European Journal of Humanities and Educational Advancements (EJHEA)
Available Online at: https://www.scholarzest.com
Vol. 4 No.9, September 2023
ISSN: 2660-5589

RECEPTIVE MEASURES OF WOMEN'S ACCESS TO WATER, SANITATION AND HYGIENE (WASH), IN RIVERS STATE

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Article history:

Received: July 4th 2023
Accepted: August 3rd 2023
Published: September 10th 2023

Abstract:

The paper seeks to generate awareness about receptive measures for women's access to water, hygiene, and sanitation in Rivers State. The study was anchored on three objectives, three research questions, and two hypotheses. Methodologically, a sample size of 400 was statistically generated through the Taro Yameni Formula. Also, a triangulation approach was adopted that utilised qualitative and quantitative methods. The questionnaire and in-depth interviews were used as instruments for data collection. The Four Likert Scale was used, and the structured questionnaire was titled Receptive Measures for Women: Access to Water, Sanitation, and Hygiene Questionnaire **(**RMWAWSHQ). Statistical tools such as the charts, mean, and standard deviation, as well as the Z-test, were used to analyse the quantitative data. Again, the qualitative instrument was analysed using content analysis. The study found that the majority of women in Rivers State often have differentiated access to water, sanitation, and hygiene. Also, it was concluded that until more women's voices and participation in policy initiation and implementation are addressed, gender and women's issues on the condition of water accessibility, sanitation, and hygiene become delusions. In all, it was recommended, among others, that more women be included in governance and decision-making, as this would enable them to fully participate in policies and programmes that can provide more water accessibility, good sanitation, and hygiene.

Keywords: Water, Hygiene

INTRODUCTION

Rivers State, located in the Niger Delta region of Nigeria, faces significant challenges in terms of WASH infrastructure and services. While there may not be specific studies or data on receptive measures of women's access to WASH in Rivers State, there are also some common issues faced by women in the region based on broader research on WASH in Nigeria. Access to clean water remains a challenge for many communities in Rivers State. Women often bear the primary responsibility for water collection, spending considerable time and effort fetching water from distant sources. Lack of access to safe water sources negatively affects women's health, safety, and productivity. As a challenge to women, Sanitation facilities, such as toilets and latrines, are crucial for maintaining hygiene and protecting women's privacy and dignity. Inadequate sanitation infrastructure is a common issue in many areas of Nigeria, and Rivers State is no exception. Lack of proper sanitation facilities poses health risks, especially for women and girls. In the same vein, on hygiene practices, promoting good hygiene practices is essential to prevent the spread of diseases. However, access to hygiene facilities and education can be addressed in Rivers State, as women often face challenges in accessing hygiene products, such as menstrual hygiene supplies, which can impact their overall well-being and dignity.

Generally, in a quest to reduce this menace, there are efforts made to improve women's access to sanitation such as; Sustainable Development Goal 6, whereby the United Nations' Sustainable Development Goal 6 (SDG 6) aims to ensure universal access to water and sanitation, specifically addressing the needs of female gender. Followed by this were Community-led sanitation initiatives, where the Programmes focus on community participation and behaviour change, such as the Community-Led Total Sanitation (CLTS) approach, which has shown success in improving sanitation access for women in various countries. Finally, there is a menstrual hygiene management initiative, where several organizations and initiatives work to improve menstrual hygiene management by providing access to sanitary products, safe and private sanitation facilities, and education about menstrual health.

Several studies, both within and outside this domain, have delved into related areas of research. For example, research conducted by Reina (2018) in rural India established that having access to household sanitation substantially lowered the instances of sexual violence against women, elevating their overall well-being. In Bangladesh, BRAC's Water, Sanitation, and Hygiene (WASH) initiative focused on rural women, offering them sanitation solutions and championing hygiene practices, which subsequently led to better health and socio-economic benefits for them. Furthermore, the World Bank's Water and Sanitation initiative aims to enhance women's access to sanitation in various nations, including Cambodia, Indonesia, and Pakistan, by launching programs that prioritize women's necessities and active involvement. Considering these initiatives, a pressing question emerges: What's the next step for the women of Rivers State? This question underscores one of the many challenges that inspired this investigation into women's access to WASH.

In a research conducted by Vivas et al. (2010) focusing on the Knowledge, attitudes, and practices (KAP) related to hygiene among school-aged children in Angolela, Ethiopia, there was a comprehensive examination of the KAP pertaining to hygiene among these students in a rural setting. This study aimed to determine the relationship between a clear understanding of hygiene and the actual personal hygiene behaviors exhibited by these children. The results of this research revealed that about 52% of the participating students demonstrated a satisfactory level of knowledge regarding appropriate hygiene practices. A significant majority, 99.0% of the students, reported washing their hands before consuming meals, but a mere 36.2% confirmed the use of soap during the process. Despite 76.7% recognizing the importance of washing hands post-defecation, only a small fraction, 14.8%, claimed to adhere to this practice. Notably, students with a commendable grasp of hygiene principles were observed to have cleaner attire and exhibited a reduced susceptibility to parasitic infections, although the latter observation did not achieve statistical significance. These insights highlight the pressing need for enhanced hand washing and hygiene-oriented educational initiatives in educational establishments. These findings offer tangible data that can potentially shape the creation of holistic health and hygiene-focused interventions for rural educational institutions. Implementing such programs effectively could significantly reduce the incidence of communicable diseases among students in these rural environments.

