Socialscientia Journal of the Social Sciences and Humanities

Examination of Gender-Sensitive and Socially-Inclusive Water, Sanitation, and Hygiene (Wash) Facilities in the Major Markets of Anambra State, Nigeria.

Samuel A. MBA, E.A. OBIENUSI, and M.C. OBIKWELU

Department of Geography and Meteorology, Nnamdi Azikiwe University, Awka NIGERIA.

Abstract

The Sustainable Development Goal 6 second target states that by 2030, achieve access to adequate and equitable sanitation and hygiene for all and end open defecation, paying special attention to the needs of women and girls and those in vulnerable situations. Thus, this study; Examination of Gender-sensitive and Socially–inclusive WASH Facilities in the major markets of Anambra State aimed was the examination of the gender-sensitive and socially–inclusive WASH facilities in the major markets of Anambra State. The objectives of the study were to; assess the availability and equitable access to WASH services in the major markets of Anambra State, and to assess the availability of gender-sensitive and socially-inclusive WASH services in the major markets of Anambra State. Three hundred and ninety-nine (399) questionnaires were distributed to the respondents. The research design was a descriptive survey design while the sampling technique was the Stratified Random Sampling Technique. The population of study comprised of 74547 (which were obtained from the market unions of each market.) persons of which 399 persons were selected for the study using Taro Yamane formula. The research instrument was a structured questionnaire design by the researchers. The data collected were analyzed using the weighted mean and the Binary Logistic Regression Model. The model indicated that there is no significant relation between environmental cleanliness, adequacy of sanitary materials and types of toilets with gender-sensitivity. (chi-square=6.896, p value=0.075) and none of the predictor variables significantly predict the response variable. The major finding of this study was that the WASH facilities were not gender-sensitive and socially inclusive in their services to the major markets in Anambra State. The study concluded that special services have to be provided by the WASH facilities to women, girls, children and the physically challenged in view of their unique nature. It therefore, recommended that the State and the relevant local governments authorities should set up a machinery to this finding.

Key words; Gender, Gender-sensitivity, Menstrual hygiene, Sanitary materials and Water.

Introduction

Governments' responsibility to provide universal access to sanitation is clear. In 2020, the UN recognized water and sanitation as human rights. It is also stated that they are essential to the realization of all human rights. (U.N.2010). Human rights criteria specify that toilets should be sufficient in the number, physically assessable, safe, affordable, designed for all, culturally appropriate and suitable for all genders (UN-HABITAT, 2014). The sustainable Development Goals (SDGs) agreed by 193 countries in 2015, include a target to achieve universal access to adequate and equitable sanitation and hygiene for all by 2030, with special attention to the needs of women and girls and those in vulnerable situation (target 6.2). This also include a target to eliminate all forms of violence against women and girls in the public and private sphere (target 5.2). WASH is the collective term for Water, Sanitation and Hygiene and this is because of the inter-dependent nature of the three core issues. Each is dependent on the pressure of the other (UNICEF, 2020).

Gender is a term that refers to socially and culturally constructed attributes associated with being female or male. Many societies not only categorize "male" or "female" based on biological features but also prescribe their respective roles and behaviour. Poor access to WASH services disproportionately

affects women and girls (WHO/UNICEF, 2010). This is because of their special nature, women and girls with disabilities face double the disadvantages because even where toilets do exist they are not designed and constructed to be fully accessible and safe for them. Women cannot urinate as easily as men because they need to undress at least partially for both urination and defecation, which requires more space, privacy and time - even more so when managing menstruation (Greed. C. 2003). On average, a woman menstruates for 3,500 days of her life, yet little attention is given to her menstrual hygiene requirements (U.N, 2010). Against this background, the focus of this study becomes vivid. That is to examine the gender-sensitive and socially inclusive WASH facilities in the major markets of Anambra State.

