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# **Original Research**

# Fertility Desire and Associated Factors among HIV Positive Adults Attending Art Clinics at Gimbi Town, Gimbi, West Wollega, Ethiopia

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#### Abstract

### This study aimed to determine the unfulfilled desire for fertility among HIVpositive individuals visiting ART clinics in Ghimbi town, Ethiopia. The research used quantitative data collected between February 15 and March 15, 2023 from two health clinics and one hospital. Trained nurses used pre-made questionnaires to gather data. The study found that among adults visiting ART clinics in Ghimbi town, the overall prevalence of unmet fertility desire was 64.6%, with a p-value < 0.25 and a threshold of P < 0.05 for statistical significance. The results were presented using tables and figures, with OR and 95% CI used to quantify the connections' strengths and statistical significance. The study found a significant correlation between unmet fertility desire and factors such as being male, living in a rural area, knowing about MTCT, being on ART for less than five years, and being unemployed. This suggests that HIV-positive individuals often have unfulfilled reproductive desires, with knowledge of MTCT negatively correlated with this outcome. Factors such as being male, living in rural areas, and having less than 5 years of ART were significantly associated with unmet reproductive desires. Addressing these needs through family planning and ART services is crucial for public health.

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### **INTRODUCTION**

Globally, HIV continues to be the leading cause of HIV-related infections and the largest contributor to HIV infections in African nations; the majority of HIV-positive individuals are in the reproductive age range. However, it is typical for them to wish to get hitched and begin a household. However, due to poor health, fear of infecting one's spouse or foetus, and discouraging policies in many countries, the prevalence of fertility planning

among adult people living with HIV (APLHIV) has been low for the past 20 years (HIV and AIDS Global Snapshot 2021).

The global goal for persons living with HIV is to live long and healthy lives for all ages, which has led to an increased focus on reproduction concerns among adult HIV positives (Global AIDS Strategy 2021–2026). Adequate access to HIV prevention, care, and treatment services can reduce the risk of

mother-to-child transmission of the HIV virus during pregnancy, childbirth, or nursing, hence improving the mother's health and preventing the spread of new paediatric infections (Niragire et al., 2012).

Due to increased antiretroviral therapy adult HIV-positive (ART) coverage, individuals now have more reproductive health needs than ever before. This is because improved health status is intended to increase the survival rate of adult HIV-positive individuals (FMoH, USAID, CSA, The WB, EPHI, 2021). Contrarily, starting antiretroviral therapy (ART) and improving health status alone did not enhance their fertility because there are numerous factors that hold back their needs. Adults living with HIV/AIDS are now leading better sexual and reproductive lives than they did before (Kebede et al., 2019). While HIV-negative individuals still have the right to a healthy sexual and reproductive life, adult persons living with the human immune deficiency virus (PLWHIV) nevertheless face significant obstacles when trying to conceive (Mujumdar et al., 2018). In order to improve the health and well-being of all individuals living with HIV, Ethiopia developed the first national prevention of mother-to-child transmissions (PMTCT) guideline in 2001. This guideline focused on prevention, made it possible for individuals to learn their HIV status, provided antiretroviral therapy and comprehensive long-term care all individuals living with HIV, and challenged persistent discrimination and stigma related to HIV (Mirkuzie, 2018; Mosisa, 2020). The risk of having an HIV-positive child drops to less than 1% with optimal treatment during pregnancy and childbirth, despite the fact that advancements in antiretroviral therapy

