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WATER SANITATION INFORMATION UTILIZATION LEVEL AMONG RURAL HOUSEHOLDS IN OYO STATE

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ABSTRACT

Inadequate water sanitation information utilization has resulted in increased occurrence of water borne diseases among rural households in recent times in Nigeria. Stakeholders in water and sanitation sectors introduced a set of recommended practices via information dissemination to people with the aim of reducing the incidence of diseases. The study therefore examined the level of water sanitation information utilization among rural households in Oyo state. A sequential multistage sampling technique was used in selecting two hundred and thirty (230) respondents for the study. Structured interview schedule was used to collect relevant data. Data were subjected to a mixed method data analysis: both descriptive (mean, frequency count, percentages, weighted mean score and standard deviation) and inferential statistical analysis (Chi-square and Pearson Product Moment Correlation (PPMC)). The inferential statistical tools were used to test the hypotheses of the study. The findings of the study revealed a mean age of 41.2 years and the mean household size was 6, while average farm size was 2.3 acres. Rain water collection (89.1%) and protected dug well (87.8%) were the common sources of water supply in the study area. Sound health (99.6%) was the most widely mentioned benefit of the water sanitation practices. The use of covered containers (WMS =3.6) ranked first as the most utilized water sanitation information and Financial constraint (WMS = 2.2) ranked first as the major constraint to the utilization of water sanitation information. The PPMC results conducted at 5% level of significance showed that age, household size, educational status and annual income had significant relationships with level of information utilization. The Chi-square test conducted at 5% level of significance revealed significant relationships between sources of water supply (personal tap, public tap, borehole, protected dug well, rain water collection) and level of information utilization. The study concluded that the various water sanitation information were moderately utilized and recommended the provision of more water and sanitation facilities by the government, developmental institutions and Non- governmental Organisations to the rural households.

KEYWORDS: PPMC, Water and Sanitation Facilities by the Government, Developmental Institutions and Non-governmental Organisations to the Rural Households

INTRODUCTION

Water is crucial for sustainable development. However, limited access to clean and safe water associated with poor water supply and sanitation at household level is widening the poverty gap, gender inequalities and the prevalence of water borne diseases (Gender and Water Alliance (GWA, 2006). This is contributing to 3.7% of the total global disease burden and 2.2 million death each year with rural households in the developing countries mostly affected (WHO/UNICEF, 2008). Although the Millennium Development goals (MDGs) target 7(c) seeks to “halve by 2015 the proportion of people

without access to safe drinking water and sanitation" (UNDP, 2005), it is anticipated that Sub-Saharan Africa will only reach the MDGs water target by 2040 (Sutton, 2008). But still, some 400 million of the people living in sub Saharan Africa will be left without access to safe water with a majority of them living in rural areas (Sutton, 2008).

Water related diseases are one of the world's most significant health problems and one that is largely preventable. Cholera and other water related diseases are responsible for some 1.8 million deaths each and every year. The poor of developing nations especially are the hardest hit. Water related diseases trap million in cycles of poverty and poor health, often rendering them unable to farm or go to school. These illnesses are of many types, but they are directly related to a need for clean water and hygiene. Many diseases arise simply because of the lack of clean water for drinking. Others are spawned by inadequate facilities and poor personal hygiene practices that are directly related to a lack of clean water (Buckingham 2000). Households are also at an increased risk for violence since they travel such great distances from their villages on a daily basis in search of water, and are even at risk when they must go to the edge of the village to find a private place to relieve themselves. Water borne disease remain a major cause of death and illness in developing countries, the global spatial distribution show that Africa and Asia account for a large percentage of these disease, which includes cholera, typhoid fever, paratyphoid, bacillary dysentery, gastroenteritis and infective hepatitis (Lucas and Gilles, 1999), children less than five years are particularly affected adversely since they can experience as many as 10 episodes of diarrhea in a year. Among this age group, 15-18% of mortality is attributed to diarrhea. Nevertheless, adult are not spared the scourge of the same disease (USAID, 2005).

