

## EVALUATION OF KNOWLEDGE AND PERCEPTION OF CONTRACEPTION AMONG HIV POSITIVE MALE IN SAYE, ZARIA.

Oyegoke AF<sup>1,2\*</sup>, Abubakar A<sup>2</sup>

<sup>1</sup>Research & Public Health Studies, Salama Infirmary (Hospital and Maternity), Zaria, Kaduna State, Nigeria.

<sup>2</sup>Department of Community Medicine, College of Medicine and Allied Sciences, Ahmadu Bello University, Zaria, Kaduna State, Nigeria.

\*Correspondence: Dr. Oyegoke, Ayandunmola Folake; +234 808 367 0811; ayandunmolaonilude@gmail.com

### Abstract

**Background:** An important part in the comprehensive care of Human Immunodeficiency Virus (HIV) is contraception. Approximately 3.5 million people are living with HIV infection in Nigeria majority of whom are in their reproductive years. HIV is mainly transmitted through heterosexual contact and men account for 58% of adult Acquired Immunodeficiency Syndrome (AIDS) related deaths. Contraception save lives making all pregnancies wanted, it enhances attainment of development goals and also controls the time at which pregnancy occur and reduces the fertility rate of a country. In Nigeria, the contraceptive prevalence rate indicates wide zonal variations ranging from 2.7% in the North West to 28.5% in the South West. This means that HIV positive patients who are healthy may engage in high-risk sexual behaviour and are at risk of transmitting HIV to sero-negative partners or re-infecting themselves with new strains of the virus. Research carried out to evaluate the perception of HIV positive men on contraception is few.

**Objective:** To determine the knowledge and perception of contraception among HIV positive male patients.

**Materials and Methods:** This was a cross-sectional descriptive study with collection of data through questionnaire and analysis was done using STATA v13.0.

**Results:** The mean age of respondents was 45.6 ± 11.7 years, majority (85.1%) of the respondents have heard about contraception and of this 90.4% and 10.5% knew condom and vasectomy respectively were type of contraception. Most (72%) had good perception and only 16.4% perceived that there is no need for HIV positive men to use contraception. There was significant association between marital status and knowledge of contraception ( $p < 0.001$ ), also there was significant association between level of education and perception ( $p = 0.005$ ).

**Conclusion:** There was high knowledge of contraception among HIV positive men, and poor acceptance of male and tubal ligation.

**Keywords:** ART, Condom, Leprosy, NTBLTC, Vasectomy, Tuberculosis, Tubal ligation.

**Cite this article:** Oyegoke AF, Abubakar A. Evaluation of knowledge and perception of contraception among HIV positive male in Saye, Zaria. Yen Med J. 2020;2(2):20 – 29.

### INTRODUCTION

HIV/AIDS have weighty medical and social impacts on individuals, families, communities and nations.<sup>1</sup> According to the Joint United Nations Programme on HIV and AIDS (UNAIDS) global update report 2016, the estimated overall number of People Living with HIV (PLWHIV) was approximately 36.7 million [34.0 million–39.8 million].<sup>2</sup> Sub-Saharan Africa was the most affected region having 25.8 million and 66% of all people with HIV infection living in the region.<sup>3</sup>

Approximately 3.5 million people are living with HIV infection in Nigeria, majority of whom are in their reproductive years.<sup>4</sup> Despite these, PLWHIV desire a return to normal life including the resumption of sexual activity and desire for HIV negative children.<sup>1,5,6</sup> The 1994 International Conference on Population and Development acknowledged the role of men in improving reproductive health. Consensus statements call for better ways to reach men with reproductive health services.<sup>7</sup> Sub-Saharan Africa has

the lowest level of contraception prevalence,<sup>8</sup> in Nigeria, the total contraceptive prevalence rate (CPR) indicates wide state variations, ranging from 0.3% in Jigawa to 41.6% in Lagos state, as well as zonal variations ranging from 2.7% in the North West to 28.5% in the South West.<sup>9</sup> In a study done in Zimbabwe, it was discovered that male knowledge of family planning was high, as 98% of the men reported that they have heard of at least one method of contraception.<sup>10</sup> About nine percent of the respondents believed that decisions on family planning should be the responsibility of the wife only while 17.8% felt that only the husband should take the decision in a study carried out in Osun State, Nigeria.<sup>11</sup> This research tries to evaluate the knowledge and perception of contraception among HIV positive male patients in National Tuberculosis and Leprosy Training Centre (NTBLTC) Saye.

