HIV POSITIVE STATUS DISCLOSURE TO SEXUAL PARTNERS AMONG WOMEN PLWHA AT HAWASSA REFERRAL HOSPITAL, SNNPR - ETHIOPIA

BY

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List of Abbreviations

AIDS – Acquired immunodeficiency syndrome

AOR- Adjusted odds ratio

ART- Anti-retroviral Therapy

ARV- Anti-retroviral

BSS- Behavioral surveillance survey

EDHS- Ethiopian demographic and health survey

F/P-Family planning

HIV- Human immune deficiency virus

HAART- Highly active anti-retroviral therapy

MTCT- Mother to child transmission

OR - Odds Ratio

PLWHA –Peoples living with HIV/AIDS

PMTCT- Prevention of mother to child transmission

SD- Standard deviation

SNNPR- South Nation and Nationalities Peoples Region

SPH – School of Public Health

VCT – Voluntary counseling and testing

WHO- World Health Organization

Abstract

Background: Disclosure of HIV status may lead to increased opportunities for social support, to discuss and implement HIV risk reduction with partners and improved access to treatment. Thus, status disclosure is major public health goal for HIV prevention & treatment

Objective: Determine the magnitude and determinants of HIV sero-status disclosure to sexual partners among women people living with HIV/AIDS at Hawassa Referral Hospital, SNNPR.

Method: A Cross sectional survey was conducted among 384 HIV positive women who had sexual partner and age 18 years attending ART clinic from March to April 2008. Using a structured and pre-tested questionnaire, data were collected through patient interview consecutively until the required number reached over one month period. Ethical clearance from concerned bodies and informed consent from participants was obtained.

X^2 tests, odds ratios and logistic regression were done to explore associations between different variables and status disclosure.

Result: Overall 85.7% the women had disclosed their HIV positive status to their sexual partners. The common barriers reported for non disclosure of HIV status were fear of abandonment; fear of break-up in relationship and fear of stigma. The negative partner reaction reported by those women who disclosed to sexual partner in this study was found to be high (59.3%). Majority (77.9%) had sexual intercourse in the past 6 month. 9.1% of the women were pregnant since they tested for HIV and condom was inconsistently used by most of the women. Being married, taking ARV treatment for more than one year and knowing the HIV status of the sexual partner were predictors of HIV positive status disclosure.

Conclusion: Even though, the magnitude of HIV positive status disclosure to sexual partner in this study is encouraging, negative partner reactions following disclosure were reported by large proportion of women. Follow up counselling, couple counselling and testing, integrating ART service to reproductive health service particularly F/P should be emphasized in order to facilitate safe status disclosure and to address the sexual and reproductive health needs of PLWHA's.

1. Introduction

The estimated number of people living with HIV worldwide in 2007 was 33.2 million, a reduction of 16% compared with the estimate published in 2006 (39.5 million), and 2.5 million people infected in the year 2007(1, 7).

Sub-Saharan Africa continues to be the region most affected by the AIDS pandemic. More than two out of three (22.5 million) adults and nearly 90% of children infected with HIV live in this region and 76% (1.6 million) AIDS deaths in 2007 occurred there, illustrating the unmet need for antiretroviral treatment in Africa (1). Over and above the personal suffering that accompanies HIV infection wherever it strikes; HIV in Sub-Saharan Africa threatens to devastate whole communities, rolling back to decades of progress towards a healthier and more prosperous future (4).

Through adjustments of the 2005 antenatal care site surveillance and DHS-Plus factors, in Ethiopia 977,394 Peoples were living with HIV/AIDS. The overall adult HIV prevalence rate was estimated to be 2.1 % (1.7% males and 2.6% females for 2007). The rural and urban HIV prevalence was 0.9% and 7.7% respectively (2, 3).

The total number of PLWHA in SNNPR for 2007 was 132,410, of which majority (59%) were females. The adult HIV prevalence was 1.4% (1.2% for male and 1.7% for female). The total PLWHA in need of ART for the same year were 34, 254. According to the report of MOH (2006), the total people involved in VCT in SNNPR were 75,562 (40,867 male and 34,695 females) with sero positive status prevalence of 9%. The number of health institutions providing VCT, ART and PMTCT in the region were 217, 36, and 58

respectively. Until mid 2006, the number of AIDS cases on ART was reported to be 4259 (52.4 % female, 44.2 % males, and 3.4% children) (2, 3).

The prevention and control of human immuno-deficiency virus (HIV) infection depends on the success of strategies to prevent new infections and treat currently infected individuals. HIV testing and counseling serves as both a critical prevention and treatment tool in the control of the HIV epidemic. Within HIV testing and counseling (VCT) programmes, emphasis is placed on the importance of HIV status disclosure among HIV infected clients, particularly to their sexual partners (5).

Disclosure provides many important benefits to the infected individual and to the public. First, disclosure may motivate sexual partners to seek testing, change behaviour and ultimately decrease transmission of HIV. In addition, disclosure may facilitate other health behaviors that may improve the management of HIV. For example, women who disclose their status to partners may be more likely to participate in programmes for prevention of HIV transmission from mothers to their infants (6).

Through disclosure of her status, a woman may receive support from her family or others in her social network and may be able to access available support services. By adequately addressing the emotional, social, and practical sequelae of her positive status, she may be more willing to adopt and maintain health behaviour such as cessation of breastfeeding or adherence to treatment regimens (5, 6).