Because of the task of water provision at the households, and the water borne diseases associated with water sanitation and hygiene, the participation of household in education, agriculture and income generating activities as well as in cultural and political engagements is often compromised (Panda, 2007, Karl, 1995). Not only that the poor do not have access to readily accessible drinking water, even when water is available in most of the small towns, there are risks of contamination due to several factors. When wells are built and water sanitation facilities are developed, they are improperly maintained due to limited financial resources. Water quality testing is not performed as often as is necessary, and lack of education among the people utilizing the water source leads them to believe that as long as they are getting water from a well, it is safe. Once a source of water has been provided, quantity of water is often given more attention than quality of water (Awuah, Nyarko, Owusu, and Osei-Bonsu, 2009).

Linkages between water supply and sanitation and a cluster of key stakeholders in health, education, agriculture, and environment sectors are intuitively obvious, and documented with varying precision in different developing countries. Some of the data and project experience in Nigeria in these sectors suggest clear linkages between poor water sanitation standards and decline in health, education and productivity. Specifically, these include low enrollment in schools, particularly of girls who must spend time in collecting water, higher crime against women due to lack of toilet privacy, as well as the more obvious impacts of disease, higher infant mortality, high absenteeism in schools and at work, and lower productivity (WaterAid, 2004).

The paper examined the water sanitation information utilization level among the rural households in the study area. To achieve the main objective, the paper identified the socio- economic characteristics of the respondents and determined the respondents' sources of water supply. The paper went further to determine the level of utilization of water sanitation information by the respondents and investigated the constraints to the utilization of information on water

sanitation by the respondents. The population of the study included all the rural households in Oyo State of Nigeria.

METHODOLOGY

A Sequential multistage sampling procedure was used in selecting 230 households. Interview schedule was designed to obtain Information on the utilization of water sanitation Information from the respondents. The variables measured included age, sex, marital status, years spent in school, religion, years of farming experience, farm size, annual income, sources of water supply, level of utilization of water sanitation Information and constraints to water sanitation Information utilization. A mixed method statistical analytical tools were employed in the study which included both descriptive (such as frequencies, percentage, mean, ranking and charts) and inferential statistics such as chi-square and Pearson Product moment Correlation (PPMC). The significant level of inferential statistics was decided at 0.05 level.

RESULTS AND DISCUSSIONS

Socio-economic Characteristics of the Respondents

Table 1 below shows that more of the respondents were less than 30years of age (32.7%), 17.2% were between the ages of 31 and 40, 21.2% were between 41 and 50 years of age. The Mean age of the farmers is 41.16 years of age. This is also in line with the study of Ayoade et al (2012) who reported that younger households are agile, active and with more energy to dissipate on productive efforts. Distribution of respondents by sex revealed that majority (74.8%) of the respondents was male while the remaining 25.2% were female. Majority (71.7%) of the respondents were married and the mean household size is 6. 43 per cent of the respondents were Muslims, 50 per cent Christians, 3.9 per cent Traditionalists while only 2.6 per cent of the respondents were free thinkers and 51.7 per cent of the respondents used both family and hired labour while 4.8 per cent of the respondents were doing it on their own without an additional source of labour. 83 per cent of the respondents belong to one social organization or the other and the mean annual income is 271,834.27 naira

Table1: Socio-Economic Characteristics of the Respondents

Socio-economic Characteristics	Frequency	Percentage	Mean
Age			
≤30	75	32.7	
31 – 40	41	17.8	
41 – 50	49	21.2	41.16
51 – 60	40	17.3	
Above 60	25	10.9	
Sex			
Male	172	74.8	
Female	58	25.2	
Marital Status			
Married	165	71.7	
Single	55	23.9	
Separated	5	2.2	
Divorced	3	1.3	
Widowed	2	0.9	
Household Size			
1 – 5	97	42.1	
6 – 10	115	50	6
11 – 15	13	6.1	