continue to extend life spans and improve quality of life for adult HIV-positive individuals who wish and plan to become parents (Lulseged et al., 2022). The demands related to fertility and pregnancy, in particular, are complex, and the desire of individuals to procreate is impeded by their status with the human immunodeficiency virus (HIV) and related variables (5). Global HIV prevention thus depends on addressing the basic needs of PLHIV, particularly their requirements related to sexual health. People living with HIV have strong urges to become pregnant, just like those who test negative for the virus (Mujumdar et al., 2018). Due to many obstacles, APLHIVA's fertility is lower than that of the general population (Ashimi et al., 2017). Research has indicated that the desire for fertility among adult **HIV-positive** influenced individuals is by various characteristics, including age, gender, marital status, number of children, partner's fertility desire, and partner's HIV status (Jose et al., 2016). There has been little research done in Ethiopia, especially on the study area and the desire for fertility of adult individuals living with HIV and related factors (Mosisa et al., 2020). The current health facility-based study is scheduled to be conducted in the Gimbi Town health facility in order to determine the extent of fertility desire and associated factors among HIV-positive people attending ARV in Gimbi Town, West Wollega, taking into account the current dearth of information about fertility desire and associated factors.

# METHODS AND MATERIALS Study area

Gimbi Town, West Wollega Zone, Oromia Regional State was the study's location. Gimbi is 441 kilometers west of Addis Ababa. It rises to a height of 1845 to 1930 metres above sea level. Ghimbi's borders are as follows: Benishangul-Gumuz Regional State to the north, Lalo Asabi district to the west, Yubdo to the southwest, and Haru to the south. An estimated 64,258 people live in Gimbi Town (32,271 males and 31,987 women) (4). Three of the five medical facilities in Gimbi Town offer ART treatment services. Gimbi Public Hospital, Gimbi Adventist Hospital, and Gimbi Health Centre were the study's locations.

### Study design

An institution-based cross-sectional study design was employed using quantitative data.

# **Source population**

The source population for this study was all HIV-positive adults attending ART clinics at health facilities in Ghimbi Town.

# **Study population**

All randomly selected HIV-positive adults attended ART clinics at health facilities in Gimbi Town during the study period.

# Inclusion and exclusion criteria Inclusion criteria

All male and female HIV-positive adults attending ART clinics at health facilities in Gimbi Town during the study period were included in the study.

### **Exclusion criteria**

Those adults who were seriously ill and were unable to communicate were excluded from the study.

# Sample size determination and sampling technique

### Sampling size determination

The sample size was determined using a single proportion formula, considering assumptions of a marginal error of 5%, a 95% confidence interval, and a 10% non-response rate. The 58% prevalence of fertility desire among HIV-positive people is from the study conducted in the Oromia region of West Shoa (WHO, 2021). Based on these assumptions, the total sample size calculated using the formula was as indicated below:

$$n = (z \alpha / 2)2 p (1-p) d^2$$

Where n is the required sample size.

Z =standard score, corresponding to a 95% confidence interval of 1.96; P = proportion; previous studies indicate the reference.

d = the margin of error between sample and population (precision) 5%

 $n = (1.96/2)^2 \ 0.58(1-0.58)/(0.05)^2 = 374Non$ response rate = 374X 10 /100 = 37 =411

### Sampling technique

Gimbi Town was home to three healthcare facilities—two hospitals and one health center—that offered ART services. A total of 1,352 ARTs were administered at these locations. Of them, 601 were affiliated with the Gimbi Health Centre, 416 with the Gimbi Public Hospital, and 335 with the Gimbi Adventist Hospital. Participants were chosen from the chosen healthcare facilities using a systematic random sampling technique after sample size proportionately the was distributed to each facility based population size (Figure 1).

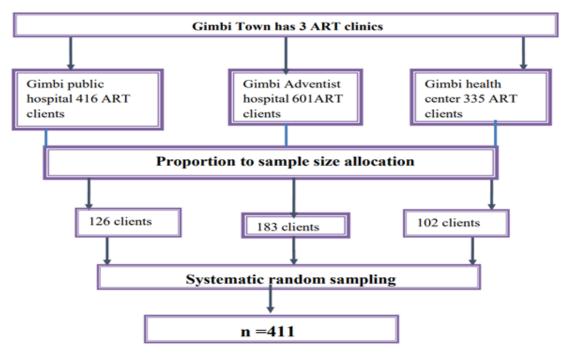


Figure 1. Schematic representation sampling procedure among ART client Gimbi Town, 2023

# The dependent variable: Fertility desire The independent variables

Age, sex, income, marital/relationship status, education, religion, occupation, and ethnicity examples of sociodemographic are characteristics. **Factors** connected to knowledge (regarding MTCT and PMTCT). Reproductive and behavioural traits (such as dread of MTCT, number of births, number of children, and gender of children) Individual factors (length of HIV diagnosis, sexuality and reproductive health counselling healthcare providers, discordant partners' sero differences).