However, disclosure of HIV status may have potential risk for the infected women. These risks include loss of economic support, blame, discrimination, disruption of family relationship and so on. These risks may lead women not to disclose their sero-status, which

in turn leads to missed opportunities for prevention of new infections to their partners and infants (5, 8).

In a setting where women's access to resources independent of their partner is uncommon, disclosure is a question of survival and thus the negative outcome of HIV positive status disclosure is a serious concern. The absence of social security and health insurance in most African countries also make women dependent on their partner and family for their health care, therefore women may choose not to disclose their HIV status in order to benefit from family support (5).

There are reports that indicate HIV infected pregnant women are not fully participating in the PMTCT program. According to the Ethiopian DHS of 2005, to date only about 2% of HIV positive pregnant women needing PMTCT have benefited from the services (31).

One of the reasons for low participation is that, non-disclosure of HIV test result to sexual partners. The uptake and adherence to PMTCT is difficult for women whose partners are unaware of their status (6).

Therefore, this study assessed the magnitude and determinant of HIV positive status disclosure among women and may give recent valuable data that can be used to compare with results of similar research in Ethiopia and other countries. Furthermore the finding will be an input to the HIV prevention endeavor in devising evidence based intervention regarding sero-status disclosure.

2. Literature Review

2.1 Rates of HIV sero-status disclosure.

Meta analysis conducted by WHO on HIV status disclosure showed that, for developed countries the disclosure rate to sexual partners ranged from 42% to 100%, depending in large part on the type of sexual partner to whom the person disclosed. Among the studies, that reported disclosure rates to current and/or steady sexual partners the average rate of disclosure was 79%. For developing countries, the rate of HIV status disclosure to sexual partners ranged from 16.7% to 86%. Among the studies, that reported disclosure rates to current and/or steady partners the average rate of disclosure was 49%, considerably less than the average rate reported from studies conducted in the developed world (79%) (5).

A study done in southern USA showed that, majority of the women had disclosed to some sex partners, close family and friends, and health care professionals. However, for 3.8% of the women disclosure of HIV infection is a difficult issue (8).

A study conducted in New York City, among 230 HIV positive women from out patient clinic, 82% of the women disclosed their HIV positive status to sexual partner(9)

Even though, status disclosure is higher in developed countries, in some studies it was found to be low. For instance, a study conducted on 2 sites; Boston City Hospital HIV Diagnostic unit and Rhode Island Hospital HIV clinic showed, 60% of individuals had disclosed their HIV status to all sexual partners and 40% had not disclosed (10).

A study carried out among hospital cases on French Antilles and French Guiana indicated that, one third of PLWHA had kept their HIV status secret. Disclosure within a steady partnership was less likely among non-French individuals (11). A research carried out on

disclosure among HIV positive Black Africans men and women living in UK showed that, majority of the participants had disclosed to one person **(**12)**.**

Three month after voluntary counseling and testing, 64% of HIV positive women and 79.5% of HIV negative women reported that they had shared HIV test result with their partners in Dar es Salaam, Tanzania (13).

A study done in Nairobi, Kenya among HIV positive pregnant women attending antenatal clinic, 65% of the women had informed partners their HIV status and 27% brought their partners for HIV testing (14).

Relatively high (84.9%) disclosure rate two weeks after testing was reported from study conducted on the pregnant women screened for HIV in Kigali, Rwanda (15).

The local study conducted in Gore and Mettu Towns, and St. Paul Hospital, Addis Ababa, Ethiopia, showed HIV positive status disclosure rate of 69% and 92% respectively (16, 40)

2.2 Determinants of HIV positive sero-status disclosure to sexual partner

A WHO cross country review of women sero positive status disclosure found that

HIV positive sero-status disclosure may be affected by many factors. These factors include, socio-economic status, age, duration of relation with the partner, level of education, culture, discussion on HIV and its test among the partners before the test, number of partners and so on. In addition, variation in rates of HIV status disclosure to sexual partners among different ethnic groups was also identified. This suggests that there may be important cultural factors that influence the patterns of self-disclosure to sexual partners. It is also indicated that, as the length of time since diagnosis increases the rate of disclosure also increase (5).

A study conducted in Paris, France on HIV positive patients in ambulatory HIV clinic, 42.5% of the participants disclosed immediately, 21% waited one month, 24% waited more than one year to disclose. Women disclosed immediately after learning status more often than men (17)

The numbers of sexual partners affect status disclosure. Women who have fewer sexual partners are more likely to disclose their HIV sero positive status than those with multiple partners. From the Boston City Hospital HIV Diagnostic Evaluation Unit, and Rhode Island Hospital HIV Clinic study, of those individuals with 1 partner, 21% had not disclosed their sero-status; 58% of those with 2 or more partners had not informed all their partners (10).

HIV sero-positive status disclosure depends on modes of transmission of the disease. From one study in Taiwan, the rate of status disclosure was 36% in men having sex with men, 34% in heterosexuals, and 21% in injection drug users. Men having sex with men were more likely than heterosexual men or male injection drug users to disclose their HIV status directly to friends immediately after learning of their HIV diagnosis (18)

Partner involvement in the pre-test counseling can determine the HIV sero-status disclosure. A study done to evaluate the influence of partner participation in the mother class to the PMTCT services in Cambodia, showed the acceptance rate to the pre-test counseling as well as disclosure of their results to their partners is higher among those with their partner involvement (19).

