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Determinants of Fertility Intention among Women Living with HIV in Western Ethiopia: Implications for Service Delivery

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Abstract

Despite increased emphasis on antiretroviral therapy for HIV infected individuals, issues of fertility and childbearing have received relatively little attention in Ethiopia. This study was conducted to assess socio-demographic, reproductive and HIV related characteristics of fertility intention among women living with HIV in Western Ethiopia. Cross sectional study was conducted from May 1 to May 26, 2012 using structured questionnaire on a sample of 456 women living with HIV who are on follow up care in anti-retroviral therapy clinics. Bivariate and multivariable logistic regression models were fitted to identify significant predictors of fertility desire at 95 CL. Out of 456 respondents 42.1% expressed intention to have children in the future. Educational attainment [AOR (95% CI) = 0.041(0.008 -0.220)], partner fertility desire [AOR (95% CI) =0.012(0.004-0.034)], number of live children [AOR (95% CI) =0.344(0.125-0.950)] and partner sero-status [AOR (95% CI) =6.578 (4.072-10.881)] were significantly associated with fertility intention. A large proportion of HIV-positive women in the study desired more children in future. Interventions to address this problem include integrated access to contraception methods, and counselling on reproductive health decision-making. *(Afr J Reprod Health 2014; 18[4]: 54-60).*

Keywords: Fertility, desire, Nekemte, PLWH, ART

Résumé

Malgré l'accent augmenté mis sur la thérapie antirétrovirale pour les personnes infectées par le VIH, les questions de la fertilité et la procréation ont reçu relativement peu d'attention en Ethiopie. Cette étude a été menée pour évaluer les caractéristiques sociodémographiques, la reproduction et la fécondité liées au VIH de l'intention chez les femmes vivant avec le VIH en Ethiopie occidentale. Une étude transversale a été menée du 1 mai au 26 mai 2012 en utilisant à l'aide d'un questionnaire structuré sur un échantillon de 456 femmes vivant avec le VIH qui sont sur le suivi des soins dans les cliniques de thérapie antirétroviraux. Les modèles de la régression Bi -variées et multi-variées ont été ajustés pour identifier les indices significatifs du désir de fécondité à 95 CL. Parmi les 456 interrogées 42,1% ont exprimé l'intention d'avoir des enfants à l'avenir. Le niveau de scolarité [AOR (IC 95%) = 0,041 (0,008 -0,220)], le désir de fertilité chez le partenaire [AOR (IC 95%) = 0,012 (de 0,004 à 0,034)], nombre d'enfants vivants [AOR (IC à 95% = 0,344) (0,125 à 0,950)] et le statut sérologique du partenaire [AOR (IC 95%) = 6,578 (4,072 à 10,881)] ont été statistiquement associé à la l'intention de fertilité. Une grande proportion des femmes séropositives dans l'étude ont le désir d'avoir des enfants dans l'avenir. Les programmes à élaborer devraient aborder un accès intégré aux méthodes de contraception, aux conseils sur la décision liée à la reproduction à la grossesse et à l'accouchement sans risque. *(Afr J Reprod Health 2014; 18[4]: 54-60).*

Mots clés: fertilité, désir, Nekemte, PVVIH, TAR

Introduction

Globally with the advent of antiretroviral therapy (ART), greater numbers of HIV-positive women are living longer and healthier lives, but are also contending with many new and existing issues affecting their sexual and reproductive health and rights. In 2013, an estimated 1.5 million women living with HIV gave birth, virtually unchanged from 2009. Globally, 3.2 million children under 15 were living with HIV in 2013, comprising 9.1% of all people living with HIV[1-3].

Preventing unintended pregnancies among women living with HIV is a critical step towards reducing mother-to-child transmission, and is a core component of the international standards for a comprehensive approach to prevention of mother-to-child transmission of HIV (PMTCT). All

women, irrespective of HIV status, need services that can help them make informed reproductive decisions and provide them with contraceptive options, if and when they are desired. By enabling women living with HIV to prevent or delay pregnancies, access to these services could avert HIV infection in infants[4].

