

Utilization and Factors Affecting Utilization of Contraception among HIV-Positive Male Patients in Saye, Zaria

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Abstract

Introduction: Sub-Saharan Africa continues to carry the full consequences of health and socioeconomic impact of HIV, with about 25.8 million and 66% of people with HIV infection living in the region. The overall prevalence of contraceptive use in Nigeria is low, especially among men; the uptake of contraception and the type of contraceptive use are heavily influenced by the male/husband dominance in the society/family. **Methodology:** The study was carried out among HIV-positive male patients in Saye, Zaria, using a descriptive cross-sectional study among 265 respondents. Chi-square and multivariate logistic regression were used to determine factors influencing contraceptive usage. **Results:** The mean age of respondents was 45.6 ± 11.7 years. Only 61.9% of the respondents have ever used contraception, out of which 56.7% are currently using contraception. The identified reason for not using contraception was because they both were HIV positive (29%). There was a significant association between age, marital status, and level of education of respondents and current use of contraception with a *P* value of 0.001, <0.001, and 0.004, respectively. **Conclusion:** There were low usage of contraception and poor acceptance of vasectomy. There should be adequate policies in place by the government to encourage male involvement in the utilization of contraception.

Keywords: Condom, contraception, HIV, National Tuberculosis and Leprosy Training Centre, tuberculosis, uptake

INTRODUCTION

Sub-Saharan Africa carries the full consequences of HIV on health and socioeconomic status.^[1] Approximately 3.5 million people are living with HIV infection in Nigeria, majority of whom are in their reproductive years.^[2] Nigeria is second to South Africa in the number of people living with HIV (PLHIV)/AIDS worldwide, representing 9% of the global burden of the disease.^[3] There is a reduction in AIDS-related deaths among women (33% decrease) compared with men (15% decrease) reflecting higher treatment coverage among women than men, 52% and 41%, respectively. Furthermore, men account for 58% of adult AIDS-related deaths.^[1]

HIV is mainly transmitted through heterosexual contact, and new infections in the country heighten due to reduced perceived personal risk, multiple sexual partners, inefficient and inadequate treatment of sexually transmitted infections, and poor quality service delivery.^[3] Helping people infected with HIV achieve their family planning (FP) intentions is an essential preventive health service and has been included as

one of the four prongs outlined by the United Nations to reduce the burden of pediatric AIDs.^[2,4]

Keyways men can be directly involved in women reproductive health include: using contraceptive methods that require their direct participation such as condom, natural FP, vasectomy, and withdrawal; supporting their partners' use of contraception through joint decision-making about contraceptive method use and family size; and preventing the spread of sexually transmitted diseases using a condom, limiting their sexual activity to one partner, and seeking treatment.^[5] In a study done in Ondo, Nigeria, only 31.2% had ever used a condom and 15.0% reported currently using a condom.^[6]

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How to cite this article: Oyegoke AF, Abubakar A. Utilization and factors affecting utilization of contraception among HIV-Positive male patients in Saye, Zaria. Niger J Med 2020;29:239-43.

Submitted: 10-Jan-2020

Revised: 28-Feb-2020

Accepted: 20-Apr-2020

Published: 26-Jun-2020

Access this article online

Quick Response Code:



Website:
www.njmonline.org

DOI:
10.4103/NJM.NJM_49_20

There are overwhelming previous studies carried out to assess the utilization of contraceptive use among HIV-positive women and prevention of mother-to-child transmission of HIV in both urban and low-resource settings; however, there are few research carried out among HIV positive men. The aim of this study is to determine the uptake of contraception and factors affecting uptake among HIV-positive male patients.

