International Journal of Ebola, AIDS, HIV and Infectious Diseases and Immunity
Vol.2, No.1, pp.12-28, February 2016
Published by European Centre for Research Training and Development UK (www.eajournals.org)

HIV-AIDS KNOWLEDGE AND ACCESSIBILITY TO HIV INFORMATION AMONG WOMEN IN OBUDU LOCAL GOVERNMENT AREA OF CROSS RIVER STATE, NIGERIA

Nelson Chukwudi Osuchukwu[1], Easter Chukwudi Osuchukwu[2], Jimmy Ebi Eko[1] and Margaretmary Amokeye Ekum[1]

[1]Department of Public Health, Faculty of Allied Sciences, University of Calabar, Calabar, Nigeria.
[2]Department of Nursing Sciences, Faculty of Allied Sciences, University of Calabar, Calabar, Nigeria

ABSTRACT: *The study was to determine HIV/AIDS knowledge and accessibility to HIV information among women in Obudu Local Government Area of Cross River State, Nigeria. A total of 402 women were recruited using multi-stage random sampling technique. A structured questionnaire was designed to generate data from the respondents. Data collected were entered and analysed using SPSS (version 20.0) and results were presented in tables and charts. Chi-square was used to test for association between variables at 5% level of significance. Findings from this study revealed most study participants (25.6%) were within the age bracket of 35-39 years, (91.8%) Christians, (71.9%) married and (43.3%) had undergone secondary education. Most respondents were civil servants (32.6%), traders/business women (15.7%), farmers (9.7%) and 20.3% were low income earners. Respondents exhibited high knowledge level of HIV/AIDS as the media (39.1%), health workers (18.7%) and HIV/AIDS campaigns (15.0%) were their major sources of information. About 54.5% respondents reported that they currently have access to HIV/AIDS information and other reproductive health services with primary health centers (21.4%) and hospitals as their top source of information centers. Intensifying HIV/AIDS awareness campaigns and improving access to reproductive health services are core strategies in averting HIV morbidity and mortality among women domiciling in semi-urban and remote settings.*

KEYWORDS: Women, Accessibility, HIV/AIDS, Knowledge, Obudu LGA

INTRODUCTION

The HIV pandemic remains a major public health problem affecting nearly all countries, regions and continents of the world. Globally, evidence-based studies have shown that an estimated 33.2 million people live with the virus, out of which 22.5 million domiciles in Sub-saharan Africa (United Nation, 2003). As at 2012, it was estimated that out of the 35.3 million people that were living with HIV, 50% (approximately 17.7 million) were women and almost half of all new adult HIV infection occur among women (UNAIDS, 2012).

In Nigeria, despite the concerted effort employed by the government and other corporate organizations to avert HIV, the number of people living with the virus and HIV-related stigma continually proliferates. The constant endemicity of HIV in Nigeria threatens the health systems and other sector of the Nigerian economy. According to UNAIDS (2014) Nigeria HIV prevalence rate was 3.2% as compared to 4.1% as at 2012.

ISSN 2053-406X(Print) ISSN 2053-4078(Online)

The vulnerability of women to HIV infection is facilitated by a number of high risk behaviours which include; having unprotected sexual intercourse, transmission of HIV from mother to child (through breastfeeding, labour or delivery), transfusion of unscreened blood and sharing of infected sharp objects such as razor, knife, needles, etc. Women's knowledge of HIV/AIDS is crucial in reducing their risk exposure. It is believed that individuals who are knowledgeable about HIV/AIDS, its mode of transmission and prevention are less susceptible to contracting HIV infection. According to World Health Organization, the proportion of women with correct knowledge of HIV/AIDS transmission in urban area is ≥80% even among the poorest 20% population in all regions except Asia. Studies have shown that women exhibit high knowledge level of HIV/AIDS (Fitzgerald et al, 2003; Ananth and Koopman, 2003). A recent Ethiopian study observed that adequate knowledge about HIV/AIDS was also significantly associated with lower likelihood of stigmatization among women of reproductive age (Gurmu and Etana, 2015).

In Nigeria, HIV/AIDS awareness is high but correct knowledge of HIV routes of transmission and prevention strategies remain relatively low (FMOH, 2010). A recent cross-sectional study carried out in Gwagwalada Area council of Abuja, Nigeria recorded high knowledge level of HIV among pregnant women (Aboh et al, 2015). However, lack of access to HIV/AIDS information among women has been documented (Iwara, 2012). This obviously is exacerbated by factors such as inadequate manpower, distance to HCT centers, stigmatization and discrimination, gender inequality, poor documentation of HIV/AIDS data and other vital information, lack of sexual autonomy and inability of women to make informed decision (Edewor, 2015). Hence, in order to reduce the rate of HIV especially among women, addressing factors hindering access to HIV/AIDS information should be a priority.

Objective of the study

The objective of this study was to determine HIV/AIDS knowledge and accessibility to HIV information among women in Obudu Local Government Area of Cross River State, Nigeria.

Research hypotheses

The null hypotheses were formulated and tested

H_{01}: There is no relationship between educational status of women and accessibility to HIV/AIDS information in the study area.

H_{02}: There is no relationship between educational status of women and awareness of HIV/AIDS transmission in the study area.

H_{03}: There is no age differential in the level of awareness of HIV/AIDS transmission in the study area

METHODOLOGY

Study setting

The study area is Obudu Local Government Area. It is positioned in the Northern part of Cross River State with an estimated populace of 256,000 (NPC, 2006). The area has 10 political

ISSN 2053-406X(Print) ISSN 2053-4078(Online)

wards with a land mass of 1,281,908 square kilometer and lies between latitude 60301 and 70001 North and longitude 90501 and 90301 East.