2.3 Barriers to HIV sero-status disclosure

HIV related stigma and discrimination remains an enormous barrier to effectively fighting HIV/AIDS epidemic in Africa. Fear of discrimination often prevents people from being tested, seeking treatment for AIDS or from admitting their HIV status publicly; which in turn can have implications for health care and further HIV transmission (4).

Measures to reduce MTCT of HIV, especially the administration of antiretroviral drugs, and avoidance of breast-feeding, make it virtually impossible for HIV positive women to keep their HIV infection a secret from their families and people in the wider community. It is therefore essential to the safety and acceptability of MTCT interventions that effective steps to be taken to combat rejection of PLWHA. Where women fear discrimination, and violence, they will be reluctant or unable to take advantage of opportunities offered to protect their infants from infection (6, 8).

Particularly in developing countries, fear of abandonment in women was closely tied to fear of loss of economic support from a partner. In these settings where resources are extremely scarce and women's access to resources independent of their partner is uncommon, fear of losing instrumental support from a partner is a major consideration when deciding whether to share results or not. The absence of social security and health insurance in most African countries also make women dependent on their partner and family for their health care, therefore women may choose not to disclose their HIV status in order to benefit from family support (5, 8, 13, 16, 33).

In addition, the decision to disclose HIV status involves a cognitive appraisal of negative consequences that is based on an individual’s knowledge of HIV, attitudes toward

HIV/AIDS or HIV-related behavior and perceived social attitudes towards people with HIV(8).

Fear of rejection and change in relationship were the main barriers reported by the participants to disclose HIV positive status in Paris, France (17).

Similarly study conducted in China showed, willingness to disclose was negatively associated with misconceptions about HIV transmission and stigma. Stigma mediated the relationship between misconceptions and willingness to disclose among women but not men. The mediation effect of stigma suggests that stigmatization reduction would be an important component of HIV prevention approaches. Gender inequality needs to be addressed in stigmatization reduction efforts (20).

A study done on African-American women in New Orleans, USA, showed 44 % of the participants had not disclosed to sexual partner; due to fear of losing economic support from sexual partners (21).

Researches conducted in Zaire, Burkina Faso, Kenya, Thailand, Tanzania, and Rwanda found that the reason for not sharing the HIV status to sexual partner were fear of being accused as the source of infection, fear of accusations of infidelity or being considered unfaithful, fear of separation/divorce, fear of shaming their family, fear of being rejected or abandoned, and fear of blame (14, 22, 23).

A study conducted in "Khayelitsha MTCT Pilot Project", South Africa; revealed that women who had not disclosed raised the issue of fear of rejection, discrimination, verbal abuse and concerns about public ignorance of the disease (31).

In Ethiopia, according to the 2005 EDHS and BSS reports, the proportion of respondents with an accepting attitude towards PLWHA is low. This indicates the existence of extensive HIV related stigma in the country, which can affect status disclosure (24, 25).

2.4 Outcomes of HIV sero-status disclosure to sexual partners

Most studies, both in developing and developed countries reported that positive outcomes were common following disclosure. Positive outcomes reported by women include increased support, acceptance (neutral), and kindness (5).

A study conducted on women receiving care at a clinic in London, UK, 57% of HIV positive women disclosed their status to their parents and reported that their parents were supportive (26).

Similarly 76% of HIV positive women in Baltimore, USA, reported acceptance, support, and understanding after disclosure (27).

More than two third of the women in Rwanda and Tanzania reported that their relationship continued after HIV positive status disclosing to their partners (28).

Disclosure was associated with less anxiety, fewer symptoms of depression, and increased social support. The negative outcomes of disclosure reported by the respondents include blame, abandonment, anger, violence, stigma, and depression. An important finding from both developed and developing country studies is that disclosure was not associated with the break-up of long-term relationships. Even if the fear of most women to disclose is break-up of relations, disclosure was not associated with abandonment (5, 16).

A study conducted on HIV positive mothers attending an outpatient clinic in Cape Town, South Africa, 27% of women reported at least one problem with disclosure, 13%

experienced violence from partners following disclosure, 9% reported that their partner left them, and 3% said they were forced to move away from their home (29). From the study in Tanzania 14.6% of partners reacted violently following disclosure (28)

Study done on HIV Voluntary Testing and Counselling Efficacy Trials in Tanzania, Kenya, and Trinidad, 27% reported a break-up of a sexual relationship, 5% reported a break-up in the marriage and 4.5% reported physical abuse by a sexual partner (30).

2.5 Disclosure to partners compared to family members and friends

Studies indicated that, many participants have specific criteria for deciding to whom to disclose. These criteria were, based on one of three factors: their relation to the person (health care provider, sexual partner or family member), the quality of their relationship (accepting versus rejecting) and the perceived ability of the other person to keep the information confidential. For many of the women, health care providers, or at least those health care providers rendering direct care, represented a group that 'needed to know' (8).

Self-disclosure of HIV infection examined among 105 African-American men and 264 European-American men in Los Angeles showed that the African-Americans were less likely to disclose their sero-status to intimate lovers, close friends, and family members or to discuss HIV-related worries with others (13).