Table1: Cond.,

Above 15	4	1.7	
Religion			
Christianity	115	50	
Islam	102	43.5	
Traditional	9	3.9	
Free Thinkers	6	2.6	
Years Spent in School			
0	54	23.4	
1 – 6	91	41.7	
7 – 12	54	23.5	10
13 – above	26	11.3	
Respondent			
Membership	191	83	
Not a member	39	17	
Farm size (hectares)			
1 – 3	91	39.6	
4 – 6	86	37.4	2.3
7 – 10	34	14.8	
Above 10	19	8.2	
Income			
1000 – 250,000	87	37.7	
251,000 – 500,000	82	35.2	271,834
501,000 – 750,000	37	16.70	
751,000 – 1,000,000	19	8.20	
Above 1,000,000	5	2.20	

Sources of Water Supply

The findings in table 2 shows that 8.1 per cent of the respondents uses personal tap, 60.8 per cent public used tap/ hand pump and 80 per cent used borehole. Another 87.7% uses protected dugwell, 40.4% used water from spring and 89.1 per cent used rain water. Also 33.5% respondents uses water from unprotected well while 33 per cent of the respondents used water from the brooks. This results implies that majority (89.1%) of the respondents used rainwater probably because its readily available during the rainy season, it saves time because they don't need to go a long distance before getting it and ut is cheap (doesn't require any form of financial commitment to get).

Table 2: Distribution of the Respondents Based on Sources of Water Supply

	Frequency	Percentage
Personal tap	29	8.1
Public tap/ Hand pump	139	60.8
Borehole/Tube well	184	80
Protected dug well	202	87.8
Spring	93	40.4
Rain water collection	205	89.1
Unprotected dug well	77	33.5
Brooks	76	33.0

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Level of Utilization of Water Sanitation Information

The level of utilization of water sanitation information was measured on a four-point scale of Always, Occasionally, Rarely and Never. The use of clean and covered containers was ranked first with a weighted mean score (WMS) of 3.62 as a major way of utilizing water sanitation information while others were securing water from clean environment second with weighted mean score of 3.47, securing of germ free water third with WMS of 3.39, followed by allowing it cool down and settle before using which ranked fourth with the weighted mean score of 3.17. Treatment of water with chlorine or potash alum comes fifth with the weighted mean score of 2.74, which is clearly followed by regular boiling of water before drinking with the weighted mean score of 2.04, followed by the use of water filter/sieve with the mean score of 1.97 and the last is the use of water guard with the weighted mean score of 1.45.

Of all the available water sanitation information, the use of clean and covered containers to fetch and preserve water was more utilized. This could be due to the fact that the information was not too ambiguous for them to implement, the readily availability of containers used in fetching water might have also be a contributory factor.

Table 3: Distribution of Respondents Based on the Level of Utilization of Water Sanitation Information

Information	Always	Occasionally	Rarely	Never	Wms	Rank
Secure Water from clean environment	152(66.1)	50 (21.7)	13 (5.7)	15(16.5)	3.47	2nd
Secure germ free Water	121(52.6)	82(35.7)	23 (10)	4(1.7)	3.39	3rd
Treatment of water with Chlorine/Potash alum	52 (22.6)	76(33.0)	92(40.0)	10(4.3)	2.74	5th
Let it stand and settle	113(49.1)	59 (25.7)	42(18.3)	16(7.0)	3.17	4th
Always cover your kegs/containers	156(67.8)	62(27.0)	12 (5.2)	0(0)	3.62	1st
Boiling of water before drinking	28(12.2)	41(17.8)	74 (32.2)	87(37.8)	2.04	6th
Use of water guard	33(14.3)	47(20.4)	31(13.5)	119(51.7)	1.97	7th
Use of Sieve	11 (4.8)	23 (10.0)	30(13.0)	166(72.2)	1.45	8th

