American Journal of Public Health Research, 2017, Vol. 5, No. 3, 79-88
Available online at http://pubs.sciepub.com/ajphr/5/3/5

DOI:10.12691/ajphr-5-3-5

Fertility Desire and Associated Factors among People Living with HIV/AIDs at Selected Health Facilities of Wolaita Zone, Southern Ethiopia: Cross-sectional Study

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Abstract **Background**: The Africa especially the region of Sub-Saharan remains the severely HIV affected region with nearly 1 in every 20 people. The majorities of people living with HIV are of reproductive age and face challenging choices concerning their sexuality, parenthood desires and family life. Despite the desire to avoid having children, many women with HIV experience unintended pregnancies. Prevention of unintended pregnancies among HIV infected women is one key strategies of prevention of mother to child transmission of the disease in the country. **Methods:** A non-experimental facility based cross sectional study design was used and the data was collected from all men and women attending care and treatment in ART clinics in selected health facilities giving ART service from January to February 2014. A pre-tested structured questionnaire was employed to collect information from respondents who fulfill inclusion criteria and after obtaining a verbal consent. Data was entered, cleaned, edited and analyzed using SPSS Version 20 statistical software package. Chi-square and binary logistic regression was carried out to assess the presence of association and the effect of independent predictors on fertility desire of the respondents. **Result:** A total of 410 Patients were included in the study giving the response rate of 97 percent. The median age of respondents was 33 and 254(62%) of clients were females. 43% (176) desire to bear child and of these 34 % were not using any modern FP method. The most commonly reported reasons for child bearing desire were desire to replace themselves *65.9* % followed by desiring a child from their partner *17.1%*. Among respondents do not desire to bear child, 45.6 % were males and 55.4 % were females. It was found that sexual practice in the last six months [AOR: 2.07, 95% CI, 1.63-7.26], number of live children (AOR: *0.5*, 95% CI, 0.105-0.217), and number of children alive [AOR: 4.61, 95% CI, 2.94-13.77], were found to be significantly associated with desire to bear children. **Conclusion:** Fertility desire is found to be high among HIV/AIDS patients living in the study area. Age, having sexual practice in the last six months, and having less number of children alive, were obtained to be the determinants of fertility desire. The current contraceptive utilization rate of the respondents was less and majority of them were using condom which is not a reliable method for the prevention of pregnancy so most of them especially those who does not desire more children will be exposed to unwanted pregnancy. The most common reason of respondents who desire to have a child was to replace them followed by desiring a child from their partner.

Keywords: *fertility desire, Wolaita Soddo, Ethiopia*

Cite This Article: Hailu Chare Koyra, Yohannes Bisa Biramo, and Efrata Girma Tufa, "Fertility Desire and Associated Factors among People Living with HIV/AIDs at Selected Health Facilities of Wolaita Zone, Southern Ethiopia: Cross-sectional Study." *American Journal of Public Health Research*, vol. 5, no. 3 (2017): 79-88. doi: 10.12691/ajphr-5-3-5.

1. Introduction

Acquired Immunodeficiency Syndrome (AIDS) is a disease caused by human immune-virus (HIV) belonging to family retroviruses (retroviridae) which has unusual life cycle which requires transcription of RNA to DNA. The viral ability to replicate so fast (10 billion per day) and associated possible point mutation poses a challenge to develop a cure. Infection by HIV virus results in both depletion and dysfunction of elements of immune system. This is due to its complex and excessive damage of immune cells with CD4 cell marker. It takes an average of 7-10 years for opportunistic infections or AIDS defining disease to appear [1].

The studies mentioned that unprotected female to male intercourse (80%) followed by mother to child (6-7%) account for a large cases of HIV infection in developing countries like Ethiopia. Unsafe injections and blood are also responsible for up to 5% of infections. Though seldom noticed in Ethiopia, injection use of drugs (IUD) is the main mode of transmission in Asia. It was 3 -5 years after the first recognition of HIV (1981) in major cities of

US that the first epidemic was noticed in Ethiopia in mid of 1980's. Since then it becomes not only the most serious health threat of the early 21st century but al so one of the greatest impediments to social and economic progress in heavily affected countries [2,3].