A study done in Baltimore, Miami, Newark, USA, 89% of individuals had disclosed their HIV status to at least one other person 6 to 24 months after being tested; 28% reported that they had first disclosed to a sexual partner, 31% had first disclosed to a relative and 29% reported they had first disclosed to neither a sexual partner nor a relative (32)

A study conducted in Taiwan indicated, 72.4% had disclosed their HIV status to at least one person, including 62% to an immediate family member and 21% to friends. Heterosexual men and male injection drug users often disclosed to their immediate families a few days after obtaining an HIV diagnosis. Perceived consequences after disclosure included: increased substantial support from family, assistance with medical and healthcare, encouragement of living positively with HIV, being rejected, treated as contagion, and condemnation. In general most of the people disclose their HIV status to their intimate family member or friend than their sexual partners (18).

2.6 Behaviour change related to HIV status disclosure

Many researches found that condom use is more common among those women who disclosed their status than those did not (5, 16).

The finding from Boston City Hospital HIV Diagnostic Evaluation Unit and Rhode Island Hospital HIV Clinic study showed, non-disclosers were less likely to regularly use condoms than disclosers are; as a result, sexual partners of HIV-infected persons continue to be at risk for HIV transmission (10).

A study conducted in South Africa found that, participants who had not disclosed to their sex partners were significantly more likely to have multiple partners, HIV negative partners, partners of unknown HIV status, and unprotected intercourse with non-concordant sex partners (33).

It was also indicated that sexual risk behavior is higher among HIV infected peoples on preventive therapy than those on HAART. This may be due to repeated counseling of patients on risk behavior during care provision. Study conducted in Mombassa, Kenya

showed in both the HAART group and the preventive therapy (PT) group, around 40 percent of PLWHA did not know their regular partner's HIV status and about 20 percent did not disclose their own status to their regular partners. Lack of knowledge of partner's sero-status and low levels of disclosure of one's own HIV status, coupled with inconsistent condom use, sets the stage for HIV transmission to sero-discordant partners, especially within regular partner relationships. Transmission of resistant viral strains and re-infection with new strains are serious public health risks. Unprotected sex also carries the risk of unwanted pregnancy and the subsequent risk of HIV transmission to the child (34).

3. Objectives

3.1 General objective

Determine the magnitude and determinants of HIV sero-positive status disclosure to sexual partners among women PLWHA at Hawassa Referral Hospital, SNNPR.

3.2. Specific Objectives

- Assess the magnitude of HIV positive status disclosure to sexual partners
- Identify barriers to HIV positive status disclosure to sexual partners
- Determine the outcome of HIV positive status disclosure to sexual partners
- Assess the determinants of HIV positive status disclosure to sexual partners

4. Method and Materials

4.1 Study design and period

Cross sectional study was conducted from March to April 2008.

4.2 Study area*:*

The study was conducted in Hawassa Referral Hospital, Hawassa town, which is the capital city of South Nations and Nationality Peoples Region (SNNPR) and is located 270km south of Addis Ababa.

Hawassa city has a total population of 200,000 (35). There are different levels of both government and private health institutions offering health services in the city.

Hawassa Referral Hospital is the only Referral Hospital in the City as well in the region. It was established in 2004/05GC and currently provides comprehensive health services (prevention, curative and teaching) including ART and PMTCT. The ART clinic was established in June 2006GC. At the end of February 2008, 1110 cases were on ART and 731 cases were on pre-ART follow up in the clinic. Of those on ART (1110), the total numbers of pediatric age groups were 56. The service is rendered by one physician, five nurses, one laboratory technician, one pharmacy technician and one data clerk; who were trained on VCT and ART.

4.3 Source and Study population

All PLWHA attending the ART clinic in the Hospital were source population. And women who had sexual partner and attending ART clinic at Hawassa Referral Hospital were the study subjects.

Inclusion: Study subjects were women who had sexual partners and at least 18 years old; able to give informed consent, and not seriously ill.

Exclusion: exclusion criteria were women whose age is less than 18 years old, absence of sexual partner, unable to hear, mentally disabled or unconscious.

4.4 Sample size determination

The sample size required for this study was determined using the formula for estimating single population proportion. The prevalence of HIV status disclosure from the previous study for developing countries on average was 49% (6).

Using 5% level of significance and 5% margin of error (precision) the sample size was:

$$n = \frac{Z_{1-\alpha/2}^2 P(1-P)}{d^2}$$

Where,

n= minimum sample size

Z= 1.96 (95% confidence interval)

p=anticipated population proportion or prevalence

d= margin of error

$$n = \frac{1.96 \times .49(1-.49)}{.05^2} = 384$$

A total of 384 women were used for this study.

4.5 Sampling techniques

Study subjects were selected using convenience sampling method. Patients came to ART clinic and contact the data clerk. At this point women who had sexual partners were identified by asking the respondents themselves. Based on the inclusion criteria all eligible

PLWHA women who came for follow up and treatments from March to April 2008, over one month period, were interviewed consecutively until reaching the required sample size.

4.6 Data collection

4.6.1 Data collection tools

The questionnaire format was taken from the previous study done in Addis Ababa (40); modified and additional questions were also added from other sources (16). Questions were first prepared in English and then translated into Amharic and then back to English.

4.6.2 Data collection method

The information was collected from the 384 patients on follow up and ART. After the aim of the study was clearly explained, informed consent obtained from the respondents and interviewer administered questionnaire was used to collect the data.