In Nigeria, based on the data at hand, the 2023 elections witnessed a total of 10,240 aspirants vying for the 990 seats in state houses of assembly spread across the country's 36 states. Out of this number, males constituted 9,221, leaving 1,019 positions contested by females. The results from the state legislative elections held on March 18 revealed a paltry 48 female victors from the initial 1,019 contestants, which translates to a mere 4.7 percent of the overall count. In response to this disproportionate representation, Professor Sonaiya Oluremi pinpointed the challenge of financial constraints and the deeply entrenched political culture that has evolved over decades as primary barriers to female participation in Nigeria's political landscape. Historically, experts have consistently identified these very challenges as central reasons for the limited presence of women in Nigerian legislative bodies, be it at the state or national levels. This lack of resources is a significant impediment, muffling the voices of women and dampening their enthusiasm for policies that could potentially enhance WASH, directly impacting their overall well-being.

Damilola Agbalojobi, an expert in political science and gender studies, echoed the sentiments expressed by Professor Sonaiya Oluremi. Agbalojobi posited that the exorbitant nature of political engagement in Nigeria acts as a deterrent for a significant number of women, influencing their decision to enter the political arena and consequently affecting the final count of women who triumph. She remarked, "In many instances, women lack the financial means to afford the compulsory expression of interest and nomination forms mandated by political parties for candidacy. This doesn't even account for the substantial financial outlay needed to manage an electoral campaign." This perspective becomes clearer when considering the recent statistics from the state house elections. Out of all the contenders, only 1,019 were women, in stark contrast to the 9,221 male participants. This means that for every female candidate, there were eight male counterparts, as highlighted by Dennis (2023).

With the above, it becomes challenging for women to get favourable legislation that could help ameliorate their quandaries. Based on the above, there exists a gap that stipulates that there exists no study on receptive measures of women's access to water, sanitation, and hygiene (wash), in Rivers State. This gap is what this study tends to fill. Therefore, the following research questions were established as a guide to the study.

i. What are the challenges to women's access to water in Rivers State?
ii. What are the conundrums to women's access to sanitation and hygiene in Rivers State?
iii. What are the receptive measures of women's access to water, sanitation and hygiene (wash), in Rivers State?

Objectives of the Study

i. To find out the challenges to women's access to water in Rivers State.
ii. To identify the conundrums to women's access to sanitation and hygiene in Rivers State
iii. To proffer some receptive measures for women's access to water, sanitation, and hygiene (WASH), in Rivers State

Hypotheses

i. The political inequality among genders is significantly responsible for policy initiation and implementation on women's access to water, sanitation and hygiene in Rivers State.

ii. The more women are privileged to attain higher participation in decision-making, the more there will be policies that can better women's access to WASH in Rivers State

Study Location

Rivers State, situated between latitudes 4045'N and longitudes 6050E, stands as one of Nigeria's 36 states. With Port Harcourt as its capital and most populous city, the state plays a pivotal economic role as the epicenter of Nigeria's bustling oil sector. The state boasts a rich tapestry of indigenous ethnic communities, such as Ikwerre, Okirika, Kalabari, Etche, Ogba, Egbema, Ndoni, Abua, Odual, Ekpeye, Igbani/Obolo, and Ogoni. Geographically, Rivers State, nestled in the eastern region of the Niger Delta, extends oceanwards from the Benue Trough, as noted by Jack (2014). Its terrain transitions from dense tropical rainforests inland to the coastal areas dominated by the distinct mangrove swamps characteristic of the Niger Delta. Spanning an area of 11,077 km² (4,277 mi²), it ranks as Nigeria's 26th largest state, encompassing 23 local government territories scattered across both upland and riverine regions. The state shares its borders with Imo, Abia, Anambra, Akwa Ibom, Bayelsa, and Delta states, and is also fringed by the vast Atlantic Ocean. Its landscape oscillates between flat plains peppered with a myriad of rivers and tributaries (Rivers State Government, 2019).

Rivers State experiences a seasonal and variable rainfall pattern, which is notably intense and typically spans from March to either October or November, peaking in July and lasting over 290 days. A dry spell is observed predominantly in January and February. Annual rainfall volumes vary, receding from approximately 4,700 mm (185 in) along the coast to around 1,700 mm (67 in) in the far north. Bonny, situated on the coastline, receives about 4,698 mm (185 in), while Degema gets approximately 1,862 mm (73 in). In Port Harcourt, temperature patterns remain fairly consistent year-round, averaging between 25 °C–28 °C. Some locales still register up to 150 mm (6 in) of precipitation during drier times. The relative humidity predominantly lingers between 90% and 100% for the majority of the year, seldom dropping below 60%. The state's land elevation predominantly remains under 20m above sea level. Being part of the lower Niger floodplain, the land predominantly comprises silt and clay, making it prone to regular flooding. The floodplain's density escalates to about 45m in the northeast and surpasses 9m in the southwestern beach ridge barriers. The coastal sandy ridges predominantly consist of sandy or loamy soils, conducive for growing crops like coconut, oil palm, raffia palm, and cocoyam. The upland regions, covering about 61% of the state, contrast with the riverine areas, which span the remaining 39% and have a relief ranging between 2m to 5m. These lush tropical rainforests host a diverse range of species, outdoing other local biomes. Regrettably, some upland forest regions have witnessed disturbances due to human activities, leading to detrimental impacts on the state's biodiversity and the ecological balance of natural habitats.