Obudu Local Government Area is bounded by the Tiv of Benue state to the North, Obanliku Local Government Area to the South, Boki Local Government Area to the East and Bekwara Local Government Area to the West. The area has two climatic seasons which are the rainy season from early April to middle October and the dry season from late October to March. Most resents in the area engage primarily in farming, fishing and small and medium scale businesses. Christianity is the primary religion practiced in the area with few Islamists and traditionalists. Obudu also consist of three ethnic groups which includes; Bette, Utugwang and Ukalu. Of the trio, Bette is more dominant than the other two ethnic groups. Obudu Local Government Area contributes effectively to the tourism industry in Nigeria. The area is unique for it ranch resort and annual Obudu ranch international mountain race around the hilly facets and environs. It has a dam which provides an ambience for recreation (Etiosa, 2006). Basic infrastructure such as roads, markets, schools and health facilities are available in the Local Government Area.

Study design

In order to determine HIV/AIDS knowledge and accessibility to HIV information among women in the study area, a descriptive cross-sectional study design was used. Both qualitative and quantitative data were generated from the study.

Study population

Women aged 15-49 years who domicile in the study area constituted the study population.

Sample Size determination

Sample size for this study was determined using Lutz's formular, (1982) which is expressed as

$$n = \frac{Z^2Pq}{d^2}$$

Where n = Sample size

Z = 1.96 (i.e. 95% confidence interval)

d = 0.05 (acceptable margin of error)

p = 7.1% = 0.071 (Proportion of women infected with HIV) (Cross River State Operational plan for EMTCT 2013-2015).

q = 1-P = 0.93 (Proportion of women not infected with HIV))

Therefore, $n = \frac{(1.96)2 \times 0.071 \times 0.93}{(0.03)2} = 282$

The sample size for this survey was 282. However, the desired sample size was increased by 30% to account for incomplete or missing questionnaires which give a sample size of 402 that was used for the study.

ISSN 2053-406X(Print) ISSN 2053-4078(Online)

Sampling Procedure

Multi-stage sampling technique was utilized in the selection of wards, communities/villages, households and respondents and the procedure is described as follows;

Stage 1: Selection of wards

Out of the 10 wards in Obudu, five wards were selected using simple random sampling by lottery method. Numbers were assigned for each ward, folded and put in a basket. It was then vigorously shaken. Someone was asked to pick a piece of the folded paper after which it was shaken. This procedure continued until five papers representing five wards have been duly selected.

Stage 2: Selection of villages/communities

In each selected ward, five villages/communities were randomly selected using the lottery method. A list of communities/villages in selected wards was obtained from the Local Government Council. Numbers were assigned to the communities based on their wards, folded and put into five separate baskets. Someone was asked to pick a piece of the folded papers from each basket. This procedure continued until five communities/villages were duly selected from each selected ward giving a total of 25 villages/communities i.e. (5×5=25)

Stage 3: Selection of households

In each community/village, 16 households were duly sampled giving a total of 402 households i.e. 16×25=402. Every 3rd household with a woman who agrees to partake in the study was interviewed. This procedure continued until 16 households and 402 women are completely sampled in 25 communities/villages. Women in each household were the respondents in the study. In a polygamous home where there is more than one woman, numbers were assigned based on the number of women present in that household, folded and put in a basket. Each of them was asked to pick and the woman that picked number one was interviewed.

Instrument for data collection

Questionnaires: A well-structured questionnaire was constructed to generate data and was interviewer-administered to the respondents. Quantitative data were generated using the questionnaire. It consisted of 23 questions and was compartmentalize into three sections. Section A, B and C comprised socio-demographic data, women's knowledge of HIV/AIDS and womens' accessibility to HIV information respectively.

Pre-Testing

The questionnaires were pre-tested among 20 women (5% of sample size) in Akpabuyo Local Government Area of Cross River State. The essence of pre-testing the questionnaire was to ascertain its reliability and validity. Pre-testing also helped to determine the relevance of questions and variables under measurement, remove ambiguity where it exists, improve on sequencing of questions, train field assistants on how best to capture sensitive questions and estimate maximum time for completion of questionnaires.

Method of Data Analysis

ISSN 2053-406X(Print) ISSN 2053-4078(Online)

Data were duly collected, collated and analysis using SPSS version 20.0 and Microsoft Excel 2007. Results were expressed as percentages and presented in tables and charts. Hypotheses were tested using chi-square at 5% level of significance.

Ethical considerations

A letter of introduction was obtained from the Department of Public Health, University of Calabar, Calabar. Ethical authorization was also acquired from the CRS-REC, Ministry of Health. Consent was gotten from the respondents verbally who agreed to partake in the study. Respondents were duly informed of the potential benefits and risks involved in the study and participation in this study was strictly voluntary. Anonymity and confidentiality of information provided by the participants were dully maintained throughout the study.

RESULTS

Socio-demographic characteristics of respondents

Four hundred and two questionnaires were completely filled, returned and analysed giving a response rate of 100%. The result of this study showed that a substantial proportion of the respondents 103 (25.6%) were within the age bracket of 35-39 years followed by those within 30-34 years 83 (20.6%) and 40-44 years 66 (16.4%). Majority of the respondents were predominantly Christians 369 (91.8%) and married 289 (71.9%). While 26 (6.5%) of the respondents reported to be traditionalists, about 95 (23.6%), 9 (2.2%), 6 (1.5%) and 3 (0.7%), respondents reported to be single, co-habiting with a partner, separated and widowed respectively. Most respondents 174 (43.3%) reported to have undergone secondary level of education while 125 (31.1%) and 72 (17.9%) of the respondents reported to have attained primary and tertiary education respectively. About thirty-one (7.7%) respondents said they had no formal education (Table1).

