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Unmet Need for Family Planning Among Women in HIV/AIDS Care at Antiretroviral Treatment Clinic in South Ethiopia: A Challenge to Prevention of Mother to Child Transmission

Mekdes Daba Feyssa[1], Yemane Berhane Tsehay[2] and Amare Worku Tadesse[2]*

[1]*Hawassa University, Ethiopia*
[2]*Addis Continental Institute of Public Health, Ethiopia*

Abstract

Background: Pregnancies in HIV positive women may or may not be desired. Family planning methods can be provided as an option to avoid undesired pregnancies. However, the prevalence of unmet need for family planning methods and its determinants among reproductive age women in HIV/AIDS care is not well known. This research assessed the prevalence and determinants of unmet need among HIV positive reproductive age women in HIV/AIDS care at Hawassa referral hospital, Southern Ethiopia.

Methods: A quantitative cross sectional study was done on HIV positive reproductive age women in HIV/AIDS care antiretroviral treatment (ART) clinic Hawassa referral hospital. Married or cohabiting with partner women, who were sexually active one year prior to survey, were included. A total of 658 women were studied. Data were entered and cleaned using computer software. Logistic regression analysis was done to select determinants of unmet need for family planning.

Results: The prevalence of unmet need for family planning was 19.1%, of whom 5.9% had unmet need for limiting and 13.2% for spacing. Women who were aged between 15-24 years [AOR, 2.86, 95%CI 1.09-7.48] and 25-34 years [AOR, 2.56, 95%CI, 1.18-5.57], illiterate [AOR, 2.76, 95%CI, 1.48-5.15] and completed primary education [AOR, 1.89, 95%CI, 1.05-3.40], had high unmet need for family planning. Women who desired children [AOR, 1.67, 95%CI, 1.01-2.76], did not use family planning previously [AOR, 2.75, 95%CI, 1.07-7.06], did not receive family planning on day of interview at HIV/AIDS care [AOR, 6.82, 95%CI 2.73-17.06] and were not on ART [AOR, 1.71, 95%CI 1.06-2.74] had high unmet need.

Conclusions: The prevalence of unmet need for family planning among women in HIV/AIDS care at Hawassa is high. Integration of family planning services at ART clinic and increased attention to women who are less educated, young adults, naïve to family planning and not on ART is recommended.

Keywords: Unmet need; Family planning; Reproductive age women; HIV/AIDS; Limiting; Spacing; ART clinic

Background

Since its first recognition four decades back, HIV has spread widely and now affects around 34 million people worldwide. Sub Saharan Africa remains the most affected region by hosting 69% of the global disease burden [1]. HIV is still a major public health challenge and a social dilemma especially among women of childbearing age [2].

Ethiopia is one of the countries most affected by HIV/AIDS pandemic. There were about 1.2 million people living with HIV/AIDS with an adult prevalence rate of 2.4% in 2010, where females were more affected than males (2.9% and 1.9% respectively) [3]. Every year in the country, 84,189 pregnancies occur among HIV positive women and around 14,140 HIV positive babies are born [3]. In 2010, it was estimated that nearly 80,000 children under the age of 15 years were living with HIV, of which more than 90% of the infections were due to vertical transmission from mother to child. WHO promotes prevention of unintended pregnancy among women living with HIV as one of its key strategies in preventing HIV transmission to infants and children [4].

Fertility regulation using family planning methods has benefits in reducing maternal and child morbidity and mortality. Studies reported that most of the pregnancies among the HIV positive women were unintended [2,5]. Unwanted pregnancy among women living with HIV is estimated to account for 25% of infant infections and 20% of infant mortality. Addressing the family planning needs of these women is the cost effective way to reduce the number of children born with the virus [6-8].

In addition to Preventing Mother-to-Child Transmission (PMTCT), meeting the family planning need of HIV positive women will help in reducing pregnancy related morbidities and mortalities in this population. It is estimated that, through the use of family planning, 25% of maternal deaths can be prevented [9].

