



ORIGINAL ARTICLE

Contraceptive Characteristics of Women Living with HIV in the Kumasi Metropolis, Ghana

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ABSTRACT

Objectives: Contraceptive use among women living with HIV is important to prevent the transmission of the infection to their partners, prevent unintended pregnancies and prevent the mother-to-child transmission of the infection. The study sought to determine the contraceptive characteristics of women living with HIV in the Kumasi metropolis.

Methods: A cross-sectional study was conducted from July to August 2012 at two HIV/AIDS clinics in the Kumasi Metropolis in the Ashanti Region, Ghana. Interviewer-administered questionnaires were used to collect data from two hundred and ninety five women. Data from one hundred and eighty three women living with HIV and who were sexually active were analyzed. Factors associated with contraceptive use were examined using logistic regression.

Results: The overall contraceptive use was high; 84.7% were using a modern contraceptive method. The male condom was the commonest contraceptive method (77.0%) used and this was the main contraceptive method promoted at the HIV/AIDS clinic. Dual method usage was low (4.4%). Multivariate analysis showed that the significant predictor of contraceptive use was HIV status disclosure to partner (AOR = 0.25; 95% CI = 0.07-0.87; p = 0.03).

Conclusions and Public Health Implications: The integration of family planning and HIV/AIDS services could stress dual method use and encourage HIV status disclosure to partner.

Key Words: Contraceptives • Condom • Women Living with HIV/AIDS • Ghana

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Introduction

Human Immunodeficiency Virus prevalence in the world has levelled-off in most regions in the world. Women are known to be the most affected with HIV. In 2010, women formed about 50% of the adult population (15 years or older) infected with HIV/AIDS in the world^[1]. In Sub-Saharan Africa, women living with HIV make up 59% of the adult population living with the infection^[1]. Sub-Saharan Africa accounts for about 70% of new HIV infections^[1]. HIV/AIDS is known to affect the sexual desire of most women initially. Some might be able to resume normal sexual activity others might not^[2]. In Ghana, the estimated HIV prevalence is 1.5 with about 226,000 people living with HIV/AIDS^[3]. Contraceptive use among women living with HIV is important to prevent unintended pregnancies. This is a prong of preventing mother – to – child transmission (PMTCT). Most HIV infections in children are transmitted through mother-to-child during pregnancy, labor and breastfeeding. Condom use among women living with HIV is also important to prevent the transmission of HIV/STI to the partner. Even for those who desire to have a child, condom use is important especially in serodiscordant relationships. In Ghana, the current contraceptive use of any method among married women (15- 49 years) in the general population is 23.5% and modern contraceptive use is 23.0%^[4]. Condom use among married women aged 15 – 49 years is 2.4% in the general population in Ghana^[5]. The sexual behaviour and contraceptive use among women living with HIV are important in reducing the transmission of HIV. It was projected that about 10,300 mothers need prevention of mother-to-child transmission services and there would be 1,100 new HIV infections in children in 2012 in Ghana^[3]. Condoms have been the main contraceptive that has been promoted for people living with HIV/AIDS because of its dual purpose of preventing the transmission of HIV/STI and preventing pregnancies. It is therefore important to study the contraceptive use and the factors associated with contraceptive uptake in women living with HIV in order to inform programs designed to reduce the transmission of HIV and prevent unintended pregnancies among this sub-population.

Methods

Study Area and Design

This was hospital-based cross-sectional descriptive study conducted from the 10th of July 2012 to the 15th of August 2012. The study was conducted in the Kumasi Metropolitan Area which has a total population of 2,035,064; females constitute 52.2% of the population^[6]. For health purposes, the metropolis is divided into five sub-metropolitan areas: Bantama, Asokwa, Manhyia North, Manhyia South and Subin. Two public health institutions in the metropolis with HIV/AIDS clinics, namely the Kumasi South Hospital in the Asokwa sub-metropolitan health area and the Suntreso Government Hospital in the Bantama sub-metropolitan health area were used for this study. The HIV/AIDS clinics at the Kumasi South Hospital and the Suntreso Government Hospital are the largest HIV/AIDS clinics of the Ghana Health Service facilities in the metropolis and they have about 4000 and 2000 clients respectively. The HIV/AIDS clinics offer counselling and testing, care and treatment, and provision of antiretroviral drugs. They also serve as referral centres for other clinics that do not provide antiretroviral drugs in the metropolis.

