
Socio - Cultural Determinants and Gender Disparities: Assessing the Intersection with Water, Sanitation and Hygiene in Eastern Obolo Local Government Area, Akwa Ibom State

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ABSTRACT

This study evaluates the socio-cultural determinants and gender disparities. It assessed the intersection with water, sanitation and hygiene in Eastern Obolo Local Government Area, Akwa Ibom State from a rural and vulnerable perspective. It aimed at assessing the level of access to water, sanitation and hygiene and identifying the socio-cultural factors that hinders access to water, sanitation and hygiene in the study area. To achieve these objectives, structured questionnaires, personal interviews and focus group discussions were employed to gather information from respondents. Through the use of the structured questionnaires, personal interviews and focus group discussions data were obtained through purposive sampling technique where village heads, elders and heads of household were respondents. Also, Bill Godden (2004) sample size determination formula was used to derived a sample size of three hundred and eighty-four 384 respondents for the study. The hypothesis for the study was tested using independent t- test to understand if there were disparities in male and female level of access to water, sanitation and hygiene in the study area. From the findings it was discovered that the level of access to water, sanitation and hygiene was very low and that there was a significant disparity in male and female level of access to water, sanitation and hygiene. The main reason for the disparity was the attitude of the female towards water, sanitation and hygiene. Water fetching, bathing, and defecation in facilities not inside their houses had exposed women and girls to sexual and verbal harassment. Hence, they feel so insecure and uneasy to go out to where water, sanitation and hygiene facilities were located since they are vulnerable. The study recommended that the provision of water, sanitation and hygiene facilities was the best way to improve and sustain Water, Sanitation and Hygiene. Also, the government should put measures in place to punish any form of harassment done to the female gender.

Keywords – Gender, Socio-cultural, Water, Hygiene, Sanitation

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I. INTRODUCTION

Access to Water, Sanitation and Hygiene (WASH) includes safe water, adequate sanitation and hygiene conditions (Ghaffoor, Farooq and Sadaf, 2020). According to the United Nations Children’s Fund, WASH is the collective term for Water, Sanitation, and Hygiene and this is because of the interdependent nature, of the three core issues. Each is dependent on the presence of the other (UNICEF, 2020). The provision of safe water, adequate sanitation, and hygiene has been lauded as one way of preventing diarrhoeal infections and improving health especially in developing countries (Wasonga, et al., 2016). The domain of safe drinking water still faces a challenge, especially in Sub-Saharan Africa (WHO/UNICEF Joint Monitoring Programme 2015), and careful re-examination of the details of its improvement is required (Satterthwaite 2016; Yamauchi, Nakao, and Harada, (2022). In terms of sanitation, it generally refers to the provision of facilities and services for safe disposal of human faeces and urine (Okon, 2016). Sanitation is a system that comprises not only a latrine but also the works for the treatment and disposal of human waste. Sanitation is a system that comprises not only a latrine but also the works for the treatment and disposal of human waste.

Sanitation facilities in Sub-Saharan Africa is associated with less progress (with about 30% of her population having access to an improved sanitation facility in 2010, up from 26% in 1990) than Southern Asia, often cited as making significant progress, especially in curbing the practice of open defecation (Salaam-Blyther, 2012; Akpabio, and Takara, (2014). Moreover, sanitation facilities do not function by themselves, but have significance only through social management. The process of decision-making also largely depends on socio-cultural conditions, and the importance of sanitation needs to be socially acknowledged (Yamauchi, Nakao, and Harada, 2022). Furthermore, the pace of improvement in sanitation is markedly slower compared with that of safe drinking water. Over the Millennium Development Goals (MDGs) period, the global use of improved drinking water sources was estimated to have increased from 76 to 91%. The MDGs target of 88% was exceeded in 2010, and 6.6 billion people had access to an improved drinking water source by 2015 (WHO/UNICEF Joint Monitoring Programme 2015; Yamauchi, Nakao, and Harada, (2022).