Around the globe, not less than 2.5 million people have died of AIDS related illness. In 2011, an estimated 34 million people were living with HIV in the world. Twenty -three million (70%) of them are in Sub-Saharan African (SSA) countries. In other words, SSA remains the severely HIV affected region with nearly 1 in every 20 people. UNAIDS (2012) in its global report revealed that there are 790,000 PLHIV in Ethiopia. Adult HIV prevalence in Ethiopia is 1.5%, 1% for males and 1.9% in female. The rural and urban adult HIV prevalence is 0.6% and 4.2% respectively. Gambella is the region with the highest HIV prevalence, 6.5%. Southern region, where this study was carried out, accounts for 0.9% [4,5].

In the absence of ART, women infected with HIV have both a physiologically reduced risk of pregnancy, and an elevated risk of pregnancy loss. It can be caused by severe clinical presentations of pelvic inflammatory disease and tubo-ovarian abscesses which may require more surgical intervention. It is also shown by other studies that HIV can cause men's hypo-gonadism, reduced sperm motility, number, concentration which can again lead to reduced fertility. PLHIV thus may be more likely to have difficulty in getting pregnant and to request assistance. So, these people should be given full support and counseling and advice of their options, including adoption [5,6,7].

The majorities of PLHIV are of reproductive age and face challenging choices concerning their sexuality, parenthood desires and family life. This is raising the need for sexual and reproductive health and HIV initiative to be mutually reinforcing. As revealed by many previous studies conducted among this population, enhanced access to ART enables HIV positive women to better express and realize their sexual and reproductive desires and rights.

It was shown that there is a positive association between fertility desire of PLHIV and ART which resulted from individuals who experienced improved health while on ART were more likely to express a desire for parenthood which may renew interest in sexual relation and desire to have children for men and women living with HIV. It is still also evident that a shorter time since treatment of HIV infection was significantly increases the odds of desire for childbearing [9,10,11,12].

Women and men living with HIV have different fertility-related needs from those who are HIV negative. In this study, it was focused on PMTCT, the prevention of unintended pregnancies and desire to give birth for men and women living with HIV. So addressing fertility issues of PLWHA is critical. But provision of comprehensive Sexual and Reproductive Health (SRH) care for PLWHA has been given low priority especially in developing countries like Ethiopia. Furthermore, the extent of fertility desire and contraceptive use in HIV positive men and women on follow up care and how these decisions may vary by individual, social, demographic characteristics and health factors is not well understood.

So this study is designed to assess the fertility desire, contraceptive use and sexual life experience of women and men living with HIV/AIDS and to identify factors associated which are responsible for fertility desire at selected health facilities of Wolaita Zone, Southern Ethiopia.

1.1. The Conceptual Frame Work

The conceptual framework of this study is based on the Traits –Desire -Intention-Behaviour (TDIB) theory of Miller (1994) to describe the psychological sequences that culminate in reproductive behaviors. It was used by Miller to trace the sequence of how childbearing motivation leads to fertility desire, fertility intention and subsequent childbearing. According to him, there are four steps of psychological sequences described by Miller (1994): the motivation of traits which leads to desire, translation of desire into intentions, and the activation of intention in the form of behavior.

According to TDBI theoretical framework, traits that predispose the individual towards or away from being and caring for children are activated into conscious desire for or against having a child. Eventfully, the intention is implemented through a behavior that leads either to the achievement or to the avoidance of conception and subsequent childbearing. In a traditional African society like Ethiopia, childbearing motivational traits are personal and socio-cultural characteristic, HIV related factors such as quality of life, use of ART, time since diagnosis of HIV infection, disclosure status are also possible motivational traits among PLHIV. The aforementioned factors, independent variables for our study, explain the outcome of the study, fertility desire and fertility intention. Thus, the extent of fertility desire and intention of PLHIV on ART are examined in terms of the above mentioned factors. Based on the TDIB theoretical frame work; therefore, the following conceptual framework is developed to carry out the study.