Study Population and Study Sample

Women living with HIV/AIDS within the reproductive age 18 to 49 years attending clinics at the above mentioned facilities were recruited for the study. The estimated sample size for the study was 300. To be eligible for the study, the respondent should have attended the clinic for at least six months. Newly diagnosed HIV/AIDS clients were excluded in the study since they are usually emotionally unstable and not sexually active or had lost interest in sex. Individuals in the WHO clinical stage IV and the very sick were also excluded

Three hundred women living with HIV/AIDS were approached to be interviewed. Two hundred clients were sampled from the Kumasi South Hospital while one hundred clients were selected from the Suntreso Government Hospital. We aimed to recruit all eligible HIV/AIDS clients presenting at the clinic within the study period. Therefore a consecutive sampling method was used till the desired sample size was attained. If the client agreed to participate in the study, a consent form was signed and interviewed

conducted. In all two hundred and ninety five women living with HIV agreed and questionnaires were administered to them.

Data

The questionnaire covered socio-demographic characteristics, contraceptive use, HAART use, reproductive history, partner's characteristics and desire for children, knowledge of PMTCT and contraceptive methods discussed at the HIV/AIDS clinic. Hospital records were reviewed to collect information on WHO clinical stage and date of diagnosis of HIV of the study participant. Questions on contraceptive knowledge and use were adopted from the 2008 Ghana Demographic Health Survey. Interviews were conducted in English or translated into Twi (local dialect) depending on preference of the participant, and it lasted between 10 to 15 minutes.

Statistical Analysis

Data analysis was done using STATA version eleven (Stata Corp., College Station, Texas: StataCorp LP, USA). Analysis was performed on 183 study participants who were sexually active; frequencies, percentages and odds ratio were calculated. Pearson chi-square and Fisher exact test were used for categorical data. The outcome variable was contraceptive use. Univariate logistic regression was conducted to determine associations between independent variables and contraceptive use. Multivariate logistic regression model was fitted to simultaneously adjust for the effect of other covariates. Statistical significance level was set at an alpha value of 0.05 with 95% confidence interval. For inclusion of variables into the model a significance level of 0.25 was considered using the likelihood ratio test.

Ethical Consideration

Ethical clearance was obtained from the Committee on Human Research, Publications and Ethics, School of Medical Sciences, Kwame Nkrumah University of Science and Technology, Kumasi, Ghana.

Results

Out of the 295 clients who were responsive, 183 were sexually active. The response rate was 98.3%.

The mean age of the respondents was 34.5 years with standard deviation of 5.2. About 79% of the respondents were married and of those who were using a contraceptive 82.2% were married. Majority of the respondents were Christians with 6.6% being Catholics. About 13% of the respondents had no formal education. Twenty percent of the respondents were unemployed whilst majority (70.5%) were self employed. About 86.0% of those who use contraceptives were self employed. The average monthly income of most of the respondents who were employed was below US\$ 53 (GHCedi (¢) 1.90 is equivalent to US\$ 1.00) (See Table 1).

Reproductive characteristics and intention of respondents

Most of the respondents (80.3%) were menstruating regularly and 94% had ever had children. Majority of the women and their partners desire to have children and about 85% of the respondents had disclosed their HIV status to their partners. About one – third of the respondents did not know the HIV status of their partners. Among the women currently using contraceptive 61.2% desire to have children in the future and 59.2% of their partners also desire to have children (Table 2).

Factors associated with contraceptive usage

In the univariate analysis, age group and educational status were not associated with the use of contraceptives. However, women who were cohabitating were less likely to use contraceptives (unadjusted odds ratio [OR] = 0.32; 95% CI = 0.12-0.88, $p = 0.03$) compared with those who were married. Participants who did not have children were significantly less likely to use a contraceptive (unadjusted OR = 0.17; 95% CI = 0.05-0.60, $p = 0.02$) compared with women with children. The HIV status of the partner was associated with contraceptive use; partners whose HIV status were unknown compared with those who were HIV positive were less likely to use a contraceptive (unadjusted OR = 0.27; 95% CI = 0.08-0.86, $p = 0.03$). Multivariate analysis showed that, disclosure of HIV status to partner was the only variable that significantly predicted contraceptive use, suggesting that women who have not disclosed their status to their partners were less likely to use contraceptive (AOR = 0.25; 95% CI = 0.07-0.87, $p = 0.03$) (Table 3).