## MATERIALS AND METHOD

### Study Area

The NTBLTC Zaria was established in January, 1991 as the human resource development unit of the National Tuberculosis & Leprosy Control Program. About 2,244 patients attend the antiretroviral treatment (ART) clinic out of which are 932 males and 1,312 females, services rendered in the ART clinic are treatment of: HIV; HIV related complication and opportunistic infection; co-morbid infection (diabetics and hypertension) and Tuberculosis (TB) and HIV co- infection. Services are rendered not only to patients from the community but patients come from all over the country although most are from Zaria and Kaduna but some come from as far as Lagos, Sokoto and Benue.

### Study Design

The study was a cross-sectional descriptive study collecting quantitative data.

### Study Population

The study population was HIV positive male patients receiving treatment at the ART clinic at NTBLTC Saye, Zaria Kaduna State.

### Sample Size determination

The sample size was determined using the formula below<sup>4</sup>:

$$\left\{ n = \frac{Z^2 pq}{d^2} \right\}$$

Where:

n = Minimum sample size,

Z = Standard normal deviate set at 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<sup>12</sup>

q = Complementary probability of q = 1 - p.

When subjected to finite correction and 10% non-response rate, 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 eligible participant. The patients that fulfilled the eligibility criteria during each clinic days were selected at random.

### Data collection techniques

The data was collected using adapted, semi-structured and pre-coded questionnaires in an android device via KoBo collect software v1.14.0a which was administered to each respondent. The questionnaire contained information on respondent's socio-demographic status, knowledge of contraception and perception of contraception. The knowledge of contraception was based on those that have ever heard of contraception before while perception on contraception was scored on a 2-point perception scale for each question, positive perception was 2-point, negative perception was 0 points and undecided was 1 point. Those that score less than or equal to one ( $\leq 1$ ) points had negative perception and those that score greater than one ( $> 1$ ) point had positive perception. A confidence interval of 95% was used and a p-value of  $< 0.05$  was considered statistically significant.

## RESULTS

Eight (2.8%) questionnaires were not filled appropriately and nine (3.1%) questionnaires were missing, however, 268 (94.0%) questionnaires from the respondents were filled appropriately and analysed using STATA v13.0.

**Socio-demographic Characteristics****Table 1: Socio-demographic characteristics of respondents (n=268).**

Questions	Freq. (%)	$\bar{X} \pm SD$
<b>Age(n=268)</b>		
18-27	16(6.0)	45.6 ± 11.7
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)	
<b>Religion(n=268)</b>		
Islam	217(81.0)	
Christianity	50(18.7)	
Traditional	1(0.4)	
<b>Tribe(n=268)</b>		
Hausa	194(72.4)	
Fulani	21(7.8)	
Ibo	21(7.8)	
Yoruba	16(6.0)	
Others	16(6.0)	
<b>Marital status(n=268)</b>		
Married	212(79.1)	
Single	41(15.3)	
Widowed	6(2.2)	
Divorced	9(3.4)	
<b>Place of residence(n=268)</b>		
Rural area	122(45.5)	
Urban area	146(54.5)	
<b>Level of education(n=268)</b>		
No formal education	8(3.0)	
Post-secondary	26(9.7)	
Primary	40(14.9)	
Quranic education	67(25.0)	
Secondary	73(27.2)	
Tertiary	54(20.2)	

The study showed that 84 (31.3%) of the respondents were within 38 to 47 age group, the mean age of respondents was 45.6 ± 11.7. Majority (81.0%) were Muslims, most of the respondents were of Hausa tribe

194 (72.4%), 79% were married, some (27.2%) of the respondents have at least secondary education, 20.2% have tertiary education.