Statement of Problem

Inclusive, well-designed toilet facilities improve people's health and quality of life. Female-friendly toilets need to be safe, private, accessible and well-managed to cater for menstrual hygiene management. Not having access to safe, clean and appropriate toilets during menstruation can cause discomfort and psychological stress, and adds to the discrimination women and girls already face because of menstruation-related taboos (Sweetman, and Cooke (eds), 2017). In Anambra State, especially in public places and markets, no special needs of women in the provision of WASH facilities except in a few cases where the toilets are gender-separated but no provision is made for menstrual hygiene and other sanitary materials. This study hopefully will draw the attention of state government and other relevant agencies to specifically make provisions for the special needs of women, girls and other vulnerable persons.

Aims/Objectives: The aim of this study is to examine the gender-sensitive and socially inclusive WASH facilities in the major markets of Anambra State. In order to achieve this, the following objectives are set; (a) To assess the availability and access to Water and Sanitation and Hygiene (WASH) services in the major markets of Anambra State. (b) To determine the availability of gender-sensitive and socially inclusive WASH facilities in the major markets of Anambra state.

Research Questions **(a)** To what extent are adequate water, sanitation and hygiene (WASH) services available in the major markets of Anambra State? (a) Are the WASH facilities in the major markets of Anambra State gender sensitive and socially inclusive?

Hypothesis Ho: There is no significant relationship between environmental cleanliness, adequacy of sanitary materials and type of toilet on gender-sensitivity.

Methodology

A descriptive study design was used while the sampling technique was the stratified random sampling technique. The data was collected using interview administered questionnaire, and field observation. The population of the study comprised 74,547 (which were obtained from the market unions of each of the 18 selected major markets in the state) persons out of which 399 samples were selected for the study using Taro Yamane's (1967) formula for sample size determination.

The 18 selected markets in the study area were selected using a stratified random sampling technique. A stratified simple random sampling technique was also used to select the number of respondents in the selected markets based on their population size. Each market was then divided into zones. A systematic sampling procedure was then applied to get the required number of respondents for each of the 18 markets with the aid of two research assistants.

The questionnaire was divided into two sections; Section A contained personal information of the respondents; name of market, age, sex and goods sold among others. While section B contained responses on the provision of gender-sensitive and socially-inclusive services in the WASH facilities in the markets.

The questionnaire was drawn from the Primary Health Care Assessment Form of the United States of America Centre for Disease Control and Prevention by the Nigerian Health Watch (Nigerian Health Watch, 2021). This was adopted with modification by the researchers for this study. The study also made use of weighted mean to convert descriptive information to quantitative data while the Binary

Logistic Regression Model was used to assess the relationship between environmental cleanliness, type of toilets and provision of sanitary materials on gender-sensitivity by WASH facilities.
This study was undertaken between 2021 and August, 2023.

Discussion
Research Question 1: To what extent are adequate water, sanitation and hygiene services available in the major markets of Anambra State.