Hygiene on the other hand is another WASH element that is subsumed in complex belief and ambivalent meanings and can be highly gendered. Generally, local knowledge of hygiene is often linked with beauty (Akpabio, 2011). According to Akpabio 2011, the Ibibios’ in southern Nigeria use the idiomatic term “nsana idem ado uyai” (physical cleanliness is beauty), which emphasises the positive values of good hygiene and consequently forms the basis for conscious behaviours for personal and environmental hygiene practices. However, where knowledge of hygiene transcends the understanding of physical cleanliness, myths, beliefs and superstition enter in to shape perception. The perception surrounding the act of calling a woman ‘dirty’ or ‘stinky’ is generally perceived as degrading to the dignity of womanhood Akpabio and Takara, (2014). Perception is a personal manifestation of how one views the world which is coloured by many sociocultural elements. Markus and Kitayama (1991) concluded that people in different cultures have strikingly different perceptions of self and others. These differences can be seen when comparing two distinct cultures.

Perception includes all those processes by which an individual receives information about his environment, which is seeing, hearing, feeling, tasting and smelling. The study of these perpetual processes shows that their functioning is affected by three classes of variables; the objects or events being perceived, the environment in which perception occurs and the individual doing the perceiving. Perception can be said to be the act of seeing what is there to be seen. But what is seen is by the perceiver, the object and its environment. It is a process through which the information from outside environment is selected, received, organised and interpreted to make it meaningful. This input of meaningful information results in decisions and actions. Thus, for understanding the human behaviour towards water sanitation and hygiene, it is very important to understand their perception, that is, how they perceive the different situations. People's behaviour towards water, sanitation and hygiene was based on their perceptions of what reality is, not on reality itself. The world as it is perceived is the world that is important for understanding the human behaviour.

The transition from the MDGs to the SDGs requires more consideration based on the socio-cultural aspects of global water, sanitation and hygiene. Those living in severe situations face structural violence, and vulnerability is a structural product of class-based economic exploitation as well as cultural, gender/sexual, and racialised discrimination (Quesada et al., 2011; Yamauchi, Nakao, and Harada, 2022). In other words, equitable water, sanitation and hygiene for those in vulnerable situations can only be based on socio-cultural considerations Yamauchi, Nakao, and Harada, H. (2022). Consequently, the level of access to water, sanitation and hygiene varies among states. Major problems facing the Nigerian coastal environment, for instance, are linked to public health, such as contamination of drinking water, poor sanitation and hygiene problems. Specifically, in Akwa Ibom State, over 90% of the population has no access to public water services. Current water supply efforts of government are concentrated in the urban areas. It was reported that the highest urban population that have access to public water services is 3.8% for Uyo, while 90% of the rural settlement water projects were either neglected, abandoned, non-functional or uncompleted (Ansa, and Ukpong, 2015; Okon, Olaniran, Kalu, and Zacchaeus (2018).

The establishment of appropriate sanitation and provision of clean water has for long been presented as a challenge for global development by international organizations, at least half a century. The League of Nations Health Organisation, which became the World Health Organization (WHO), had recognised the importance of sanitation as early as the 1930s, advocating appropriate sanitation in "rural" housing (Borowy, 2007; Yamauchi, Nakao, and Harada, 2022). The disposal of untreated human wastes into water or tidal mudflats along the waterfront communities is linked to public health (Bassey, 2008; Okon, et al., 2017) and this is the major problem facing the Nigerian coastal areas, as evidenced by health records from Akwa Ibom State Hospitals' Management Board (2009). This condition predisposes coastal communities to faeco-oral infections transmitted by the consumption of contaminated food and water (Scott and Oni, 2003). Hence, some communities may have access to water without access to improved water sources. Studies recently conducted among rural schools in South-western Nigeria reported a paucity of water, sanitation and hygiene facilities. Only 15% of the available school sanitation facilities provided basic sanitation service, while none of the hand wash facilities provided basic hygiene service.

