Texila International Journal of Public Health
Volume 7, Issue 1, Mar 2019

Predictors of Utilization of Family Planning Services among HIV Positive Women in Two South Eastern States of Nigeria

Article by Oniyire Adetiloye, Orji Bright, Emmanuel UGWA, Oluwatobi Adebayo, Olowu Banjo, Salami Kabiru
[1]*Public health, Texila American University*
E-mail: oniyire.adetiloye@jhpiego.org[1]

Abstract

The study objective was to determine the predictors for the use of family planning methods among women living with HIV in two South Eastern States in Nigeria in order to make quality improvement recommendations. This was a descriptive cross sectional study among HIV positive clients attending the HIV clinic in Ebonyi and Enugu State Nigeria. The sample size was 442 clients comprising 142 from Ebonyi and 300 from Enugu. Informed consent was obtained. Data collection was done using interviewer-administered and pretested questionnaires. Quantitative variables were summarized using frequencies, percentages, means and standard deviation. The Chi-square test was used to evaluate association between categorical variables as appropriate and P-value ≤0.05 was considered statistically significant. Logistic regression analysis was used to assess the relative effect of determinants, adjusting for other predictor variables. Majority (42.3%) of the respondents were aged 30-39years. There were significantly more female (78.4%) respondents compared to males (21.6%). Respondents lived in the urban (47.2%) and sub-urban (48.2%) settings. Most (72.1%) of the respondents, had a tertiary level education and were mostly traders, single and of Christian faith. Less than half (40%) of the respondents had 3-4 babies and had their last babies 5 or more years prior to the study. Occupation and education are strong predictors of contraceptive use among HIV positive clients. Further study will be necessary to determine the behavioral interventions and communication strategy that will further enhance uptake of family planning methods especially among this group in Nigeria.

Keywords: *Predictors, Family Planning Use, HIV Positive, South-East Nigeria*

Introduction

It is documented that the global trends in HIV infection showed an increase in HIV prevalence, but a reduction in AIDS-related mortality due to the survival benefits of antiretroviral (ARV) treatment[1] However, sub-Saharan Africa still carries a huge burden of HIV, therefore contributing more to the global figure of HIV-related deaths. [1] HIV infection is endemic in Nigeria and paediatrics HIV incidence c increase when pregnancy is not delayed until when desired. Therefore, delaying or preventing pregnancy in women of reproductive age group is one of the major effective strategy to prevent mother-to-child transmission of HIV (PMTCT). Evidence has shown that the family planning approach of PMTCT is cost effective; adding family planning to PMTCT would reduce the cost of each HIV infection avoided by half. [3]. Reports on fertility desire among women living with HIV have been inconsistent; signifying an intricate relationship between HIV status and fertility depending on the setting. Some have shown a significant reduction in desire, while others have shown an increase [4]. There is also dearth of knowledge on the predictors of uptake of family planning services among HIV positive women in Nigeria. Therefore, understanding the predictors of contraceptives use among HIV positive women will help to sustain the gains of family planning, improve the health of women living with HIV, as well as reduce MTCT.

In one study, majority of the study participants were in the age between 30 to 34 years and median age was 30 [5]. In another, the ages of the respondents ranged from 15 to 50 years with a mean of 30.9 ± 7.0 years, while the parity ranged from 0 to 13 with a mean parity of 4.0[6]. Another showed that mean age

DOI: 10.21522/TIJPH.2013.07.01.Art014
ISSN: 2520-3134

was 32 (±7) years, 73.5% (208/283) were married, and out of whom 28.8% (60/208) were in polygamous relationships [6]. Marital status, religion and formal education [7, 8] have been shown to be predictors of FP use as those who were married and well educated were more likely to use. Sociodemographic factors (age, education, and occupation) were associated with contraception use [9]. Women attending secondary education and higher had increased odds of contraceptive use [9,10]. Younger age was associated with increased contraceptive use [11, 12]. House wives were less likely to utilize modern contraceptive as compared to government employees [9, 13]. Another study did not find any association between education and contraceptive usage [9]. One study reported that although education and the desire to stop childbearing are strongly associated with contraceptive uptake among uninfected women, but both factors are not significant among HIV-positive women for whom wealth is the most important factor [14]. HIV status disclosure to regular partner was not associated with use of contraception in either Bivariate or multivariable analyses [9]. This is in contrast to a recent study in Uganda that showed that the lack of HIV disclosure was associated with lower odds of use of modern contraceptives among HIV women enrolled in HIV clinics in Uganda [15]. The study was undertaken to determine the predictors of contraceptive use among women living with HIV in selected district referral hospitals in Enugu and Ebonyi, Southeast Nigerian States. Specifically, the study will provide answer to the research questions

a. What is the socio-demographic characteristics of women attending HIV clinics in the selected hospitals in Ebonyi and Enugu states South East of Nigeria?
b. What is the knowledge regarding modern contraception among HIV-positive women attending HIV clinics in Enugu and Ebonyi States South East of Nigeria?
c. What are the predictors of family planning acceptance among HIV-positive women attending HIV clinics in Enugu and Ebonyi States South East of Nigeria?

