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Determinants of Dual Contraceptive use Among HIV Positive Women in Reproductive Age Group, Benishangul Gumuz Region, Northwest Ethiopia

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Abstract

Introduction: People Living with HIV make up the most important group to address HIV Prevention. Simultaneous protection against both unwanted pregnancy and STIs/HIV is referred to as dual contraceptive. Therefore, dual protection with the use of effective modern contraceptive method together with condom is critical.

Objectives: To assess the prevalence and associated factors of dual contraceptive use among HIV positive reproductive aged women (15-49) in Metekle Zone, west Ethiopia.

Methods: Institutional based cross-sectional study was conducted. Systematic sampling technique was used to get 403 participants. Data were analyzed using SPSS version 20. Logistic regression was used to check variable having association dual-contraceptive use.

Results: Of the 403 PLHIV women, 99.5% had heard about modern contraceptive, but only 273(58.8%) had heard about dual contraceptive, out of which 165 (40.9%) had reported using dual methods. The common reason not to use dual method was lack of knowledge 174(73.1%).

Conclusions: Less than half used dual methods. Awareness creation on dual contraceptive use should be given attention.

Keywords: HIV positive women, Dual contraceptive, Risk factors, and HIV Transmission

Introduction

In 2011, globally 34 million people were living with HIV/AIDS. Of which Sub Saharan Africa account 69 % (23.5 million) and women are the most affected with 58% (13.63million) of all people living with HIV in the region by the year 2011⁽¹⁾. Around 92 % of pregnant women living with HIV resided in sub-Saharan Africa and more than 90% of children who acquired HIV in 2011 are also there. HIV infected women living in sub-Saharan Africa are still at high risk of unintended pregnancy and sexually transmitted infections ⁽¹⁾. Integration and linkage between HIV and reproductive health services need

to be highly advocated. PLHIV make up the most important group to address HIV prevention strategies ⁽³⁾. A change in the risk behavior of a person with HIV has a greater impact on the transmission of HIV than the same behavioral change in a person without HIV ⁽⁴⁾. According to 2011 EDHS in Ethiopia the prevalence of HIV infection among reproductive aged women is 1.9 %⁽⁵⁾. This can estimate that the heterosexual and vertical transmission of HIV will be the main importance that needs to be addressed in order to prevent the spread of HIV. Prevention of unintended pregnancy is the second most approaches

for the prevention of mother to child transmission of HIV/AIDS⁽⁶⁾. Therefore, Family planning is highly recommended especially for those women living with HIV. Contraceptive has great contribution to achieve millennium development goal 4,5 and six by reducing unintended pregnancy, by improving maternal health and reduction of number of high risk pregnancy that results in maternal and child mortality to be increased⁽⁶⁾. HIV-positive women may wish to plan pregnancies, limit their families, or avoid pregnancy. Effective use of dual contraceptive by HIV-positive women has significant contribution to reduce both sexual and vertical transmission of the virus. Like HIV negative client's HIV-positive women can use most of the currently available contraception methods including barrier, hormonal, intrauterine devices and sterilization⁽⁷⁾. However, Hormonal contraceptive alone can't prevent the transmission of resistant virus (re-infection by another strain of the virus) and STIs between partners. In addition, the effect of hormonal contraceptive is affected by the interaction of some antiretroviral drugs with potentials for reduction in efficacy in those on ART⁽⁸⁾. Therefore, dual protection with the use of a more effective modern contraceptive method together with condom has paramount benefits for HIV positive women, i.e. it prevents HIV re-infection by resistant virus, prevents STI and prevents unintended pregnancy in HIV positive women which is among the four prongs of PMTCT. As evidenced by the study done in other African countries, the prevalence of dual contraceptive utilization is lower and as best of my knowledge there was no study in the area where this study will be conducted. It is important to assess the prevalence of dual contraceptive use and determine factors associated with it in HIV positive women. In the study area care givers recognize the importance of dual contraceptive in HIV positive women. However, still little is known about the prevalence of its utilization by HIV positive women and factors associated with it; hence, the study will help to suggest appropriate interventions to be designed in order to improve dual contraceptive utilization among HIV positive women. Furthermore, it will provide planners and policy makers with useful information that could lead to reforms that encourage dual contraceptive utilization. Therefore, this study will assess the prevalence and associated factors of dual contraceptive use among HIV positive women at Northwest Ethiopia.