The riverine region of the state is demarcated into three distinct hydro-vegetative zones: beach ridge, saltwater, and freshwater. Each of these zones boasts its unique features and compositions. The freshwater zones predominantly span the upper and lower floodplains of the Niger Delta. A notable conservation effort in this region is the Finima Nature Park, situated on Bonny Island. This protected region and forest reserve stretches over an area of roughly 10 km² (3.9 mi²). Over time, the park's vegetation has matured into a dense forest ecosystem.

Rivers State is renowned for its abundant reserves of crude oil and natural gas. Within its boundaries, the state houses two primary oil refineries, a pair of significant seaports, several airports, and a multitude of industrial zones scattered throughout its territory. Remarkably, the state contributes to over 60% of Nigeria's total crude oil production. In addition to its oil reserves, the state is also endowed with other natural assets like silica sand, glass sand, and clay

Before the pivotal discovery of oil in substantial quantities in 1956, the majority of Rivers State's populace primarily engaged in agricultural activities. As a testament to its agricultural heritage, Rivers State stands as a frontrunner in the cultivation of staples like yam, cassava, cocoyam, and maize. Nearly 39% of the state's expanse, translating to 760,000 hectares, especially in the upland regions, is deemed fit for agricultural activities. The state is also a significant producer of cash crops, with oil palm products, rubber, coconut, raffia palm, and jute being the primary outputs. Additionally, the state's agricultural portfolio includes the production of vegetables, melons, pineapples, mangoes, peppers, bananas, and plantains. The fishing industry also plays a pivotal role in shaping the state's economy. Not only is it a lucrative profession, but fishing also serves as a popular pastime and recreational activity for many in Rivers State.

LITERATURE REVIEW

There has been some literature on Women and Water. For instance, the American Psychological Association (APA) (2017), established that women are individuals who identify themselves as female, regardless of their assigned sex at birth or biological characteristics. This definition acknowledges gender identity as a personal and subjective experience that may not align with biological factors. It recognizes that gender is a social construct influenced by cultural, societal, and personal factors. World Health Organization (WHO) (2019) established that women are adult human females who typically possess two X chromosomes (XX), reproductive anatomy that includes structures such as ovaries, fallopian tubes, uterus, and vagina, and secondary sexual characteristics such as breasts. They are generally capable of bearing children through pregnancy and childbirth. In all, this study sees women as all female gender. Women and water are interconnected in various ways, and their relationship has significant implications for society, health, and the environment.

In many parts of the world, women are primarily responsible for collecting water for their households. They may have to walk long distances to reach water sources, carrying heavy containers on their heads or shoulders. This task can be time-

consuming and physically demanding, limiting women's opportunities for education, income generation, and personal development. Water plays a vital role in women's health, particularly during pregnancy and childbirth. Adequate hydration is essential for maternal well-being and the health of the developing fetus. Access to clean water facilities also reduces the risk of infections during childbirth, improving maternal and neonatal health outcomes.

Also, literature on women and sanitation/hygiene equally exists. The United Nations Children's Fund (UNICEF) (2012) refers sanitation to as the provision of facilities and services that ensure the safe disposal of human waste, promote cleanliness, and prevent the contamination of water sources and the environment. It involves the proper management of excreta, wastewater, solid waste, and other waste products to protect human health and the environment. Sanitation plays a crucial role in disease prevention, as inadequate sanitation can lead to the spread of waterborne diseases and other health hazards. According to WHO (2018), hygiene refers to a set of practices and conditions that promote and preserve health and well-being by preventing the spread of disease-causing agents and maintaining cleanliness. It encompasses various behaviours and habits, such as personal cleanliness, proper waste management, and maintaining a clean and healthy environment.

Good hygiene practices help in reducing the risk of infections and diseases, thereby contributing to overall public health. Women play a crucial role in ensuring proper sanitation and hygiene practices within their families. Access to clean water and sanitation facilities is essential for women's reproductive health, personal hygiene, and the well-being of their children. Lack of access to safe water and sanitation disproportionately affects women and girls, leading to increased vulnerability to diseases and infections. It is important to recognize the significance of the relationship between women and water and to ensure equitable access to water resources, sanitation facilities, and opportunities for women's empowerment (Sen, 2016).

METHODOLOGY

The study adopted a descriptive research design. Also, the population of the study is the total number of women in Rivers State which stood at 3,780,577 (World Bank Rivers State, 2023). Given this, the sample size of 400 was statistically generated through the Taro Yameni Formula.

$$n = \frac{N}{1 + N(e)^2}$$

Where n = sample size
N = the population size
e = the limit of error tolerance
1 = constant