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Adapted from Yilkudi (2014)

Constraints to Water Sanitation Information Utilization

The constraints to water sanitation information utilization was measured on a 3 point scale of very serious, serious and not serious. Of all the constraints of water sanitation information utilization, financial constraint ranked first as the most serious constraint with the weighted mean score of 2.18, Others were inappropriateness of the information (1.95), practicality of the information (1.78) and low level of education (1.74) ranked second and joint third respectively. Complexity of the information ranked fourth with the weighted mean score of 1.67, this could also be as a result of low educational status of the respondents. Compatibility with culture and religion ranked last with the weighted mean score of 1.47.

Table 4: Distribution of Respondents by the Constraints to Water Sanitation Information Utilization

Constraints	Very Serious	Serious	Not Serious	Wms	Rank
Inappropriateness of the Information	78(33.9)	63 (27.4)	89 (38.7)	1.95	2nd
Practicality of the information	30(13.0)	119 (51.7)	81 (35.2)	1.78	3rd
Compatibility with culture and Religion	(17.0)	30 (13.0)	161(70.0)	1.47	5th
Complexity of the Information	14(6.1)	127 (55.2)	89 (37.7)	1.67	4th
Low level of Education	44(19.1)	92 (40.9)	94(40.9)	1.78	3rd
Financial constraints.	133(57.8)	65 (28.3)	32 (13.9)	2.18	1st

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Hypothesis One

HO_1: There is no significant relationship between the selected socio – economic characteristics and the level of utilization

The result of the table below shows a positive and significant relationship between age, household size, years spent in school, annual income and the level of utilization

Table 5: The Result of PPMC Showing Relationship between Socio-economic Characteristics and the Level of Water Sanitation Information

Socio-Economic Characteristics	R-Value	P-Value	Remarks
Age	0.477	0.000	Significant
Household Size	-0.073	0.000	Significant
Years Spent in school	0.052	0.001	Significant
Years of farming Experience	0.382	0.430	Not Significant
Farm Size	0.235	0.273	Not Significant
Annual Income	0.036	0.001	Significant

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Hypothesis Two

H02: There is no significant Relationship between the Sources of water supply to the respondent and the level of water sanitation information utilization

The table below shows there is a positive and significant relationship between getting water from personal tap, Public Tap, borehole, Protected dug well, Rain water Collection and level of utilization. The results of the analysis indicates that information on various sources of water supply was well utilized which helped in increasing the level of utilization of water sanitation information on various sources of water supply.

Table 6: Relationship between the Sources of Water Supply to the Respondent and The Level of Water Sanitation Information Utilization

Sources of Water Supply	Chi-Square Value	D. F	P – Value	Remarks
Personal Tap	26.649	14	0.021	Significant
Public Tap	30.886	14	0.006	Significant
Borehole/Tube well	28.116	14	0.014	Significant
Protected Dug well	43.193	14	0.000	Significant

Springs	22.213	14	0.074	Not Significant
Rain water collection	47.173	14	0.000	Significant
Unprotected Dug well	12.297	14	0.582	Not Significant
Brooks	18.878	14	0.170	Not Significant

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CONCLUSIONS AND RECOMMENDATIONS

From the findings, majority of the respondents were less than 30 years of age, while the mean age was found to be 41.16. Majority of the respondents were married and Local council (78.3%) was the major source of water sanitation Information, In ranking the severity of the identified constraints associated with the water sanitation Information utilization, Lack of finances to utilize the Information was ranked first among others. The study concluded that the various water sanitation information were moderately utilized and recommended the provision of more water and sanitation facilities by the government, developmental institutions and Non-governmental Organisations to the rural households. Therefore, there is a need to increase the level of awareness on water sanitation Information utilization through various organizations and agencies that are saddled with the responsibility of enlightening rural farmers and the local councils should be more empowered in terms of resources and facilities in order to be able to do their work of water provision and water sanitation information dissemination effectively.

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