#### **Data collection method**

Under the direction of the supervisor designated to carry out the data collection, three BSC health professionals who worked in the three designated ART care units gathered the quantitative data using a prepared questionnaire.

A one-day training session on the data collection instrument was provided to the data collectors. The responders were chosen at random from a predetermined, predefined period. From each site, three supervisors were chosen to serve as ART coordinators, and they closely supervised the lead investigator during the data gathering procedure. Then, as soon as the data is gathered and gets to the primary investigator for cross-checking, it is given to the supervisor.

#### **Data collection tool**

The data collection instrument employed in this investigation was modified from previous English-language studies on a similar subject (WHO, 2021). Experts in both languages then translated it into Afan Oromo, then for correctness and consistency, they translated it back into English (WHO 2021). Language experts in both languages have verified that the Afan

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Oromo translation uses proper terminology and is consistent in meaning.

#### Data quality assurance

The data collection tool was modified from earlier research on related topics that was prepared in English. Language experts then translated it into Afan Oromo and back into English to ensure the consistency of the questions. This ensured the quality of the data. (Eniyew et al., 2021; Dina et al., 2021; Assefa et al., 2023). Prior to the start of data collection, supervisors and data collectors received training on data collection instruments. Supervisors and data collectors received a one-day training on data gathering techniques, confidentiality, and privacy. Prior to the actual data collection on 5% of the sample size at Nekemte Health Centre, the questionnaires were pre-tested. Questions were rewritten and altered based on the results of the pre-test; those that were deemed unclear or irrelevant were eliminated. Every day, the primary investigator and a supervisor oversaw the data gathering procedure. Before the data was entered into computer software, they double-checked its correctness and completeness. Each question is assigned a unique numerical code, and once more, the coded data is input into EpiInfo version 7.2.

#### Data analysis technique

information **Ouantitative** was coded, imported into Epi Data 4.2, and then exported to SPSS 25 for Windows for examination. Tables and charts were used in the computation and presentation of descriptive data. The Hosmer and Lemeshow tests were used to evaluate the goodness of fitness of the model. Via the variance inflation factor, multicollinearity between independent variables was examined. In order to account for potential confounders, bivariate logistic regression was performed and variables with p < 0.25 were fitted to the final multivariable logistic regression. To determine the statistical significance and strength of the connection, factors in the final model with an adjusted odds ratio (AOR) of 95% confidence interval and a P-value < 0.05 were taken into account.

#### **Ethical consideration**

The Wollega University Institute of Health Sciences' ethical review board granted approval. Written to the West Wollega Zone Health Office was an official letter. The investigator submitted all correspondence to the appropriate authorities and was granted authorization to gather data when the Gimbi Town Health Office addressed formal letters to the relevant medical facilities. Before work started, all necessary permissions were obtained. Each responder was made aware that their participation in the study was entirely voluntary and that they could pause at any moment. Prior to data collection, all respondents provided written consent. All answers to the questionnaire were kept private and confidential, and the participant's name was not typed on it.

# RESULTS AND DISCUSSIONS Socio-demographic characteristics of the participants

From the total sample size (411), four hundred ten (410) participated in the study, making the response rate 99.8%. The age of the respondents ranges from 18 to 70 years, with a mean and standard deviation of  $35 \pm 8.462$ . With regard to the sex of the respondents, 257 (62.7%) were females and 153 (37.3%) were males. More than half, 234 (57.1%), were urban residents. The majority of the respondents, 335 (81.7%), were married and living together. By ethnicity, about three-fourths, 258 (72.7%) were Oromo. Of the total participants, 151 (36.8%) were unemployed at the time of the data collection (Table 1).