Thus: $n = \frac{3{,}780{,}577}{1+3{,}780{,}577\ (0.05)^2}$

$$n = \frac{3{,}780{,}577}{3{,}780{,}578\ \times 0.0025}$$

$$n = \frac{3{,}780{,}577}{9451.445}$$

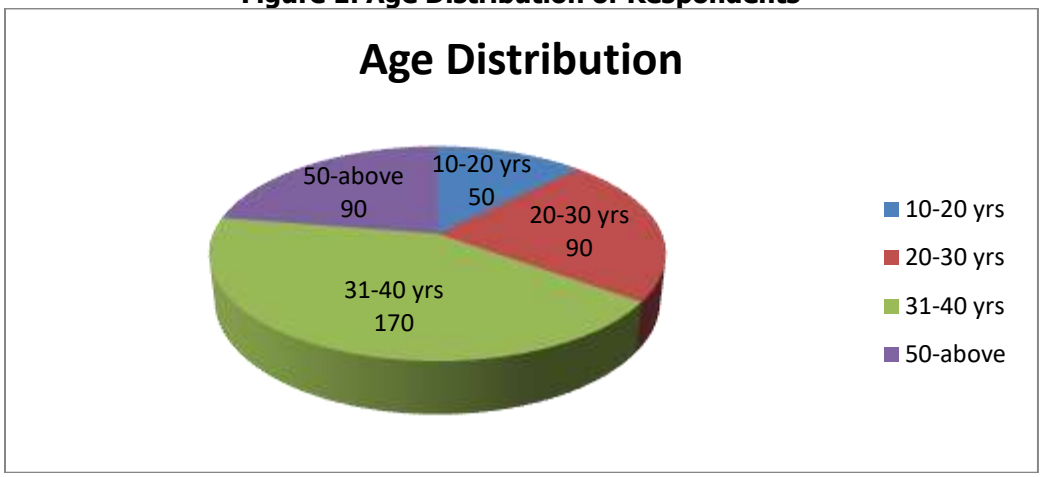
$$n = 400$$

A cluster sampling technique was used to group the LGAS into rural and urban areas, after which quota sampling was used to allocate 200 samples to each group. The researcher used a convenience sampling technique to select only eight communities whereby 4 in each area. In the rural area, Ndele, Ihugboko, K-Dere, and Kokoroko communities were selected. In the Urban centre were Rumuolumeni, Allu, Choba, and Rukpukwo communities. Also, a triangulation approach was adopted that utilized qualitative and quantitative methods. Therefore, the questionnaire and in-depth interview were used as instruments for data collection. The Four Likert Scale was used and the structured questionnaire titled Receptive Measures for Women, Access to Water, Sanitation and Hygiene Questionnaire **(**RMWAWHSQ). Statistical tools such as charts, mean, standard deviation, as well as T-tests were used to analyze the quantitative data. Again, the qualitative instrument was analyzed using content analysis.

DATA PRESENTATION AND ANALYSIS

Socio-Demographic Characteristics of Respondents

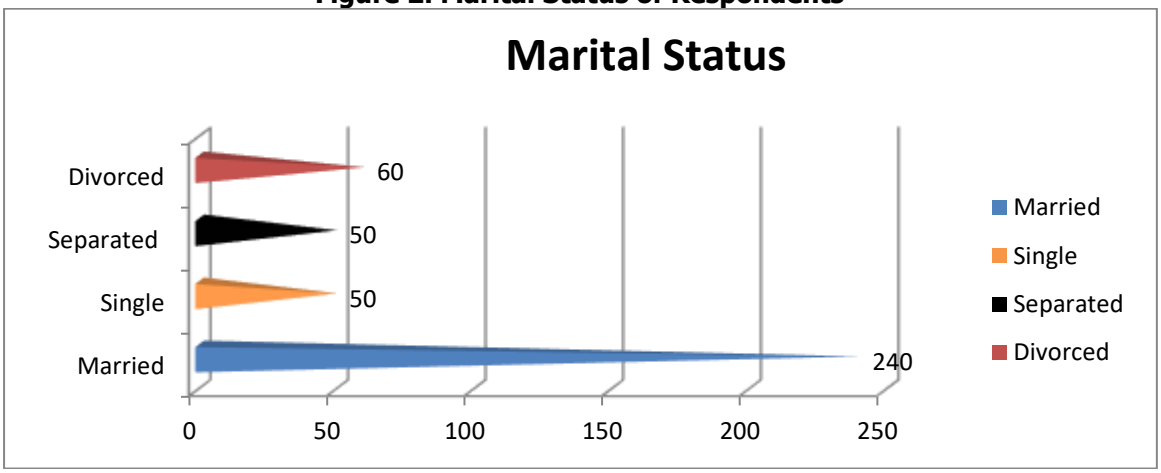
Figure 1. Age Distribution of Respondents



Source: Research Fieldwork (2023)

Based on the table above, it explains the age distribution of respondents. It shows that respondents within the age bracket of 31-40 years constitute the majority of respondents and those within the age limit of 10-20 years are the lowest with 50 respondents.

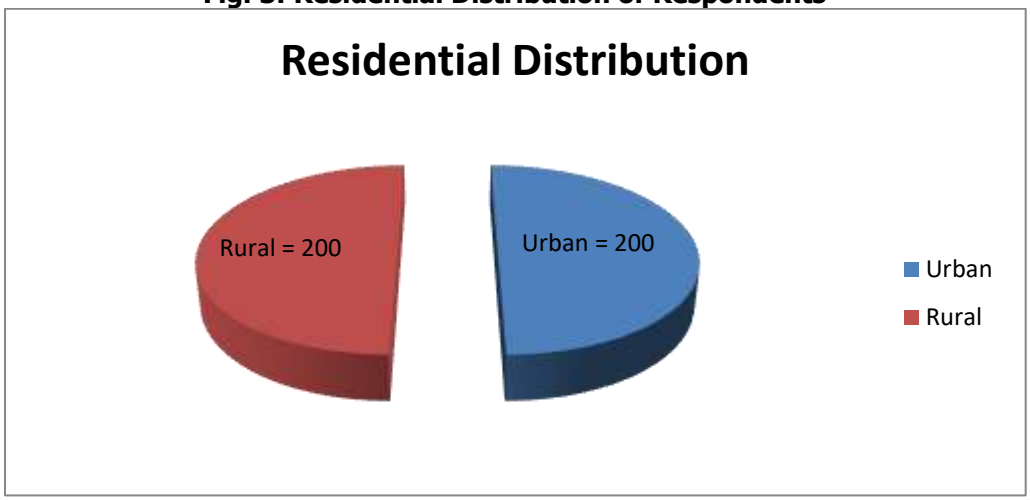
Figure 2. Marital Status of Respondents



Source: Research Fieldwork (2023)

The above figure two explains the marital status of respondents. It showed that married couples constitute the majority of respondents with 250 respondents. The least are those within the category of divorced and widowed with 60 respondents.