**Knowledge of Contraception among HIV Positive Male Patients**

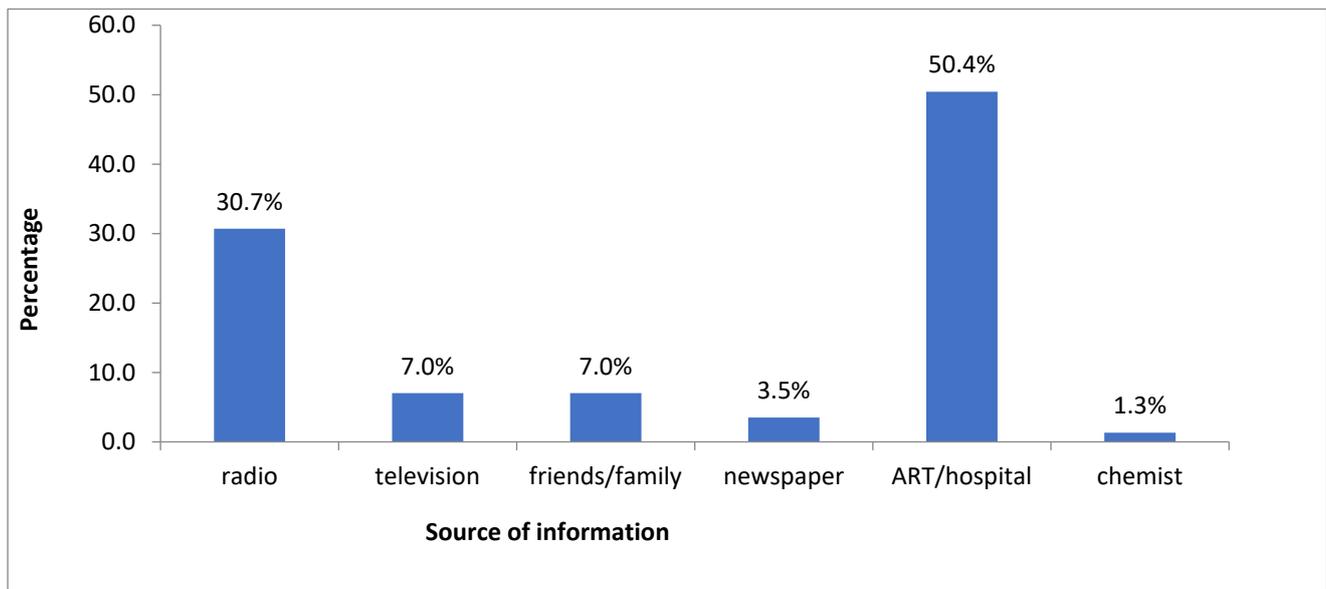
**Table 2: Knowledge of respondents about contraception.**

Knowledge of Contraception	Yes (%)	No (%)
Ever heard of contraception(n=268)	228(85.1)	40(14.9)
<b>Type of contraception known*(n=228)</b>		
Condom	206(90.4)	22(9.6)
Withdrawal	24(10.5)	204(89.5)
Pills	48(21.1)	180(78.9)
Injectable	41(18.0)	187(82.0)
IUD	6(2.6)	222(97.4)
Abstinence	9(3.9)	219(96.1)
Tubal ligation	10(4.4)	218(95.6)
Vasectomy	15(6.6)	213(93.4)
<b>Knowledge of use of contraception*(n=228)</b>		
Prevention of pregnancy	113(49.6)	115(50.4)
Prevent the transmission of HIV/STIs	126(55.3)	102(44.7)
None of the above	28(12.3)	200(87.7)

\*multiple responses

Majority 228 (85.1%) of the respondents have heard about contraception before which showed that there is good knowledge about contraception and almost all 206 (90.4%) of the respondents knew that condom is a type of contraception. Mostly half of the respondents

knew that contraception is used for prevention of pregnancy and preventing the transmission of HIV/STIs, while 28 (12.3%) of the respondents think that contraception is neither use for both.