**Table 1**Socio-Demographic Characteristics of HIV positive adult attending ART units at GimbiTown, Oromia, Western Ethiopia 2023.N=410

Variables	Category	Frequency	Percent
	<=25 years	42	10.2
Age of participant	25-34years	150	36.6
	35-44years	166	40.5
	>=45	52	12.7
Sex of participant	Male	153	37.3
	Female	257	62.7
Marital status of participant	Single	26	6.3
	Married	335	81.7
	Divorced	17	4.1
	Widowed	32	7.8
Ethnicity of participant	Oromo	298	72.7
	Amhara	60	14.6
	Gurage	28	6.8
	Tigre	24	5.9
Religion of participant	Orthodox	170	41.5
	Adventist	30	7.3
	Protestant	146	35.6
	Muslim	64	15.6
Place of Residency	Urban	234	57.1
,	Rural	176	42.9
Educational status of	un able to read	81	19.8
participant	and write		1310
	primary education	136	33.2
	secondary	139	33.9
	education		
	college and above	54	13.2
Partner educational status	un able to read	56	13.7
	and write		
	primary education	151	36.8
	secondary	145	35.4
	education		
	college and above	58	14.1
	Employed	151	36.8
Occupational status of	Farmer	57	13.9
participant	Merchant	84	20.5
	Student	16	3.9
	Unemployed	102	24.9
Total monthly income of the	< 500	47	11.5
family	501-1000	99	24.1
	>1001	264	64.4

# Participants' knowledge about HIV and PMTCT

The majority of the respondents know at least one mode of HIV transmission from mother to child. The majority, 346 (84.4%),

of the respondents recognise that HIV transmits during breastfeeding, and 282 (68.8%) report that HIV transmits during delivery from mother to child. Three hundred seventeen (77.3%) participants responded that ART can reduce the risk of

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transmission of HIV from mother to child. Out of the 410 participants, more than half, 230 (56.1%), have lived with HIV for more than 5 years and are currently taking ART drugs. However, 276 (67.3%) didn't disclose

their sero status to their partners, and more than half (219 (53.7%) of currently FP users didn't disclose their status to their family planning provider (Table 2).

**Table 2**HIV and PMTCT knowledge of HIV positive adult attending ART units at Gimbi Town, Oromia, Western Ethiopia, 2023.N=410

Variable	Category	Frequency	Percent
	Don't know	49	12.0
Partner HIV status	I have no partner	65	15.9
	Negative	80	19.4
	Positive	216	52.7
Disclose HIV status to partner	No	276	67.3
-	Yes	134	32.7
Disclose sero status to family planning	Yes	75	18.3
provider	No	218	53.2
Year of HIV diagnosis	≤5years	180	43.9
	>5years	230	56.1
Year of ART starts	≤5years	183	44.6
	>5 years	227	55.4
HIV transmit from MTC during	Yes	250	61.0
pregnancy	No	160	39.0
HIV transmit from MTC during delivery	Yes	282	68.8
	No	128	31.2
HIV transmit from MTC during breast	Yes	346	84.4
feeding	No	64	15.6
ART reduce MTCT of HIV	Yes	317	77.3
	No	93	22.7

# Sexual activity and contraception among HIV positive people attending ART

Ninety-two percent (370) of the participants reported having engaged in sexual activity in the previous six months. Of them, 140 (34.1%) have ever used a condom; only 102 (24.9%) have done so on a regular basis. 343

participants, or 83.7%, said they had ever discussed sexuality and fertility goals with their ART service providers. In terms of fertility, 320 people (78%) had one to three children, whereas 294 people (71.7%) were currently using modern family planning (Table 3).