Fig. 3: Residential Distribution of Respondents



Source: Research Fieldwork (2023)

Figure 3 above gives a brief analysis of the residential distribution of respondents. First, it explains that urban residents are 200 respondents representing 50% of the total sample. Also, the rural respondents are equally 200 persons constituting 50% of the total respondents. By implication, the result showed an equal distribution of samples across the study area.

Test of Hypotheses and Analysis of Research Questions

Hypothesis one: The political inequality among genders is significantly responsible for policy initiation and implementation on women's access to water, sanitation, and hygiene in Rivers State.

Z-Test analysis of the political inequality among genders and policy initiation and implementation

Variables	N	$\Sigma x2$	$\Sigma y2$	Σxy	r-value	z-cal	z-crit	Result
political inequality (x) policy initiation and implementation (y)	400	12,999	49,252	62,251	0.76	14.36	1.96	Sig

Source: Researcher's Fieldwork, 2023

The table above shows a calculated z-value of 14.36 while the critical z-value at 0.05 is 1.96. Since the z-calculated of 14.36 is greater than the z-critical of 1.96, we fail to accept the null hypotheses for the alternate. This reveals that there is a strong, positive, and statistically significant relationship, implying that the political inequality among genders is significantly responsible for policy initiation and implementation on women's access to water, sanitation, and hygiene in Rivers State.

Hypothesis Two: The more women are privileged to attain higher participation in decision-making, the more there will be policies that can better women's access to WASH in Rivers State

Z-Test analysis on women's higher participation in decision-making and policies that can better women's access to WASH

Variables	N	$\Sigma x2$	$\Sigma y2$	Σxy	r-value	z-cal	z-crit	Result
Women's higher participation in decision-making and policies (x) Women's access to WASH (y)	400	7,481	8,628	16,115	0.84	15.87	1.98	Sig

Source: Researcher's Fieldwork, 2021

The result in the table above shows a z- calculated of 15.87 with a z-critical of 1.98 at 0.05 level of significance. Since the z-calculated of 15.87 is greater than the z-critical of 1.98, we reject the null hypotheses and accept the alternative. This reveals that there is a strong, positive, and statistically significant relationship. This implies that as long as more women are privileged to attain higher participation in decision-making, there will be more policies that can better women's access to WASH in Rivers State

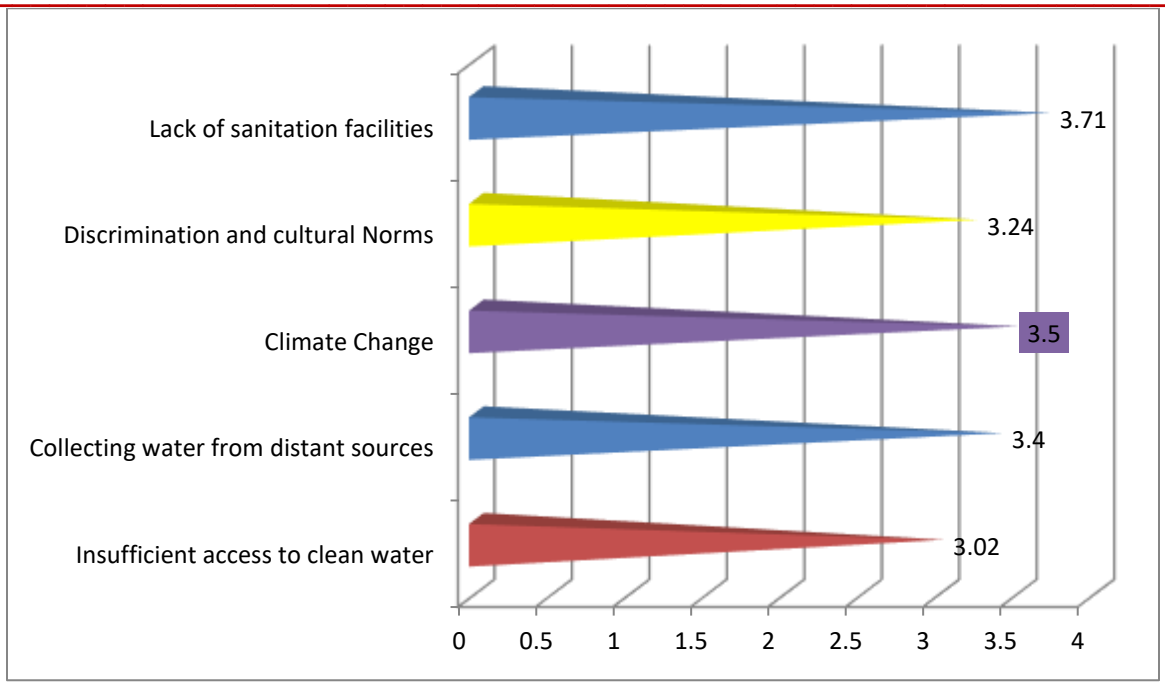
Research Question One: What are the challenges to women's access to water in Rivers State?