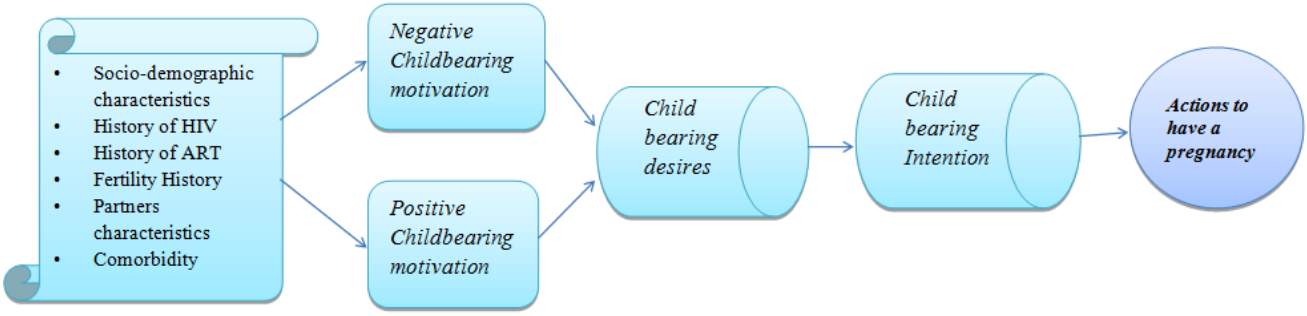

Figure 1. Conceptual frame work of fertility desire and contraceptive use among HIV/AIDS patients at Selected Health Facilities of Soddo Town and Zuria Woreda, Southern, Ethiopia, 2014: Based on the TDIB theory

2. Methods and Participants

2.1. Study Area and Period

This study was conducted from January to February, 2014 in three selected health facilities of Wolaita Zone, two from Soddo town and one health facility from Soddo Zuria district. The study area is located about 390 kilometers south of Addis Ababa. The town is the largest town in Wolaita Zone and the second town in SNNPR next to Hawassa. Currently, there are three health centers and two hospitals which provide ART service.

2.2. Study Design

The non-experimental or observational, analytical and cross -sectional study design was utilized to carry out this study to collect the data from individual respondents. The fertility desire and intention study is analytical as the aim is to examine the association between fertility desire or intention and other socio-demographic and HIV related factors. This study was done by using quantitative data obtained from the respondents supplemented by qualitative data that is obtained using in-depth interview of health service providers in ART unit and clients on-ART.

2.3. The Study Population

All men of age 18 to 59 and women of age 18 to 49 who are on ART and receiving care and treatment in ART units at the health facilities of Soddo town and Soddo Zuria District at least once were studied.

Inclusion Criteria: People living with HIV/AIDS in reproductive age group (18-49 years for women and 18-54 years for men) who had at least one visit to the selected chronic HIV care units were the candidates. In addition, those who showed willingness to consent for participation in the study and those who could hear and speak Amharic were included.

Exclusion Criteria: All clients who were unable to hear mentally disabled, seriously ill and those younger or older than the age specified in the inclusion criteria were excluded from the study.

2.4. Sampling Technique and Data Collection Tools

The sample size determination is based on the assumption that 50% of HIV positive individuals may desire and intend to have children with 5% margin of error and 95% confidence interval (alpha=0.05). A non-response rate is assumed to be 10%. The actual sample size for the study was determined using a formula for single population proportion with non-response rate of 10% which gives, n=384 + 10%= 423 final sample size.

The three health facilities were selected as they provide care and treatment service to PLWHA and the calculated sample size was proportionally allocated for the three health facilities that provide ART service based on their client's size. Among clients who were attending in ART unit at Soddo teaching Hospital, 1491 were currently on ART among these 340 clients were selected for this study by proportional allocation. In Soddo health center 280 clients were on ART, of this 64 clients were selected for this study by proportional allocation. Similarly, in Soddo Zuria district Tome health center which is providing ART services for 82 clients, 19 clients were selected.

To select the study subjects from the health institution, systematic sampling was implemented using every 4th client who was getting the service in ART unit.