There is a current focus on antenatal HIV testing, provision of ARV prophylaxis to infected women and exposed newborns with counselling on safer infant feeding practices. [16] While these measures are efficient public health approach there is need to compliment these approaches by expanding access and utilization of family planning among HIV positive women in Nigeria. Furthermore, evidence has also shown that it is cost-effective to add family planning to PMTCT [1].

Materials and methods

The study was descriptive and cross-sectional survey in design, conducted among women attending HIV clinics in Enugu and Ebonyi States. Information concerning determinants of contraceptive choices among HIV-positive women of childbearing age, sociodemographic variables and contraceptive use was collected. The study population consisted of women of reproductive age group (15-49years) on ARV therapy and attending the HIV specialist clinics of the institution for follow up care from 2014 to 2017. The selected hospitals were district hospital in Onueke Ebonyi State and Udi, Oji River and Awgu district hospitals all at Enugu State.

Purposive sampling was carried out. Records of all HIV positive clients seen between 2014 and 2017 were retrieved. Consecutive clients attending routine clinics were also included. The sample size was calculated using the formula of prevalence as N = z2pq/d2, where z is the normal standard deviation set at 1.96, confidence level specified at 95%, the tolerable error margin (d) at 5% and based on prevalence of 56% of utilization of family planning methods by women living with HIV in Lagos, south west Nigeria [2]. A sample of 379 was obtained. This was adjusted to compensate for an attrition rate of 20% and the final minimum sample size is 442. Only those that had complete records as per the data collection instrument, were contacted, and those who agreed to take part in the survey were included. All women that had AIDS or were critically ill, pregnant women with HIV receiving critical care at the facility, women with HIV but were less than 15 years or greater than 50 years of age at the time of study and all women who did not consent to the study were excluded from the study.

Every woman who attended the clinic was invited to participate and if she agrees she had the study information read to her. This continued until the required sample size was achieved. The exercise was

carried out in a period of one month to ensure no woman was interviewed twice since most clients are usually given a return date of at least one month. They were screening and recruitment if they met the inclusion criteria at the commencement of the study using the health facilities which they had used previously as a base. Structured questionnaire was used to obtain information from the study respondents. The questionnaires were subdivided into four sections to elicit information on the respondents' Socio-demographic characteristics, knowledge and use of contraceptive methods of family planning and factors that promotes or inhibits acceptance of contraceptive methods. The survey tools were validated by experts in the field, piloted and data collectors trained on the use of the tools.

Study was approved by stakeholders and heads of units and hospital administration in a meeting organized to explain the study. Also, the study was approved by the State Ethical Committee board. They gave approval for the study to commence. The study was explained to the participants and consent was obtained before administration of surveys. Confidentiality was ensured by conducting the survey in a place that ensures auditory and visual privacy. Personal identifiers were not used and survey tools and forms were kept under locks and keys in the office of the researcher.

Data management

At the end of data collection, the data collection tools were checked for completeness and coded. Data entry was done into Microsoft excel, cleaned and exported to statistical package for social sciences (SPSS) version 20.0 software (Chicago IL USA) for analysis. Quantitative variables were summarized using descriptive statistics (frequencies, percentages, means and standard deviation) and inferential statistics (chi-square and logistic regression). The Chi-square test was used for evaluating association between categorical variables as appropriate. Statistical significance was said to be achieved when P value is ≤ 0.05. Logistic regression analysis was used to assess the relative effect of determinants, adjusting for other predictor variables. The dependent variable was the use of family planning method classified as "Yes" or "No" and the covariates were variables that were significantly associated with use of family planning methods at bivariate level. The findings were presented in tables, graphs and charts.

Results

Table 1 showed that majority of the respondents (42.3%) were aged 30-39years, while those <20years were the fewest (2.4%). There were more women (78.4%) than females (21.6%). Majority were sub-urban (48.2%) and urban (47.2%) dwellers. Majority of the respondents (72.1%) had tertiary education, while only 1% had no education at all. Majority was traders (38%) and followed by teachers (18.7%), while those that had no occupation were very few (1.8%). Most of the respondents were of Christian religion (98.3%), while the remaining were either traditionalists (1%) or of Islam religion (0.7%). While majority (77%) were singles, 14.8% were married and the remaining were either separated or divorced. While majority (28.1%) had a monthly income of N16, 000-25,000, as many as 18.3% had no income and only 3.1% had an income >N55, 000 per month.