Methods and Materials

Study Design and Participants:

Institutional based cross-sectional quantitative study was conducted among systematically selected HIV positive reproductive age women, who visited ART clinic during data collection period in health institutions found in Benishangul Gumuz Regional State (BGRS), west. HIV positive reproductive aged women who are pregnant, seriously ill during data collection period, and those with incomplete documents were excluded from the study.

Data Collection and Variable Specification:

Participants were interviewed by trained interviewers using structured and questionnaire. The questionnaire was first written in English, translated into Amharic by experts, and translated back into English by a panel of professionals who speak both languages. The questionnaire was pretested before the initiation of the study and contained information regarding socio-demographic characteristics, tobacco and alcohol use, and nutritional status. A three-days training of the contents of the questionnaire, data collection techniques, and ethical conduct of human research was provided to research interviewers prior to the commencement of the study.

Statistical Analysis:

The questionnaire was checked for completeness, had pre-coded and entered to EPI INFO version 21 statistical software and exported to SPSS version 20 for further analysis. Descriptive and summary statistics were used to explain the study population with respect to the relevant variable. Bivariate logistic regression had used primarily to check which variables had association with the dependent variable then variables having p value of less than 0.2 were fitted in to multivariate logistic regressions. Odds ratio with 95% CI was computed and variables having p-value less than 0.05 in the multiple logistic regression models were considered as significantly associated with the dependent variable.

Results

Baseline participant characteristics from August 2016 to September, 2016, 403 HIV-infected reproductive age married non-pregnant women were recruited for the study. Of the 403 PLHIV selected for data analysis, 265(65.8%) were rural resident, majority of them was within age range of 30 to 39, 204(50.6%), housewife 207 (51.4%), were not read and write 175(43.4%) and half of them reported they intended to become pregnant in the future. Most of participants had known their HIV status before five years 197(48.9%). Most PLHIV (99%) were taking ART for more than 60 months (37.5%). Most of the participants were (93.8%) disclosed their HIV status

to their partner, and their partners were HIV infected (83.6%). Contraceptive information and current contraceptive practices among 403 PLHIV, (99.0%) were received posttest counseling of which in about 256(63.5%) their partners were involved and 335(83.1%) included family planning counseling. Most (99.5%) had heard about modern contraceptive, commonly the indictable one 314(77.9%), of which 309(76.7%) currently reported

using at least one modern contraceptive. Only 273(58.8%) had heard about dual contraceptive, out of them only about half had discussed with health care providers, and their partners. Only 165 (40.9%) had reported using two contraceptive methods (dual methods) and, in this group, 102 (61.8 %) used male condoms in every sexual act. The common reason reported not to use dual contraceptive was lack of knowledge 174(73.1%) [Table 1].

Table 1: HIV/AIDS and family planning related characteristics of PLHIV women involved in the Study from August 2018 to September 2018, Northwest Ethiopia.

Characteristics	Number /Percentage
Duration of HIV diagnosis: <1	18(4.5%)
1-3	108(26.8%)
3-5	80(19.9%)
>5	197(48.9%)
Received post test counseling: Yes	399(99.0%)
No	4(1.0%)
Received family planning counseling: Yes	335(83.1%)
No	68(16.9%)
Disclosed status to your partner: Yes	378(93.8)
No	25(6.2)
Partner involved during post test counseling:	
Yes	256(63.5%)
No	147(36.5)
Partner's HIV status: Reactive	337(83.6%)
Non-reactive	19(4.7%)
Unknown	47(11.7%)
Current CD4 count: <200	48(11.9%)
200 - 500	150(37.2%)
500-1000	171(42.4)
>1000	34(8.4%)
Current on ART: Yes	399(99.0)
No	4(1.0%)
Duration on ART: <12	54(13.4%)
12 - 36	118(29.3%)
36 - 60	80(19.9%)
>60	151(37.5%)