Table 1: CHECKLIST OF **WASH** SERVICES IN THE MAJOR MARKETS

Name of Market	Regularity of water	Adequacy of toilets	Adequacy of washing soap	Toilet waste bin	Adequacy of sanitary material	Hygiene Behaviour	Environmental cleanliness	Hand-washing basin	Hand-washing prompts	No of toilets
Onitsha main market (zone1)	Regular	Adequate	None	None	Poor	Poor	Good	None	None	10
Onitsha main market (zone2)	Regular	Adequate	None	None	Poor	Poor	Good	None	None	10
Onitsha main market (zone3)	Regular	Adequate	None	None	Poor	Poor	Good	1	None	10
International building material market Ogidi	Regular	Adequate	None	1	Poor	Good	Good	None	None	10
International Utensil market Onitsha	Not Regular	Poor	None	None	Poor	Good	Good	1	None	6
Old auto spare parts, Obosi	Good	Good	None	5	Poor	Poor	Poor	Poor	None	60
Awka main market	Not Regular	Poor	None	None	Poor	Poor	Poor	1	None	10
Eke Oyibo market Amawbia	None	None	None	None	Poor	Poor	Good	None	None	6
Nkwo Amaenyi market	None	None	None	None	None	Poor	None	None	None	None
Abattoir market Awka	Regular	Good	None	None	Poor	Good	Good	1	None	3
Eke Market Nibo	Regular	Good		None	Poor	Poor	Poor	None		2
Nkwo market Enugu-Ukwu	Not Regular	Not Adequate	None	None	None	Poor	Poor	None	None	3
Agba-Edo United	Regular	Adequate	None	None	Poor	Good	Good	None	None	5
Agbo-Edo Motor	Regular	Adequate	None	None	Poor	Poor	Good	1	None	6
Spare parts new auto spare parts	Regular	Adequate	None	None	Poor	Good	Good	None	None	4
Nkwo market	Not Regular	None	None	None	Poor	Poor	Poor	None	None	6

| Afor Market | Not Regular | None | None | None | Poor | Poor | Poor | None | None | 6 |
| Eke Market | Not Regular | Adequate | None | None | Poor | Good | Good | None | None | 12 |

Source: Researcher's field work 2022

From table 1, Onitsha Markets have an adequate and regular supply of water in the majority of the market except for the International Utensils Market which purchases its water from Water vendors. There is an inadequacy of washing soaps and toilet bins in most of the markets. There is a lack of washing hand basins, inadequate bleachers and other sanitary materials that are necessary for environmental cleanliness in the markets.

Awka markets lack water facilities have poor hygiene behaviour, lack toilets waste beans, inadequate washing soups, inadequate hand-washing basins and lack of bleaches and other sanitary materials. Only the abattoir (meat) market has enough water available in their toilets and the environment is clean. The Eke-Oyibo markets Amawbia is also clean but it is not regularly in use.

Nnewi Market has regular and adequate water in the sanitation facilities but they lack toilet waste bins, washing soaps, hand-washing basins, bleaches and other sanitary materials. The toilet environment is clean.

Umunze Market lacks water, has poor hygiene behaviour, no urinals, no toilet waste bin, poor environmental cleanliness, lack of washing soaps, lack of hand-washing basins, bleaches and other sanitary materials.

Ufuma Market lacks water and it is not in use. So, these market toilets lack all the necessary sanitation services expected from a market.

Ekwulobia Market has a functional borehole but it is not regularly operated. There is good hygiene behaviour but it lacks toilet waste bins, washing soaps, hand-washing basins and other sanitary materials. The toilet environment is clean and it has good management.

Findings
There is generally lack of water in the markets except Onitsha and Nnewi markets. The water is for the toilet facilities only and not for the entire market. There is lack of toilet waste bin in the majority of the markets. There is generally poor hygiene behaviour among the sanitation facility users and attendants Most of the facilities lack washing soaps, hand-washing basin, bleaches and other sanitary materials.

Research Question 2
Are the WASH facilities gender-sensitive and socially- inclusive?

Table 2: CHECKLIST ON GENDER-SENSITIVE AND SOCIALLY-INCLUSIVE SERVICES IN THE MAJOR MARKETS.

Name of market	Gender separated Toilets	Waste bin for menstrual hygiene	Environ-mental cleanliness	Provision for the physically challenged	Adequacy of sanitary materials	Type of toilets
Onitsha main market (zone1)	Yes	None	Good	Poor	Poor	Improved
Onitsha main market (zone2)	Yes	None	Good	Poor	Poor	Improved