Table 2 shows that majority of respondents (98%) have heard about family planning. About 18% have heard about injectable and 36% have heard about more than one method. The female condom is the least heard about (0.5%). Majority of the respondents (80%) were using a family planning method and the male condom was the most used (35.6%), while implants (0.6%) and female condoms (0.8%) were the least used. More than one method was used in 22.6% of cases. Reason for non-use is fear of complication in most cases (22.5%) and lack of knowledge of available methods in 18.3% of cases.

Table 3 shows that location, educational status and occupation are factors significantly associated with use of family planning among HIV positive couples in South-East Nigeria ($p<0.05$). Age, sex, religion and marital status are not significantly associated with family planning use among the respondents ($p<0.05$).

Discussions

This study showed that most of the respondents (98%) have heard about family planning. Another study from northwest Nigeria showed a similarly high level of knowledge among 93.6% of those surveyed [9].

DOI: 10.21522/TIJPH.2013.07.01.Art014
ISSN: 2520-3134

Similarly, high knowledge level has been reported [2] and even among rural women [102]. Lower knowledge levels have been reported by other studies in Nigeria [103] especially among rural population compared to urban population [104). Studies have also shown that HIV-infected women who know their status have a lower fertility desire and better use of contraceptives as compared to their HIV-negative counterparts [10].

This present study shows that majority (80%) were using family planning and condom was the most commonly used method (36%). The utilization of family planning is high compared to 10% reported in Northwest Nigeria [7], 50.6% in South-West [2] and 50% [5] reported in Ethiopia despite high level of awareness of modern contraception. The major reasons for non-use was the fear of side effects [7].

Although Condom was low (35.9%), it was the commonly used contraceptive method in this study. It was followed by use of more than one method. Studies have shown low use of barrier method of contraception by people infected with HIV in developing countries. [7] and this has implications for partners who may acquire new strains of HIV. Condom use reduces the chances of acquisition of resistant strains among pregnant women. It is a very important component of a comprehensive program for prevention of mother-to-child HIV transmission (PMTCT).

Majority of the respondents, 42.3%, were aged 30-39years. There were significantly more female respondents (78.4%) compared to males (21.6%). In one study, majority of the study participants were in the age between 30 to 34 years and median age was 30 [5]. Some researchers found that younger participants and those who were never married or in marriage to have relatively higher desire for children [5]. Higher fertility desires among married individuals can be explained by the social expectation of marriage as reported elsewhere in Tanzania and beyond [14]. Moreover, younger unmarried individual who are still in their early reproductive age would be expected to desire children than older ones who are more likely to already have children. In the current shortage of human resource for health in the country, this study indicates that a focus on younger individuals would be beneficial. Health personnel could identify and offer special reproductive health services to these individuals as they attend care and treatment clinics.

The factors associated with contraceptive use in this study were location, education, occupation and parity. Sociodemographic factors (age, education, and occupation) were associated with contraception use [9]. Although age is not a good predictor of contraceptive use in the study, a previous study has opined that younger age was associated with increased contraceptive use [11, 12]. Women attending secondary education and higher had increased odds of contraceptive use [9, 10]. Marital status, religion and formal education [7, 8] have been shown to be predictors of FP use as those who were married and well educated were more likely to use. Although this study finds an association between education and contraceptive use, religion and marital status are not significantly associated with use. Ashimi and colleagues had reported that people of Christian faith are more likely to use contraceptives, but this was not corroborated in the present study [6]. Another study did not find any association between education and contraceptive usage [9]. One study reported that although education and the desire to stop childbearing are strongly associated with contraceptive uptake among uninfected women, but both factors are not significant among HIV-positive women for whom wealth is the most important factor [14]. This study did not find any significant association between income and contraceptive use among HIV positive clients. The present study also confirms corroborates previous studies that occupation is a good predictor of family planning use among HIV positive persons as house wives were less likely to utilize modern contraceptive as compared to government employees [9, 13].

Conclusion

Family planning knowledge and use among HIV-positive women in the two South East States of Nigeria were very high when compared to other regions in Nigeria and within the African sub-region. Partners' awareness of each other's sero status was equally high and commendable as this can enhance efforts at reduction of transmission. This suggests a relatively low-risk of unintended pregnancy among HIV-positive women. Although condom use is relatively poor when compared with other studies, it is the most commonly

used method. Those who did not use any method were mostly those who were afraid of complication or unaware of available methods. The present study has also shown that location, occupation and education are strong predictors of family planning use among HIV positive clients in South East.