Also, the open defecation rate among students in the community was over 35%, while only 10% of the schools were open defecation free (Wada, et al., 2020). Another study that assessed water, sanitation and hygiene facilities in 5 communities in Northern Nigeria reported that over half of the respondents' major drinking water source was surface water, while over 75% used pit latrines. The open defecation rate in the communities was estimated to be around 41% (Sridhar, Okareh and Mustapha, 2020). Water and sanitation have attracted the greatest policy and 'discourse' attention; hygiene - one of the key and interlocking components of water and sanitation – remains the least discussed (Aunger, Coombes, Curtis, Mosler, and Trevaskis, 2014). Moreover, a considerable amount of work has been done to identify the benefits of water provision, improving sanitation and hygiene which motivate individual behaviour change among low-income population. Unfortunately, many projects usually provide only one type of service such as improved water source or sanitation with little emphasis on behaviour change component, which develops as a result of perception and attitude acquired over time (Wasonga, Okowa, Mark and Kiol, 2016). Consequentially, many studies on water, sanitation and hygiene have been conducted separately (Okon, et al., 2017; Bassey, 2008, 2015; Wang et al. 2014; Baloye and Palamuleni, 2015) without taking in to consideration the nexus between water, sanitation, hygiene, gender differences and socio-cultural factors that may pose a challenge towards proper utilisation of the WASH facilities available in a location.

It was against these backdrops that this study considered the imperative to undertake a comparative evaluation of socio-cultural determinants and gender disparities: assessing the intersection with water, sanitation and hygiene in Eastern Obolo Local Government Area, Akwa Ibom State.

1.1 Research Objectives

The aim of the study was to assess socio - cultural determinants and gender disparities: assessing the intersection with water, sanitation and hygiene in Eastern Obolo Local Government Area, Akwa Ibom State.

The objectives of this study were to:

- i. Assess the level of access to water, sanitation and hygiene in the study area
- ii. Identify the socio-cultural factors that hinders access to water, sanitation and hygiene in the study area.

1.2 Research Hypothesis

In line with the aim and objectives and research questions of the study, the following hypothesis was tested:

- i. Ho: There is no significant disparity in male and female level of access to water, sanitation and hygiene in the study area

1.3 Study Area

Eastern Obolo is a local government area found in Akwa Ibom State, South-South, Nigeria. The local government area has its headquarters in the town of Okoroete and comprises several towns and villages which include Ikonta, Otuwene, Umuaka, Akpabom, Atabrikang, Kampa, Amadaka, and Obionga. The major tribal sub-divisions in the local government area are the Iko, the Okoroete, and the Andoni.

The population of Eastern Obolo local government area is put at 169,202 inhabitants with the major language spoken in the area being the Obolo dialect. Christianity and traditional religion are the major religions in Eastern Obolo while the popular landmarks in the area include the Eastern Obolo Refinery. Eastern Obolo local government area occupies a total area of 117,008 square kilometres and has the Obolo River running through the area which is polluted. The rural upland community dwellers also dump their wastes indiscriminately in nearby bushes resulting in environmental pollution. This practice has over time impinged on the quality of the drinking water sources in these areas with health consequences (Akwa Ibom State Hospitals' Management Board, 2009 Okon, Olaniran, Kalu, Zacchaeus (2018). The local government area has large forest reserves and has an average annual temperature of 26 degrees centigrade. The area witnesses two major seasons which are the dry and the rainy seasons with the humidity of the area is put at 91 percent.

Varieties of crops are grown in the Eastern Obolo LGA and these include coconut, kolanut, and rubber. The LGA also has a massive coconut oil processing plant. Fishing is a major occupation of the people of Eastern Obolo with the area's many rivers and tributaries being rich in seafood. Eastern Obolo LGA is also rich in mineral resources such as crude oil and natural gas with the area hosting a mini crude oil Refinery. Eastern Obolo local government area is also a rural settlement in Akwa Ibom State, vulnerable to health challenges due to insufficient provision of safe water, adequate sanitation, and hygiene.