Onitsha main market (zone3)	Yes	None	Good	Poor	Poor	Improved
International building material market Ogidi	Yes	None	Good	Poor	Poor	Improved
International Utensil market Onitsha	Yes	None	Good	Poor	Poor	Improved
Old auto spare parts, Obosi	No	None	Poor	Poor	Poor	Improved
Awka main market	Yes	None	Poor	Poor	Poor	Improved
Eke Oyibo market Amawbia	Yes	None	Good	Poor	Poor	Improved
Nkwo Amaenyi market	None	None	None	Poor	None	None
Abattoir market Awka	No	None	Good	Poor	Poor	Improved
Eke Market Nibo	No	None	Poor	Poor	Poor	Improved
Nkwo market Enugu-Ukwu	No	None	Poor	Poor	None	Improved
Agba-Edo United Nnewi	Yes	None	Good	Poor	Poor	Improved
Agbo-Edo Motor Nnewi	Yes	None	Good	Poor	Poor	Improved
Spare parts new auto spare parts Nnewi	Yes	None	Good	Poor	Poor	Improved
Nkwo market Umunze	No	None	Poor	Poor	Poor	Improved
Afor Market Ufuma	Yes	None	Poor	Poor	Poor	Improved
Eke Market Ekwulobia	No	None	Good	Poor	Poor	Improved

Source: Researchers's field work 2022

From table 2 Onitsha Markets; All the toilets in Onitsha markets are of the improved type with separate toilets for males and females, but the toilets have no waste bins for menstrual wastes. The environments are clean. The old motor spare parts facilities have poor environmental cleanliness and no separate toilets for males and females (Plate iv).

Awka Market; All the toilets are of the improved type but no waste bin for menstrual waste. Only Awka main market have separate toilets for male and female. Only the abattoir (meat) market has clean environment in and around its facility. Others have very poor environmental cleanliness. (Plate vi).

Nnewi Markets; the Nnewi toilet facilities are gender separated but no waste bin for menstrual waste, toilets are not covered but good environmental cleanliness. Umunze market; the Umunze market facility is of the improved type but not covered and is not gender-separated. It also has poor environmental cleanliness. Ufuma market; the Afor market toilet facilities are abandoned but gender-separated. The environmental cleanliness is poor. Ekwulobia Market; the toilets are of the improved type but not covered. The environmental cleanliness is good but not gender-separated.

Findings
Most of the toilet facilities are gender separated but no waste bin for menstrual wastes and are of the improved type. All the toilet compartments have doors with locks. The toilets are not covered. The environment is also relatively clean. Unfortunately, all the toilets lack sanitary materials and waste bins for menstrual waste.

Hypothesis 1: There is no significant relationship between environmental cleanliness, adequacy of sanitary materials and type of toilet on gender sensitivity. To test this hypothesis, Binary Logistic Regression was performed using data on gender–sensitive and people–friendly services in the major markets. Gender–sensitivity was used as the dependent (response) variable while environmental

cleanliness, adequacy of sanitary materials and type of toilet were used as independent (predictor) variables.

   Goodness of Fit The goodness of fit helps us to determine if the model adequately describes the data. What has been prescribed or proposed, does it describe the data adequately or not. Two tables will be used to check the goodness of fit; the Omnibus test and the Hosmer and Lemeshow test.

Omnibus Tests of Model Coefficients

		Chi-square	Df	Sig.
Step 1	Step	6.896	3	.075
	Block	6.896	3	.075
	Model	6.896	3	.075

In Significant Omnibus tests (p–values greater than or equal to 0.05) imply that the model is showing a good fit. Otherwise, the model is showing a poor fit.

Hosmer and Lemeshow Test

Step	Chi-square	Df	Sig.
1	.000	1	1.000

Insignificant Hosmer and Lemeshow test (p–value greater than or equal to 0.05) shows that there is no difference between the observed and predicted models. Otherwise, it indicates a poor fit. Variations in the independent variable (gender sensitivity) explained by the independent variables

Model Summary

Step	-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
1	17.161[a]	.318	.432

a. Estimation terminated at iteration number 20 because maximum iterations have been reached. A final solution cannot be found.