Table 1: Presents the Summary of Descriptive Statistics on the challenges to women's access to water in Rivers State: N=400

S/N	ITEMS	MEAN	STD	REMARK
1	Insufficient access to clean water	3.02	0.78	Accepted
2	Collecting water from distant sources	3.40	0.68	Accepted
3	Climate Change	3.50	0.66	Accepted
4	Discrimination and cultural Norms	3.24	0.86	Accepted
5	Lack of sanitation facilities	3.71	0.64	Accepted

Source: Research Fieldwork (2023).

Figure 4: Chart Showing challenges to women's access to water



Source: Research Fieldwork (2023)

Given the analysis, it established the challenges to women's access to water in Rivers State and how affects their overall well-being, health, and socioeconomic development. This also relates to the result of hypothesis one which established that political inequality among genders is significantly responsible for ineffective policy initiation and implementation on women's access to water, sanitation, and hygiene in Rivers State. In relation to the qualitative result, it proved that limitations faced by women in accessing good water are characterized by some challenges which imply that women, in Rivers State, often bear the primary responsibility for water collection in their households. According to the World Health Organization (WHO) and UNICEF, around 263 million people globally still lack access to improved water sources, with women and girls being disproportionately affected (WHO/UNICEF, 2019). Women are more likely to spend significant time and energy collecting water, which impacts their education, employment opportunities, and overall quality of life.

It was found that insufficient access to clean water facilities poses a severe health risk, particularly to women. The lack of water infrastructure increases the vulnerability of women to waterborne diseases, such as diarrhea, trachoma, and urinary tract infections (WHO, 2019). Additionally, women's reproductive health is affected when they lack access to clean water for menstrual hygiene management. Again, lack of Sanitation Facilities is a factor, as women's access to clean water is closely linked to access to adequate sanitation facilities. In many communities, women lack safe and private sanitation facilities, which can lead to health issues and increase the risk of violence or harassment when they need to go out in search of secluded spots for sanitation needs. The researcher observed together with the in-depth interview that discrimination and cultural Norms are a major challenge. By implication, some of the IDI respondents were of the view that discriminatory practices and cultural norms often reinforce gender inequalities in water access. In some societies, women are marginalized and have limited decision-making power regarding water management and infrastructure development. Their voices and perspectives are often excluded from community-level discussions and decision-making processes, hindering their ability to address their specific water-related needs. This situation is found in the Ibaa community, Ndele community, and other rural communities where women are not permitted to contribute during decision-making. Most of the water projects installed in some of these communities are just political recommendations that fail to understand the need for distribution.

Also, the triangulation result showed that climate change exacerbates the challenges women face in accessing water. Increasingly erratic rainfall patterns and floods can disrupt water availability and quality. Women, as primary caregivers, are particularly affected as they bear the responsibility of securing water for their households. They may need to travel longer distances to find water sources or use unsafe water, increasing their vulnerability to waterborne diseases. This situation has been reoccurring in Ahoada West and East of Rivers State where flood disasters always surface.

Most women and girls often spend hours each day collecting water from distant sources, sometimes walking long distances and carrying heavy loads. This time-consuming task limits their opportunities for education, income generation, and other productive activities. According to the United Nations Development Programme (UNDP), reducing the time burden of water

collection for women can contribute to gender equality and poverty reduction (UNDP, 2016). Furthermore, it was found in this study that the journey to water sources, especially in areas with limited infrastructure, exposes women and girls to various safety risks. They may face harassment, assault, or other forms of gender-based violence while collecting water or using shared sanitation facilities (UN Women, 2017). Ensuring women's access to safe water sources and promoting gender-sensitive WASH facilities is essential for their safety and well-being.

Therefore, the study realized through the in-depth interviews conducted found that improving women's access to water requires multifaceted interventions. This result relates to the findings of UNESCO (2020) which explains that governments, international organizations, and NGOs must invest in infrastructure development to ensure water is available closer to households, reducing the burden of water collection on women. It is crucial to involve women in decision-making processes related to water management and sanitation. Community-led initiatives and innovative technologies, such as rainwater harvesting systems, can also contribute to enhancing women's access to water. Some of the IDI respondents lamented that rainwater is no longer hygienic to the people of Rivers State given the situation of pollution induced by multinational oil companies and illegal oil bunkers in some oil host communities.