Recommendations

Condom should be made readily available, but dual protection should be encouraged. Generally, contraceptive methods should be made available and integrated within the ART program. Clients should be counselled and receive method of their choice at one-stop.

Education and occupation should be offered to all HIV positive persons in a non-discriminatory manner to enable them exercise their reproductive right, including right of when to have children and how many children they should have.

The strength of this study is based on the fact that it was a multi-center study. However, the result is limited by the fact that study participants were predominantly from the South East and may not be representative of other parts of Nigeria. Also this study did not assess the quality of FP counseling at the clinics and the potential impact of provider stigma and judgmental attitudes on FP unmet need. Although we did not directly establish what proportion of pregnancies were intentional, the relatively high desire for children indicate that majority of these pregnancies could be intentional. All pregnant women in Nigeria are offered voluntary counselling and testing and those testing positive are enrolled in the prevention of mother to child transmission program. However, no special reproductive health services are available in care and treatment clinic to offer appropriate services to PLWHA.

The programs to be developed should address one stop access to contraception methods, counselling on reproductive related decision and safer conception, pregnancy, and delivery. Further study will be necessary to determine the behavioral interventions and communication strategy that will further enhance uptake of family planning methods in Nigeria.

Reference

[1].Ayesha BMK, Quarraisha AK. HIV Infection and AIDS in Sub-Saharan Africa: Current Status, Challenges and Opportunities. Open AIDS J. 2016; 10: 34–48.

[2].Ashimi AO, Amole TG, Ugwa EA, Omole-Ohonsi A. Awareness, practice and predictors of Family planning by pregnant women attending a tertiary hospital in a semi-rural community of northwest Nigeria. J Basic Clin Reprod Sci 2016; 5:6-11.

[3].Andia I, Kaida A, Maier M et al., "Highly active antiretroviral therapy and increased use of contraceptives among HIV-positive women during expanding access to antiretroviral therapy in Mbarara, Uganda," The American Journal of Public Health, vol. 99, no. 2, pp. 340–347, 2009.Chama C, Morrupa J, Gashau W. Sex and reproduction among HIV infected people in Maiduguri, Nigeria. *J ObstetGynaecol* 2007; 27:812-5.

[4].Bizuneh G, Solomon S, and Yilma M, "Unmet need and evaluation of program options to meet unmet need for contraception in Ethiopia: further analysis of the 2000 and 2005," Ethiopia Demographic and Health Survey, 2008, http://www.measuredhs.com/pubs/pdf/FA62/FA62.pdfCredé S, Hoke T, Constant D, Green SM, Moodley J, et al. (2012) Factors impacting knowledge and use of long acting and permanent contraceptive methods by postpartum HIV positive and negative women in Cape Town, South Africa: a cross sectional study. BMC Public Health 12(197).

[5].Dabral S and Malik SI. "Demographic study of Gujjars of Delhi: IV, Kap of family planning," Journal of Human Ecology, vol. 16, no. 4, pp. 231–237, 2004.

[6].Ezechi OC, Gbajabiamilla TA, Gab-Okafor CV, Oladele DA, Ezeobi PM, Ujah IA. Contraceptive behavior, practices and associated factors among Nigerian women living with human immunodeficiency virus infection. J HIV Hum Reprod 2013; 1:30-5

[7].Federal Ministry of Health. Technical Report: National HIVSero-prevalence Sentinel Survey; 2010

[8].Hoffman IF, Martinson FEA, Powers KA, Chilongozi DA, Msiska ED, et al. The year-long effect of HIV-positive test results on pregnancy intentions, contraceptive use, and pregnancy incidence among Malawian women. JAIDS. 2008;47(4):477–83.