WHO defines unmet need for family planning as percentage of women of reproductive age who are married or in a union, fecund and sexually active but not using any method of contraception for neither spacing nor limiting children [10]. Unmet need for family planning is a major cause of unintended pregnancy. In Ethiopia 25.3% of reproductive age women had unmet need for family planning [11]. Fifty three percent

***Corresponding author:** Amare Worku Tadesse, Addis Continental Institute of Public Health, P.O. Box 7233, Addis Ababa, Ethiopia, Tel: +251-116-390018; E-mail: amareworku@addiscontinental.edu.et

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of women who were diagnosed to have HIV at voluntary counselling and testing (VCT) centres had unmet need for family planning [12]. Factors contributing to unmet need among women with HIV are likely to be similar to those of HIV negative women. These include having little or incorrect knowledge of contraceptive options, limited access to family planning services and lack of integration between HIV and family planning services. In addition, some women with HIV may feel reluctant to seek family planning services fearing stigma and discrimination [13,14]. However, to the researchers knowledge, the prevalence of unmet need and its determinants among HIV positive women who are in HIV/AIDS care is not well documented in resource-limited settings like Ethiopia. Therefore, knowing the prevalence and identifying the factors will help in strengthening programs designed to reduce MTCT of HIV. The objective of this study was to provide empirical information on the prevalence and determinants of unmet need for family planning among HIV positive reproductive age women in HIV/AIDS care.

Method

Study design and Setting

A hospital-based cross sectional study was employed through an exit interview of HIV positive reproductive age women enrolled in HIV/AIDS care at ART clinic in Hawassa Referral hospital, Hawassa, south Ethiopia. This clinic is the centre for HIV/AIDS patients' care and follow-up to nearly ten million inhabitants of the region. According to the 2011 report from the southern regional health bureau, the cumulative number of persons ever enrolled in HIV/AIDS care at the hospital was 4576 in pre ART and 2636 in ART.

Study participants

The total number of females aged 15 years and above was 2520, of which 1452 were started on ART. All HIV positive women between the ages of 15-49 years in HIV/AIDS care at ART clinic in Hawassa referral hospital, married or in a union, who reported sexual activity in the last one year and with no diagnosed problem of infertility were included (N=2,442). Those who were severely ill and admitted for inpatient management (n=17) were excluded. Data on socio-demographic and clinical characteristics from the excluded women were not different from the study participants at enrollment in HIV/AIDS care.

Informed written consent was sought from those who were able to give consent and was willing to allow medical record review for the purpose of confirming HAART history and other relevant factors. Ethical approval was obtained from the Research Ethical clearance board team of Hawassa University and the southern region health bureau. Confidentiality was assured by conducting anonymous interviews in a private room. Data were recorded on a coded paper-based questionnaire. Each study subject was assigned a unique code. Once questionnaires were coded, personal identifiers were removed and other information from the structured questionnaire was entered into the electronic database. Original questionnaires were stored in locked files by the investigators. Data were password protected and stored on computers that were accessed only by the researchers.

Sample size and sampling

The sample was based on a predicted prevalence of unmet need for family planning of 50% among women living with HIV in Ethiopia, due to lack of similar prevalence data; ± 4% precision and 95% confidence level. The study was also powered to detect odds of 2 at 95% confidence interval and 90% power. Considering a 10% non-response, a sample size of 661 out of 2,425 was calculated and consecutive reproductive age group women attending HIV/AIDS care at ART clinic of Hawassa referral hospital who claimed to be sexually active were selected. The health care provider invited the women to participate in the study. Exit interviews were conducted with pre-tested structured questionnaire after taking informed consent. The questionnaire was pre-tested on 70 women attending HIV/AIDS care at ART clinic of Adare hospital in Southern Ethiopia.

Data/ measures

Socio-demographic characteristics, contraceptive use and intentions, desire to have child, discussion of family planning options with ART clinic care provider and sexual practices were captured using a structured questionnaire. Information on initiation of ART, disclosure, partner testing and result was abstracted from medical records. We defined unmet need for family planning as the proportion of HIV positive reproductive age women (married or in a union) in care who are sexually active and want to terminate or postpone child bearing for at least two years but currently not using any contraception. Demand for family planning referred to the proportion of sexually active women in reproductive age group who want to limit or postpone childbearing. Women who had penetrative sexual practice during the last one year were labelled as sexually active. In this study, women were considered to be HAART users if they have been receiving HAART for at least one month and HAART-naïve if they had never taken HAART.

