

# ATTITUDES OF HIV-POSITIVE PREGNANT WOMEN TOWARD FAMILY PLANNING AND ITS ASSOCIATED FACTORS IN PUBLIC HOSPITALS OF ADDIS ABABA, ETHIOPIA

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## ABSTRACT

**BACKGROUND:** Human Immunodeficiency Virus infection of a reproductive age woman has an impact on women's health, risk of transmission to her family and her fertility decisions. Contraception has a great importance in preventing unintended pregnancy and decrease maternal to child transmission of the virus.

**OBJECTIVE:** This study was aimed to assess attitudes of HIV-positive pregnant women towards family planning in selected Public Health institutions of Addis Ababa, Ethiopia.

**METHODS:** A cross-sectional study was conducted among HIV-positive pregnant women attending ANC clinics in purposely selected three teaching hospitals in Addis Ababa from April to July 2016. A total of 173 women were participated in the study. Data was collected using interviewer administered structured questionnaire and the data was analyzed using SPSS version 21 statistical software. Binary and multiple logistic regression were done to identify the associated factors of intentions to use contraception. A level of  $P < 0.05$  was considered statistically significant.

**RESULT:** Out of the total 173 respondents, about 87.9% were intended to use contraception after delivery. Unintended pregnancy rate of the current pregnancies was 34.7%. Condom use other than its contraceptive purpose was 27% and 26% before pregnancy and during current pregnancy respectively. Prior history of use of contraception and age of the woman had shown an independent association with intention to use contraception.

**Conclusion:** Every effort should be made to satisfy the good attitude for the contraception so as to minimize unintended pregnancy and pediatric HIV. At all levels knowledge should be transmitted and condom should be available easily and offered.

**KEY WORDS:** Unintended pregnancy, contraception, family planning

## INTRODUCTION

Prevalence of Human Immunodeficiency Virus (HIV) is the highest in sub-Saharan Africa region<sup>1</sup> and women comprise 58% of the adults living with HIV in this region. The incidence of HIV in children was also highest in sub-Saharan Africa, representing more than 90% of children worldwide who became newly infected with HIV<sup>2</sup>.

Planning of pregnancy in HIV positive mother is one of the most important interventions to reduce maternal-to-child transmission (MTCT) of HIV, as unplanned could pose a greatest risk of MTCT. Family planning (FP) is one of the cost effective interventions for preventing both maternal-to-child transmission (PMTCT) of HIV and maternal morbidity and mortality from unintended pregnancy<sup>3</sup>. Condom prevent infection transmission and another more effective contraceptive for pregnancy prevention<sup>4</sup>.

Reviewed articles showed that only 20-43% HIV-infected women in sub-Saharan Africa used family planning<sup>5</sup>. It is estimated that 14 million unintended pregnancies occur each year in sub-Saharan Africa<sup>6</sup>. Factors associated with family planning use among married HIV positive women were urban residency, and better educational status<sup>7</sup>. Studies also revealed that lack of female decision-making power, poor economic resources, low quality care at family planning services, and desire for large families were barriers to use family planning<sup>7-9</sup>.

Fertility desire in 2011 in a study done in Addis Ababa showed, 43.3% of HIV Positive mothers desired to have children in the future, out of which 71.5% stated

positively that they intended to give birth in the near future, and of these 26.8% were pregnant at the time of the study<sup>10</sup>.

A study in Ethiopian found that after people tested HIV-positive, their intention to have children reduces significantly<sup>11</sup>.

Although in Kenya the majority (87%) of HIV-infected pregnant women participating in a PMTCT trial expressed an intention to use FP in the future, high proportion of unintended pregnancies (59%), thus emphasizing a gap between intent and practice<sup>12</sup>. In a cross-sectional study among HIV-positive women on antiretroviral therapy (ART) in Kigali, Rwanda, 62.7% had become pregnant unintentionally<sup>8,13,14</sup>. A comparative study done in Ethiopia, Black lion and Gandhi hospitals in 2013 shows unintended pregnancy significantly occurred in HIV infected (56.3%) than uninfected pregnant women (29.5%)<sup>15</sup>. Factors which can contribute for unmet need are having little or incorrect knowledge of contraceptive options, limited access to family planning services and lack of integration between HIV and family planning services, fearing stigma and discrimination<sup>16,17</sup>.