Most participants indicated that they are civil servants 131 (32.6%), traders/business women 63 (15.7%) and farmers 39 (9.7%) which are their major occupations. While sixty-nine (17.2%) respondents reported to be students mostly in tertiary institutions, about 42 (12.1%) said they were full-time housewives and thirty-five (8.7%) respondents said they were unemployed. One-fifth of the respondents 82 (20.3%) reported that their level of income range from ₦11,000 to ₦20,000. About 69 (17.2%) reported that they earn ₦21,000 to ₦40,000 whereas, 55 (13.7%) said they earn ₦41,000 to ₦90,000 monthly. While 41 (10.2%) respondents reported to be earners within the income range of N6,000 to N10,000, 38 (9.5%) respondents earn as low as N5,000 on monthly basis (Table 2).

TABLE 1: Distribution of respondents by age, religion, marital status and level of education (n=402)

ISSN 2053-406X(Print) ISSN 2053-4078(Online)

VARIABLES	NUMBER OF RESPONDENTS	PERCENTAGE (%)
Age in years		
15-19	35	8.7
20-24	29	7.2
25-29	39	9.7
30-34	83	20.6
35-39	103	25.6
40-44	66	16.4
45 years and above	47	11.7
Total	**402**	**100**
Religion		
Christianity	369	91.8
Islam	7	1.7
Traditional religion	26	6.5
Total	**402**	**100**
Marital status		
Married	289	71.9
Single	95	23.6
Separated	6	1.5
Widowed	3	0.7
Co-habiting	9	2.2
Total	**402**	**100**
Level of education		
No formal education	31	7.7
Primary education	125	31.1
Secondary education	174	43.3
Tertiary education	72	17.9
Total	**402**	**100**

TABLE 2: Distribution of respondents by occupation and level of income (n=402)

VARIABLES	NUMBER OF RESPONDENTS	PERCENTAGE (%)
Occupation		
Farmer	39	9.7
Trader/business	63	15.7
Civil servant	131	32.6
Full-time housewife	49	12.1
Student	69	17.2
Unemployed	35	8.7
Others	16	4.0
Total	**402**	**100**
Level of Income per month		
Less than N5,000	38	9.5
N5,000-N10,000	41	10.2

ISSN 2053-406X(Print) ISSN 2053-4078(Online)

N11,000-20,000	82	20.3
N21,000-40,000	69	17.2
N41,000-N90,000	55	13.7
Greater than N90,000	31	7.7
No response	86	21.4
Total	**402**	**100**

Knowledge/Awareness of HIV/AIDS infection among respondents

All respondents 402 (100%) claimed to have heard of HIV/AIDS before. Predominantly, their sources of information include, radio 107 (23.0%), health workers 87 (18.7%), television 75 (16.1%) and HIV/AIDS campaigns 70 (15.0%). Other respondents reported that their sources of information on HIV/AIDS were from bill boards 51 (10.9%), their friends 37 (7.9%), their husbands 27 (5.8%) and books/newspapers/magazines 12 (2.5%) (Figure 1). Out of 402 respondents, 245 (60.9%) respondents could fairly differentiate between HIV and AIDS. The remaining 157 (39.1%) respondents could not differentiate between HIV and AIDS. A reasonable proportion of the participants 322 (80.1%) claimed to know or have seen someone that is infected with HIV but 80 (19.9%) reported otherwise. More than half of the respondents 256 (63.7%) said they are susceptible to the risk of contracting HIV whereas 146 (36.3%) respondents claimed not to be susceptible to HIV infection. A larger proportion of the respondents 372 (92.5%) also knew that HIV positive individuals can be healthy-looking. On the other hand, 30 (7.5%) respondents disagreed to this opinion (Table 3).

TABLE 3: Knowledge of HIV/AIDS infection among respondents (n=402)

VARIABLES	NUMBER OF RESPONDENTS	PERCENTAGE (%)
Ever heard of HIV/AIDS before		
Have heard	402	100
Have not heard	0	0.0
Total	**402**	**100**
Know someone that is infected with HIV		
Yes	322	80.1
No	80	19.9
Total	**402**	**100**
Susceptible to the risk of contracting HIV		
Susceptible	256	63.7
Not susceptible	146	36.3
Total	**402**	**100**
Healthy looking people can be HIV positive		
Yes	372	92.5
No	30	7.5
Total	**402**	**100**
Can HIV be transmitted from one person to another		
Can be transmitted	383	95.3
Cannot be transmitted	19	4.7
Total	**402**	**100**

ISSN 2053-406X(Print) ISSN 2053-4078(Online)