4.6.3 Recruitment and training of data collectors

Recruitment- Three data collectors were selected; all of them were female nurses who were working in the ART clinic and one supervisor, who was in charge of the ART clinic coordination.

Training- Training was given for the data collectors and the supervisor by the investigator for two days, using lecture and role play method of training. The objective of the study, method of interview, how to keep confidentiality, and way of handling and approaching study subjects was given due attention during training. A manual on HIV status disclosure to sexual partner (benefits, potential risks, and barriers) was given to each interviewer and supervisor.

4.6.4 Data quality assurance

Questionnaire were formulated from previous studies and translated from English to Amharic and back to English to assure consistency. Then, questionnaire was pre-tested after which the relevant changes were made with the input from pre-testing.

Pre-testing

Before the actual data collection pre-test was carried out on 15 subjects, who were not included in the proper study but were client of ART clinic, to check whether the data collectors understood the questions in similar way and collect the intended information as well evaluate the completeness and the consistency of the questionnaires. Then after, minor modifications were made.

The collected data were checked for completeness, accuracy, clarity and consistency by the supervisor and principal investigator. Daily strict follow up and checking of the data collected was done in order to manage any problem encountered. Timely feed back was given for the data collectors and the supervisor through meeting that was held before the next day data collection began

4.7 Data process and Analysis

Data was entered, edited, and coded in to EPI info version 2002 computer software, and finally 10% of the data entered was cross checked. Minor discrepancies related to error in data entry were found and rechecked from the original hard copy questionnaire and then corrected.

Data was analyzed using SPSS version 12.1 and EPI info version 2002 software. Tables were generated using cross tabulation comparing status disclosure with other variables. Logistic regression analyses were done to identify the relation ship between sero-status

disclosure and the independent variables. Frequency, Odds Ratio with 95% CI and P-value were used to present the finding.

4.8 Variables

4.8.1 Independent Variables

- Socio-demographic variables such as age, occupation, marital status, religion, ethnicity, educational level, monthly income
- Type of partnership
- Membership to PLWHA association
- Discussion between couples on HIV related issues
- Duration of relation with partner
- Duration since tested and duration since ARV treatment started
- Knowledge of partner HIV status
- Condom use

4.8.2 Dependent Variable

HIV positive status disclosure

4.9 Ethical Consideration

Ethical clearance for the proposal was obtained from the Research and publication Committee, Faculty of Medicine, Addis Ababa University. Written letter of permission was obtained from, school of pubic health Addis Ababa University and Hawassa Referral Hospital Medical Director.

The aims, purpose, benefit and method of the study was clearly explained to the participant. All of the study participants were informed that, their response will be kept secret; and only health workers who were currently working in the ART clinic collected the data. Finally, they were interviewed after informed consent was obtained. The interview was conducted in a way that it would not violate their privacy and confidentiality of information. Thus, name and address of the interviewees was not recorded in the questionnaire.

The respondents were informed that they have the right to be involved or not to be involved in the study, and that non-involvement otherwise will not affect the clinical care they receive.

4.10 Operational Definition

- **Sexual partner**: -is a person with whom one engages in sex acts**.**
- **Regular partner** -means spouse(s) or live-in sexual partners or regular boy friend
- **Non-regular partner-** Sexual partners that one is not married to and never lived with that partner
- **Cohabiting partners** -partners who are not married but living together
- **Outcome of disclosure:** Considered as positive outcome, if the partner reaction following disclosure is acceptance and increased support; but considered as negative if the reaction is abandonment, anger, and blame.
- **HIV sero-positive status disclosure to sex partner** - refers to the act of informing the HIV sero-positive status of an infected person to sex partner by the person herself.
- **Chat/ khat**: is a substance which is used by some one for stimulant purpose.

4.11 Dissemination of the result

The study result will be disseminated to SPH, Medical Faculty of Addis Ababa University, EPHA, SNNPR Health Bureau and Referral Hospital. Attempts will be made to publish the finding in peer-reviewed journal and present in scientific conference.

5. Result

5.1. Socio-Demographic Characteristics

Majority 348 (90.6%) of respondents were from urban area. The dominant ethnic groups were Wolayta and Amhara, 116 (30.2%) and 109 (28.4%) respectively. More than half (54.4%) of the women were Orthodox Christians. The age range of the study participant was from 18 to 57 years and 293 (76.3%) of them were less than 35 years old with mean (SD) of 29.5 (7.1) years (Table 1).

One hundred and twenty (31.3%) have attended primary school, (39.6%) were house wives, 247 (64.3%) were married and 215 (56%) had an average monthly income of less than or equal to 250 Ethiopian birr. The average monthly income of the respondent's sexual partner was above 250 Ethiopian birr for half 201 (52.3%) of them (Table 1).

Two hundred seventy (70.6%) of them were not members of PLWHA association and two hundred fifty seven (66.9%) of the women were taking ARV drugs and 127 (33.1%) were on pretreatment follow up.

The duration of diagnosis for the study subjects ranged from 1month to 84month. One hundred fifty seven (43.3%) of the study participants had known their HIV status for less than one year but the rest 206 (56.7%) of the women knew their positivity and lived with HIV for more than one year.

Table 1 Socio-demographic characteristics of women PLWHA attending ART clinic, Hawassa Referral Hospital, SNNPR, April 2008.