Socio-cultural factors play a large role in fertility decision-making. Eliminating MTCT will not be possible without addressing unmet needs for family planning. Understanding the attitudes of HIV-positive pregnant women towards family planning helps to target interventions to address the challenges and obstacles that reduce the use of family planning in the future.

## METHODS

The study used a cross-sectional design. The survey was

conducted at antenatal care (ANC) clinics of three teaching government hospitals (Tikur Anbessa hospital, Zewditu Memorial Hospital, and Gandhi Memorial Hospital). Gandhi Memorial Hospital is the only maternity government hospital in the country. The other two are tertiary referral hospitals which give maternity and other services too. The total number of deliveries in the three teaching hospitals per annum is close to 12,000. The study was conducted from April to August 2016.

The study population was all HIV positive pregnant women attending ANC services in these selected health facilities. Those HIV Positive pregnant women who were enrolled in ANC clinics and live at least for six months in Addis Ababa city was included in the study.

Those HIV Positive pregnant women who were in labor, undergoing abortion or miscarriage and who have medical contraindication for future pregnancy were excluded from the study.

The sample size was computed using single proportion formula with Epi Info version 3.5.2. It considers 87% favorable attitude towards family planning among HIV positive pregnant women from a Kenyan study<sup>(12)</sup>, 95% confidence level, and 5% margin of error. Based on these and by considering a 5% non-response rate, the final sample size was 183.

Quota sampling technique was implemented to select the study participants. Hence, all HIV positive pregnant women attending ANC clinics in the three teaching hospitals who fulfils the inclusion criteria were selected consecutively during the study period interval till the required sample size achieved.

The dependent variable was attitude towards contraception. The independent variables were maternal age, level of education, employment, number of living children, whether current pregnancy is planned, prior use of FP, future FP preferences, perception of FP acceptance by their spouse or partner, HIV serostatus of partner/husband, reaction of their spouse or partner to their decision about FP condom use, practice of condom use during pregnancy and marital status.

Data was collected using interviewer administered structured questionnaire developed from previous related studies. The questionnaire was translated in to the local language (Amharic) by experts in both languages and back translated to English by another person to ensure consistency and accuracy.

Six female nurses, two from each hospital, who had previous training on ART and/or HIV counseling, and previous experience in data collection were recruited.

Moreover, training was given for two days on interview techniques, sampling and ethical issues, emphasizing the importance of safety of participants and interviewers, minimization of under reporting and maintaining confidentiality. A pre-test of the questionnaire was conducted in selected ANC units of the three hospitals which were not included in the main study.

The collected data was cleaned and entered into SPSS version 21 software program for analysis. Data entry was done by the researcher. Descriptive statistics, bivariate and multivariable logistic regression analysis were done to identify factors associated with attitudes of HIV-positive pregnant women towards family planning. Variables found to be significant at bivariate level, ( $P <$

0.05), were included in to multiple logistic regression models. Then multivariable logistic regression analyses were used to calculate Odds ratio with 95% confidence interval to estimate association.

Approval was obtained from the research and publication committee of obstetrics department of college of health sciences of Addis Ababa University. Permission was obtained from medical directors and respective unit heads at each health institutions. Verbal consent was also obtained from each study participant. In order

to make informed decision sufficient information was given to each participant. Confidentiality was maintained by conducting interview in private place.

## RESULTS

Out of the total 183 sample size calculated, 173 pregnant women participated in the study yielding a response rate of about 94%. The mean age ( $\pm$  1SD) of the participants were 28.8 ( $\pm$ 4.8). About 80% (n=140) of the respondents had formal education while 19.1% (n=33) of them cannot read or write (Table 1).