**Figure 1: Source of information about contraception (n=228)**

Half (50.4%) of the respondents in this study got their information about contraception from ART clinic/Hospital, while 30.7% got their information from radio.

**Table 3: Relationship between socio-demographic characteristics and Knowledge of contraception.**

Socio-demographics	KNOWLEDGE			X <sup>2</sup> (P-value)
	Yes %	No %	TOTAL%	
Age (years)				
<b>18-27</b>	11 (68.8)	5 (31.3)	16 (100.0)	7.161 (0.306)
<b>28-37</b>	40 (81.6)	9 (18.37)	49 (100.0)	
<b>38-47</b>	76 (90.5)	8 (9.5)	84 (100.0)	
<b>48-57</b>	65 (83.3)	13 (16.7)	78 (100.0)	
<b>58-67</b>	29 (85.3)	5 (14.7)	34 (100.0)	
<b>68-77</b>	5 (100.0)	0 (0.0)	5 (100.0)	
<b>78-87</b>	2 (100.0)	0 (0.0)	2 (100.0)	
Place of residence				
<b>Rural area</b>	107 (87.7)	15 (12.3)	122 (100.0)	1.220 (0.269)
<b>Urban area</b>	121 (82.9)	25 (17.1)	146 (100.0)	
Religion				
<b>Islam</b>	187 (86.2)	30 (13.8)	217 (100.0)	1.396 (0.497)
<b>Christianity</b>	40 (80.0)	10 (20.0)	50 (100.0)	
<b>Traditional</b>	1 (100.0)	0 (0.0)	1 (100.0)	
Marital status				
<b>Single</b>	28 (68.3)	13 (31.7)	41 (100.0)	25.300 (<0.001)*
<b>Married</b>	190 (89.6)	22 (10.4)	212 (100.0)	
<b>Widowed</b>	6 (100.0)	0 (0.0)	6 (100.0)	
<b>Divorced</b>	4 (44.4)	5 (55.6)	9 (100.0)	
Level of education				
<b>No formal education</b>	5 (62.5)	3 (37.5)	8 (100.0)	5.946 (0.311)
<b>Quranic education</b>	56 (83.6)	11 (16.4)	67 (100.0)	
<b>Primary</b>	33 (82.5)	7 (17.5)	40 (100.0)	
<b>Secondary</b>	62 (84.9)	11 (27.5)	73 (100.0)	
<b>Post-secondary</b>	22 (84.6)	4 (15.4)	26 (100.0)	
<b>Tertiary</b>	50 (92.6)	4 (7.4)	54 (100.0)	

There is significant association between marital status and knowledge of contraception (p < 0.001).

**Table 4: Multivariate logistic regression model on knowledge of contraception and socio-demographic characteristics.**

Socio-demographics	Odds Ratio	P-value	95% confidence interval
<b>Marital status</b>			
Single/Divorced/Widowed	1.00		
Married	4.09*	<0.001	2.00 – 8.35

Married HIV positive men are 4 times more likely to have a good knowledge about contraception than those that are not married (OR = 4.09, 95% CI = 2.00 – 8.35) which means that marital status is the main predictor of knowledge.