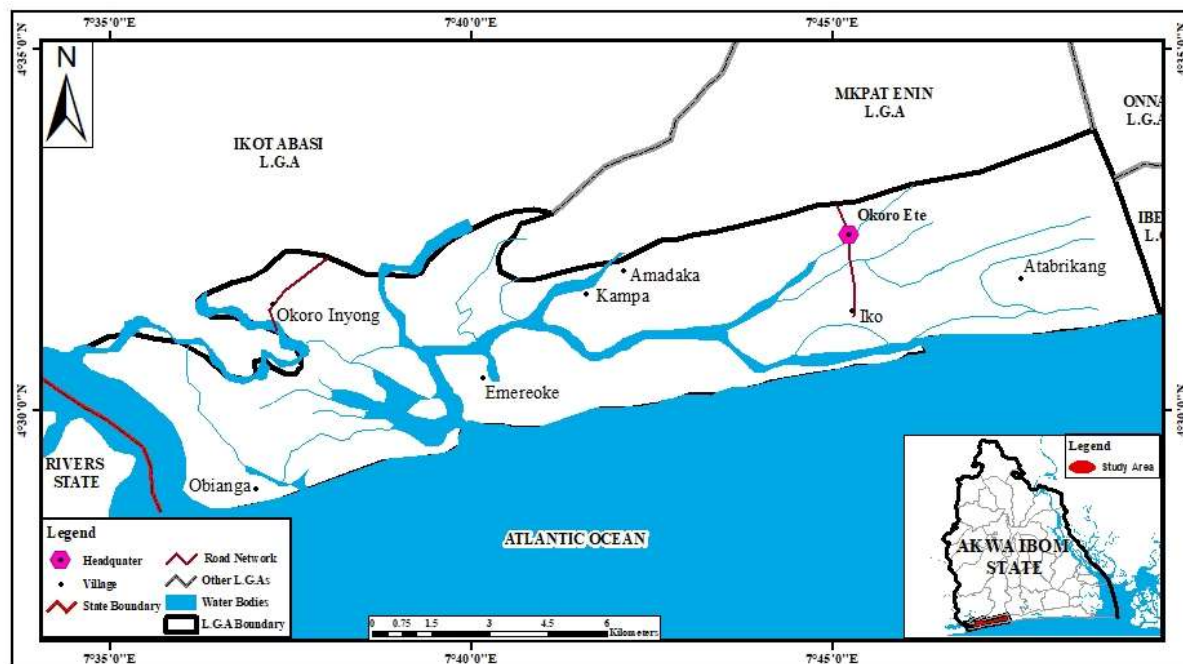


Figure 1 – Eastern Obolo Local Government Area (Study Area)

Source: Ministry of Lands and Town Planning

The study adopted a survey design. The survey design was used to describe the characteristics of a population or phenomenon being studied in order to obtain information. The study covered the sixteen villages in Eastern Obolo Local Government Area. Eastern Obolo has a population of 59, 970 according to the National Population Commission, 2006. According to Udofia (2011), population of the study is used as a basis for determining the minimum sample size needed for any serious analysis, but in a situation where the population size is infinite or cannot be accurately estimated, Godden (2004) opined that the infinite population sampling formula be used to determine the sample size. The populations of the 16 communities sampled were not known, thus, a sample size of three hundred and eighty-four (384) was derived for this study using Bill Godden (2004) sample size determination formula.

$$SS = \frac{Z^2 \times (p) \times (1-p)}{C^2} \quad \text{(Equation 1)}$$

Where:

Z = 1.96 Z value (1.96 for 95% confidence level)

P = 0.5 percent picking a choice, expressed as decimal (.5 used for sample size needed)

C = 5% confidence interval, expressed as decimal (0.05).

Thus:

$$SS = \frac{1.96^2 \times (0.5) \times (1-0.5)}{0.05^2} \quad \text{(Equation 2)}$$

$$SS = \frac{3.8416 \times 0.5 \times (0.5)}{0.0025} \quad \text{(Equation 3)}$$

$$SS = \frac{1.9208 \times (0.5)}{0.0025} \quad \text{(Equation 4)}$$

SS = 384

To select the respondents for the study, purposive sampling technique was adopted. The idea behind this was that the older population had the experience and they are custodians of water, sanitation and hygiene due to several years of interaction with their environment. Hence, the village heads, elders and heads of household were considered for the study in each community. The methods used to gather data for analysis were questionnaire survey, personal interviews and focus group discussions. Purposively selected respondents were administered questionnaires in each community. The purpose of the study was clearly be stated to enable the respondents see the need to participate and also give accurate response to the questions. These questions were framed according to the objectives of the study.