METHODOLOGY

Study area

The National Tuberculosis and Leprosy Training Centre (NTBLTC), Zaria, provides training of staffs and renders medical services to patients who are made easier with the availability of the National Tuberculosis Reference Laboratory where investigations, blood work, and laboratory tests are done. The mandate of the center is as follows: training workforce for the NTBLTC Program; tuberculosis (TB)/HIV and leprosy services (diagnostic, chemotherapy, etc.); and operational research relating to TB, HIV, and leprosy.^[7] The policy for the treatment of HIV is to test the patient; if positive, the antiretroviral is started immediately irrespective of CD4 count. For those starting the antiretroviral, the drugs are dispensed for 1 month to assess the level of adherence. On the second visit, it is dispensed for 2 months, and on subsequent visits, it is dispensed for 3 months. However, if the patient defaults, the interval between appointments reduces just to foster adherence.

Study design

The study was a descriptive, cross-sectional study.

Study population

The study population was HIV-positive male patients receiving treatment at the antiretroviral therapy clinic at NTBLTC, Saye, Zaria, Kaduna State, with the exclusion of HIV-positive male patients who are chronically ill on inpatient admission and HIV-positive male patients who are coinfecting with TB.

Sample size determination

The sample size was determined using the formula below:^[2]

$$\left(n = \frac{z^2 pq}{d^2} \right)$$

where:

n = Minimum sample size,

z = Standard normal deviate set at a 95% confidence interval, which corresponds to 1.96,

d = Margin of sample error tolerated which is set at 5% (0.05)

p = Contraceptive prevalence was (63%) in a previous study^[8]

q = Complementary probability of $q = 1 - p$.

A sample size of 285 was used as the minimum sample size for this study.

Sampling technique

A simple random sampling technique was used to collect information from an eligible participant. The patients that fulfilled the eligibility criteria during each clinic day were selected at random.

Data collection techniques

The data were collected through an android device using KoBo collect software version 1.14.0a (KoBoToolbox, Harvard Humanitarian Initiative, 14 Story St, Second floor, Cambridge, MA 02138, USA), and the questionnaire contained information on respondents' sociodemographic status, uptake of contraception, and factors influencing the use of contraception.

Data analysis

The questions on uptake of contraception were based on ever used, currently using, and the type of contraceptive method they are currently using. The factors affecting uptake of contraception included some sociodemographic factors, the attitude of the health workers, knowledge of contraception, and finance. The data were analyzed using STATA software version 13.0 (StataCorp LLC 4905 Lakeway Drive College Station, Texas, USA), and univariate analysis was done using proportions, measures of dispersion, measures of central tendency, and percentage while bivariate analysis which was checking the association between the religion of the respondents, level of education, and use of contraception using Chi-square was done. A confidence interval of 95% was used, and $P < 0.05$ was considered statistically significant; therefore, any bivariate analysis, that is, <0.05 , was considered significant, and multivariate analysis was done.

Ethical considerations

Letter of introduction was written to the institution, and the principal of the NTBLTC gave the approval to carry out the study. Oral consent was obtained from each participant of the study, and confidentiality of the respondents was ensured by not asking of their name.

RESULTS

About 8 (2.8%) questionnaires were not filled appropriately, and 9 (3.1%) questionnaires were missing. Therefore, 268 (94.0%) questionnaires from the respondents were analyzed using STATA version 13.0.

Table 1 shows that 84 (31.3%) of the respondents were within the 38–47 age group; the mean age of respondents was 45.6 ± 11.7 . Majority of the respondents (81.0%) were Muslims, 50 (18.7%) were Christians, most of the respondents were of Hausa tribe (194, 72.4%), 79% are married, 27.2% of the respondents have at least secondary education, and 20.2% have tertiary education.