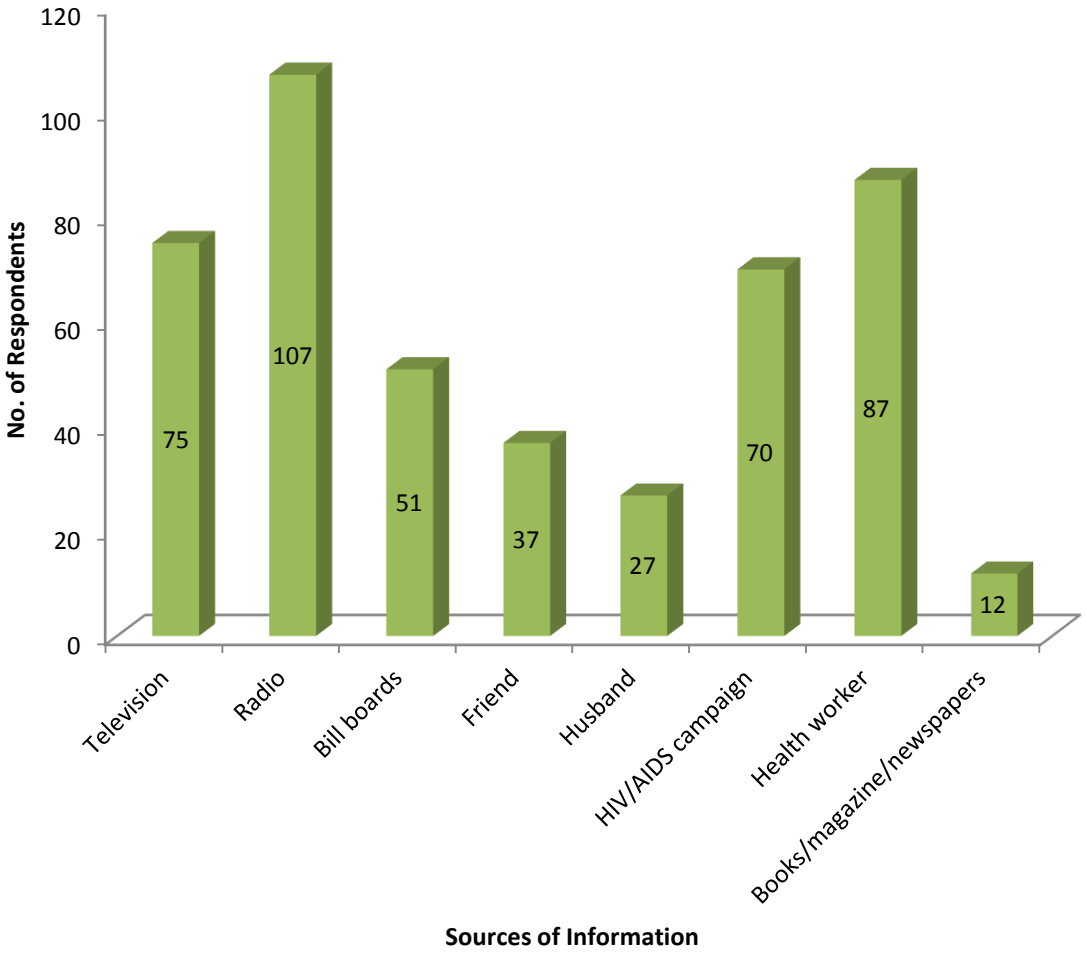

FIG 1: Sources of information about HIV/AIDS infection among respondents

Knowledge of HIV/AIDS Mode of transmission among respondents

More than two-thirds of the respondents 383 (95.3%) adequately knew the different modes of HIV/AIDS transmission. Only 19 (4.7%) expressed knowledge deficiency about the different modes of HIV/AIDS transmission (Table 3). Most respondents agreed to the opinion that HIV can be transmitted through blood transfusion 275 (68.4%), testing of blood 245 (61.0%) and sharing a needle with HIV infected person 371 (92.3%). Other respondents largely disagreed to the opinion that HIV can be transmitted through insect bites 242 (60.2%), communion cup 303 (75.4%), shaking hands with HIV infected person 355 (88.3%), kissing of HIV infected person 281 (69.9%), hugging HIV infected person 374 (93.0%), eating food/drink prepared by HIV infected person 341 (84.8%), sharing smoke with HIV infected person 199 (49.5%), using same toilet with HIV infected person 293 (72.9%), sharing same drinking glass with HIV infected person 330 (82.1%) and being coughed/sneezed on by HIV infected person 252 (62.7%) (Table 4). Based on the route of HIV/AIDS transmission, most respondents agreed that, blood 392 (97.5%) and semen 211 (52.5%) are major route of HIV transmission from one

ISSN 2053-406X(Print) ISSN 2053-4078(Online)

person to another. Others disagreed saying that sweat 221 (55.0%), tears 266 (66.2%), saliva 222 (55.2%) and urine 325 (80.8%) are routes in which HIV can easily spread (Table 5).

Knowledge of HIV/AIDS treatment and prevention among respondents

Most respondents 206 (51.2%) reported that AIDS cannot be cured. However, while 117 (29.1%) respondents were not sure if AIDS could be cured or not, 79 (19.7%) respondents reported that AIDS can be cured.

TABLE 4: Knowledge of HIV/AIDS mode of transmission among respondents (n=402)

VARIABLES	NUMBER OF RESPONDENTS (PERCENTAGE)			
	Agreed	**Disagreed**	**Not sure**	**Don't know**
a. Insect bites	45 (11.2)	242 (60.2)	78 (19.4)	37 (9.2)
b. Communion cup	21 (5.2)	303 (75.4)	22 (5.5)	56 (13.9)
c. Giving blood	275 (68.4)	109 (27.1)	11 (2.7)	7 (1.7)
d. Having a blood test	245 (61.0)	122 (30.3)	25 (6.2)	10 (2.5)
e. Shaking hands with someone who is HIV positive	13 (3.2)	355 (88.3)	17 (4.2)	17 (4.2)
f. Kissing someone who is HIV positive	68 (16.9)	281 (69.9)	22 (5.5)	31 (7.7)
g. Hugging someone who is HIV positive	9 (2.2)	374 (93.0)	8 (2.0)	11 (2.7)
h. Eating food prepared by someone who is HIV positive	23 (5.7)	341 (84.8)	17 (4.2)	21 (5.2)
i. Sharing a smoke with someone who is HIV positive	89 (22.1)	199 (49.5)	64 (15.9)	50 (12.4)
j. Sharing a needle someone who is HIV positive	371 (92.3)	11 (2.7)	9 (2.2)	11 (2.7)
k. Using the same toilet seat as someone who is HIV positive	46 (11.4)	293 (72.9)	46 (11.4)	17 (4.2)
l. Drinking from same glass as someone who is HIV positive	11 (2.7)	330 (82.1)	51 (12.7)	10 (2.5)
m. Being cough/sneezed on by someone who is HIV positive	78 (19.4)	252 (62.7)	56 (13.9)	16 (4.0)