Statistical analysis

Data were entered and cleaned using Epi Data Version 3.1. Analysis was done using SPSS version 15 Statistical software. Errors related to inconsistency of data were checked and corrected. Descriptive statistics including percentages, ratios, frequency distributions, means, medians, ranges, standard deviations and appropriate graphic presentations were used for describing data. Unmet need for family planning was further described by socio-demographic, fertility desire and awareness on family planning. Then, variables with $P < 0.2$ from the bivariate logistic model were entered into the final model for evaluation by multivariate logistic regression to select determinants of unmet need for family planning. $P<0.05$ was taken as statistically significant.

Result

Out of the 661 clients who were recruited to this study, 658 (99.6%) agreed to participate. The mean age of participants was 29.1 (± 5.49 SD) years. Five hundred and thirty-four (81.2%) were married and the rest live with their partner. Seventy-four (11.2%) of the participants were illiterate, 234(35.6%) were housewives and 34(5.2%) were unemployed (Table 1).

The median duration since HIV diagnosis, follow up at ART clinic and ART initiation was 3 years. Three hundred and eighty-one (57.9%) of the women were taking ART. Disclosure of HIV status to partner was done by 544(82.7%) of the participants. Partners of 526(79.9%) participants were tested for HIV, among whom 403(76.6%) were positive and 389(96.5%) had follow up at the ART clinic (Figure 1).

Of all participants, 156 (23.7%) reported history of unwanted pregnancy, of whom 102(64.6%) had it after being diagnosed to have HIV. The number of study participants with 1–4 living children was 367(55.8%). Three hundred and forty-three (52.1%) participants wanted to have a child at one stage in their life. During the study period, 509 participants (77.4%) used at least one form of family planning method. Injectables 319 (48.5%), condom 262(39.8%), pills 91 (13.8%)

Characteristics		Number	Percent (%)
Age (years)	15-19	20	3
	20-24	111	16.9
	25-29	243	36.9
	30-34	150	22.8
	35-39	108	16.4
	40-44	25	3.8
	45-49	1	0.2
Marital status	Married	534	81.2
	In a relationship	124	18.8
Religion	Orthodox	322	48.9
	Catholic	23	3.5
	Muslim	89	13.5
	Protestant	221	33.6
	Other	3	0.5
Educational status	Illiterate	74	11.2
	Able to read and write	138	21
	Primary education	219	33.3
	Secondary education	139	21.1
	Tertiary education	88	13.4
Ethnicity	Sidama	172	26.1
	Oromo	109	16.6
	Welayta	204	31
	Amhara	102	15
	Gurage	37	5.6
	Other	34	5.2
Occupation	Student	54	8.2
	House servant	30	4.6
	Daily labourer	80	12.2
	Merchant	92	14
	Sex worker	13	2
	Self/Private employed	46	7
	Government Employed	75	11.4
	Unemployed	34	5.2
	House wife	234	35.6
Estimated Monthly income(Ethiopian Birr)[£]	No income	278	42.2
	≤500	74	11.2
	500-1500	150	22.8
	≥1500	156	23.7

Ethiopian Birr (ETB): one USD was equivalent to 17.2 ETB during survey period

Table1: Socio-demographic characteristics of study participants.

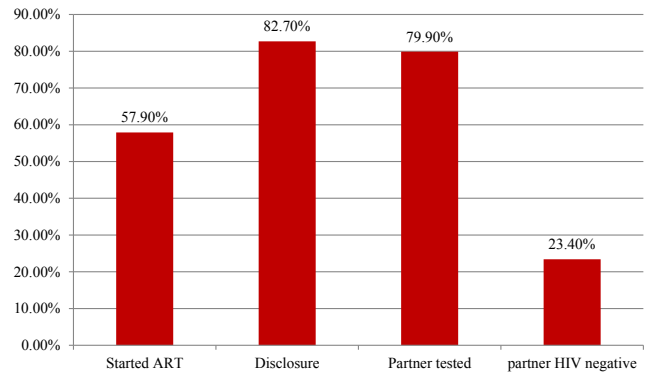

Figure 1: HIV related characteristics of study participants.