Heard about Modern Contraceptive method:	
Yes	401(99.5)
No	2(0.5%)
Modern Contraceptive method you know:	
OCP	52(12.9%)
IUCD	6(1.5%)
Inject able	314(77.9%)
Implant (Norplant)	23(5.7%)
Condom	8(2.0%)
Currently using modern contraceptive:	
Yes	309(76.7%)
No	94(23.3%)
Type of hormonal contraceptive using:	
OCP	8(2.6%)
Injectable	158(51.1%)
Implant (Norplant)	9(2.9%)
IUCD	7(2.3%)
Condom	127(41.1%)
Ever heard about dual contraceptive:	
Yes	237(58.8%)
NO	166(41.2%)
Advantages of dual contraceptive do you know:	
To avoid un intended pregnancy	67(16.6%)
To prevent transmission of HIV	9(2.2%)
To limit family size	76(18.9%)
To prevent STI	25(6.2%)
All of the above	56(13.9%)
Didn't	170(42.2%)
Have discussed about dual contraceptive with the health care worker:	
Yes	206(51.1%)
No	197(48.9%)
Have discussed about dual contraceptive with partner:	
Yes	204(50.6%)
No	199(49.4%)
Using dual contraceptive:	
yes	165(40.9%)*
No	238(49.1%)
Using condom: In every sexual act	102(61.8%)

Often	63(38.2%)
Reasons not to use dual contraceptive:	
husband desire	36(8.9%)
lack of knowledge	174(73.1%)
to have child	28(11.8%)

Factors found to be significantly associated with dual contraceptive use at baseline in multivariable analysis, included having family planning counseling [AOR=1.15 and 95% CI=1.23, 3.71] disclosing status to partner[AOR=2.73 and 95%CI=0.341, 2.80],partner involvement in counseling[AOR= 2.08 and 95% CI=1.902,

2.78],partner HIV status[AOR=1.57 and 95% CI=1.40, 3.07],heard about dual contraceptive[AOR=3.88 and 95% CI=3.93, 4.15], have discussed about dual contraceptive with health care provider [AOR=4.41 and 95% CI3.45, 4.88] and with their partner[AOR= 4.76 and 95% CI=4.78, 5.59] and current CD4 count [Table 2].

Table 2: Dual contraceptive use and associated factors among PLHIV women involved in the Study from August 2018 to September 2018, Northwest Ethiopia.

Characteristics	Using dual contraceptive		COR (95% CI)	P value	AOR (95% CI)
	No (238)	Yes (165)			
Residence					
Urban	148	117	1.48(0.97, 2.27) 1	0.575	0.78 (0.32,1.87) 1
Rural	90	48			
Age					
15-20	13	19	0.12(0.03, 0.44)	0.188	0.15 (0.01, 2.55)
21-29	76	69	0.17(0.05 ,0.61)	0.264	0.26(0.03, 2.74)
30-39	130	74	0.28(0.08, 0.97)	0.677	0.62(0.07, 5.90)
40-49	19	3	1		1
Educational status					
not read and write	120	55	3.27(0.89,4.07)	0.297	4.22(0.28, 6.18)
Read and write only	46	30	2.30(0.60 ,4.84)	0.092	3.63(0.68, 5.73)
Primary school (grade 1-8)	44	46	1.43(0.38 ,5.43)	0.140	3.77(0.51, 8.32)
Secondary school (grade 9-12)	24	28	1.29(0.32, 5.10)	0.259	3.60 (0.33, 4.80)
Tertiary(TVET/college/university)	4	6	1		1
Educational status of the partner					
Can't read and write	42	16	2.88(1.26,3.56)	0.370	1.99(0.44, 4.91)
Read and write only	65	36	1.98(0.96,4.06)	0.958	0.96(0.24, 3.83)