**Perception of Contraception among HIV Positive Male Patients**

**Table 5 Perception of respondents on contraception**

Statements	Disagree (%)	I do not know (%)	Agree (%)
<b>It is only women who are promiscuous that use contraception without their husband’s consent</b>	127 (47.4)*	82 (30.6)	59 (22.0)
<b>I will not allow my spouse/ partner to use contraception</b>	165 (61.6)*	40 (14.9)	63 (23.5)
<b>It is only women that are meant to use contraception and not the men</b>	167 (62.3)*	59 (22.0)	42 (15.7)
<b>There is no need for HIV positive man to use contraception</b>	160 (63.1)*	55 (20.5)	44 (16.4)
<b>Contraception should not be promoted among people living with HIV</b>	153 (57.1)*	56 (20.9)	59 (22.0)
<b>Men should not assist their women in obtaining contraception</b>	156 (58.2)*	60 (22.4)	52 (19.4)

\*Positive responses

The overall mean perception score of the respondents was  $1.38 \pm 0.52$  and most of the respondents 192 (72%) had good perception while 76 (28%) have poor perception. 22.0% were of the perception that it is only promiscuous women that use contraception without their husband’s consent, the perception of 15.7% of the respondents was that it is only women that are meant to use contraception and not the men.

**Table 6: Relationship between socio-demographic characteristics and Perception of contraception.**

Socio-demographics	PERCEPTION		X <sup>2</sup> (P-value)
	GOOD	POOR	
Age (years)			
<b>18-27</b>	10 (62.5)	6 (37.5)	16.400 (0.012)*
<b>28-37</b>	32 (65.3)	17 (34.7)	
<b>38-47</b>	72 (85.7)	12 (14.3)	
<b>48-57</b>	50 (64.1)	28 (35.9)	
<b>58-67</b>	21 (61.8)	13 (38.2)	
<b>68-77</b>	5 (100.0)	0 (0.0)	
<b>78-87</b>	2 (100.0)	0 (0.0)	
Place of residence			
<b>Rural area</b>	88 (72.1)	34 (27.9)	0.026 (0.871)
<b>Urban area</b>	104 (71.2)	42 (28.8)	
Religion			
<b>Islam</b>	150 (69.1)	67 (30.9)	6.962 (0.031)*
<b>Christianity</b>	42 (84.0)	8 (16.0)	
<b>Traditional</b>	0 (0.0)	1 (100.0)	
Marital status			
<b>Single</b>	28 (68.3)	13 (31.7)	2.786 (0.426)
<b>Married</b>	151 (71.2)	61 (28.8)	
<b>Widowed</b>	6 (100.0)	0 (0.0)	
<b>Divorced</b>	7 (77.8)	2 (22.2)	
Level of education			
<b>No formal education</b>	5 (62.5)	3 (37.5)	16.676 (0.005)*
<b>Primary</b>	27 (67.5)	13 (32.5)	
<b>Quranic education</b>	39 (58.2)	28 (41.8)	
<b>Secondary</b>	52 (71.2)	21 (28.8)	
<b>Post-secondary</b>	20 (76.9)	6 (23.1)	
<b>Tertiary</b>	49 (90.7)	5 (9.3)	

Age group, religion and level of education have a significant association with perception with a p-value of 0.012, 0.031, and 0.005 respectively.

**Table 7: Multivariate logistic regression model on perception of contraception and socio-demographic characteristics.**

Socio-demographics	Odds Ratio	P-value	95% confidence interval
<b>Religion</b>			
Islam	1.00		
Christian/ Traditional	1.74	0.18	0.77 – 3.95
<b>Age</b>			
> 48	1.00		
≤ 47	1.59	0.10	0.91 - 2.78
<b>Level of education</b>			
No formal education	1.00		
Formal education	1.88*	0.04	1.02 - 3.44

Good perception was 1.8 times higher in those with formal education than those without formal education (OR = 1.88, 95% CI = 1.02 – 3.44). This means that education is the main predictor of perception.