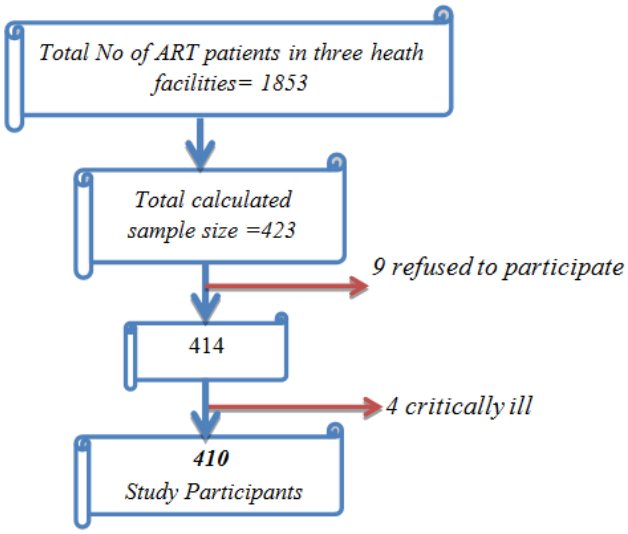

Figure 2. Schematic representation of sampling procedure during the period of data collection

2.5. Data Quality Assurance

To the pre-test was made on the 5 % of the sample and the investigators provided three days proper training to the data collectors and supervisors. Closer supervision was undertaken during data collection. Codes were given to each questionnaire during data collection so that any identified error was traced back using the code. The filled questionnaires were checked for completeness by supervisors and principal investigator every day, if there were problems it was discussed immediately with data collectors and supervisors.

2.6. Data Processing and Analysis

Data was entered, checked for completeness and internal consistency, outliers and incomplete questionnaires was excluded from the analysis. Data processing and analysis were done using SPSS version 20 for windows program. Moreover, hosmer and lemeshow test of model fitting with the data was tested, Descriptive statistics, chi-square test, odds ratio with 95% confidence interval and Logistic regression to find the effect of each explanatory variable was used.

2.7. Ethical Consideration

Before starting the data collection, the study got official approval from the Wolaita Sodo University ethical committee. Permission was obtained from the concerned bodies of the Zone, 'Woreda and town' administrative. The objectives of the study were explained to the identified study subjects.

Study participants were kindly requested to be included in the study but they were informed that it is their right to participate and to stop any time if they are not willing complete responding to the questions.

Each study participant was requested for informed consent and their full consent and confidentiality was assured including by not mentioning their identification in any of the research report.

2.8. Operational Definitions

People Living with HIV (PLHIV) on Chronic HIV care: are people with confirmed and documented HIV test results who have already been enrolled to ART clinic, had at least one visit and have got comprehensive HIV care and treatment in the health facilities before the interview.

Fertility desire: those respondents' wish to have a child or more children in the future. The question to ask is: "would you like to have a/another child in the future?". WHO also put the desire for children to be questioned whether the respondent wants to have a child/another child or whether the respondent's spouse or partner wants to have a child/another child [12].

Family planning use: those clients have been on any types of contraceptive methods until the date of data collection.

3. Results

3.1. Socio-demographic and Economic Characteristics

Out of 423, 410 patients participated in the study with the response rate of 97 percent [Figure 1]. Among them, 254(62%) of clients were females and the median age of respondents was 33. As to their religion, 192(46.8%) of the respondents were protestants followed by orthodox religion 30.7%. Age at first marriage for the female was about 19 and age at first birth was about 22. As per marital status, 54.6 % of the participants were married. Regarding educational status of the clients, 132 (32.2 %) was with grade level 7-12. Majority of females were house wives which was 47 % from females and 28.6% from the total interviewed clients followed by daily laborer [Table 1].

Table 1. Socio-economic and demographic characteristics and its association with fertility desire (N=410)