High-quality programmes and services that positively address sexuality and promote the sexual health of women living with HIV/AIDS are essential for women living with HIV/AIDS to have responsible, safe and satisfying sexual lives, especially in countries severely affected by HIV. Pregnancy may carry additional risks for an HIV-positive woman; both for her own health and the infant's health. Women living with HIV/AIDS should be aware of these risks when considering whether to have children and planning a family[5]. Findings from the most recent national antenatal care sentinel surveillance show a declining trend in HIV prevalence among pregnant women aged 15-49 years in both urban and rural areas of Ethiopia. Urban HIV prevalence declined from a peak of 14.3% in 2001 to 4.4% in 2012, while rural prevalence peaked in 2003 at 4.1% and remained at 1.8% in 2012. Similarly HIV prevalence among pregnant women aged 15-24 years attending antenatal care decreased from 3.5% in 2007, to 2.6% in 2009 and 2.1% in 2012. This trend was observed in both urban and rural areas of Ethiopia. In urban areas the prevalence decreased by more than half from 9.1% in 2005 to 3.3% in 2012. Similarly rural prevalence among 15-24 year old Antenatal care attendees declined from 2.4% in 2005 to 1.4% in 2012[6-7].

Education status, age of the respondent, marital status, Parity , partner's positive desire having sex with the current partner ,having a child with current partner, HIV disclosure status, having good perceived health status and CD4 count ≥200 cells were some of the factors associated with fertility intension in previous studies[8-12].

Limited number of studies has been conducted on identifying factors affecting fertility desire of people living with HIV in Ethiopia; particularly in the study area[9]. The finding of the study will help policy makers and program implementers to design appropriate sexual and reproductive service that address need of people living with HIV. Therefore this study was intended to assess Determinants of fertility intention among women living with HIV in Western Ethiopia.

Methods and material

Study setting, design, and participants

The study was conducted in Nekemte Hospital and Nekemte Health Centre. The town is divided in to 12 kebeles. The total population of the town is 96,187. There are governmental and private health institutions in the town. There are also about eight NGOs working in the area of HIV/AIDS care and support. Nekemte Referral hospital and Nekemte health center are the two governmental health institutions that provide ART treatment and care in the town.

A cross sectional institution based study design that employed quantitative data collection method was used from May 1 to May 26, 2012 to assess factors associated with fertility intention among people living with HIV.

Source populations for the study were all women living with HIV who came to Nekemte Hospital and health center ART unit and study population were sampled women living with HIV who visited Nekemte Hospital and health center ART clinic during data collection period.

Sample size and sampling procedures

The sample size was determined using a formula for estimation of single population proportion with the assumption of 95% confidence level, margin of error of 5% and taking 50% expected fertility desire.To compensate the non-response rate, 20% of the determined sample was added up on the calculated sample size giving a total sample of 461.

The calculated sample size was proportionally allocated to the two ART centers found in Nekemte town namely; Nekemte hospital and Nekemte health center based on the total number of client on follow up care in the respective ART centers. Then to select study subjects from each ART unit, systematic sampling was used by referring client's registration book for a day prior to data collection.

Data collection procedure

A structured questionnaire adapted from different literatures[9-12], were first Prepared in English was translated in to Afan Oromo and then back translated to English to check for consistency was used to collect data from respondents. Main points included in the questionnaire were socio-demographic characteristics, HIV and treatment conditions, child desire information and reproductive characteristics. The pre-test was done on 5% of the total sample size in Gimbi hospital. The questionnaire was then assessed for its clarity and completeness. Some skip patterns were corrected, questions difficult to ask were rephrased and the consent form was modified.

For administering the structured questionnaire, four trained nurses (Counselors) working in the ART treatment units were recruited to conduct exit interview. Two Supervisors who had second degree supervised the data collectors. All field questionnaires were reviewed each night and morning sessions were conducted every morning with the data collectors to discuss on the problem encountered.

Data processing and analysis

The data were checked, cleared and entered into Epi info version 3.5.1 statistical software and exported to SPSS version 20.0 for analysis. The descriptive analysis such as frequency distribution and measures of central tendency were used. Initially, bivariate analysis was performed between dependent variable and each of the independent variables. Their odds ratios (OR) at 95% confidence intervals and p-values were obtained. The findings at this stage helped us to identify important associations. Then multivariable analysis was performed using the logistic regression model with variables that were significant at $p<0.05$ on bivariate analysis and statistical significance were declared at $p<0.05$.

Ethical Considerations

Ethical clearance and permission was obtained from Jimma University Ethical Review Committee and Permission was secured from Nekemte Hospital and health centers through letter written by Jimma University. Informed written consent was obtained from each respondent before interview. Confidentiality of individual client information was ensured by using unique identifiers for study participants and limiting access to the principal investigator and research assistants of study information.