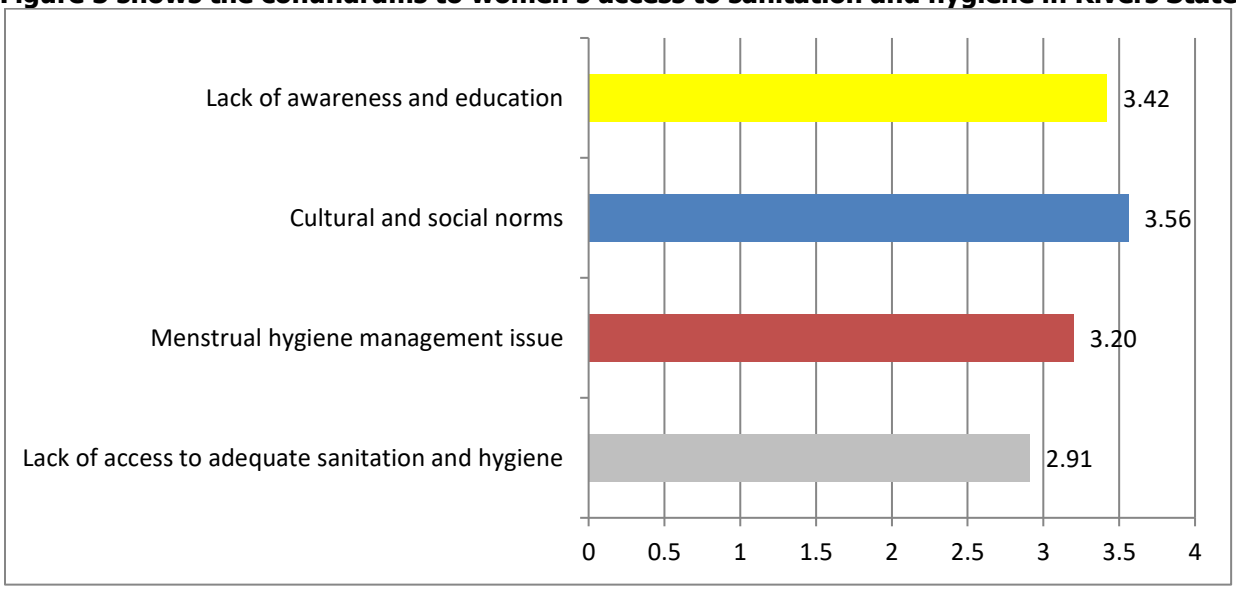
Research Question Two: What are the conundrums to women's access to sanitation and hygiene in Rivers State?

Table 2: Presents the Summary of Descriptive Statistic on the conundrums to women's access to sanitation and hygiene in Rivers State: N=400

S/N	ITEMS	MEAN	STD	REMARK
1	Lack of access to adequate sanitation and hygiene	2.91	0.85	Accepted
2	Menstrual hygiene management issue	3.20	0.66	Accepted
3	Cultural and social norms:	3.56	0.76	Accepted
4	Lack of awareness and education	3.42	0.67	Accepted

Source: Research Fieldwork (2023)

Figure 5 shows the conundrums to women's access to sanitation and hygiene in Rivers State



Source: Research Fieldwork (2023)

The table above presents the summary of descriptive statistics on the conundrums of women's access to sanitation and hygiene in Rivers State. The result of the findings explains the challenges to women's access to sanitation and hygiene. However, access to sanitation and hygiene are a crucial aspect of ensuring the well-being and dignity of women in developing countries. Lack of access to adequate sanitation and hygiene facilities poses numerous challenges and health risks for women, including increased vulnerability to disease, compromised safety and security, and limitations on education and economic opportunities. However, there should be more efforts to address this issue and improve women's access to sanitation and hygiene.

Based on the in-depth interview analysis one of the challenges faced by women is a *lack of privacy and safety*, This represents the view of UN Women (2016) **i**nadequate sanitation facilities, such as open defecation or shared latrines, deny women privacy and expose them to the risk of harassment, assault, and violence. It was also found that limited menstrual

hygiene management resources (MHM) are a critical aspect of women's sanitation and hygiene needs. However, in Rivers State, many women lack access to affordable and hygienic menstrual products, clean water, and appropriate facilities for managing menstruation. This results in limited options for women to maintain menstrual hygiene, and in the view of United Purpose (2019) it often leads to health issues and school or work absenteeism.

Furthermore, cultural and social norms can also hinder women's access to sanitation and hygiene in Rivers State. In some communities selected for this study as well as other communities in Rivers State, women face restrictions and taboos around the use of toilets or bathing facilities, particularly during menstruation. According to UNICEF Nigeria (2018), these norms often limit their access to clean water, proper toilets, and sanitary products, leading to unhygienic practices and increased health vulnerabilities. Also, limited awareness and education about sanitation and hygiene practices contribute to the challenges faced by women in Rivers State. This is proved truthful as a study by WaterAid Nigeria (2019) confirms that many women do not have adequate knowledge about proper hygiene practices, including hand washing and menstrual hygiene management. This lack of awareness, coupled with limited access to information and resources, hinders their ability to maintain good sanitation and hygiene practices

Therefore, the result of the In-depth respondents, impact on education, is true as insufficient sanitation facilities in schools can lead to girls' absenteeism or dropout rates due to the lack of privacy and facilities to manage menstrual hygiene (World Bank, 2020). Also, the result of the in-depth interview revealed that because of the challenges of sanitization and hygiene, leads to health risks as most public school suffers from toiletry facilities. This is in relation to the study by UNICEF (2010) which stipulates that poor sanitation and hygiene contribute to the spread of diseases like diarrhea, which disproportionately affects women and young children.