and implants 37 (5.6%) were among the methods used (Table 2). Only 250(38%) participants received family planning method during the day of the interview at the HIV AIDS care, of whom 73(29.2%) were provided by a health provider who was trained on family planning, and the method being only condom. The total number of dual contraception use was 214 (32.5%). Of the surveyed women, 126 (19.1%) did not use family planning methods despite not wanting to become pregnant, of whom 87 (13.2%) had unmet need for spacing and 39 (5.9%) for limiting.

In multivariate logistic regression model, age between 15-24 years [AOR, 2.86, 95%CI 1.09-7.48] and 25-34 years [AOR, 2.56, 95%CI, 1.18-5.57], illiterate [AOR, 2.76, 95%CI, 1.48-5.15] and primary education [AOR, 1.89, 95%CI, 1.05-3.40] were found to be statistically significant ($P<0.05$) with unmet need for family planning methods. In addition, no desire for children [AOR, 0.60, 95%CI, 0.36-0.98], previous use of family planning [AOR, 2.75, 95%CI, 1.07-7.06], not receiving family planning on day of interview at HIV/AIDS care [AOR, 6.82, 95%CI, 2.73-17.06] and not started on ART [AOR, 1.71, 95%CI, 1.06-2.74] were found to be statistically significant ($P < 0.05$) with unmet need for family planning methods (Table 3).

Discussion

The prevalence of unmet need for family planning method was 19.1% of which 5.9% was unmet need for limiting and 13.2% for spacing the number of children. Factors such as age, educational status, receiving family planning method at HIV/AIDS care on day of the interview, number of desired children, previous use of family planning method and ART initiation were found to be determinants of unmet need for family planning.

Unmet need for family planning among HIV positive women is one of the important factors which contributes to unwanted pregnancy and vertical transmission of the virus to a child [11]. The current study found a higher prevalence than the level reported in the DHS survey data from Zambia (10.8%), Swaziland (13%), Zimbabwe (18.4%) and Lesotho (10.3%) [15]. However, this study found a lower rate than that reported in the Home based AIDS care study in Uganda (33.5%), ART started women in South Africa (28%), Voluntary Counselling and Testing (VCT) centre in Lesotho (31.3%) and Ethiopian DHS (25.3%) [11,16-18]. The unmet need for family planning among VCT clients who were married/ cohabited in a study at urban town of Ethiopia was 53% [12]. These results could be explained by the fact that clients at the VCT centre would more likely test negative and have similar characteristics of the general population.

Dual contraception with condom use and other types of family planning methods is the recommended method in HIV positive women [4,19]. The current study showed higher dual contraception use than the study done in South Africa where 25% dual contraception use among women using or not using HAART [20]. The most common type of family planning method used by the study participants was different from the findings in other African countries like South Africa where higher preference and use of barrier method mainly male condom among HIV positive clients (69%) compared to 56% use of hormonal contraception [20]. Mixed results have been shown in other studies in Ethiopia where one found use of injectable contraception was 51.7 % followed by condoms (24.1%) [12] and the other showing condom use (72.9%) followed by injectables (21.2%) [21].

Unplanned and unwanted pregnancy among the participants was smaller than other studies done in Africa where 84% of pregnancies