Result

Socio-demographic Characteristics of study respondents

Table 1: Socio demographic Characteristics of study participant attending ARV treatment units, Nekemte, Ethiopia, May 2012

Characteristics n=456	Number (%)
Age	
15-24	90 (19.7)
25-34	231 (50.7)
35-44	114(25.0)
44+	21 (4.6)
Marital status	
Married	279 (61.2)
Single	72(15.8)
Divorced	54 (11.8)
Widowed	51(11.2)
Ethnicity	
Oromo	354(77.6)
Amahara	75 (16.4
Gurage	18 (3.6)
Tigre	9 (2.0)
Religion	
Orthodox	165 (36.2)
Catholic	36 (7.9)
Muslim	54 (11.5)
Protestant	201 (44.1)
Educational status	
Illiterate	45(9.9)
Primary	267(58.6)
Secondary	117(25.7)
post-secondary	27(5.9)
Occupational status	
Unemployment	54 (11.8)
House wife	174(38.2)
Daily laborers	4(7.5)
Government employee	87(19.1)
Merchant	96(21.0)
Other	11(2.4)
Estimated monthly household income (In Eth. Birr)	
≤ 500	348(76.3)
>500	108(23.7)

Out of the sampled 461 women 456 responded to the questionnaire making a response rate of 98.9%. Of the 456 respondents half of the study participants were in the age category 25-34 years, 61.2% were currently married, and 77.6% were Oromo in ethnicity. Majority (44.1%) of the study respondents were protestant followers. Regarding their education status and 58.6% had primary level of education. Occupations of 174 (38.2%) respondents were housewives. Nearly 75% of the participants earned monthly income of less than or equal to 500 Ethiopian Birr (about 25 US $) (**Table 1**).

Table 2: Fertility desire and reproductive history of women attending ART service by at ARV treatment units Nekemte, Ethiopia, May 2012

Characteristics	Number (%)
Number of current live births (n=456)	
0	150(32.9)
1-2	231(50.7)
>=3	75(16.4)
Plan to have child in the future (n=456)	
Yes	192(42.1)
No	264(57.9)
When do you prefer to have children? (n=192)	
1-2year	162(84.4)
>2year	30(15.6)
Number of children you plan to have (192)	
1 – 2	185(96.4)
>2	7(3.6)
Reason not to have children in the future (264)	
Have desired number of children	111(42)
Fear of MTCT	81(30.7)
Lack of adequate income	54(20.5)
Other	18(6.8)
Partner desires to have children (n=279)	
Yes	162(58.1)
NO	117(41.9)

** Factors associated with fertility desire*

Fertility desire of study participants

Two hundred thirty one (50.7%) of the study subjects had three and more children who are currently alive. One hundred ninety two study participants (42.1%) expressed the desire to have more children. One hundred sixty two (84.4%) of the study subjects who desire to have children planned to have a child within two years period. Out of those who desired to have children 185 (96.4%) desired to have two and less than two children. Out of the 264 respondents who are not desired to have children in the future the major reason given were having desired number of children 111(42%). Out of 279 respondents with partner 162(58.1%) of their spouse expressed desire to have children in the future (**Table 2**).

In bivariate analysis age, educational status, marital status, partner fertility desire, number of live children and partner HIV status were significantly associated with fertility desire of study participants.

In multivariable analysis literate women were less likely desiring to have children in the future compared to their counterparts (AOR=0.041, 95%CI (0.008 -0.220). Partner Fertility desire (AOR=0.012 95%CI, (0.004-0.034), were olso positively associated with fertility desire of study participants. Those women whose partner not had fertility desire were less likely intended to have children in the future. Subjects who have biological child were less likely desiring to have children than women with no children (AOR=0.344,95%CI, (0.125-0.950). Participants with negative partner HIV sero status were around 7 times more likely intended to have children in the future. (AOR=6.578,95%CI, (4.072-10.881) (**Table 3**).

Discussion

This study found that a high proportion (42.1%) of women living with HIV expressed a desire to have more children. The finding was higher than those reported from Ethiopia (18.3%), Kabala (28.6%), Tanzania (37.1%) and rural Uganda (7%)[9-11,15]. However it was lower than that reported from northeast Nigeria where 65.5% females and 61.2% males expressed the desire to have more children[12]. The finding showed that being HIV positive did not remove reproductive desires, and diversity existed in reproductive intentions. It is important for clinicians to recognize that many HIV-positive women desire and intend to become pregnant and to discuss pregnancy plans with their clients prior to conception.

