

This agrees with the findings of Sridhar, Okareh and Mustapha (2020)who assessed the knowledge, attitudes, and practices on Water, Sanitation, and Hygiene in some selected LGAs in Kaduna State, Northwestern Nigeria, and found that the level of awareness on personal and environmental hygiene understanding was fairly good in all the local government areas, and 65.4% claimed to use water and soap for washing hands after defaecation. The incidence of water-related diseases is generally low in the area. This finding also agrees with the results from Alula (2016) on Knowledge, attitude and practice on hand washing and associated factors among public primary school children in Hosanna Town, Snnpr, Ethiopia, who found that the participants have good knowledge of hand washing which is an important component of UNICEF WASH.

Lack of UNICEF WASH knowledge, unhygienic practices and poor attitudes towards UNICEF WASH facilities oftentimes are significant factors in waterborne disease prevalence in communities (Gebreeyessus & Adem, 2018; Berhe et al., 2020). It has been found that there is a direct positive correlation between UNICEF WASH knowledge, practices and behaviours and UNICEF WASH-related health implications, where people are unaware of the health importance of quality drinking water, proper sanitation and hygienic practices(WHO, 2011; Eneji, 2015).

Communities such as Panda and Bangunji demonstrated high level of awareness about UNICEF WASH activities towards eradicating open dafaecation, as the respondents showed high responses and interests during the fieldwork. The village heads and most of the respondents from these communities demonstrated a high level of awareness.

Hypothesis tworevealed that the availabilityof UNICEFWASH facilities towards eradication of open defaecation among communities in Gombe State, Nigeria is not significant. This isbecause the calculated p-value of 0.71 is higher than the 0.05 level of significance and the calculated t-value of 1.621 is lower than the 1.972 critical t-value at 782 degrees of freedom (df). This means that UNICEF WASH facilities towards the eradication of open defaecation among communities in Gombe State, Nigeria are not available.

The finding of the study agreed with Rotimi and Noeem (2020) who assessed the availability and adequacy of UNICEF WASH materials in secondary schools in Lagos State, Nigeria and found that WASH facilities are grossly inadequate. In a similar study, Belachew, Abrha, GebrezgiandTekle (2018) examined the availability and utilization of sanitation facilities in Enderta district, Tigray, Ethiopia and the study found that significant proportions of households have no latrines and hand washing facilities, though they have access to an improved water source.

In a similar study, Busienei (2019) assessed socioeconomic factors associated with the persistent practice of open defaecation in Lodwar and found that only 19% of the study population had a latrine facility in their homesteads with 73% of the latrines constructed using poor materials. Issaka and Enoch (2013) carried out a study on the assessment of accessibility and utilization of toilet facilities in Wa, a medium-sized city located in North-western Ghana. The results indicate inadequacies in the spatial distribution of public toilets with a concentration of these facilities in the central areas of the town.

The finding further corroborates those of Isaiah and Olayinka (2023) who examined water, sanitation and hygiene in tertiary institutions in parts of the Lagos metropolis. The study revealed that UNICEF WASH facilities are not adequate. Yusuf, Aliyu and Moyi (2019) researched a survey of UNICEF WASH among primary schools in Sokoto State, Nigeria. The study found that there are shortage of water facilities, toilet facilities and hygiene facilities. Umahi, Obiano and Joel (2020) assessed the preview of Water, Sanitation and Hygiene Practices in the Kofai Community of Taraba State, Nigeria and found that the UNICEF WASH facilities for the eradication of open defaecation are not available.

The implication of this finding is that non-availability of UNICEF WASH facilities in Gombe State is largely responsible for the practice of open defaecation among communities in Gombe State, especially in communities such as Lambo and Bangunji, where there were practically no public latrines. Most of the households in these

communities do not have any latrines in their houses, and are left with no any other option than to defaecate in the open fields and available bushes around. Added to this, is the scarcity of water, which is a key determinant to the usage or otherwise of latrines. There is high scarcity of water in most of the communities where this research was carried out. Their major water sources were streams, where they fetch water both for consumptions and domestic use. Conversations with most of the respondents revealed that some of them use maize combs, leaves and sticks to clean themselves after defaecating.

The study revealed that:

1. There is significant awareness of UNICEF WASH activities towards eradication of open defaecation among communities in Gombe State, Nigeria($t = 153.845$, $p = 0.000$).
2. There are no significant availability of UNICEF WASH facilities towards eradication of open defaecation among communities in Gombe State, Nigeria ($t = 1.621$; $p = 0.71$).

Conclusions

Based on the findings of the study, the following conclusions were made:

1. Community members in Gombe State, Nigeria are aware of UNICEF WASH activities towards eradication of open defaecation because results showed a significant level of awareness.
2. UNICEF WASH facilities towards eradication of open defaecation among communities in Gombe State, Nigeria are not available, as most communities do not have latrines.

Recommendations

Based on the conclusion, the study recommended the following:

1. To further enhance the awareness of UNICEF WASH activities for open defaecation eradication among community members in Gombe State, Nigeria, there is a need for collaboration between communities and non-governmental organizations (NGOs) toconduct regular community sensitization campaigns aimed at educating residents about the health risks associated with open defaecation and the importance of adopting proper WASH practices.
2. Given the lack of available UNICEF WASH facilities for open defaecation eradication in Gombe State, Nigeria, it is crucial to invest in infrastructure development. Communities and non-governmental organizations (NGOs) should allocate resources to construct UNICEF WASH facilities, including accessible and functional latrines and hand washing stations, in communities with inadequate infrastructure.

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