Variable	Desire to have child		OR[CI Lower-Upper]
	Yes	NO	
Sex			
Male	63	93	2.83[1.74, 8.13]*
Female	116	138	1
Religion of the respondent			
Protestant	81	112	3.61[0.30,7.11]
Orthodox	70	59	1.90[0.22, 6.84]
Muslim	13	47	2.24[0.03-11.32]
others	12	26	1.00
Employment Status			
Unemployed	65	101	1.00
Employed	111	133	1.57[0.61, 7.40]
Educational Status			
Cannot read and write	34	43	1.00
Able to read and write	32	19	1.80[0.47, 6.82]
Grade 1-6	24	81	1.35[0.69, 2.64]
Grade 7-12	62	64	1.34[0.72, 2.51]
Grade 12+	24	27	1.19[0.52, 2.77]
Marital Status of the respondent			
Single	30	24	23.70 [3.1, 180] **
Married	106	90	5.49 [0.09, 0.41] **
Divorced	20	38	0.22[0.37, 8.41]
Living Separately	11	70	0.89[0.19, 4.10]
Widowed/Widower	9	12	1.00
Age Group of Respondents			
18-25	41	33	1.00
26-29	31	46	0.45[0.216, 4.16]
30-35	43	45	0.43 [0.73, 0.99]**
36-39	50	29	0.11 [0.1, 0.72) ***
>=40	11	81	0.15 [0.113, 2.42]
Place of Residence			
Urban	130	168	3.02 [1.08, 3.80] *
Rural	46	66	1.00
Monthly income			
Below 750 birr	52	141	1.00
≥750 birr	124	93	7.01[0.005-21.96]

*p-value<0.05, **p-value<0.01, ***p-value<0.001.

3.2. Sexual and Reproductive Health Characteristics of the Respondents

Regarding to fertility desire 43% (176) of the respondents want to give birth and among married respondents, 48.2 % (99) do not desire to have child, and of these 34 % of them were not using any modern FP method. On the other hand, 57% of respondents do not desire to bear child and of these 45.6 % were males and 55.4 % were females [Figure 3].

There were 33.5 % respondents who had a childbearing experience and 29.9 % of PLWHA hold their HIV statuses secrete from their spouse. The reasons raised by the respondents were since they were not currently living together, due to fear of their relationship, due to the discrimination that follows and without unknowing reason. Among these respondents who did not yet disclose their HIV status to their spouse majority 60.4 % were female and 39.6 % were male. Regarding to their knowledge on mother to child HIV transmission, 57.6 % did not know any ways of transmission and 68.3 % of PLWHA do know at least one way of how HIV can be transmitted from mother to child.

It was found that the most common types of family planning method utilized by study patients were condoms (62%) followed by injectable contraceptives (20%) [Figure 4].

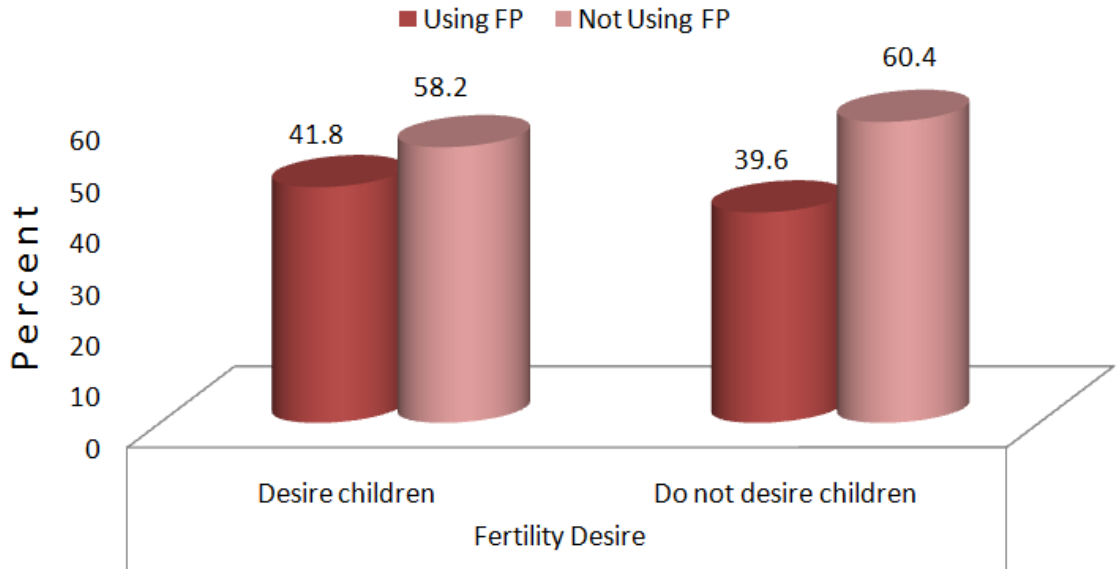

Figure 3. Child bearing desire and utilization of family planning among respondents (N=410)