Variables (n=384)	Number	%
Address		
Urban	348	90.6
Rural	36	9.4
Age(in years)		
18-24	102	26.6
25-34	191	49.7
35	91	23.7
Religion		
Orthodox	209	54.4
Protestant	122	31.8
Muslim	40	10.4
Other	13	3.4
Educational level		
Do not read and write	86	22.4
Read and write	36	9.4
Primary	120	31.3
Secondary	102	26.5
Certificate and above	40	10.4
Occupation		
Government employee	51	13.3
House wife	152	39.6
Merchant	63	16.4
Daily laborer	47	12.2
Student	31	8.1
Farmer	21	5.5
Others	19	4.9
Ethnicity		
Wolayta	116	30.2
Amhara	109	28.4
Sidamo	61	15.9
Oromo	41	10.7
Gurage	27	7
Others(Kambata, Hadya, Gamu)	30	7.8
Current marital status		
Currently married	247	64.3
Cohabiting	71	18.5
Never married	25	6.5
Others(Divorced, Widowed)	41	10.7
Monthly own income (in ETH. Birr)		
No income	30	7.8
250	215	56
251-500	48	12.5
501	91	23.7
Membership to any PLWHA Association		
Yes	113	29.4
No	271	70.6

5.2 HIV/AIDS related knowledge, substance use, sexual behaviour and condom use of study subjects

Three hunderad and sixty five (95.1%) of the respondents knew that they can transmit HIV to their sexual partner but 16(4.2%) did not. 349(90.9%) of the respondents did know how to protect their sexual partner from being infected with HIV. Of those who knew way of prevention, 348(99.7%) reported condom use can prevent transmission of HIV to sexual partner. Of the 348 women who did know condom use in HIV prevention, 12(3.4%) did not know the place or person where they can get condom. 364(94.8%) of the respondents never had alcohol in the last 30 days. Twenty (5.2%) and seventy (4.4%) of the study subjects had alcohol and chat respectively once or more in the last 30 days prior to the study (Table 2).

359 (93.5%) of the women had at least one sexual partner and 25 (6.5%) women did not have sexual partner during the survey. Of all (384) women 346 (90.1%) of the women reported to have regular sexual partner and the rest 38(9.9%) have non regular partners. 299(77.9%) had sexual intercourse in the past 6 month. Thirty five (9.1%) of all women were pregnant since they tested for HIV, of these 25(71.4%) gave birth, 10 (28.6%) were pregnant during the study period. The pregnancies were not intentional in 9(25.7 %.) and also 5(20%) of those women who gave birth did not have access to PMTCT services for last delivery (Table 2).

The number of current sexual partners of the respondents were two for 12(3.1%) and three and above for 7(1.8%) of the women (fig 1).

Concerning condom use, only 30.6% of regular and 60.5% of non regular sexual partners used condom always since they knew their HIV positive sero status. Where as condom use by the women the last time they had sexual intercourse with their partner was 67.9% for regular and 91.9% for non regular partner.

The common reason for non use of condom as it was reported by the participants were; partners objection (34.9% of regular and 60% of non regular), in order not to be suspected by sexual partner (37.2% of regular and 40% of non regular), and being HIV positive sexual Partner(19.8% of regular and 40% of non regular partners).

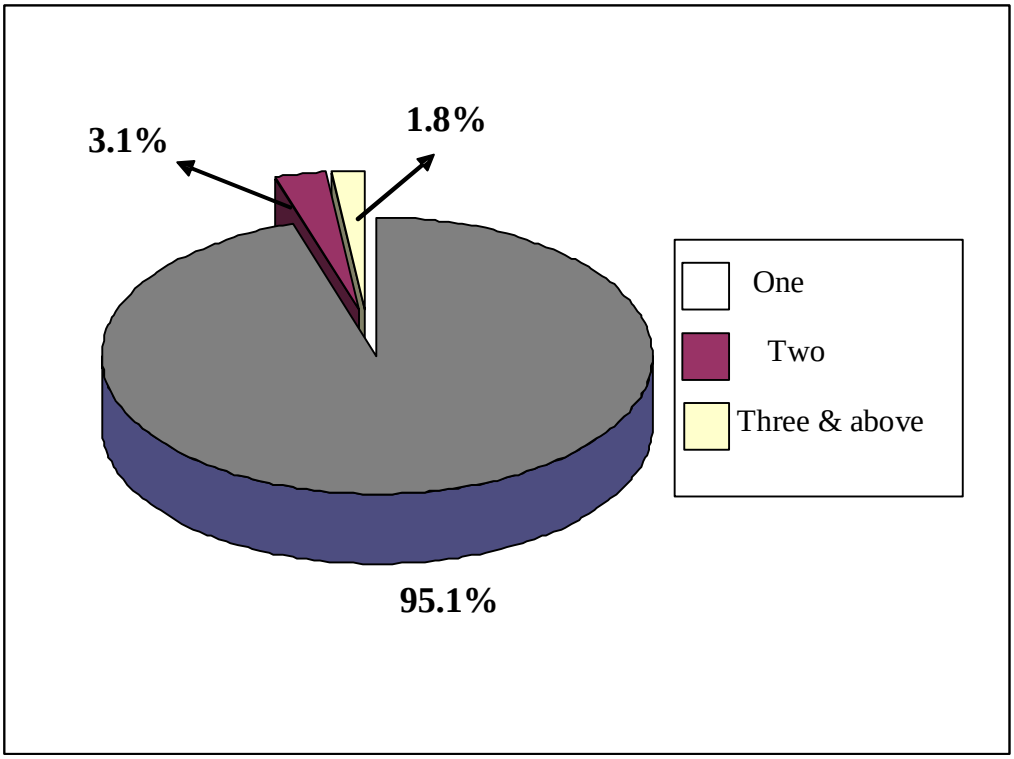

Fig: 1 Number of current sexual partners of women PLWHA attending ART clinic, Hawassa Referral Hospital, April 2008