Data collected for the study were analysed using both descriptive and inferential statistics. Relative access index (RAI) was used to measure the level of dwellers access to water, sanitation and hygiene while socio- cultural factors that hinder dwellers access to water, sanitation and hygiene and solutions to the problems were measured using 5 points likert scale questionnaire; independent t-test was used to test the hypothesis

Relative Access Index (RAI), the formula is given as = $(5N_5+4N_4+3N_3+2N_2+1N_1)/5N$ ----(eqn 5)

N_1 represented the number of respondents who indicated a “Very High Access Level” (VHAL).

N_2 represented the number of respondents who indicated “High Access Level” (HAL)

N_3 represented the number of respondents who indicated “Moderate Access Level” (MAL).

N_4 represented the number of respondents who indicated “Low Access Level” (LAL)

N_5 represented the number of respondents who indicated “Very Low Access Level” (VLAL).

2. RESULT AND DISCUSSION

2.1 General Socio-Economic Characteristics of Respondents

In this section information on the sex of respondents, occupation, educational level, age and income levels were analysed.

Table 1: Socio-Economic Characteristics of Respondents

Sex	Frequency	Percentage (%)
(a) Male	134	34.9
(b) Female	250	65.1
Total	384	100
Age (Years)		
(a) Below 20	95	24.7
(b) 20-40	165	43
(c) 41-60	81	21.1
(d) Above 60	43	11.2
Total	384	100
Marital Status		
(a) Single	98	52.9
(b) Married	203	25.5
(c) Divorced	18	4.7
(d) Widow/widower	65	16.9
Total	384	100
Occupation		
(a) Fishing	250	65.1
(b) Farming	63	16.4
(c) Trading	45	11.7
(d) Civil Servant	15	3.9
(e) Unemployment	11	2.9
Total	384	100

Sex	Frequency	Percentage (%)
Education		
(a) Primary	71	18.5
(b) Secondary	235	61.2
(c) Tertiary	48	12.5
(d) No Formal education	30	7.8
Total	384	100

Source: Field Survey (2022).

Based on table above, it can be deduced that the majority of the respondents were females. Out of the 384 questionnaires administered, a total of 134 questionnaires were answered by males and 250 questionnaires were answered by females. At the time of the questionnaire administration, the females were the majority of people present. The greater number of respondents based on age, 2 were young men and women between the age of 20-40 years which accounted for 43%. Respondents below 20 years were 24.7% while 21.1% were between 41-60 years and 11.2% were 60 years of age and above. However, majority of the respondents were single. 52.9%, 25.5% were married, 4.7% divorced and 16.9% were widowed.

The high percentage of married people over single can be as a result of the push factor of rural-urban migration, where majority of the youth are in town. Fishing was a major occupation of the people of Eastern Obolo with a 65.1%, Farming. About 16.4 percent of the respondents were into farming, 11.7 percent were into trading, 3.9 percent of the respondents were in civil service while 2.9 percent were unemployed. In the education aspect, 18.5% had primary education, 61.2% had secondary education, 12.5% had tertiary education while 7.8% had no formal education. This implies that most of the respondents were able to read and write.

Table 2: Level of access to water, sanitation and hygiene

Variables	Very High Access Level (VHAL)	High Access Level (HAL)	Moderate Access Level (MAL)	Low Access Level (LAL)	Very Low Access Level (VLAL)	RAL	Rank
Unimproved	310	65	22	9	2	1.0	1 st
Limited	4	5	8	43	324	0.2	2 nd
Basic	9	15	24	62	274	0.14	3 rd

Field Survey, 2022

Based on Table 2, it shows that the level of access to water, sanitation and hygiene for 1st to 3rd were unimproved (1.0), limited (0.2) and Basic (0.14). Unimproved ranked 1st with a high access index of 1.0.