ISSN 2053-406X(Print) ISSN 2053-4078(Online)

TABLE 5: Knowledge of HIV/AIDS routes of transmission among respondents (n=402)

VARIABLES	NUMBER OF RESPONDENTS (PERCENTAGE)			
	Agreed	**Disagreed**	**Not sure**	**Don't know**
a. Blood	392 (97.5)	5 (1.2)	3 (0.7)	2 (0.5)
b. Sweat	102 (25.4)	221 (55.0)	46 (11.4)	33 (8.2)
c. Tears	72 (17.9)	266 (66.2)	31 (7.7)	33 (8.2)
d. Semen	211 (52.5)	132 (32.8)	22 (5.5)	37 (9.2)
e. Saliva	68 (16.9)	222 (55.2)	68 (16.9)	44 (10.9)
f. Urine	19 (4.7)	325 (80.8)	32 (8.0)	26 (6.5)

Nearly half of the respondents 193 (48.0%) claimed that AIDS has a vaccine while about 122 (30.3%) respondents were not sure of AIDS vaccine availability. Only 87 (21.6%) respondents indicated that AIDS has no vaccine. Most respondents 231 (57.5%) said that HIV infection has a vaccine whereas about 99 (24.6%) respondents opposed to opinion. However, 72 (17.9%) respondents were not sure if HIV infection has a vaccine or not. A considerable percentage of the study participants 321 (79.9%) expressed their eagerness to undergo the HIV test while 81 (20.1%) respondents stated otherwise (Table 6). Respondents knew that HIV can be mitigated by sexual fidelity 133 (31.6%), correct and consistent condom usage 114 (27.1%), complete sexual abstinences with people with many sexual partners 96 (22.8%) and abstaining from sex 78 (18.5%) (Figure 2).

TABLE 6: Knowledge of HIV/AIDS treatment and prevention among respondents

VARIABLES	NUMBER OF RESPONDENTS	PERCENTAGE
Can AIDS be cured		
Yes	79	19.7
No	206	51.2
Not sure	117	29.1
Total	**402**	**100**
Availability of vaccine for AIDS		
Yes	193	48.0
No	87	21.6
Not sure	122	30.3
Total	**402**	**100**
Availability of vaccine to prevent HIV infection		
Yes	231	57.5
No	99	24.6
Not sure	72	17.9
Total	**402**	**100**
Willing to have an HIV test		
Yes	321	79.9
No	81	20.1
Not sure	0	0.0
Total	**402**	**100**

ISSN 2053-406X(Print) ISSN 2053-4078(Online)