**Table 3**Sexual activity and contraception among HIV positive people attending ART at Gimbi Town, Oromia, Western Ethiopia 2023

Variable	Response	Frequency	Percent
	••		
Sexually active within thepast	Yes	370	90.2
six months	No	40	9.8
If so have you usedcondom	Yes	140	34.1
	No	230	56.1
Reason of condom use	To prevent pregnancy	47	33.6
	To prevent co infection.	84	60
	HIV negative partner.	9	6.4
Discuss about RH withhealth	Yes	358	87.3
care provider	No	52	12.7
Contraceptive utilization	Yes	293	71.5
	No	117	28.5
Reason of contraceptive	Health professional advised	11	2.7
utilization	It's good for my health	10	2.4
	I have enough number of children	125	30.5
	To prevent unwanted pregnancy	147	35.9
Where do you access	At ARV treatment units	19	4.6
family planning	Family planning unit	269	65.6
	From private pharmacy	5	1.2
Number of Alive children	0	52	12.7
	1-3	320	78.0
	<u>&gt;</u> 4	38	9.3

# Sexual activity and contraception among HIV-positive people attending ART

Most of the respondents are aware of at least one method by which HIV can be passed from mother to child. The majority of respondents—346 (84.4%) 282 and (68.8%)—acknowledged that HIV can spread from mother to child during nursing and childbirth. Among participants, 317 (77.3%) said that antiretroviral therapy lower the risk of HIV (ART) can

transmission from mother to child.Of the 410 individuals, 230 (56.1%) have been living with HIV for more than five years and are on antiretroviral therapy (ART) at this time. But 276 (67.3%) of the presently FP users did not tell their partners about their sero status, and over half (219 (53.7%) did not tell their family planning provider about their status.

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### Fertility Desire among People Attending ART

According to the majority of responders, there is at least one way for HIV to be transmitted from mother to kid. The majority of responders, 346 (84.4%) and 282 (68.8%), agreed that breastfeeding and delivery can transmit HIV from mother to child. Antiretroviral therapy (ART) can reduce the risk of HIV transmission from mother to child, according to 317

participants (77.3%).230 (56.1%) of the 410 people have been living with HIV for longer than five years and are now receiving antiretroviral medication (ART). However, 276 (67.3%) of the current FP users withdrew information about their sero status from their partners, and more than half (219 (53.7%) withheld information from their family planning provider.

**Table 4.**Fertility desire related characteristics of adult people attending ARV treatment units at Gimbi Town heath facility, 2023.

Variable	Response	Frequency	Perce <b>n</b> t
Desire to have	Yes	288	70.2
child	No	122	29.8
	Having child affects my health	10	2.4
Reason for not desiring more children.	No adequate income	84	20.5
	Fear of risk of MTCT	42	10.2
	Health providers advised me	9	2.2
	Fear of social discrimination	226	55.1

# Factors associated with fertility desire among HIV-positive adults attending ART clinics

People living with HIV who are receiving ART at Gimbi town health facilities have expressed a desire to procreate in response to a number of significant variables. Therefore, compared to women, men had three times the chances of wanting to have children [AOR 3.106; 95% CI, 1.379–6.998]. Compared to people living in urban areas, the odds of having fertility desire were lower for those living in rural areas [AOR 3.625; 95% CI, 1.582–8.308]. Compared to the working participants, the unemployed participants had

an 83% lower likelihood of desiring to have children [AOR 0.172; 95% CI 0.063-0.469]. Compared to those who have fewer or no children, study participants who have already had four or more children are 99% [AOR 0.004; 95% CI 0.000-0.064] less likely to desire fertility. Those who are aware of MTCT are five times [AOR 5.2; 95% CI, 6.-7.5] more likely to desire reproduction than those who are unaware of it. When comparing clients on ART treatment for less than five years to those who had used ART for more than five years, the odds of having fertility desire were three times higher [AOR 3.871. 95% CI. 1.721-8.706]. The

participant's educational status, the partner's educational status, telling the partner about one's HIV status, and the partner's HIV status

did not significantly correlate with the desire for reproduction (Table 5).