In Figure 1, out of 268 respondents, 166 (61.9%) reported that they have ever used contraception and 91 (34%) reported that

Table 1: Sociodemographic characteristics of respondents (n=268)

Questions	Frequency (%)
Age (n=268), $\bar{X}\pm SD$	45.6 \pm 11.7
18-27	16 (6.0)
28-37	49 (18.3)
38-47	84 (31.3)
48-57	78 (29.1)
58-67	34 (12.7)
68-77	5 (1.9)
78-88	2 (0.8)
Religion (n=268)	
Islam	217 (81.0)
Christianity	50 (18.7)
Traditional	1 (0.4)
Tribe (n=268)	
Hausa	194 (72.4)
Fulani	21 (7.8)
Ibo	21 (7.8)
Yoruba	16 (6.0)
Others	16 (6.0)
Marital status (n=268)	
Married	212 (79.1)
Single	41 (15.3)
Widowed	6 (2.2)
Divorced	9 (3.4)
Place of residence (n=268)	
Rural area	122 (45.5)
Urban area	146 (54.5)
Level of education (n=268)	
No formal education	8 (3.0)
Postsecondary	26 (9.7)
Primary	40 (14.9)
Quranic education	67 (25.0)
Secondary	73 (27.2)
Tertiary	54 (20.2)

SD: Standard deviation

their spouse had ever used contraception before while only 152 (56.7%) were currently using contraception.

In Table 2, out of 166 respondents that reported that they had ever used contraception, 153 (92.2%) chose condom as one of the contraceptive methods that they have ever used while only 2 (1.2%) chose vasectomy. One hundred and fifty-two respondents reported that they are currently using contraception, of which condom still ranked the highest contraceptive method used at 90.8%.

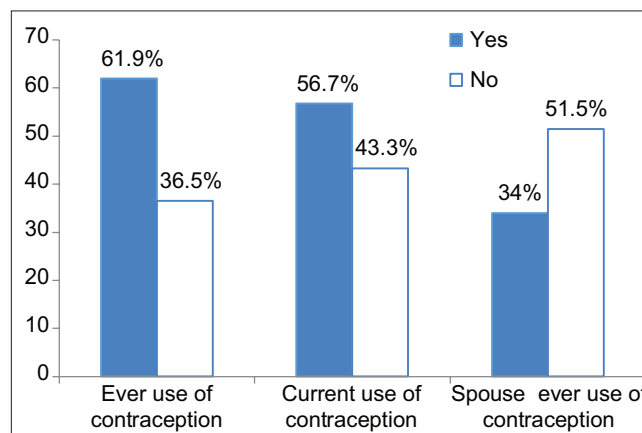
Thirty percent of the respondents chose that the reason for not using contraception was because they were married, as seen in Figure 2; 29% said that it is because they were both HIV positive; 28% said that it reduces sexual pleasure; and 18% acknowledged that their religion does not permit the use of contraception.

In Table 3, there was a significant association between age of respondents, marital status, level of education, and current use

Table 2: Contraceptive methods ever used and currently using by respondents

Contraceptive method	Ever used contraceptive (n=166), n (%)	Currently using contraceptive (n=152), n (%)
Condom	153 (92.2)*	138 (90.8)*
Pills	3 (1.8)*	4 (2.6)*
Injectable	2 (1.2)*	8 (5.3)*
Vasectomy	2 (1.2)*	3 (2.0)*

*Multiple responses

**Figure 1: Respondents' uptake of contraception**

of contraception, with a *P* value of 0.001, <0.001, and 0.004, respectively.

This analysis in Table 4 showed that the odds of good contraceptive usage is four times higher in those that are married (odds ratio [OR] = 4.25, 95% confidence interval [CI] = 2.19–8.26) and two times higher in those with formal education (OR = 2.23, 95% CI = 1.26–3.94). This means that education and marital status are the main predictors of contraceptive usage.

DISCUSSION

This study shows that 61.9% of the respondents reported that they have ever used contraception which is almost synonymous with a study done in Nairobi, Kenya, where 58.8% of the male respondents had used contraception,^[9] but it is, however, low compared to a study done in Zimbabwe where 80.6% of the respondents had ever used a contraceptive method^[10] and a study done in Uganda where 87% of the respondents had ever used FP.^[11] Only 34% of the respondents reported that their spouse has ever used contraception before, and this is in contrast to a study done in Nigeria where the results showed that 63% of men reported that they or their wives had previously used at least one modern or traditional method.^[8] The disparities may be due to the environment where the study was done, as there is no high importance placed on contraception.