Table 3: Parameter estimates from multivariable logistic regression model predicting the probability of fertility desire among HIV positive women at ARV treatment units Nekemte, Ethiopia, May 2012

Variables	Fertility desire		95% CI	
	Yes No (%)	No No (%)	COR	AOR
Age category				
15-34	150(46.7)	171(53.3)	1.942(1.270-2.972)*	
35+	42(31.1)	93(68.9)	1	
Educational status				
Illiterate	9(20)	36(80)	0.311 (0.146-0.663)**	0.041(0.008 -0.220)**
Literate	183(44.5)	228(55.5)	1	1
Marital status				
Married	132(47.3)	147(52.7)	1	
Single/divorced/ widowed	60(33.9)	117(66.1)	0.571 (0.387-0.8430)*	
Partner Fertility desire				
Yes	126(77.8)	36(22.2)	1	1
No	6(5.1)	111(94.9)	0.015(0. 006-0.038)**	0.012 **(0**.004-**0**.034**)****
No of alive children				
0	90(60.0)	60(40)	1	1
1 and above	102(33.3)	204(66.7)	0.333 (0.223-0.499)*	0.344(0.125-0.950)*
Partner serostatus				
Positive	90(42.9)	120(57.1)	1	1
Negative	36(63.2)	21(36.8)	2.286 (1.250-4.180)**	6.578 **(**4.072-10.881**)****

*Statistically significant (P<0.05) **strong statistical association (P<0.001)

From those participants who desired to have children in the future, large proportion 96.4% of them desire to have one to two children and about 15.6 % want to wait for greater than two years. The result was much higher than that reported from Northern Nigeria, where more than half of them want to have less than or equal to two children[12]. The discrepancy could be due to socioeconomic and cultural differences between the two populations. Decreasing unmet need for contraception is very important for HIV positive people to enable them limit or space child birth.

Educational attainment was associated with fertility desire, meaning those women who were not attending school were less likely to have fertility intentions as compared to their counterparts. Findings reported from similar studies in Ethiopia and Northern Nigeria showed that educational attainment did not significantly affect desire for children[9,12]. This could be due to better understanding and expectation of more educated people about prevention of maternal to child transmission during pregnancy, labour and postpartum period.

Partner's fertility desire was positively associated with desire for children in this population. In this study, the level of fertility desire was similar with what was reported in other studies conducted in Guinea and Ethiopia[8,9]. Similar desire for children could be explained by the presence of open discussion about fertility issues among the couples. Men's involvement in sexual and reproductive health services should be promoted, both as an individual and as a partner in a relationship.

Participants with one and more than one children had lower likelihood to desire children as compared to those without children. This finding conforms to findings reported from Tanzania Canada and Lesotho and rural Uganda[11,13,14,15]. Higher fertility desires among individuals with no previous child can be explained by the social expectation of people with no children to have their own biological offsprings.

In contexts of poverty, children are valued as a source of social, economic and political security. The outcome under such conditions may not be increased demand for modern contraceptive

services, but changes in the contexts in which children are conceived and in which they grow up. Increased poverty in many parts of the world combined with globalization of capital provides the context for increased entry of children into the workforce (as an economic resource to their families and as a cheap source of labour, and into economically-based sexual relations). Therefore, the policies should give due attention to overcome the consequences of fertility desires on social experiences of women[4,16].

The interpretation of the findings of this study should consider the following potential limitations: Firstly, the cross sectional nature of this study may limit the causal and effect interpretation of the factors observed. Secondly, reported behaviors especially those related to sexual life may be affected by social desirability bias.

Conclusion

Large proportions of the HIV-positive women in the study continue to desire children. Factors that influence fertility desire among HIV positive persons include: educational level, partners' fertility desires, number of children, and partners' HIV status. Interventions to address this problem should include integrated access to contraceptive methods, counselling on reproductive health decision-making and use of contraceptive methods to prevent unwanted pregnancies. Clients seeking HIV services and those seeking reproductive health services share common needs and concerns, and integrating services will enable health care service providers to efficiently and comprehensively address them. Service integration will help to ensure that the reproductive health needs of people living with HIV are met.

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Contribution of Authors

Conceived and designed the study: ASM, MAW, BAW. Collected and analyzed the data: ASM. Prepared the manuscript: ASM, MAW, BAW. Approved the manuscript: ASM, MAW, BAW

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