Primary school (grade 1-8)	72	38	2.08(1.02,4.22)	0.249	2.20(0.58, 5.44)
Secondary school (grade 9-12)	38	52	0.80(0.39,1.65)	0.117	0.29(0.06, 1.36)
Tertiary(TVET/college/university)	21	23	1		1
Family planning counseling					
Yes	183	152	0.51(1.85, 2.68)* 1	0.024	1.15(1.23, 3.71)* 1
No	55	13			
Disclosing status to partner	216	162	2.50(1.62,2.69)* 1	0.031	2.73(0.341, 2.80)* 1
Yes	22	3			
No					
Partner involvement in counseling	135	121	2.10(1.36,3.22)* 1	0.006	2.08(1.902, 2.78)* 1
Yes	103	44			
No					
Partners HIV status					
Reactive	190	147	0.39(0.19,0.80)*	0.024	1.57(1.40, 3.07)*
Non-reactive	12	7	0.52(0.16,1.65)	0.584	0.85(0.93,1.68)
Unknown	36	11	1		1
Current CD4 count					
<200	30	18	0.73 (0.67,2.09)	0.010	0.84(0.71, 2.61)*
200-500	104	46	3.28(2.71,4.50)	0.004	2.43(2.44, 4.57)*
500-1000	95	76	3.47(1.53 ,3.87)	0.001	3.86 (3.46, 4.14)*
>1000	9	25	1		1
duration on ART					
<12	40	14	2.74(1.37,5.46)	0.052	0.19(0.04, 1.02)
12-36	78	40	1.87(1.13,3.08)	0.807	0.88(0.34, 2.34)
36-60	45	35	1.23(0.71,2.13)	0.257	1.79(0.65, 2.96)
>60	75	72	1		1
Have heard about dual contraceptive	54	151	3.76(1.25,3.93)* 1	0.000	3.88(3.93, 4.15)* 1
Yes	178	12			
No					
Have discussed about dual method with partner	62	148	2.47(1.95,3.41)* 1	0.000	4.76(4.78, 5.59)* 1
Yes	176	17			
No					

Have discussed about dual method with health care workers				0.000	
Yes	62 176	148 17	3.71(3.84,4.56)* 1		4.41(3.45, 4.88)* 1
No					

Discussions

Most (76.7%) PLHIV who reported having sex with their steady partner in our study used at least one contraceptive method but only 40.9% used dual methods, of them 61.8% used consistently. The most common single method used was injectable (51.1%) and male condoms (41.1%) respectively. The prevalence of dual contraceptive use in this study is higher than the prevalence in studies conducted in Kenya (13.5%), in Zambia (17.7%), in Ireland (22%) and in India (27%) (9,10,11,12). In our study the significant factors found to be associated with dual methods use was family planning counseling, HIV status disclosure to partner, HIV infected partner, having information about dual methods, discussing about dual methods with health care providers and partner and CD4 count. The associated factors identified in our study were consistent with risk factors mentioned from studies in Uganda, Zambia, Nigeria and India (9,12,13,14,15). Similar to other similar studies we didn't found significant association of dual methods use with religion, residence, ethnicity and age. Unlike studies conducted in Kenya, Nigeria and Uganda which found educational level and Study in Uganda which found age to significantly associated with dual methods use, we didn't find in our study, this may be due to most of our study participants were at the same educational level. Our analyses indicate that PLHIV women who were counseled about family planning was 1.15 times more likely to use dual method than those not get counseling, those who disclose their HIV status to their partner was 73% more likely to use dual methods than those who didn't disclose their status, those who their partner involved in posttest counseling was 8% more likely to use dual methods and those PLHIV women with HIV infected partner was 57% more likely to use dual methods. Those PLHIV women who have information about dual methods and who have discussed about dual methods with their health care providers and their partner were also more likely to use dual methods than those not. As the number of CD4 count increased the probability to use dual methods also increased.

Study Limitations

The possible that responses were influenced by social desirability bias due to the sensitive nature of discussions of sexual behavior and contraception in rural setting and our data collectors are health care providers at the health facilities, the possible that under reported bias. The study also didn't include possible qualitative data.

Conclusion

Less than half of married PLHIV women were using dual methods and about half of them used inconsistently. Our study showed that having information about dual methods, family planning counseling, HIV status disclosure to partner, HIV infected partner, having information about dual methods, discussing about dual methods with health care providers and partner and CD4 count had significantly associated with dual methods use. So, a coordinator who can facilitate referral and link PLHIV to family planning services is important. In order to promote joint decision-making among couples for family planning, HIV disclosure to partners and involving partners in family planning counseling should be promoted. Special attention should be given to discordant and those with lower CD4 count. Most of them were using hormonal methods of contraceptive. So, there is obvious need to promote the use of effective non-hormonal methods, such as the intrauterine device, which recent data suggest is very safe in HIV-infected women.

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