Fifty-six percent of the respondents are currently using contraception which is almost similar to a study done in

Table 3: Relationship between sociodemographic characteristics and use of contraception

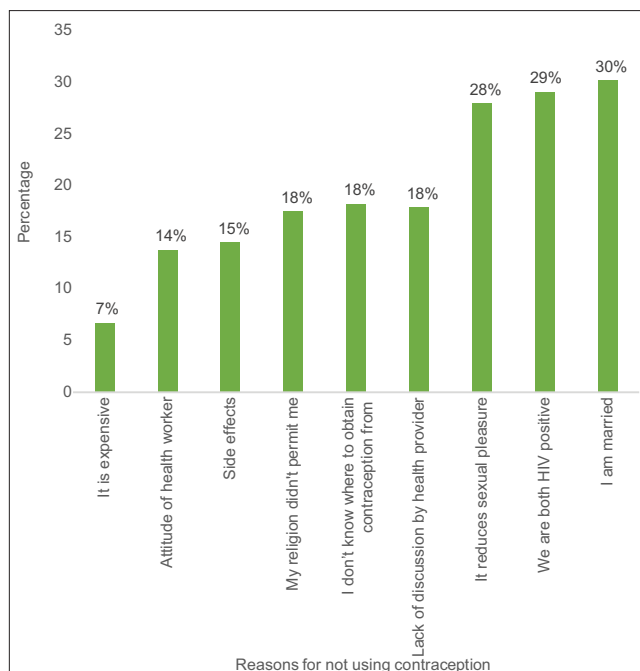
Sociodemographic	Currently using		χ^2 (P)
	Yes, n (%)	No, n (%)	
Age (years)			
18-27	2 (12.5)	14 (87.5)	23.686 (0.001)*
28-37	23 (46.9)	26 (53.1)	
38-47	61 (72.6)	23 (27.4)	
48-57	42 (53.9)	36 (46.2)	
58-67	20 (58.8)	14 (41.2)	
68-77	3 (60.0)	2 (40.0)	
78-87	1 (50.0)	1 (50.0)	
Place of residence			
Rural area	69 (56.6)	53 (43.4)	0.002 (0.962)
Urban area	83 (56.9)	63 (43.2)	
Religion			
Islam	119 (54.8)	98 (45.2)	3.3774 (0.185)
Christianity	33 (66.0)	17 (34.0)	
Traditional	0 (0.0)	1 (100.0)	
Marital status			
Single	12 (29.3)	29 (70.7)	17.958 (<0.001)*
Married	133 (62.7)	79 (37.3)	
Widowed	4 (66.7)	2 (33.3)	
Divorced	3 (33.3)	6 (66.7)	
Level of education			
No formal education	1 (12.5)	7 (87.5)	17.544 (0.004)*
Primary	19 (47.5)	21 (52.5)	
Quranic education	33 (49.3)	34 (50.8)	
Secondary	43 (58.9)	30 (41.1)	
Postsecondary	15 (57.7)	11 (42.3)	
Tertiary	41 (75.9)	13 (24.1)	

Table 4: Multivariate logistic regression model on the usage of contraception and sociodemographic characteristics

Sociodemographics	OR	P	95% CI
Marital status			
Single/divorced/widowed	1.00	<0.001	2.19-8.26
Married	4.25*		
Age			
>48	1.00	0.27	0.79-2.32
≤47	1.35		
Level of education			
No formal education	1.00	0.006	1.26-3.94
Formal education	2.23*		

OR: Odds ratio, CI: Confidence interval

Bangladesh where the current contraceptive use rate was 63%^[12] and in Uganda Rhoda where 68% of men are currently using an FP method.^[11] However, it is in contrast to a study done in India where 96% of men are currently using a contraceptive method.^[13] In a study done in Northern Nigeria, it showed that 67% of the current users of contraceptives are between the ages of 26 and 40 years and only 24% are between the ages of 41–59 years; this is, however, in contrast to this study

**Figure 2: Factors that affect the uptake of contraception**

where 72.6% and 53.9% of the current users of contraception are within the ages of 38–47 years and 48–57 years, respectively.^[14] This may be due to misinterpretation of the information transmitted to the respondents, and some might not want to use contraception because of the felt need to reproduce.