**Table 1. Socio-demographic characteristic of HIV positive pregnant women at ANC clinics of three teaching hospitals in Addis Ababa, 2016.**

Socio-demographic characteristic	Value	N(n= 173)	Percentage
Age in years	20 - 24	27	15.6
	25 - 29	80	46.2
	30-34	40	23.1
	35 and above	26	15.0
Religion	Orthodox Christians	40	80.9
	Muslim	21	12.1
	protestant	8	4.6
	Catholic	2	1.2
Educational status	Other	2	1.2
	Higher education	27	15.6
	Secondary education	65	37.6
Occupation	Primary education	48	27.7
	No formal education	33	19.1
Occupation	unemployed	28	16.2
	house wife	80	46.2
	employed	65	37.6

About 20% (n=31) of the respondents were on their first pregnancy. Majority (n=131, 92.3%) of respondents had at least one live child. Majority of the current pregnancies (n=113, 65.3%) were planned while 34.7% (n=60) of the pregnancies were unplanned. About half of the respondents (n=88) knew their serostatus in the index pregnancy. For about half (n=83, 48%) of the respondents, their partners were also seropositive however in 19.7% (n=34) of them their partners were HIV negative. A third of mothers (n=56, 32.4%) did not know their partner's sero-status (Table 2).

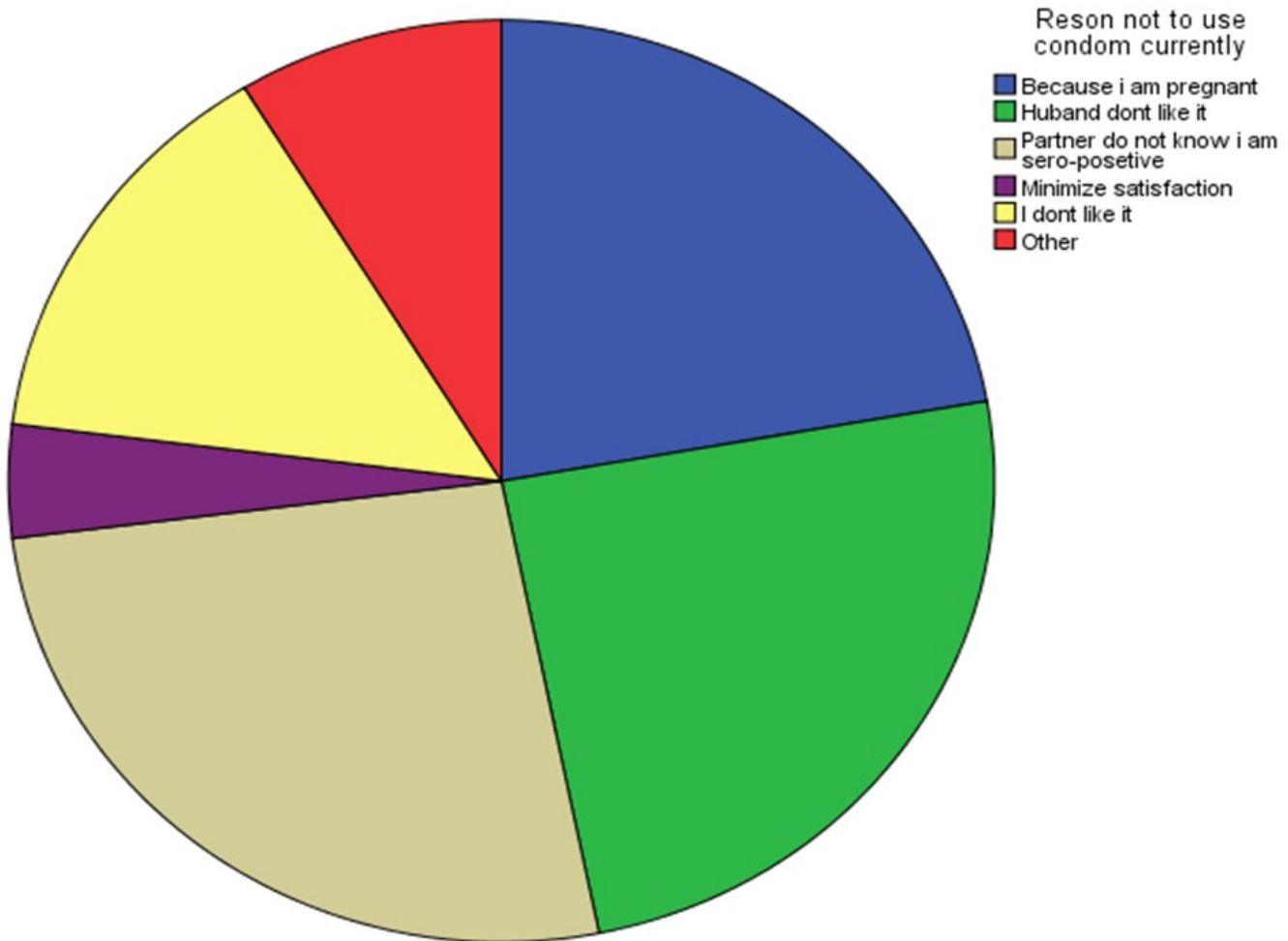
Almost two-third (n=114, 65.9%) of mothers had history of use of one or more kind of contraceptive. Condom (26.5%), pills (23.9%) and injectable (24.8%) were the common types used. About 88% (n=157) of the study participants had good attitude to use contraceptive after delivery, while the rest had no plan to use in the near future (Table 3).