**Table 5**Bivariate and multivariate logistic regression analysis of factors associated with fertility desire among HIVpositive adults attending ART clinics at Gimbi town, Ethiopia, 2023.N=410

Variable	· ·	Fertility Desire	Fertility Desire		
	Categories	Yes	NO	COR(95%CI)	AOR(95%CI)
Sev	Male	106(69.3%)	47(30.7%)	1.390(0.91-2.13)	3.106(1.38-6.99)*
	Female	159(61.9%)	98(30.1%)	1:00	1:00
Dacidanay	Urban	138(59.0%)	96(41.0%)	1:00	1:00
	Rural	127(72.2%)	49(27.8%)	1.803(1.19-2.74)	3.625(1.58-8.31)*
Education	No formal	33(40.7%)	48(59.3%)	1:00	1:00
	Primary	83(61.0%)	53(39.0%)	2.278(1.29-3.99)	1.014(0.31-3.28)
status of	Secondary	111(79.9%	28(20.1%)	5.766(3.14-10.58)	2.090(0.62-7.06
participant	College and above	38(70.4%)	16(29.6%)	3.455(1.66-7.19)	0.945(0.17-5.29)
Partner	No formal	19(33.9%)	37(66.1%)	1:00	1:00
The state of the s	Primary	96(63.6%)	55(36.4%)	3.399(1.78-6.48)	2.466(0.68-8.90)
educational	Secondary	105(72.4%)	40(27.6%)	5.112(2.64-9.91)	1.312(0.33-5.29)
status	College and above		13(22.4%)	6.741(2.94-15.44)	1.181(0.19-7.15)
	Employed	117(77.5%)	34(22.5%)	1:00	1:00
Occupational	Farmer	27(47.4%)	30(52.6%)	0.262(0.14-0.49)	0.519(0.15-1.75)
status of	Merchant	58(69.0%)	26(31.0%)	0.648(0.36-1.18)	1.595(0.53-4.77)
participant	Student	12(75.0%	4(25.0%)	0.872(0.26-2.88)	0.179(0.03-1.07)
	Unemployed	51(50.0%)	51(50.0%)	0.291(0.17-0.50)	0.172(0.06-0.47)*
Number of	Haven't children	48(92.3%)	4(7.7%)	1:00	1:00
alivechildren	1-3children	215(67.2%)	105(32.8%)	0.171(0.06-0.47)	0.228(0.05-1.14)
	>=4	2(5.3%)	36(94.7%)	0.005(0.01-0.03)	0.004(0.00-0.06)*
Knowledge of	Yes	249(72.0%)	97(28.0%)	0.05(0.04-0.07)	[AOR 0.52;95% CI, 0'04 0.66.]*
MTCT	No	16(25.0%)	48(75.0%)	1:00	1:00
Years of ART	<=5	142(77.6%)	41(22.4%)	2.928(1.896-4.523)	3.871(1.72-8.71)*
utilization	>=6	123(54.2%)	104(45.8%)	1:00	1:00
Disclose HIV	Yes	93(69.4%)	41(30.6%)	1:00	1:00
status topartne	r No	172(62.3%	104(37.7%)	1.372(0.88-2.13)	1.023(0.38-2.75)
	Don"t know	33(67.3%)	16(32.7%)	1:00	1:00
Partner HIV	Haven"t partner	3(10.3%)	26(89.7%)	0.056(0.02-0.21)	0.042(0.01-0.281)
status	Negative	86(74.1%)	30(25.9%)	1.390(0.67-2.88)	8.928(2.14-37.21)
	Positive	143(66.2%)	73(33.8%)	0.950(0.49-1.84)	2.105(0.58-7.59)

**Note**:\*=significant variables during multiple logistic regression analysis at p< 0.05

According to this study, 64.6 [95% CI, 60.2-69.8] of adult HIV/AIDS patients who attend ART clinics at the Gimbi Town Health Facility aspire to become pregnant. Research from Fitche Hospital and the Afar region also

revealed similar results (Ayieko et al., 2017; Anbesu & Mohammed, 2021). Assefa et al. (2023) and Ashimi et al. (2021) conducted studies in Nigeria (75.8%) and the Harari region's Hiwot Fana specialist hospital

(69.5%), respectively, yielded higher results than the current finding. This discrepancy can result from the study population's varied sociocultural backgrounds, the study site, or the historical period.