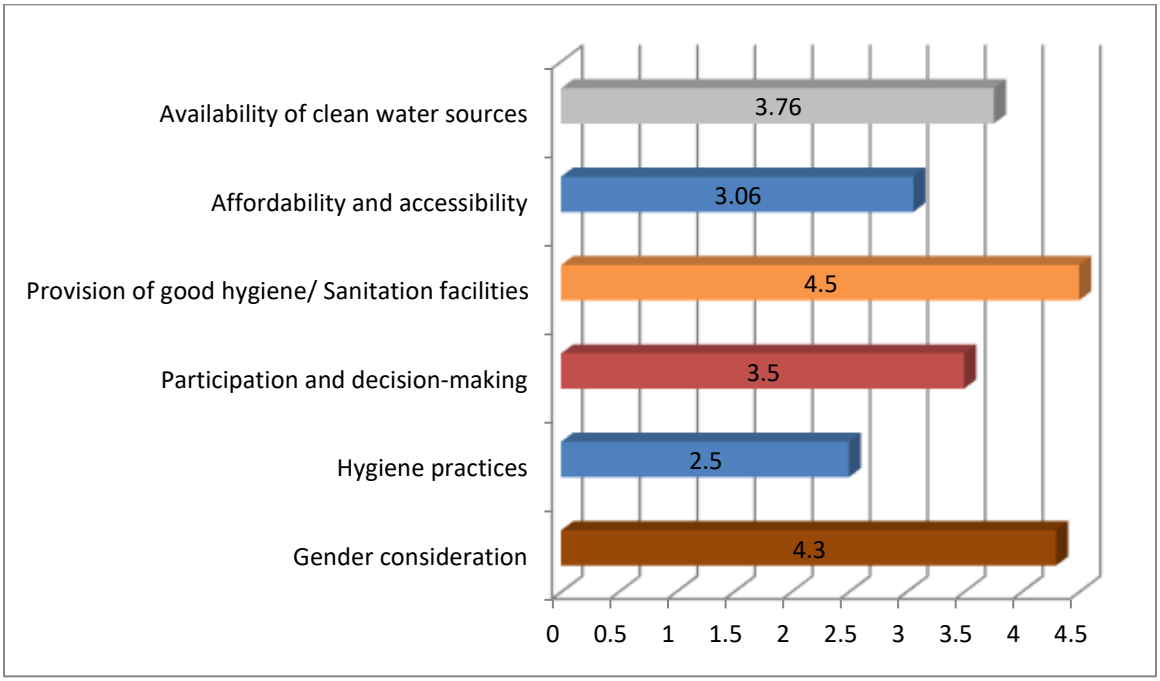
Research Question Three: What are the receptive measures of women's access to water, sanitation, and hygiene (wash), in Rivers State**?**

Table 2: Presents the Summary of Descriptive Statistics on the measures of women's access to water, sanitation, and hygiene (wash), in Rivers State: N=400

S/N	ITEMS	MEAN	STD	REMARK
1	Gender consideration	3.22	0.73	Accepted
2	Hygiene practices	3.38	0.84	Accepted
3	Participation and decision-making	3.15	0.74	Accepted
4	Provision of good hygiene/ Sanitation facilities	3.12	0.83	Accepted
5	Affordability and accessibility	3.06	0.76	Accepted
6	Availability of clean water sources	3.76	0.54	Accepted

Source: Research Fieldwork (2023)

Fig. 6 Chart representing Mean score on the measures of women's access to water, sanitation and hygiene (wash).



Source: Research Fieldwork (2023)

Results in Table 3 and Figure 6 above present the summary of descriptive statistics on the receptive measures of women's access to water, sanitation, and hygiene (wash), in Rivers State. Based on the analysis, it was revealed that Access to water, sanitation, and hygiene (WASH) is crucial for the well-being and empowerment of women. In Rivers State, Nigeria, several receptive measures can be considered to assess women's access to WASH services. These measures include: Assessing the availability and proximity of clean water sources is essential. It involves evaluating the accessibility of safe and reliable water supply systems, such as piped water, boreholes, protected wells, or water kiosks, within a reasonable distance from women's residences or communities. Secondly, there should be Adequacy of water supply: It is important to determine whether the available water supply meets the needs of women and their households. This includes evaluating the quantity of water provided, its reliability throughout the year, and the functionality of water infrastructure.

Also, it was indicated that assessing the availability and accessibility of sanitation facilities, such as toilets or latrines, is crucial. It involves evaluating the availability of functional and gender-responsive sanitation facilities that ensure privacy, safety, and dignity for women and girls. Again, for more receptive measures, evaluating women's knowledge, attitudes, and behaviors related to hygiene practices is another important measure. It involves assessing their awareness of proper handwashing techniques, menstrual hygiene management, and overall hygiene practices within the household. Apart from the above, the study equally found that it is essential to *incorporate gender perspectives into WASH assessments*. This involves evaluating whether WASH facilities and services are designed and located in a way that considers the specific needs, safety concerns, and preferences of women and girls.

Again, it was revealed that assessing the affordability and accessibility of WASH services is crucial. It involves evaluating whether the cost of accessing clean water, sanitation facilities, and hygiene products is affordable for women, particularly those from low-income communities. Additionally, assessing the physical accessibility of WASH facilities for women with disabilities is important. Another finding showed that Assessing women's participation in WASH-related decision-making processes is crucial for measuring their access to WASH. It involves evaluating whether women have a voice and influence in the planning, design, implementation, and monitoring of WASH programs and policies at the community and institutional levels.

CONCLUSION

It was concluded that until more women's voice and participation towards policy initiation and implementation are addressed, gender/women issues on the condition of water accessibility, sanitation, and hygiene becomes delusion. By

considering these receptive measures, stakeholders can better understand the existing gaps and challenges in women's access to WASH in Rivers State. This information can then inform the development of targeted interventions and policies to improve women's access to clean water, sanitation, and hygiene.

RECOMMENDATIONS

i. There should be inclusiveness of more women in governance and decision-making, as this would enable them to participate fully in policies and programs that can provide more water accessibility, good sanitation, and hygiene.

ii. Empowering women educationally and economically can help address their specific needs and ensure equitable access to clean water resources.

iii. Quality leadership is imperative as this would improve the welfare skills of all including women. Such could enable them to improve their access to water, hygiene, and sanitation.

iv. Power is indeed tussled, women should empower themselves politically to attain more political positions in the government. Such efforts would grant women more political offices which could give them the edge to make policies that can improve their wellbeing.

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