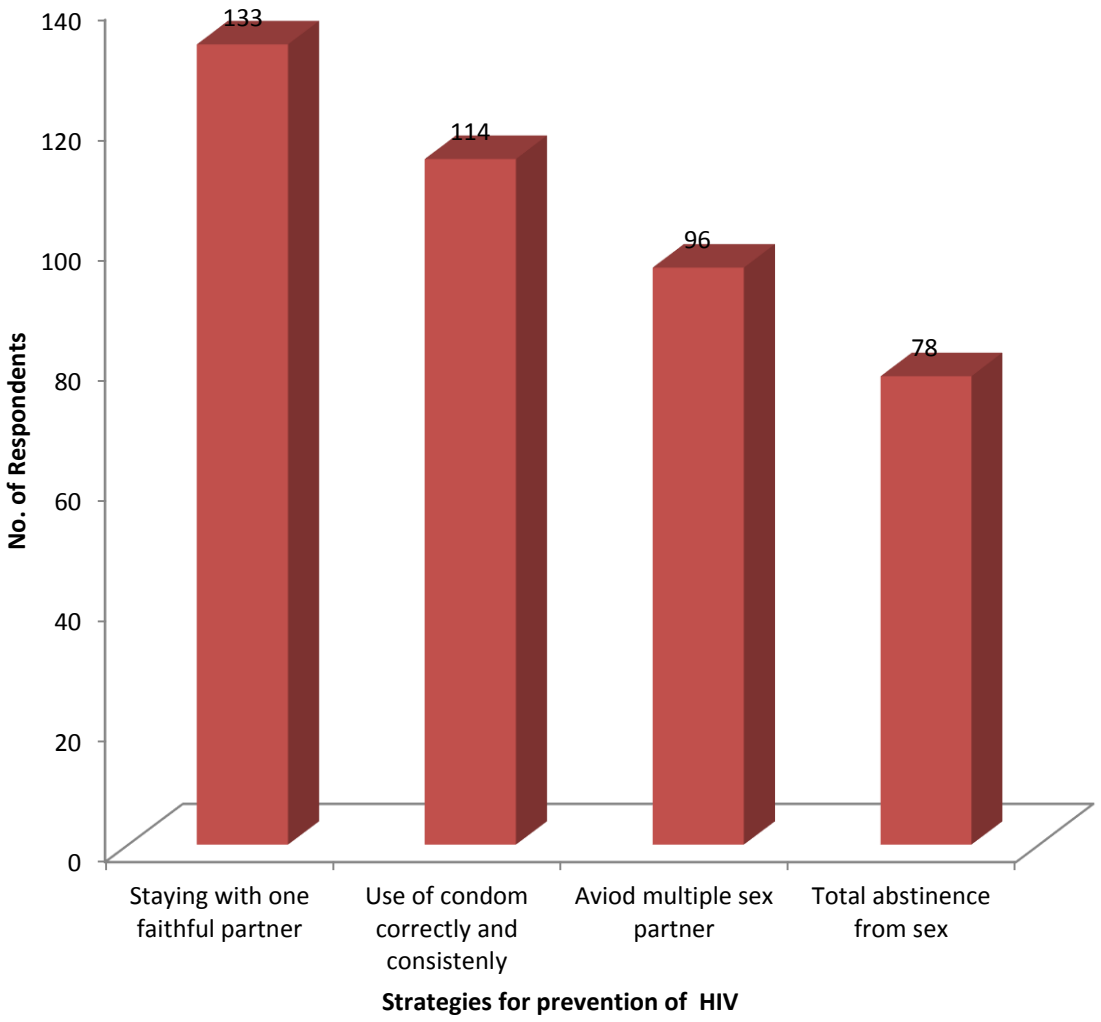

FIG 2: Knowledge of HIV prevention among respondents

Accessibility to HIV/AIDS information and other reproductive health services among respondents

A greater percentage of the study participants 219 (54.5%) currently have access to HIV/AIDS information and other reproductive health services. Major sources of information centers as reported by the respondents were primary health centers 88 (21.4%), media (TV/radio) 66 (16.1%), HIV/AIDS awareness campaign 45 (10.9%) and schools/institutions 29 (7.1%). Most respondents 235 (58.5%) also claimed that they are aware of centers where women can easily access HIVAIDS information. Available centers reported by the respondents were primary health centers 69 (16.7%), sacred heart catholic hospital 61 (14.7%), Model general hospital Sankwala, Obanliku 49 (11.8%), heart-to-heart center Sankwala 33 (8.0%) Non-governmental organisations 23 (5.5%) and LACA office Obudu 12 (2.8%) (Table 7).

ISSN 2053-406X(Print) ISSN 2053-4078(Online)

TABLE 7: Accessibility to HIV/AIDS information and other reproductive health issues among respondents

VARIABLES	NUMBER OF RESPONDENTS	PERCENTAGE (%)
Currently have access to information on HIV/AIDS and other reproductive health services		
Yes	219	54.5
No	183	45.5
Total	**402**	**100**
Sources of information*		
Primary health centers	88	21.4
Media (TV/radio)	66	16.1
Schools /Institutions	29	7.1
HIV/AIDS campaigns	45	10.9
No response	183	44.5
Total	**411**	**100**
Aware of any center where information on HIV/AIDS can be easily accessed		
Yes	235	58.5
No	167	41.5
Total	**402**	**100**
Available centers where information on HIV/AIDS can be easily accessed*		
LACA office Obudu council	12	2.8
Primary health centers	69	16.7
Sacred heart catholic hospital	61	14.7
Model general hospital Sankwala	49	11.8
Heart-to-heart center Sankwala	33	8.0
Non-governmental organizations	23	5.5
No response	167	41.5
Total	**414**	**100**

Multiple responses

Test of relationship between educational status and awareness of HIV/AIDS transmission and accessibility to HIV/AIDS information among women (Hypotheses 1 and 2)

Educational status of women has a significant influence on their level of awareness of HIV/AIDS transmission (Critical χ^2= 15.01533; $\chi^2_{0.05}$ = 7.81; df = 3; P<0.05) and accessibility to HIV/AIDS information (Critical χ^2= 24.07724; $\chi^2_{0.05}$ = 7.81; df = 3; P<0.05)). Hence, the null hypotheses were rejected and the alternative accepted (Table 8 and 9).

ISSN 2053-406X(Print) ISSN 2053-4078(Online)

Test of relationship between age and awareness of HIV/AIDS transmission among women (Hypotheses 3)

The influence of age on awareness of HIV/AIDS transmission was found to be statistically significant (Critical χ^2= 22.4533; $\chi^2_{0.05}$ = 12.59; df = 6; P<0.05). Hence, the null hypotheses were rejected and the alternative accepted (Table 10).

TABLE 8: Test of relationship between educational status and accessibility to HIV/AIDS information among women in the study area

Educational status		No formal education	Primary	Secondary	Tertiary	**Total**
Currently accessing HIV/AIDS information	Have access	9	64	84	62	219
	Do not have access	22	61	90	10	183
	Total	**31**	**125**	**174**	**72**	**402**

Critical χ^2= 24.07724; $\chi^2_{0.05}$ = 7.81; df = 3; P<0.05

TABLE 9: Test of relationship between educational status and level of awareness of HIV transmission among women in the study area

Educational status		**No formal education**	**Primary**	**Secondary**	**Tertiary**	**Total**
Awareness of HIV/AIDS transmission	Aware	23	118	170	72	**383**
	Not aware	8	7	4	0	**19**
	Total	**31**	**125**	**174**	**72**	**402**

Critical χ^2= 15.01533; $\chi^2_{0.05}$ = 7.81; df = 3; P<0.05

TABLE 10: Test of relationship between age and level of awareness of HIV transmission among women in the study area

Age (in years)		15-19	20-24	25-29	30-34	35-39	40-44	45 & above	**Total**
Awareness of HIV/AIDS transmission	Aware	33	26	37	78	99	64	46	**383**
	Not Aware	2	3	2	5	4	2	1	**19**
	Total	**35**	**29**	**39**	**83**	**103**	**66**	**47**	**402**

Critical χ^2= 22.4533; $\chi^2_{0.05}$ = 12.59; df = 6; P<0.05

ISSN 2053-406X(Print) ISSN 2053-4078(Online)