Method	Contraceptive ever heard N (%)	Contraceptive ever used N (%)	Contraceptive Current use N (%)	Contraceptives desired by those with unmet need N (%)
Any Method	654(99.3%)	633(96.2%)	509(77.4%)	126(19.1%)
Condom	597(90.7%)	392(59.6%)	262(39.8%)	33(26.19%)
Pills	631(95.89%)	406(61.7%)	91(13.8%)	17(13.49%)
Injectable	634(96.35%)	461(70.1%)	319(48.5%)	51(40.47%)
IUD	539(81.91%)	34(5.2%)	19(2.9%)	21(16.67%)
Implants	538(81.76%)	86(13.1%)	37(5.6%)	30(23.8%)
Tubal ligation /Vasectomy	239(36.3%)	1(0.1%)	1(0.2%)	1(0.79%)
Lactational Amenorrhea Method	233(35.41%)	100(15.2%)	1(0.2%)	0(0%)
Withdrawal	186(28.27%)	97(14.7%)	3(0.5%)	0(0%)
Rhythm method	176(26.75%)	44(6.7%)	2(0.3%)	0(0%)
No response	6(0.91%)	2(0.3%)	1(0.2%)	1(0.79%)
Total	654(99.3%)	633(96.2%)	509(77.4%)	126(19.1%)

Table 2: Distribution of ever heard and use of contraceptives among study participants.

Independent variables		Unmet need		Crude OR¥ (95% CI)	Adjusted OR¥ (95% CI)
		Yes	No		
Age (years)	15-24	28(25.2%)	83(74.8%)	3.01 [1.50-6.04]**	2.86 [1.09-7.48]*
	25-34	35(23.3%)	115 (76.7%)	2.42 [1.30-4.50] **	2.56[1.18-5.57]*
	>=35	13(9.7%)	121(90.3%)	1.00	1.00
Income (ETB)	No income	62(22.3%)	216(77.7%)	2.07 [1.19-3.61]*	1.66[0.87-3.16]
	<= 500	23(31.1%)	51(68.9%)	3.25 [1.64-6.47]**	1.78[0.82-4.03]
	501-1499	22(14.7%)	128(85.3%)	1.24 [0.64-2.40]	0.89[0.43-1.84]
	>=1500	19(12.2%)	137(87.8%)	1.00	1.00
Educational status	Illiterate or only read/write	50(23.6%)	162(76.4%)	2.39 [1.42-4.0]**	2.76 [1.48-5.15]**
	Primary	50(22.8%)	169(77.2%)	2.29 [1.37-3.83]**	1.89[1.05-3.40]*
	Secondary and above	26(11.5%)	201(88.5%)	1.00	1.00
Marital status	Married	100(18.7%)	434(81.3%)	1.00	----
	Cohabiting	26(21%)	98(79%)	1.15 [0.71-1.87]	----
Number of alive children	0	54(23.9%)	172(76.1%)	1.00	1.00
	1-4	60(16.3%)	307(83.7%)	0.62 [0.41-0.94]*	0.88[0.49-1.55]
	>4	12(18.5%)	53(81.5%)	0. 72 [0.36-1.45]	1.93[0.68-5.45]
Number of children desired	No desire	59(15.1%)	332(84.9%)	1.00	1.00
	1-5	67(25.1%)	200(74.9%)	1.89 [1.27-2.79]**	1.67 [1.01-2.76]*
Disclosure of HIV status to partner	Yes	97(17.8%)	447(82.2%)	1.00	1.00
	No	29(25.4%)	85(74.6%)	1.57 [0.98-2.53]	1.49[0.78-2.84]
Previous use of FP^	Yes	114(18 %)	519(82%)	1.00	1.00
	No	12(48%)	13(52%)	4.20 [1.87-9.45]**	2.75[1.07-7.06]*
Information on FP^ ever given by ART¶ care provider	Counselled	27(10.6%)	227(89.4%)	1.00	1.00
	Not counselled	99(24.5%)	305(75.5%)	2.73 [1.73-4.32]***	1.01[0.43-2.39]
Received FP on interview day	Yes	21(8.4%)	229(91.6%)	1.00	1.00
	No	105(25.7%)	303(74.3%)	3.78 [2.29-6.22]***	6.82[2.73-17.06]***
Unintended pregnancy after HIV diagnosis	Yes	12(11.8%)	90(88.2%)	0.52 [0.27-0.98]*	0.52 [0.26-1.05]
	No	114(20.5%)	442(79.5%)	1.00	1.00
Started ART¶	Yes	57(15%)	324(85%)	1.00	1.00
	No	69(24.9%)	208(75.1%)	1.89 [1.28-2.79]**	1.71[1.06-2.74]*

*P<0.05, **P<0.01, *** P<0.001; ^ Family Planning; ¶ Antiretroviral Therapy; ¥ Odds Ratio

Table 3: Association of unmet need for family Planning among study participants by selected variables.

among women with HIV were unplanned [5,20]. Possible explanations for higher rates of undesired pregnancies in HIV positive women include giving more attention to the disease progression than family planning or interaction of some ART drugs with hormonal contraception.