**Table 3. Family planning characteristic of HIV positive pregnant women at ANC clinics of three teaching hospitals in Addis Ababa, 2016**

**Table 2. Obstetric characteristic of HIV positive pregnant women at ANC clinics of three teaching hospitals in Addis Ababa, 2016.**

Variable		Frequency	%
Gravidity	C	31	17.9
		142	82.1
Is current pregnancy planned	Yes	113	65.3
	No	60	34.7
When did you know your HIV status?	During current pregnancy	88	50.9
	Before current pregnancy	55	31.8
	During previous pregnancy	30	17.3
Is your husband seropositive for HIV?	Yes	83	48
	No	34	19.7
	Don't know	56	32.4
Number of live children	None	11	7.7
	One or more	131	92.3
	None		
	One or more		

Variable		No.	%
Have you ever used contraceptive?	Yes	114	65.9
	No	59	34.1
Do you want to use contraceptive in the future?	Yes	152	87.9
	No	21	12.1
Did you use condom after you knew your serostatus	No	71	41
	Sometimes	55	31.8
	Consistently	47	27.2
Do you use condom currently?	Yes	45	26
	No	126	73
Have you ever discussed about contraceptive with your partner?	Yes	125	73.1
	No	46	26.9



About 73% of the respondents did not use condom during the index pregnancy. The main reasons being their partners do not know they are seropositive (26.2%), husband may not like condom (24.2%) or a quarter of them said they are pregnant and condom has no importance (Fig 1).

On multivariate logistic regression, Age of the respondents and prior use of contraception were found to be independent predictors to their intension to use family planning. Age  $\leq 34$  years was the age range that was a significant factor (AOR=5.5,  $p<0.03$ ) for their intension to use FP. Those pregnant women  $\leq 34$  years of age were found to be 5.5 times more likely to use FP.

Those pregnant women who used contraceptive before were found to be 6.24 times more likely to use FP (AOR=6.24,  $p<0.01$ ). In this study, marital status was found to be a weaker determinant for their intension to use FP. Those respondents who discussed with their partner about contraceptive use were found to be 5.18 times more likely to use FP (AOR=5.18,  $p<0.07$ ) (Table 4).

**Table 4. Predictors of intention to use family planning of HIV positive pregnant women at ANC clinics of three teaching hospitals in Addis Ababa, 2016**

Variable	Category	Intension to		COD (95%CI)	AOR (95%CI)	P-value
		use FP Yes	No			
Age	≤ 34 years	133	14	3.50 (1.25, 9.77)	5.5 (1.2, 25.57)	P<0.03
	> 34 years	19	7	1.00	1.00	
Marital status	Married	137	17	2.15 (0.64,7.23)	1.7 (0.39, 7.4)	P=0.47
	Others*	15	4	1.00	1.00	
Ever used contra- ceptive	Yes	110	4	11.1(3.54,35.00)	6.24 (1.54, 25.27)	P<0.01
	No	42	17	1.00	1.00	
Discussed with partner about con- traceptive	Yes	115	10	3.61 (1.42,9.22)	5.18 (0.87, 30.75)	P=0.07
	No	35	11	1.00	1.00	
Did you use con- dom after you knew your serosta- tus	No	62	9	1.86 (0.69,5.00)	0.51 (0.00, 32.57)	0.13
	Sometimes	53	2	7.16 (1.48,34.60)	3.84 (0.73, 201.9)	
	Regularly	37	10	1.00	1.00	
Do you use con- dom currently	Yes	35	10	1.00	1.00	
	No	115	11	3.00 (1.17,7.62)	9.03 (0.16, 500.9)	<b>0.28</b>