Table 1. Socio-demographic and health characteristics of women living with HIV

Characteristic	Contraceptive use		Overall(n=183) n (%)	p-value
	Yes n(=157) n (%)	No (n=26) n (%)		
Age Group				0.98
≤ 34 years	79(50.3)	13(50.0)	92 (50.3)	
≥ 35 years	78(49.7)	13(50.0)	91(49.7)	
Marital Status				0.05
Married	129(82.2)	16(61.5)	145 (79.2)	
In a relationship	10(6.4)	3(11.5)	13 (6.6)	
Cohabiting	18(11.4)	7(27.0)	25(13.7)	
Religion				0.13
Catholic	9(5.7)	3(11.5)	12 (6.6)	
Other Christian*	125(79.6)	6(23.1)	141 (77.1)	
Moslem	20(12.7)	16(61.5)	26(14.2)	
Traditional/Spiritualist	3(2.0)	1(3.9)	4 (2.1)	
Educational Status				0.9
None	20(12.7)	4(15.4)	24 (13.1)	
Basic**	30(19.1)	4(15.4)	34 (18.6)	
Higher Education***	107(68.2)	18(69.2)	125 (78.3)	
Employment Status				0.89
Unemployed	32(20.4)	5(19.2)	37(20.2)	
Self employed	111(70.7)	18(69.2)	129 (70.5)	
Private/Government	14(8.9)	3(11.6)	17 (9.3)	
Level of monthly Income†				0.43
GH<¢100	71(56.8)	10(47.6)	81(55.5)	
GH≥¢100	54(43.2)	11(52.4)	65(44.5)	
Duration of HIV Diagnosis				0.13
< 12 months	97(61.8)	12((46.2)	109(59.6)	
≥ 12 months	60(38.2)	14(53.8)	74(40.4)	
WHO Clinical Stage				0.88
I	28(17.8)	5(19.2)	33(18.0)	
II	33(21.0)	6(23.1)	39(21.3)	
III	96(61.2)	15(57.7)	111(60.7)	
HAART Users				0.61
Yes	149(94.9)	26(100.0)	175(95.6)	
No	8(5.1)	0(0.0)	8(4.4)	

*Other Christian= All Christian organisations (Methodist, Presbyterian, Pentecost, Charismatic) except Catholic,

**Basic education=Primary

***High Education= Middle/Junior High School, Secondary/Senior High School and Tertiary,

†Among those who use contraceptive (n=125) and those who do not use contraceptive (n=21)

Table 2. Reproductive characteristics and intentions of women living with HIV by contraceptive use

Characteristic	Contraceptive use		Overall(n=183) n (%)	p-value
	Yes n(=157) n (%)	No (n=26) n (%)		
Menstruating Regularly				0.64
Yes	127(80.9)	20(76.9)	147(80.3)	
No	30(19.1)	6(23.1)	36(19.7)	
Ever had children				0.02
Yes	151(96.2)	21(80.8)	172(94.0)	
No	6(3.8)	5(19.2)	11(6.0)	
Parity				0.88
3-Jan	111(73.5)	14(66.7)	125(72.7)	
>3	40(26.5)	7(33.3)	47(27.3)	
Desire children				0.05
Yes	96(61.2)	21(80.8)	117(63.9)	
No	61(38.8)	5(19.2)	66(36.1)	
Partner desires children				0.09
Yes	93(59.2)	20(76.9)	113(61.8)	
No	64(40.8)	6(23.1)	70(38.2)	
Disclosure to Partner				0.001
Yes	139(88.5)	16(61.5)	155(84.7)	
No	18(11.5)	10(38.5)	28(15.3)	
HIV Status of Partner				0.02
Positive	46(29.3)	4(15.4)	50(27.3)	
Negative	65(41.4)	7(26.9)	72(39.4)	
Unknown	46(29.3)	15(57.7)	61(33.3)	

Current Contraceptive use among women living with HIV

Eighty - five percent of the respondents were using a modern contraceptive method. Dual method use which is the condom and another method was 4.4%. Eighty -eight percent of the respondents were using any contraceptive method. The distribution of the various contraceptive methods are male condom(77.0%), injectables(5.5%), female sterilisation(1.1%), female condom(0.5%), implants(0.5) and other non modern methods which is the rhythm(1.1%). None of the partners of the respondents had had vasectomy.