DISCUSSION

Knowledge of HIV and its mode of transmission among women

All respondents 402 (100%) claimed to have heard of HIV/AIDS with radio 107 (23.0%), health workers 87 (18.7%) and television 75 (16.1%) as their top three sources of information. This clearly indicates that HIV/AIDS campaign is widespread in Obudu Local Government Area and the media coupled with health workers are the most effective channels through which HIV/AIDS messages gets to most of the respondents. These results are consistent with other survey reported in Nigeria (Dim, Anorlu, Igwilo & Said, 2004; Adeleke, Mukhtar-Yola & Gwarzo, 2009; Olugbenga-Bello, Oladele, Adeomi and Ajala, 2012*)*. A greater fraction of the study participants (80.1%) knew someone who is infected with HIV, but only 63.7% of the respondents felt they were susceptible to the risk of contracting HIV. This clearly reveals that women who felt they were at risk of contracting HIV could be women who are currently living in polygamous home, unemployed, victim of gender-based violence, illiterates and lack knowledge about HIV and its mode of transmission and prevention. Studies have shown that due to the receptive role in heterosexual intercourse, women are at a higher risk of contracting HIV/AIDS (Quinn and Overbaugh, 2005; Mehta, 2006). According to the Society for Women's Health Research (2004), the risk of HIV transmission is higher from an infected male to female than from an infected female to male sexual partner. About 92.5% of the respondents also knew that HIV positive individuals can be healthy looking. This high knowledge level is similarly reported in Kano State, Nigeria (Adeleke et al., 2009).

Most respondents (95.3%) reported that HIV can easily be spread via giving blood 275 (68.4%), having a blood test (61.0%) and sharing a needle with HIV infected person (92.3%). Contrarily, most respondents also expressed their opinion that HIV cannot be transmitted through insect bites (60.2%), communion cup (75.4%), shaking hands with HIV infected person (88.3%), kissing (69.9%), hugging (93.0%), eating food/drink prepared by HIV infected person (84.8%), sharing smoke with HIV infected person (49.5%), using same toilet with HIV infected person (72.9%), sharing drinking glass with HIV infected person (82.1%) and being coughed/sneezed on by HIV infected person (62.7%). This finding corroborates with other studies in Nigeria (Adeleke et al., 2009; Balogun & Odeyemi, 2010; Olugbenga-Bello et al., 2012). This high level of knowledge of HIV transmission could be attributed to increase access to the mass media, health education by health workers during prenatal or postnatal visit to health care facilities, increase HIV awareness campaigns and personal experience encountered especially among HIV infected women. Nevertheless, HIV awareness campaign should be intensified in rural settings where most women still suffer from low level of HIV knowledge. Regular HIV awareness campaigns through the mass media and health workers will also help correct any erroneous belief on HIV mode of transmission such as getting HIV through having a blood test and giving blood as expressed by respondents in this study.

While majority of the respondents acknowledged that blood (97.5%) and semen (52.5%) are other routes through which HIV can be transmitted from one person to another, other respondents disagreed to the opinion that sweat (55.0%), tears (66.2%), saliva (55.2%) and urine (80.8%) are routes in which HIV can be rapidly spread (Table 5). This clearly indicates that most HIV workshops, seminars and symposia targeted at women have been proven to be very effective. Majority of the study participants (51.2%) knew that AIDS has no cure, but nearly half of the respondents (48.0%) believe that there is a vaccine for AIDS and 57.5% respondents perceived the availability of HIV vaccine. This knowledge gap on HIV/AIDS

ISSN 2053-406X(Print) ISSN 2053-4078(Online)

could be attributed to poor access to HIV/AIDS information. Most women who suffer this knowledge gap on HIV/AIDS may be women with low education status.

Two-third of the respondents (79.9%) reported that they will be willing to have an HIV test while 20.1% of the respondents stated otherwise. This finding was similarly reported by Olugbenga et al (2012) where 96.3% of the respondents were willing to have HIV test. High enthusiasm for HIV test among women may be attributed to high awareness level about HIV/AIDS, desire to know HIV status among women and knowledge of the benefits of knowing HIV status. Respondents exhibited high knowledge of HIV prevention by stating that faithfulness to one sex partner (31.6%), correct and consistent condom usage (27.1%), abstaining from sex with people with many sexual partners (22.8%) and abstaining from sex (18.5%) are effective and feasible strategies to prevent HIV infection. This report is comparable to that of Dim et al (2004) where sexual fidelity and condom use were considered methods identified to reduce and prevent HIV transmission. Improving strategies on HIV prevention is pivotal to the mitigation of HIV transmission among women especially in rural settings.

Accessibility to HIV/AIDS Information and other reproductive health services

About 54.5% of the respondents reported that they currently have access to HIV/AIDS information and other reproductive health services. Their primary source of information center as reported by the respondents was primary health centers (21.4%). Other sources of HIV/AIDS information centers included; the media (TV/radio) (16.1%), HIV/AIDS awareness campaign (10.9%) and schools/institutions (7.1%). This result disagrees with a study carried out in Kenya where a greater proportion of women had low access to HIV and AIDS preventive messages (Koech, Maithya & Muange, 2013). In this study, accessibility to HIV/AIDS information may be largely reported by literate women and those who regularly utilize primary health centers. Hence, women with low educational status, poorer socio-economic status and those who rarely utilize primary health care centers need to be reached.

Most respondents (58.5%) also reported that they are aware of centers where women can easily access HIVAIDS information. Centers widely mentioned by the respondents were primary health centers (16.7%), sacred heart catholic hospital (14.7%), Model General Hospital Sankwala, Obanliku (11.8%), Heart-to-Heart Center Sankwala 33 (8.0%) Non-governmental organizations (5.5%) and LACA office Obudu 12 (2.8%). This result clearly showed that the primary and secondary health facilities are effective channels through which HIV/AIDS messages and other health information could easily reach a large proportion of women in any society or community. These health facilities serve as centers where women can easily access services such as HIV counseling and testing, collection of ARV drugs, HIV treatment and other preventive services. The media, institutions and HIV/AIDS campaigns are also effective channels through which HIV/AIDS messages can be easily accessed by the women as reported in Obudu Local Government Area.