This is contained in the model summary table. The results are produced using the Cox & Snell R Square and Nagelkerke R Square. Both are different types of R Square. Therefore, the explained variation in the dependent variable based on our model is 43.2% by using the Nagelkerke R^2 method.

TABLE 3: CATEGORY PREDICTION CLASSIFICATION TABLE

			Predicted		
			Gender Sensitive		Percentage
	Observed		No	Yes	Correct
Step 1	Gender Sensitive	No	5	2	71.4
		Yes	2	9	81.8
	Overall Percentage				77.8

a.
The cut value is .500

This provides an indication of how well the model (the independent variables predicting the dependent variable category) is able to predict the correct category once the predictors are added to the study. The model classified 77.8 percent of cases overall; the rate of correct classification is if we always predict

Female-friendly toilets need to be safe, accessible, affordable and well-managed, cater for menstrual hygiene management and meet the needs of all. The lack of these in our WASH facilities in the markets means that achieving the SDG's Goal 6.2 by 2030 will be a mirage if conceited efforts are not made in less than seven years from now by the state government and other stakeholders.

References

Greed C. (2003). Inclusive urban design; public toilets, London: Routledge

Kabila Abass; Alfred, Foster, Senior, Owusu; and Razak, M. Gyasi (2018). Market vegetable hygiene practices and health risk perceptions of vegetable sellers in Urban Ghana. *International Journal of Environmental Health Research.* https:doi.org/10.1080/09603123.2018.1535057.2018 Informa UK Limited, trading as Taylor& Francis Group.

Maulidya, Hasana (2018). Comparison of sellers'   awareness to environmental hygiene of Market Bulak, Market Klander and Market Rawamangun, East Jakarta. E3S web of Conference 31, 06013(2018) https: //doi.org/10.1051/e3sconf/20183106013.

Nigerian Health Watch (2020). *Assessment of water, sanitation and hygiene services in PHCs in FCT and Niger State.* Nigerian Health Watch, 2021.

Nwankwo, I.N., Uzoechina, G.O and Oguegbu, A.E. (2016). "*A survey of sanitation and hygiene faculties in public and private primary school for effective implementation of UBE programme in Onitsha, Anambra State."* Research Journal of Education, Academic Research Publishing group, vol. 2(8), page 129-136, 08-2016.

Sweetman, C . and Cooke, L (2017). Gender and development: water, sanitation and hygiene. Oxford publishing, Oxford U.k., 25(2)

UN-HABITAT (2014). Releasing the human rights to water and sanitation; a handbook by the UN special rapporteur Catarina de Alhuquereue, NewYork; UN publishing. Available at unhabitat.org/books/realizing_the_human_rights_to_sanitation_a_handbook_by_the_un_special_rapportuer_caterina_de_albuquerque/ (accessed 4th September, 2018'

*UNICEF (2020).*Evaluation of the UNICEF supported Federal Government of Nigeria water, sanitation and hygiene (2014-2017). Ministry of Health, Government of Kenya. 2020.

United Nations General Assembly (2010). Resolution; The Human right to water and sanitation (A/DES/64/292), New York; UN Publishing, Available at un.org/en/ga/search/view.doc.asp?symbol=A/RES/64/292 (accessed 4th September 2018)

WHO/UNICEF Joint Monitoring Programme for water supply and sanitation (2010). Progress on sanitation and drinking water- 2010 update. Geneva; WHO/UNICEF, available at www.who.int/water_sanitaion_health/publications/9789241563956/en/ (accessed 4th September, 2018.

Biographical Note

Samuel A. MBA is a doctoral candidate in the Department of Geography and Meteorology, Nnamdi Azikiwe University, Awka, NIGERIA, Email: samuelmba390@gmail.com

E.A. OBIENUSI is a Lecturer in the Department of Geography and Meteorology, Nnamdi Azikiwe University, Awka NIGERIA.

M.C. OBIKWELU is a Lecturer in the Department of Geography and Meteorology, Nnamdi Azikiwe University, Awka NIGERIA.