Discussion

This cross-sectional study serves as a pilot study on the contraceptive characteristics of women living with HIV in the Kumasi Metropolis, Ghana. The results showed that disclosure of HIV sero-status to one's partner was a significant predictor of contraceptive use; women who had not disclosed their status to their partners were significantly less likely to use contraceptive. Similarly, a study in Zambia^[7] also reported disclosure of HIV status as a predictor of contraceptive use. In Uganda^[8] disclosure of HIV status was a predictor of modern contraceptive use in women living with HIV. Disclosure of one's HIV status to partner would ensure that both parties would understand

Table 3. Univariate and adjusted analysis of factors associated with contraceptive use among women living with HIV

Characteristics	OR	Crude OR 95% CI	p-value	AOR	Adjusted OR 95% CI	p-value
Age Group						
≤ 34*						
≥ 35	0.99	0.43, 2.26	0.98	0.87	0.34, 2.23	0.77
Marital Status						
Married*						
In a relationship	0.41	0.10, 1.67	0.21	1.82	0.30, 11.18	0.41
Cohabiting	0.32	0.12, 0.88	0.03	0.51	0.15, 1.71	0.27
Religion						
Other Christian*						
Catholic	0.38	0.09, 1.57	0.18	0.22	0.04, 1.12	0.11
Moslem	0.43	0.15, 1.22	0.11	0.3	0.08, 1.11	0.1
Traditional/Spiritualist	0.38	0.04, 3.91	0.42	0.12	0.01, 1.40	0.09
Educational Status						
None*						
Basic	1.5	0.34, 6.70	0.6	1.3	0.24, 6.88	0.76
Higher Education	1.2	0.36, 3.88	0.78	1.33	0.32, 5.53	0.7
Ever had children						
Yes*						
No	0.17	0.05, 0.60	0.02	0.29	0.06, 1.41	0.13
Desire children						
Yes*						
No	2.67	0.96, 7.45	0.06			
Disclosure to Partner						
Yes*						
No	0.21	0.08, 0.52	0.001	0.25	0.07, 0.87	0.03
HIV Status of Partner						
Positive*						
Negative	0.81	0.22, 2.92	0.74	0.97	0.24, 3.89	0.97
Unknown	0.27	0.08, 0.86	0.03	0.36	0.09, 1.50	0.16

*Reference group

the importance of using the condom and other modern contraceptives to prevent unintended pregnancies. It would be easier for couples who have completed childbearing to decide to go for a permanent contraceptive method as well as use the condom. Women living with HIV could therefore

be counselled and encouraged to disclose their HIV status to their partners since it may improve their contraceptive use to prevent unintended pregnancies and the transmission of HIV/STI. Disclosure of HIV status to partner is a dilemma because of the stigma and discrimination^[9, 10] associated with the infection

and more so if the woman is the first to know of her status it sometimes presupposes that she is the one who got the infection first. Women in many places in Africa are expected to be modest and chaste, and be with only one partner. Most HIV infection is transmitted through heterosexual intercourse in Africa and if a woman is tested positive it presupposes that she is promiscuous that is why she has the infection. Interventions that promote HIV status disclosure and issues relating to non-disclosure could be assessed^[11, 12] since it may improve uptake of contraceptives.

Contraceptive use among women living with HIV is generally higher than the general population^[8, 13]. This is mainly because of the high use of the condom which has a dual purpose of preventing the transmission of HIV and preventing unintended pregnancies. The use of modern contraceptive among respondents was high (84.7%). This compares with a study done in Soweto, South Africa where 84% women living with HIV were currently using at least one contraceptive method^[14]. Other studies however reported lower contraceptive use among women living with HIV. A cross-sectional study in Kenya^[13] reported 44.2% of respondents currently using a contraceptive method. A study in Uganda^[15], even reported as low as 25.2% of women currently using a contraceptive method and this could be due to the fact that the study was conducted in a post conflict era. Another study in Uganda^[8] conducted at twelve HIV clinics reported current contraceptive use of 61.8%. In Lusaka, Zambia^[7], 59.2% of women living with HIV reported current use of a modern contraceptive and this is due to the fact that more than half of the respondents had not disclosed their HIV status to their partners. The differences in the level of contraceptive use can be explained by the differences in the characteristics of the populations sampled.