Table 2 HIV/AIDS related knowledge, substance use, sexual behaviour and condom use of women PLWHA attending ART clinic, Hawassa Referral Hospital, SNNPR, April 2008

Characteristics	Number	%
Knowledge on transmission of HIV to sexual partner (n=384)		
Yes	365	95.1
No	3	0.8
Do not Know	16	4.2
Knowledge of protecting partner from HIV (n=384)		
Yes	349	90.9
No	35	9.1
Knowledge on condom use to prevent HIV transmission to sexual partner (n=349)		
Yes	348	99.7
No	1	0.3
Knowledge of source of condom(n=348)		
Yes	336	96.6
No	12	3.4
Alcohol use in the past 30 days (n=384)		
Never	364	94.8
Yes, once per month	7	1.8
Yes, once per week	12	3.1
Yes, daily	1	0.3
Chat use in the past 30 days (n=384)		
Yes	17	4.4
Never	367	95.6
Pregnancy after HIV test (n=384)		
Yes	35	9.1
No	349	90.9
Gave birth after positive HIV status (n=35)		
Yes	25	71.4
No	10	28.6
Pregnancy intention (n=35)		
Wanted	26	74.3
Unwanted	9	25.7
Access to PMTCT for last delivery (n=26)		
Yes	21	80.7
No	5	19.3

5.3 Rate of HIV Positive Status Disclosure

5.3.1 Rates of HIV positive status disclosure among all study participants

Three hundred and fifty four (92.2%) of the respondents disclosed their HIV positive status to anyone and 329(85.7%) disclosed to their sexual partner. However, for 55(14.3%) of the women disclosure of HIV infection is a difficult issue to sexual partner. The rate of HIV positive status disclosure varies by the type of sexual partners of the women. It was 71.1% and 87.3% for non regular and regular sexual partner respectively.

The rate of disclosure to any one (92.2%) was achieved over a period of time. Two hundred sixty two (68.2%) of the participants disclosed within one month, (15%) between 1month and 6month, 5.2% after 6month of diagnosis and the rest 3.1% did not remember. As shown in figure 2, the first individual to whom the respondents disclosed their HIV result was mainly to sexual partners 267(75.4%). More than half 219(57%) of them next disclosed their HIV positive status to family members.

The main reasons for disclosure of HIV result to sexual partner in 347(98%) of the study participants were felt responsibility, concern for not to risk others health, seeking social support and in 89.5% of the participants to teach others about the disease.