In this study, provision of family planning method at the ART clinic in the same facility was low which could contribute to the increased prevalence of unmet need. A study done in Zimbabwe showed that many women with HIV prefer to obtain family planning from their HIV care provider rather than disclosing their HIV status to another health care provider. Providing both HIV and family planning services at the same facility enables providers to offer more convenient and comprehensive services [22].

The odds of unmet need for family planning was more than twice as high in the age group 15-34 years as opposed to their older counterparts. These results are contrary to the findings in Lesotho where age group above 35 years had higher prevalence of unmet need [23]. Our finding is similar to the study done at VCT centres in Ethiopia [12]. This could be because young women are less likely to be in a stable relationship and discuss about family planning method with their care provider.

Our study showed HIV positive women who have completed secondary school or above had low levels of unmet need for family planning. Similarly, women who were not educated had 26% of unmet need and those with secondary education and above had 19.7% unmet need for family planning [11]. However, studies done at other sub Saharan countries found education was not significantly associated with unmet need for family planning [20,22]. This may show that those who are more educated might be in a better position to have better access to family planning method and satisfy their contraceptive need.

The unmet need for family planning among currently married women was not different from those who were single but in a relationship. Our finding is similar with the study done at VCT centre in Ethiopia [12]. However, a study done in Lesotho showed women who are married had a higher odds of having unmet need for family planning than those who were not married [18].

This study found no association between income and unmet need for family planning. This is different from other studies observed in Lesotho and Ghana, where women in the lowest wealth quintile had high unmet need for contraception to limit or space birth as compared to those with highest wealth quintile [18,24]. This could be because family planning methods are provided for free at ART clinics in Ethiopia.

Women who were not offered family planning options on the day of the interview had higher odds of having unmet need for family planning method than their counterparts. Though this relation was not assessed in other studies [12,18,22], women who were offered family planning options at the facility could have been using the method prior to their presentation on the day of the interview. Women with no desire to have a child had less unmet need as compared with those who desire. This may be because they are likely to ask for family planning service themselves.

The odds of having unmet need for family planning was about two times higher among women who did not start ART compared to those who are on ART. Similar findings were observed in South Africa, where women who were on HAART had higher level of contraceptive use (86%) [20]. This is likely due to the fact that women who are not enrolled in ART care have less frequent contact with healthcare providers. Increased contact with health care providers could increase the chance of discussing family planning methods.

This study, the first of its kind in Ethiopia, explored the prevalence of unmet need and determinants for family planning methods among HIV positive women on ART care. However, some limitation of the study shall be acknowledged. As the study included sensitive issues and possible influence from health workers and community members to practice protected sex, social desirability bias could not be ruled out whereby the women may over-report their contraceptive use. The cross-sectional nature of this study is also a limitation as it precludes determination of causality between the explanatory variables and the outcome.

Conclusion

Unmet need for family planning among women who are HIV positive and on HIV/AIDS care at the ART clinic is high compared to similar population in other Sub-Saharan African countries. HIV positive women who are younger than 35 years, less educated, desire more children, did not previously use or receive a family planning method at the ART care and those who did not start ART have high unmet need for family planning. The most common family planning method used and desired by women in the ART care was injectable contraception. The use of condoms with other contraception among reproductive age women in ART clinic is low.

Attention should be given to women who are young, less educated and desire more children. Several family planning methods should be available in addition to condoms, and these should be offered to all women who are having follow up at the ART clinic to increase dual contraceptive use by all HIV positive women. Given the current prevalence of unmet need, the capacity of health care providers in the ART clinic to provide family planning methods needs to assessed. In addition, the setup of ART clinic in a hospital need to be evaluated for better patient access to contraception and possible integration of services to effectively implement HIV prevention activities.

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