## DISCUSSION

The knowledge of contraception among the respondents was very good as the majority 228 (85.1%) of the respondents have heard about contraception before, this is similar to a study carried out in Ilorin, Nigeria where 97% of male respondents have heard of contraceptive methods,<sup>13</sup> also, a study done in Uganda Rhoda and a study done in Zimbabwe discovered that 98% and more than 98% of the men reported that they have heard of at least one method of contraception.<sup>10,14</sup> However, it is in contrast to a study done in Osogbo where only 57.0% had a good knowledge of family planning.<sup>9</sup> This may be due to the wide media coverage especially on radio about the importance of contraception and also because this was a facility based study there was some level of knowledge about contraception through health education by the facilitators.

Almost all 206 (90.4%) of the respondents knew that Condom was a type of contraception only 15 (6.6%) and 10 (4.4%) of the respondents knew male sterilization and female sterilization respectively. This is in line with a study done in North-Central Nigeria where 90% of the respondents had correct knowledge of condom,<sup>15</sup> and Zimbabwe where 91% have heard of condom.<sup>10</sup> This is also in consonance with the findings of the study done in Nigeria, which showed that 89.7% of the respondents reported that they knew of at least one method of family planning of which the most commonly known method was condom, then pill and withdrawal but female and male sterilization were least known.<sup>12</sup> This might be because the study carried out in Zimbabwe and Nigeria were on married men and it is known that marital status have a significant

association with knowledge of contraception. The reason that vasectomy and tubal ligation are the least known might be because of lack of acceptance of sterilization (permanent method) as a form of contraception due to fear.

The overall mean perception score of the respondents was  $1.38 \pm 0.52$  and most of the respondents 192 (72%) had good perception while 76 (28%) have poor perception, this is synonymous to a study done at Osogbo, Nigeria where 69.8% of the respondents had a positive perception score while 30.2% had negative perception score. 22.0% of respondents in the study were of the perception that it is only promiscuous women that use contraception without their husband's consent which is in line with a study done in Oshogbo where 20.8% of the respondents were of the same perception.<sup>9</sup> Sixty-one percent of the respondents were of the perception that they will allow their spouse to use contraception which is almost similar to a study done in Zimbabwe where about 84% approved of family planning.<sup>10</sup> The perception of 15.7% of the respondents was that it is only women that are meant to use contraception and not the men which contradict a study done on the role of men in family planning and decision-making in rural and urban population at Osun State, Nigeria where majority of the men would prefer to use family planning instead of their wives.<sup>11</sup>

About 16.4% and 57.1% perceived that there is no need for HIV positive men to use contraception and contraception should be promoted among people living with HIV, this is in contrast with the study done in North-Central Nigeria where 97.8% of the respondents said condom use should be promoted among people living with HIV/AIDS.<sup>15</sup> This possibly

might be due to religious belief or level of education. The perception of 19.4% of the respondents was that men should not assist their women in obtaining contraception and it contradicts the result of a study done in Zimbabwe where 60% of the respondents indicated that obtaining family planning information and contraceptive supplies is the responsibility of the woman.<sup>10</sup> This study also discovered that the respondents that live in urban area, more educated have good perception about contraception, therefore, it can be said that place of residence and level of education have influence/effect on perception of HIV positive male towards contraception. This is similar to a study done in Zimbabwe where the more educated and urban residents approved of family planning significantly more than the less educated and rural residents.<sup>10</sup>

### CONCLUSION

This study carried out in NTBLTC Saye to determine the knowledge and perception of contraception among HIV positive male patients showed that there was good knowledge about contraception and condom was identified to be the most common method of contraception. However, there was poor knowledge about vasectomy as most do not know what it is used for which may be linked to the poor acceptance of the method of contraception, there was significant association between marital status and knowledge of contraception. The overall perception of the respondents was good however some of the respondents were of the perception that it is only promiscuous women that use contraception without their husband's consent which showed that there is no adequate reorientation of people and reduce response of men to the involvement and use of contraception. There was significant association between religion, age and level of education on perception about contraception.