**DISCUSSION**

The majority (87.9%) of HIV positive pregnant women participated in this study expressed their intention to use family planning in the future. However, this contrasts with the high proportion of unintended pregnancies (34.7%), thus emphasizing a gap between intent and practice. The finding of this study is consistent with other studies done on the rate of unintended pregnancy among HIV-positive women including a study in Kenya (59%)<sup>12</sup>, in Cape Town, South Africa

(61.6%)<sup>13</sup> and in Kigali, Rwanda (62.7%)<sup>8</sup>. Data from a large cohort study in Rakia, Uganda over the period 2000–2006 also revealed that nearly half of all pregnancies among HIV-infected women were unintended<sup>14</sup>. The high proportions of unintended pregnancy in this study were mostly due to avoidable causes including incorrectly using the contraceptives (66.7%). This problem can be prevented by proper counseling during pregnancy and offering after delivery at the appropriate time. This in turn helps to prevent significant pediatric

HIV infection, improve maternal health and decrease health cost at large.

Apart from the availability and accessibility of family planning methods, religion, culture, educational status and age, as well as the attitudes and knowledge of HIV-positive women towards the available family planning methods, are important factors affecting the use and the choice of family planning methods<sup>12</sup>. World Health Organization (WHO) recommended also that dual family planning should be practiced by HIV-positive women. This includes a highly effective hormonal method used together with barrier methods, such as condoms<sup>3</sup>. Condoms have been found to be reliable for both the prevention of pregnancy and HIV infection, as well as other sexually transmitted diseases. Hormonal contraceptive methods are used as a back-up for the prevention of conception in case the condom bursts.

The Ethiopian government provides free family planning services for all who are in need. In this study, long acting contraceptive methods intrauterine contraceptive device (IUCD) and implants are the most preferred (50%) methods in those who intended to use contraception in the future. This finding is consistent with a study done in Kenya which showed modern FP methods (hormonal, barrier or permanent) were preferred by most of the women who intended to use FP<sup>12</sup>. The highest preference for long acting contraceptives methods in this study may be due to high rate of unintended pregnancy before current pregnancy as most were practicing condom alone or pills alone (26.5% and 23.9% respectively). A study done in Zambia also revealed that the highest rates of unintended pregnancy were ob-

served among couples requesting condoms only (26.4/100CY) or oral contraceptives (20.7/100CY)<sup>18</sup>.

There is a low acceptance of condom use in sub-Saharan Africa due to socio-cultural influences, gender and sexual norms, influences of poverty, and insufficient information. In Ethiopia prior to 2013, the overall annual distribution of condom ranged from 147 to 174 million which was over 50% less of the target. With the involvement of pertinent partners working in the area, a national condom strategy was drafted to ensure sustainable and equitable access to quality condoms. It also promotes correct and consistent condom use for prevention of HIV/sexual transmitted infections and unplanned pregnancies among the sexually active population with emphasis on the most vulnerable<sup>19</sup>. However; in this study, only about 27.2% of respondents used condom consistently during coitus before pregnancy. This seems better than similar studies done in Africa including a study done in Kenya which is only 8%<sup>12</sup>. Absence of partner disclosure about sero-status, partner discomfort of using condom and knowledge gap on the importance of condom beyond contraception were the main reasons for not using condom in this study.

In this study, age  $\leq$  34 years and prior use of contraception have a strong association with positive attitude for family planning methods. This is consistent with the findings from other studies with a high percentage of unintended pregnancies in Uganda and Kenya (12, 14). These may be related to good knowledge and prior experience on the importance of family planning in general.



This study offers an insight to health planners about the attitudes and intentions of HIV-positive women and their partner towards FP. It is paramount to provide and expand HIV prevention programs in order to reduce unwanted pregnancies and the incidence of HIV-infected children.

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**COMPETING INTERESTS**

The authors declare that they have no competing interests

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