DOI: 10.21522/TIJPH.2013.07.01.Art014
ISSN: 2520-3134

[9].Melaku YA, Zeleke EG, Kinsman J, Abraha AK. Fertility desire among HIV-positive women in Tigray region, Ethiopia: Implications for theprovision of reproductive health and prevention of mother-to-child HIV transmission services. *BMC Womens Health* 2014; 14:137.
[10]. Magala I, Onega L, Rose N, et al. Factors influencing contraceptive uptake among sexually active HIV positive clients in TASO Masaka, Uganda. *J Public Health Policy Plann* 2017;1(2):46-49.
[11]. Polis CB, Gray RH, Lutalo T et al., "Trends and correlates of hormonal contraceptive use among HIV-infected women in Rakai, Uganda, 1994–2006," Contraception, vol. 83, no. 6, pp. 549–555, 2011.
[12]. Wilcher R, Cates W. Reproductive choices for women with HIV. *Bull World Health Organ* 2009; 87:833-9.
[13]. World Health Organization. Global summary of the HIV/AIDS epidemic 2014. http://www.who.int/hiv/data/epi_core_july2015.png?ua=1.
[14]. Yemane Berhane, Haftu Berhe, Gerezgiher Buruh Abera, and Hailemariam Berhe, "Utilization of Modern Contraceptives among HIV Positive Reproductive Age Women in Tigray, Ethiopia: A Cross Sectional Study," ISRN AIDS, vol. 2013, Article ID 319724, 8 pages, 2013. doi:10.1155/2013/319724.

Table 1. Sociodemographic characteristics of participants

Parameter	Frequency	Percentage
Age		
<20	9	2.4
20-29	95	24.5
30-39	163	42.3
40 and above	119	30.8
Sex		
Male	84	21.6
Female	302	78.4
Location		
Urban	182	47.2
Rural	18	4.6
Sub-urban	186	48.2
Education		
None	4	1
Primary	15	3.9
Secondary	89	23
Tertiary	278	72.1
Occupation		
None	7	1.8
Trading	147	38
Housewife	46	11.9
Teacher	72	18.7
Students	57	14.8
Others	57	14.8
Religion		
Traditional	4	1
Christianity	379	98.3
Islam	3	0.7
Marital Status		
Single	297	77
Married	57	14.8
Separated	19	4.8
Divorced	13	3.4

Income		
None	71	18.3
5000-15000	30	7.7
16,000-25,000	108	28.1
26,000-35,000	95	24.7
36,000-45,000	29	7.6
46,000-55,000	41	10.5
>55,000	12	3.1

Table 2. Contraceptive methods awareness, use and preference

Parameter	Frequency	percentage
Have you heard of family planning?		
Yes	378	98
No	8	2
Methods heard of:		
None	15	3.9
Injectable	69	17.9
OCP	16	4.2
Male condom	89	23
Female sterilization	15	3.9
Implants	8	2
Foaming tablets	6	1.5
Female condom	2	0.5
IUD	10	2.7
Male Sterilization	17	4.4
More than one type	139	36
Adoption of any method of family planning[c]		
Yes	309	80
No	77	20
Methods used:[d]		
Injectable	53	16.7
OCP	8	2.6
Male condom	111	35.9
Female sterilization	11	3.7
Implants	2	0.6
Foaming tablets	11	3.7
Female condom	2	0.8
IUD	18	5.9
Male Sterilization	23	7.5
More than one method	70	22.6
Reasons for non-utilization[e]		
Husband desire more children	11	13.8
Fear of complication	17	22.5
Husband refusal	7	9.5
No sexual partner	6	8
Lack knowledge of family planning methods	14	18.3
Religious prohibition	10	12.9
Don’t Know where to access it	2	3
More than one reason	9	12

DOI: 10.21522/TIJPH.2013.07.01.Art014
ISSN: 2520-3134

Table 3. Factors associated with contraceptive use among HIV positive couples

Parameter	Use (%)	Non-use (%)	Chi-Square	p-Value
Age				
<40	227 (58.9)	53 (13.6)	1.459	0.2271
>40	80 (20.8)	26 (6.7)		
Sex				
Male	68 (17.5)	12 (3.2)	1.742	0.1869
Female	240 (62)	66 (17.2)		
Location				
Urban	161 (41.7)	21 (5.4)	17.312	< 0.0001
Rural	144 (37.3)	60 (15.5)		
Education				
<Tertiary	75 (19.5)	30 (7.8)	6.534	0.0106
>Tertiary	232 (60.1)	49 (12.6)		
Occupation				
Unemployed	73 (18.8)	9 (2.2)	5.968	0.0146
Employed	244 (63.1)	69 (17.8)		
Religion				
Non-Christians	4 (1)	3 (0.74)	2.291	0.1301
Christians	304 (78.8)	75 (19.5)		
Marital Status	76 (19.7)	16 (4.1)	0.401	0.5266
Not Married	232 (60.2)	62 (16)		
Married				
Income				
No income	67 (17.3)	22 (5.7)	3.199	0.0737
With income	247 (64)	50 (13)		
Parity				
<5	266 (69)	57 (14.8)	7.337	0.0068
>5	43 (11)	20 (5.2)		
Age of Last Baby	212 (55)	35 (9.1)	1.863	0.1723
<5	111 (28.8)	27 (7.1)		
>5				