CONCLUSION AND RECOMMENDATIONS

HIV infection among women is a major health problem in Nigeria. Due to its endemicity, HIV/AIDS has also contributed to the poor maternal health outcomes from conception to birth. Findings from this study showed that women had high knowledge of HIV/AIDS, mode of transmission and prevention and a reasonable proportion of the study participants had access

ISSN 2053-406X(Print) ISSN 2053-4078(Online)

to HIV/AIDS information and other reproductive health services. Based on this, it is therefore recommended that

1. Intensify HIV/AIDS awareness campaigns

   Programme planners in collaboration with relevant stakeholders should ensure regular scale-up in HIV/AIDS awareness campaigns especially in rural settings. This strategy will significantly influence behavoiural change and provide correct and factual information about HIV infection thereby correcting any widely held erroneous beliefs about HIV/AIDS.

2. Relevant organization agencies involved in HIV/AIDS prevention campaigns should ensure health workers in respective primary health centers and hospitals are better equipped with regular updates on HIV/AIDS prevention strategies especially as it concern women. This is imperative because most women in this study reported that they access HIV/AIDS information in primary health centers and hospitals in the study area.

REFERENCES

[1] Aboh O. Otokpa, Taiwo. O. Lawoyin, Michael C. Asuzu. (2015): Knowledge on HIV/AIDS and Sexual Risk Behaviour among Pregnant Women in Gwagwalada Area Council of Abuja, Nigeria. *World Journal of Preventive Medicine*. 3(3):73-83.

[2] Adeleke S. I., Mukhtar-Yola M., Gwarzo G. D. (2009): Awareness and knowledge of mother-to-child transmission of HIV among mothers attending the pediatric HIV clinic, Kano, Nigeria. *Annals of African Medicine*; 8(4):210-214.

[3] Ananth P., Koopman C. (2003). HIV/AIDS Knowledge, Beliefs, And Behavior Among Women Of Childbearing Age In India. *AIDS Education and Prevention*: 15(6): 529-546.

[4] Balogun M., Odeyemi K. (2010): Knowledge and practice of prevention of mother-to-child transmission of HIV among traditional birth attendants in Lagos State, Nigeria. *Pan African Medical Journal*; 5(7):112-119

[5] Dim S. I., Anorlu R. I., Igwilo C. I., Said O. O. (2004): Knowledge about HIV/AIDS among pregnant women in Lagos, Nigeria. *Nigerian Quarterly Journal of Hospital Medicine*; 14(3):262-265

[6] Edewor N. (2010): Access to Health Information by People Living with HIV/AIDS in Nigeria. *Library Philosophy and Practice*. ISSN 1522-0222

[7] Fitzgerald K., Chakraborty J., Shah T., Khuder S., Duggan J. (2003): HIV/AIDS Knowledge Among Female Migrant Farm Workers in the Midwest. *Journal of Immigrant Health*; 5(1): 29-36

[8] FMOH (2010): National HIV seroprevalence sentinel survey among pregnant women attending antenatal clinics in Nigeria: Technical Report 2010. Department of Public Health, National AIDS/STI Control Program, Nigeria, 1-4.

[9] Gurmu E, Etana D (2015): HIV/AIDS knowledge and stigma among women of reproductive age in Ethiopia. *Afr J AIDS Res.;*14(3):191-9.

ISSN 2053-406X(Print) ISSN 2053-4078(Online)

[10] Iwara F. U. (2012): Utilization of HIV/AIDS Information among Women in Calabar South Local Government Area of Cross River State, Nigeria. *African Journal of Aquatic Science*; 9(1): 37-45

[11] Koech J., Maithaya H., Muange V. (2013): The Influence of socio-cultural factors on communication and women participation in HIV and AIDS campaigns in Kenya. International *Journal of Humanities and Social Sciences*; 3(1):60-66.

[12] Lutz W (1982). Sampling: how to select people, households, places to study community health, 3rd ed. International Epidemiological Association. Edinburgh.

[13] Mehta, S. (2006). The AIDS pandemic: a catalyst for women's rights. *International Journal of Gynecology and Obstetrics*, 94 (3), 317-324.

[14] Olugbenga-Bello A. I., Oladele E. A., Adeomi A. A., Ajala A. (2012): Perception about HIV testing among women attending antenatal Clinics at primary Health centers in Osogbo, Southwest, Nigeria. *Journal of AIDS and HIV Research*; 4(4):105-112.

[15] Quinn, T.C. & Overbaugh, J. (2005). HIV/AIDS in women: an expanding epidemic. Science, 308(56):1582-1583.

[16] UNAIDS (2014): HIV and AIDS estimates retrieved from http://www.unaids.org/en/regionscountries/countries/nigeria

[17] UNAIDS (2012): *Report on the global AIDS epidemic*, 2012. Available from http://www.unaids.org/en/media/unaids/contentassets/documents/epidemiology/2012/gr2012/20121120_UNAIDS_Global_Report_2012_en.pdf. Also see UNAIDS and World Health Organization (WHO), *Progress for children: Achieving the MDGs with equity, 2010*. Retrieved from http://www.childinfo.org/files/PFC_No.9_EN_090710.pdf

[18] United Nations (2003). Workshop in HIV/AIDS and Adult Mortality in Developing Countries. New York: United Nations; UN/POP/2003/3.

ISSN 2053-406X(Print) ISSN 2053-4078(Online)