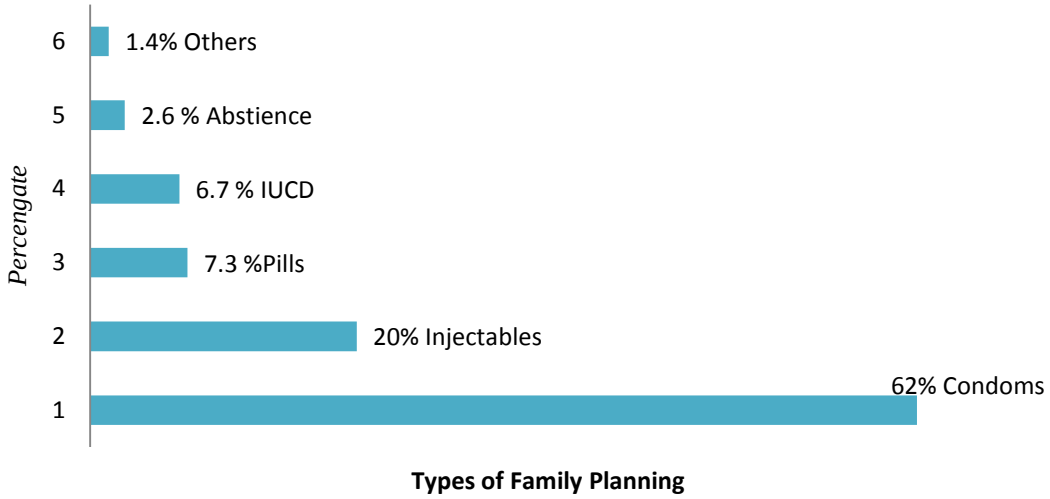

Figure 4. The types of family planning method utilization by the respondents (N=410)

3.3. Factors Associated with Patient's Desire to Bear Child

According to the chi-square-statistics, marital status, age and place of residence were obtained to be significantly associated with fertility desire. Those not ever married or single respondents were 23.7 times more likely to desire a child than married. On the other hand those living separately 5 times more likely to desire a child than married. Respondents with age range 30-35 years were 0.43 times less likely to desire a child than 18-25 years, age range 36-39 years were 0.11 times less likely to desire a child than age 18-25 years.

Similarly the respondents who live in urban 3.32 times more likely to desire a child than those live in rural area. From the observed socio-economic and demographic factors

sex, religion, employment status and educational status, did not show any association with the respondents desire to have child.

The statistical analysis revealed that sexual practice in the last six months, life time childbearing experience, sex variety of existing children and number of children alive was found to be significantly associated with desire to have children. Those respondents who perform sexual practice in the last six months, 2.07 times more likely desire to have child than those who did not perform sexual practice. Those respondents who does have a life time childbearing experience 0.037 times less likely desire to have a child (P<0.001). Respondents who does have only male or female desire more than those who had both sex, those who had only male 5.3 times more likely desire to have a child and those who had only female 3.67 times more likely desire to have a child than those who had both sex of children. Having less number of children alive was strongly associated with fertility desire.

Table 2. Reported reasons for child bearing desire of study participants at selected health facilities of Wolaita Zone,2014

Fertility desire of respondents	Reasons	Number	Percent
Desire to have child(N=176)	Replacing themselves	116	65.9
	Desire to have from their partner	30	17.1
	Pressure of their partner	11	6.2
	Others	19	10.8
Do not desire to have child(234)	Enough number of births	21	8.9
	Economical problem	33	14.1
	Fear of infection transmission	70	30
	Perceived negative effect on their health	101	43.2
	Others	9	3.8

Table 3. Sexual, reproductive life and HIV Related characteristics and their association with child bearing desire of the respondents, (N=410)