In the current study, more than three-out-of-four women were using the male condom. This is mainly because of its dual purpose in preventing the transmission of STI/HIV and pregnancy, and this is the main contraceptive promoted at HIV/AIDS clinics in Kumasi. Similarly in other African countries the commonest contraceptive used by women living with HIV is the male condom^[7, 8, 13]. Condom is the main contraceptive promoted among people living with HIV. The female condom which has the advantage of being female controlled and can be used if the man is reluctant to use the male condom was however

very low (0.5%). Similarly in the general population in Ghana female condom use is very low^[5]. It can be argued that the female condom has not been well promoted; it was recently re-launched by the Ghana Health Service in October 2012 with the aim that it will help with its integration into sector wide policies as well as within HIV/AIDS programming^[6]. Similarly in Uganda^[8], female condom use was low (0.8%). Female condom use in Kenya^[13] was higher (10.5%) unlike that in Kumasi, Ghana but this is still low when compared with male condom use. Further research into the low use of female condom among women living with HIV will help clarify the barriers to its use and probably improve its uptake.

Dual contraceptive method use which is the male condom and any other method was low (4.4%) in the sexually active women living with HIV. Other studies however reported higher dual contraceptive use^[7, 8, 13, 14]. This study recorded lower dual contraceptive method use and it may be due to the fact that much attention has not been given to the other modern contraceptive methods among women living with HIV. Dual contraceptive method use has the additional advantage of being an effective method of preventing unintended pregnancies and this is important especially for couples who have completed their families or who do not desire children. The integration of family planning services into HIV/AIDS clinics creates an ideal opportunity to promote dual method use and this will go a long way in the prevention of mother to child transmission and the transmission of HIV. Female sterilisation was very low and compares to other African studies^[7, 8, 13]. In the United States^[17] however sterilisation was one of the commonest contraceptives (44.4%) used among women living with HIV/AIDS. It must however be stated that about a third of the women had sterilisation regret^[17]. In counselling women on contraceptive methods, care must be taken so as not to coerce women living with HIV to accept permanent contraceptive methods. Women living with HIV have reproductive rights to decide freely on the number of children and spacing of their children and counselling on contraceptive methods should be done in a supportive environment. Couple counselling is also another method that may improve use of other contraceptive methods in addition to condom use but further research in this area has to be done. In Kumasi, about one tenth of sexually active women living with HIV used other

family planning methods without condom. This was slightly lower than the 13% reported in a study in Uganda^[9]. Since the condom is the only contraceptive that has the additional benefit of preventing HIV/STI transmission, its continuous promotion at HIV/AIDS clinics may still be warranted.

Study Limitations

In interpreting the results caution must however be taken. The clients attending the clinic may be compliant clients who adhere to treatment and counselling. Potential information bias has to be considered in the interpretation of this data. Since these clinics are specialised, the potential to elicit high response rate for use of condoms is high. Women who were very sick or in WHO Clinical Stage IV were excluded from the study. This will affect assessing the health status and contraceptive use of all women living with HIV in general. These limitations notwithstanding the findings from this study provide a good source of information for improving the services to women living with HIV.

Conclusion and Public Health Implications

Overall, the use of contraceptives among women living with HIV in the Kumasi Metropolis, Ghana is high. Condom is the main contraceptive used because of its dual purpose in preventing the transmission of HIV/STI and preventing unintended pregnancy. Factors associated with contraceptive use at univariate analysis: are ever had children, desire for a child, HIV status of partner and HIV disclosure to partner. Women who have not disclosed their HIV status to their partners were less likely to use contraceptive. Women living with HIV could be encouraged to disclose their HIV status to their partners and encourage their partners to also go for HIV testing. Issues relating to non-disclosure may be assessed and interventions that promote disclosure of HIV status may be implemented. Women who had not disclosed their HIV status could be as a result of stigma and discrimination associated with the infection and they could also be lacking condom negotiation skills. There may be the need of improving the condom negotiation skills of women living with HIV. As part of the integration of family planning services into HIV/

AIDS services in Ghana, attention could be given to temporary long term and permanent contraceptives whilst emphasising condom use as well. There is however the need for much larger and longer follow-up studies in this area to be conducted in Ghana.

Conflicts of Interest: None declared

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