Men's desire for fertility was higher in this study (69.3%) than women's (61.9%). This outcome was comparable to research conducted in the Western Shoa Zone and the Harari Regional State (Haile et al., 2014; Abebea & Endazenaw, 2015). This could be the case because pregnant women experience more pain and worry more about the possibility of vertical HIV transmission to the foetus. They also believe that pregnancy and childbirth would exacerbate their HIV infection.

Place of residence was another strongly correlated factor with desire for fertility in these populations. Compared to their peers, those who reside in rural areas are more desirous of being fertile. This study's findings were in line with research from the west Shoa zone and southern India (Jose et al., 2016; Abebea & Endazenaw, 2015). This is because parents in rural areas want more children than in urban areas because they perceive them to have greater influence. Individuals who are four or more times pregnant are less likely to aspire to become pregnant. This result was in line with research conducted in northern Nigerian suburbs (Ashimi et al., 2017). Our study's findings were consistent with research carried out in other parts of Ethiopia (West Shoa zone, Jimma town, Addis Abeba) (Asfaw & Gashe, 2018; Abebea & Endazenaw, 2015). This could be the case because those without children might feel purposeless in life and want to experience motherhood.

It was also discovered that one of the elements influencing a person's desire for children was their occupation. Compared to those who were employed, those without jobs in this study were less likely to aspire to have children. The findings of this study were consistent with research carried out in Ethiopia's Dodota areas, which discovered that jobless individuals had a lower inclination to wish more children than those who were employed (Kebede et al., 2019). This may be related to the fact that unemployed persons will not be able to support a family financially.

Understanding the transmission from mother to child is another crucial component of the desire for fertility. People who are aware of the transmission of diseases from mother to child are less likely to desire to have children. The research done in Addis Abeba and Hawassa City (Eniyew et al., 2021; Asfaw & Gashe, 2018) yielded results comparable to this one. On the other hand, the Fitche Hospital study in North West Ethiopia found no correlation between the desire for reproduction and knowledge about mother-to-child transmissions (Dina et al. 2021; Mekonnen et al., 2019). The variations may result from the diverse cultures present in the study sites and from variations in the study population.

The length of time that ART was used was another factor that was linked to desire for fertility. Compared to people who use ART for longer than five years, those who stop using it earlier had four times higher

rates of fertility aspirations. The findings of this study were consistent with research carried out in the west Shoa zone, the Afar area, and the Harari regional state (Anbesu & Mohammed, 2021; Haile et al., 2014; Dina et al., 2021). Given the similarities of those studies, it is possible that most participants in both came from places with easy access to HIV/AIDS resources, including knowledge, care, and support.

#### **Conclusion and Recommendations**

The study looked at the level of reproductive desire and factors related to it in adult HIV-positive patients who visit ART clinics. The study found that among HIV-positive individuals enrolled in ART programmes, there was a significant incidence of fertility desire. In the study area, this is a significant public health concern. According to a multivariate logistic regression analysis, people who are male, live in rural areas, are unemployed, have less than four living children in their family, and don't know much about mother-to-child transmission are more likely to want to have additional children.

#### Recommendations

In addition to integrating family planning counselling and resources with ART clinic services, ART providers will strive to improve education and counselling about the implications of having children for HIV-positive individuals.

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#### **DECLARATION**

The authors declare that they have no competing interest

#### DATA AVAILABILITY

Data will be made available on request.

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