Variable	Desire to have child		OR[CI Lower-Upper]
	Yes	No	
Sexual Practice (in the last six weeks)			
Yes	*109*	*115*	*2.07 [1.63, 7.26] **
No	*67*	*149*	*1*
Past childbearing experience			
Yes	*129*	*174*	*0.037 [0.113,0.406] ****
No	*47*	*60*	*1*
Sex variety of children			
Male only	*53*	*82*	*8.3 [0.72, 11.32]*
Female only	*77*	*51*	*2.97 [3.76, 12.64] ***
Any sex	*42*	*105*	*1.00*
Spouse made HIV-Test			
Yes	*109*	*113*	*1.72[0.52, 5.77]*
No	*67*	*121*	*1.00*
Disclose HIV status			
Yes	*100*	*120*	*9.55[0.21, 13.34]*
No	*76*	*116*	*1.00*
Knowledgeable on PMTCT			
Yes	*66*	*101*	*1.00*
No	*110*	*133*	*5.63[0.83, 1.47]*
Number of Children Alive			
1-2	*103*	*107*	*0.05 [0.105-0.217] ***
3-4	*65*	*59*	*10.20 [0.97, 42.09]*
>4	*8*	*63*	*1.00*
Duration of ART			
1-24 months	*82*	*83*	*4.61[2.94, 13.77]**
25-48 months	*54*	*58*	*3.54[0.64, 9.03]*
>48 months	*40*	*93*	*1.00*
Current FP utilization			
Yes	*114*	*131*	*2.72[0.76, 7.96]*
No	*62*	*103*	*1.00*

*p-value<0.05, **p-value<0.01, ***p-value<0.001.

The multivariate binary logistic regression model [Table 3] reveals that age, sexual practice in the last six months, number of live children were obtained to be the most important predictors of fertility desire of the respondents. It was found that respondents of younger age's desire to have child more than elders. Those respondents with age group of 30-40 years were less likely desire to have a child than age of 18-25 years. Those respondents who performed sexual practice in the last six months were twice more likely desire to have a child than those who did not performed sexual practice. Having less number of alive children was found to be a strong predictor for the fertility desire, those respondents who does have more than three children 0.032 times less likely desire to have a child than those who had one or not at all alive child with (95% CI, 0.005-0.217).

In this study the binary logistic regression analysis reveals religion, occupational status, place of residence, sex variety of existing children, current FP utilization, and duration of ART utilization, educational status and age at first birth were not obtained to affect the fertility desire of the respondents.

The most common reasons given for not desiring a child were, fear of negative effect on their health *43.2%* followed by fear of infection transmission to the new born *30%* and economical reason 14.1%. Similarly those respondents who desire to have a child reported as they have their own reasons among which the most common one was to replace themselves *65.9* % followed by desiring a child from their partner *17.1%* [Table 2].

4. Discussion

The prevalence of fertility desire among HIV/AIDS patients at selected health facilities in Wolaita Zone was found to be in this study was 43%. The study also found that patients who desire to bear a child were younger, have less number of children alive, and performed sexual practice in the last six months and less likely to be married. This result is consistent with a study conducted in Addis Ababa which was 40% [10] and it is greater than the finding of Jimma which showed that 23% of the respondents had desire to fertility [13]. The discrepancy between the findings could probably be due to difference in health care services, socio-demographic and cultural differences of the study populations. When the fertility desire of study participants was seen by sex, females desire children more than male (45.7% vs 40.4%) but in other studies like in Tigray 43.4 % male and 56.7% female and Nekemet males desire more than female [14].

In this study, 54.6 % of the respondents were sexually active in the last six months which is similar to a research conducted in Tanzania revealed that there were 60 % sexually active PLWHA, among these 69 % performed unprotected sex and 12.5 % of women reported pregnant at the time of the survey [15]. The increase in unsafe sex among PLWHA challenges the PMTCT program as the outcome of unsafe sex resulted in unwanted pregnancy. Risky sexual behavior among HIV positive women increases the risk of transmitting resistant virus to their sexual partners.

In current study, among married women who desire to bear child, about 58.2 % of them were not using any modern family planning method. More than 100 million women in less developed countries, or about 17 % of all married women, would prefer to avoid a pregnancy but are not using any form of family planning. Here in Ethiopia according to the 2011 EDHS the unmet need for family planning was 25.3 % 16.3 for spacing and 9 for limiting [16].