This implies that, more people in the study area drinks water from an unprotected dug well or unprotected spring; use pit latrines without a slab or platform, hanging latrines, or bucket latrines and do not have access to basic hand washing facilities. Access to improved source of water, improved sanitation and hygiene facilities was low in the study area.

Table 3: Socio-cultural factors that hinder water, sanitation and hygiene

Socio-cultural factors	Frequency	Percentage
Attitude	188	49
Traditions	15	3.9
Education	111	29
Beliefs	11	2.9
Social Class	59	15.4
Total	384	100

Field Survey, 2022

Table 3 showed that the major socio-cultural factor was attitude which accounted for 49% of the factors identified by the researchers. Traditions accounted for 3.9% of the problems identified. It was also discovered education accounted for 29%, beliefs accounted for 2.9% and finally social class accounted for 15.4% of the identified socio-cultural factors. This implies that the respondents in the study area have a very bad attitude towards water, sanitation and hygiene.

2.2 Hypothesis Testing

Ho: There is no significant disparities in male and female dwellers level of access to water, sanitation and hygiene in the study area

Table 4: T-test analysis of disparities in male and female dwellers level of access to water, sanitation and hygiene

Disparities in Gender	N	\bar{X}	SD	t-value	Decision
Male	134	22.61	2.92	6.25	Sig.
Female	250	12.79	1.52		

P < .05; Crit. t = 1.64

The analysis in table 4 produced a t- test value of 6.25 which is greater than the critical value of 1.64 at .05 level of significance. Based on this result, the null hypothesis is rejected Therefore, there is a significant disparity in male and female level of access to water, sanitation and hygiene in the study area. The main reason for the disparity was the attitude of the female towards water, sanitation and hygiene.

Water fetching, bathing, and defecation in facilities not inside their houses had exposed women and girls to sexual and verbal harassment. Hence, they feel so insecure and uneasy to go out to where water, sanitation and hygiene facilities are located since they are vulnerable to sexual and verbal harassment. Additionally, they have deficiency in knowledge, poor attitudes, and lack of practices of water, sanitation and hygiene, particularly with regard to home water treatment, use of unsafe water sources, and open defecation. However, most female in the study area were not open to education. Seminars and townhall meetings were held but they refused to come out to learn and as such their knowledge on water, sanitation and hygiene was limited.

3. CONCLUSION AND RECOMMENDATIONS

Evidence from the study has shown that the level of access to water, sanitation and hygiene was very low. Respondents living within the sampled environment were drinking water from an unprotected dug well or unprotected spring; using pit latrines without a slab or platform, hanging latrines, or bucket latrines and having no access to basic hand washing facilities. It was further observed that the majority of the houses within the sampled area were below standard due to lack of facilities such as toilets which made them go for open defecation. The findings of this research are consistent with the data from the 2018 Nigeria National Demographic Survey which showed that even though progress may have been made over the years, a considerable number of Nigeria's population still lives without basic drinking water, sanitation and hygiene facilities.

It has been established that the major socio-cultural factor hindering the people in the sampled community to access to water, sanitation was their attitude. Most of the people in the community were not open to education. Seminars and townhall meetings were held but they refused to come out to learn and as such their knowledge on water, sanitation and hygiene was limited. In line with the study, the findings of Wilbur (2014), the socio-cultural factors were hypothesised to affect the adoption, operation, and maintenance of composting latrines. In the indigenous communities of rural Panama, the socio-cultural factors (that is, attitudes and perceptions) were thought to influence the success of composting latrine projects.

Based on the hypothetical analysis the researcher was able to prove that there is a significant disparity in male and female dwellers level of access to water, sanitation and hygiene. Accordingly, the study recommend that provision of water, sanitation and hygiene facilities was the best way to improve and sustain water, sanitation and hygiene. Government should strengthen efforts to eradicate the practice of open defecation, create more platform for the sensitisation of the people. Finally, community approaches to total sanitation should be imbibed. Also, the government should put measures in place to punish any form of harassment done to the female gender.

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