In this study, condom ranked the highest contraceptive method used at 90.8% and only 2% used male sterilization; this is similar to a study done in India where a condom was the most commonly reported contraceptive method used by married PLHIV.^[13] It is similar to a study done in Nairobi, Kenya, where it was also noted that condom was one most common method of the contraceptive use and men with HIV/AIDS reported a higher condom use.^[9] This study is, however, in contrast to a study done in Uganda Rhoda where although the most commonly used FP method was male condoms as chosen by 62% of the men. However, the preference for vasectomy and female sterilization was at 14% and 16%, respectively.^[11] The condom is the most available contraceptive, and the high rate of use might be due to the dual effects it has; most of the respondents are opposed to vasectomy because they feel that it affects erection and libido.

This study discovered that contraceptive use was higher among respondents who are married and of high educational level which is also similar to a study done in Nairobi, Kenya, where contraceptive use was higher among married individuals with HIV/AIDS and increased with age and education level.^[9] It is also synonymous with a study done in Ilorin, Nigeria, where the ever use of contraception ranges from 6% in those with no education to 53% with those with postsecondary education.^[15]

The factors responsible for uptake of contraception are: marital status; seroconcordant couple; religion; side effects of contraception; cost; and reduction of pleasure. This is in line with

a study done in India where the researcher identified the barriers as lack of discussion by health-care providers about contraceptives other than condoms, lack of acceptability of contraceptives due to misconceptions about and overestimation of their side effects, and lack of involvement of husbands in FP counseling, placing the burden for contraception on women.^[13] Similarly, in a study at Osogbo, Nigeria, the identified barriers were long waiting time at FP center, the attitude of health workers, and finance.^[16]

CONCLUSION

The study carried out in NTBLTC, Saye, to determine the usage of contraception among HIV-positive male patients showed that the uptake of contraception was fair because the population of the respondents who have ever used contraception was not up to those who are currently using contraception and even less reported that their spouses have ever used contraception. Very few of the respondents were currently using vasectomy as most opted for a condom. Furthermore, some of the respondents are not using contraception because they think that it is not necessary since their spouse is also HIV positive. There was also a significant relationship between the level of education and marital status with current use of contraception. The assessment carried out revealed that marital status, seroconcordant couple, disapproval by religion, side effects of contraception and attitude of health workers were factors that affect uptake of contraception. Therefore, this study showed that there were low usage of contraception and poor acceptance of vasectomy.

Recommendation

Contraceptive methods should be made available and easily accessible at the center and also sexual and reproductive health facilities should be incorporated extensively into the services provided, and involvement of males in this process will increase the utilization of contraception significantly. The government should put in place adequate policies to encourage male involvement in the utilization of contraception as some respondents in the study thought that contraception is basically a problem the women who have to deal with it alone. The uptake of contraception and the type of contraceptive use are heavily influenced by the male/husband dominance in the society/family; therefore, there is a need to integrate and involve the male in the contraception policies.

Acknowledgment

The corresponding author wants to appreciate Engr. Oyegoke Toyese for his immense support in editing and

proof-reading the manuscript meticulously and the Ministry of Education (Federal Government Scholarship Board) for their sponsorship and also to IFRA-Nigeria and French Embassy in Nigeria for the research grant award.

Financial support and sponsorship

Nil.

Conflicts of interest

There are no conflicts of interest.

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