Among sero-discordant couples 54.6% practice sex in the last six months before the survey and of these about 14.7 % of respondents practice sexual intercourse without condom which is greater than a study conducted on North-Central Nigeria on condom use among sero-discordant couples which showed that around 40% of sero-discordant couples were engaged in unprotected sexual intercourse or they did not use condom. This will increase the chance of HIV transmission to uninfected partner. Only 67.2% of the respondents were using condom due to different reasons they mentioned like desire to have more children, lack of knowledge about sex without condom will increase the risk of drug resistance HIV virus due to virus exchange [17].

Furthermore, this study has showed that number of children alive was found to be strong predictor for desiring a child. It was also found that in this study having only female and male children also found to have an association with desiring a child. Consistent to this finding in Uganda, the most common reasons for women wanting a child included the desire for a successor, not already having a boy, and having no children at all [18].

Most of the research conducted on the fertility desire of PLWHA yields a consistent result that is young PLWHA of age less than 30 desire 1.5 to 4 times more likely to have child than their older counterparts. In this study younger age of 18-25 year respondents highly desire to have child than those of older age, it is not as such surprising to get older ages not to desire as they had a greater probability to achieve their desired number of births and younger ages may not have a child at all.

On the other hand from those sexually active PLWHA the decision made to be pregnant by not knowledgeable on PMTCT was found to be greater than the decision made by those knowledgeable on PMTCT. This is the very important finding that should be seriously taken by PMTCT program planners so that they are expected to fill the gap on PMTCT knowledge and reduce the risk of infecting the newborn. Partner fertility desire was not significantly associated with fertility desire of the respondents but in other studies like a study conducted in South Wollo Zone and in Nekemt showed partner desire had significant effect on the fertility desire of the PLWHA [14]. In this study PLWHA who did not perform sexual practice in the last six months were found to be less likely to desire a child than those who performed sexual practice. This is because those who want a child will be engaged to unprotected sexual intercourse to achieve their desire.

Limitation of the Study

The study does not compare the fertility desire of pre-ART and on-ART clients. The possibility of recall bias since most data is based on patients self-report.

5. Conclusion and Recommendation

Fertility desire is found to be high among HIV/AIDS patients living in the study area. Age, having sexual practice in the last six months, and having less number of children alive, were obtained to be the determinants of fertility desire. The current contraceptive utilization rate of the respondents were less and majority of them were using condom which is not a reliable method for the prevention of pregnancy so most of them especially those who does not desire more children will be exposed to unwanted pregnancy. PLWHA who did not want to desire a child are at greater risk to have unwanted pregnancy as the unmet need on family planning was found to be higher for them. The country and PMTCT programs will face a big challenge if the risk of unsafe sex by PLWHA not reduced. **Based on the above results we would like to recommend the following;**

- It is critical to establish and strengthen reproductive health service programs in ART care and treatment unit to assist PLWHA in the prevention of unwanted pregnancies and also to ensure that desired conception and birth take place as safely as possible.
- The health planners and service providers need to consider the strong predictors found in our research so as to plan, implement and to make their MTCT program more effective.
- There should be a mechanism to strengthen the counseling service focused on consistent utilization of condom, psychological support and to use the PMTCT service if pregnant.

Competing Interests

The authors declare that there is no competing of interests.

Abbreviations

AIDS (Acquired Immunodeficiency Syndrome), ART (Antiretroviral therapy), ETB (Ethiopian birr), FP (Family planning), IUD (Intra-uterine device), PMTCT (Prevention of mother to child transmission), PLWHA (People living with HIV/AIDS) MTCT (mother to child transmission)

Acknowledgements

We would like to thank all data collectors, supervisors and persons who helped us in the process of doing the research. My appreciation also goes to Wolaita Zone Health office, Soddo Zuria Woreda Health office, Soddo Hospital, Soddo health center, Tome health center, all those health providers working in the ART unit in the health facilities and clients for their willingness to participate in the study. Finally our deepest thanks also go to Ms. Birtukan Ermias for her editing and other supports.

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