### RECOMMENDATIONS

Health workers especially doctors and nurses that work in NTBLTC, Saye should be thorough in the counselling of the HIV positive men on the importance of contraception usage in prevention of re-infection because based on the finding of the study less of the respondents knew what contraception is used for. There is need for the health workers to enlighten men to know about the other methods of contraception apart from condom and withdrawal method.

### ACKNOWLEDGEMENT

The corresponding author want to appreciate Engr. T. Oyegoke for his immerse support in the editing and proof-reading the manuscript meticulously and Ministry of Education (Federal Government Scholarship Board), Federal Republic of Nigeria for their sponsorship. Also, acknowledgement goes to IFRA-Nigeria and the French Embassy in Nigeria for the research grant award.

### ETHICAL CONSIDERATION

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.

### REFERENCES

1. Polisi A, Gebrehanna E, Tesfaye G, Asefa F. Modern contraceptive utilization among female ART attendees in health facilities of Gimbi town, West Ethiopia. *Reprod Health*. 2014;11(1):30.
2. Joint United Nations Programme on HIV/AIDS. *GLOBAL AIDS UPDATE 2016*. Geneva, Switzerland: UNAIDS; 2016:1–16.
3. Awofala AA, Ogundele OE. HIV epidemiology in Nigeria. *Saudi J Biol Sci*. 2018;25(4):697–703.
4. Shehu AU, Joshua IA, Umar Z. Knowledge of contraception and contraceptive choices among human immunodeficiency virus-positive women attending antiretroviral clinics in Zaria, Nigeria. *Sub-Saharan African J Med*. 2016;3(2):84-90.
5. Myer L, Morroni C, El-Sadr WM. Reproductive decisions in HIV-infected individuals. *Lancet*. 2005;366(9487):698–700.
6. Melaku YA, Zeleke EG. Contraceptive utilization and associated factors among HIV positive women on chronic follow up care in tigray region, northern ethiopia: A cross sectional study. *PLoS One*. 2014;9(4):e94682. <https://doi.org/10.1371/journal.pone.0094682>. Accessed Nov 6, 2017.
7. Herndon N. Men influence contraceptive use. *Netw Res Triangle Park N C*. 1998;18(3):13.
8. Mayondi GK, Wirth K, Morroni C, Moyo S, Ajibola G, Diseko M, et al. Unintended pregnancy, contraceptive use, and childbearing desires among HIV-infected and HIV-uninfected women in Botswana: across-sectional study. *BMC Public Health*. 2016;16(1):44-51.
9. Adelekan A, Omoregie P, Edoni E. Male

- Involvement in Family Planning: Challenges and Way Forward. *Int J Popul Res.* 2014 (Article ID 416457):1-9.
10. Mbizvo MT, Adamchak DJ. Family planning knowledge, attitudes, and practices of men in Zimbabwe. *Stud Fam Plann.* 1991;22(1):31–38.
  11. Orji EO, Ojofeitimi EO, Olanrewaju BA. The role of men in family planning decision-making in rural and urban Nigeria. *Eur J Contracept Reprod Health Care.* 2007;12(1):70–75.
  12. Oyediran KA, Ishola GP, Feyisetan BJ. Factors affecting ever-married men's contraceptive knowledge and use in Nigeria. *J Biosoc Sci.* 2002;34(4):497–510.
  13. Oni GA, McCarthy J. Family Planning Knowledge, Attitudes and Practices of Males in Ilorin, Nigeria. *Int Fam Plan Perspect.* 1991;17(2):50–54.
  14. Wanyenze RK, Tumwesigye NM, Kindyomunda R. Uptake of family planning methods and unplanned pregnancies among HIV-infected individuals: a cross-sectional survey among clients at HIV clinics in Uganda. *J Int AIDS Soc.* 2011;14:35-43.
  15. Salaudeen AG, Ojotule A, Durowade KA, Musa OI, Yusuf AS, Saka MJ. Condom use among HIV sero-concordant couples attending a secondary health facility in North-Central Nigeria. *Niger J Basic Clin Sci.* 2013;10:51-56.