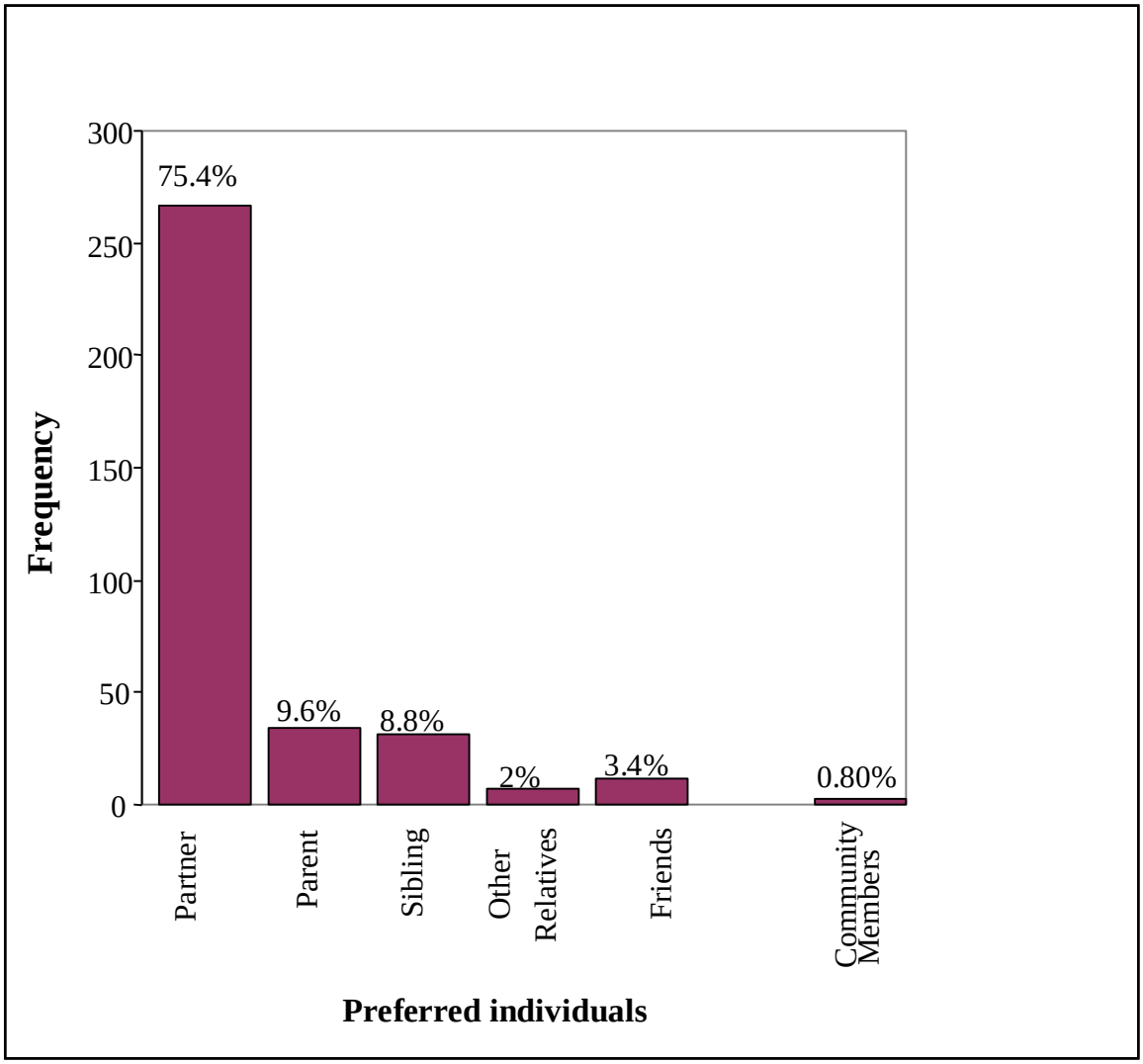

Fig. 2 First time HIV positive status disclosures of women PLWHA attending ART clinic, Hawassa Referral Hospital, SNNPR, April 2008

5.3.2 HIV positive status disclosure among women having Regular sexual partners

Of the 346 women having regular sexual partners 87.3% disclosed their positive status to their partners. The relation of respondents with their regular partner was 2years for 64(19.3%) and >2year for 267(80.7%) with mean (SD) 7.7(6.2) years.

Majority (70%) of the study participants reported that they did not discuss on HIV and VCT issues with their partner prior to HIV test and the rest 30% discuss. Two hundred and twenty one (63.9%) of the women did asked about the HIV status of most recent regular partner and 203 (58.7%) of them knew the HIV status of their partners. Of those who knew their recent regular partner's HIV status, 187(92.1%) of the sexual partners were HIV positive and 16(7.9%) were HIV negative. Condom use was higher among those who disclosed their results ($p<0.05$). But discussion on HIV and VCT issues prior to the test among the partners did not found to have association with status disclosure. The social relation ship of the respondents with the partner prior to the HIV test was smooth in 302(87.3%) and the rest with disagreement as shown in table 3.

Table 3 HIV/AIDS related issues, communication and treatment by HIV positive status disclosure to regular sexual partners of women PLWHA attending ART clinic, Hawassa Referral Hospital, SNNPR, April 2008

Characteristics	Status Disclosure to regular sexual partner		X^2(P-value)
	Yes Number (%)	No Number (%)	
Own monthly income(Eth. Birr)			
250	192(63.6)	18(40.9)	7.348(0.007)
>250	110(36.4)	26(59.1)	
Duration of relation with partner			
2year	22(51.2)	42(14.6)	29.795(0.000)
>2year	21(48.8)	246(85.4)	
Knowledge of Partner status			
Yes	200(66.2)	3(6.8)	53.473(0.000)
No	102(33.8)	41(93.2)	
Duration of HIV test			
11month	112(37)	24(54.5)	
12month	172(57)	19(43.2)	5.249(0.072)
Do not remember	18(6)	1(2.3)	
Relationship before test			
Smooth relation	32(72.7)	270(89.4)	8.179(0.004)
With disagreement	12(27.3)	32(10.6)	
Duration of ARV started			
1 year	20(45.5)	111(36.8)	
>1 year	2(4.5)	100(33.1)	1.041(0.000)
Not started	22(50)	91(30.1)	
Discussion before test			
Yes	55(18.2)	7(15.9)	
No	212(70.2)	32(72.7)	0.150(0.928)
Do not remember	35(11.6)	5(11.4)	
Condom use			
Yes	174(57.6)	5(11.4)	60.447(0.000)
No	51(16.9)	34(77.3)	

5.3.3 HIV positive status disclosure among women having non regular sexual partners

Thirty eight or 9.9 percent of the total (384) study participants had non regular sexual partners. Of the 38 women having non regular sexual partner majority (65.8%) of them discusses on HIV/AIDS issues and VCT with their partner before tested for HIV.

The duration of relation with the recent partner was 5month for 23(67.6%) and 6month for11 (32.4%) of the respondents with mean and standard deviation of 5 and 3.6 months respectively. Despite, 27(71.1%) of the women disclosed their HIV positive status to these sexual partners, only 10(26.3%) of them knew the HIV status of the most recent regular partner.

5.4 Barriers to HIV sero-status disclosure

The most common barriers to disclose the test results as reported by the women were fear of stigma and rejection 49(89.1%), client skill and psychological factors such as difficulty of accepting the test result and didn't know how to tell the person about the diagnosis 26(47.3%), fear of abandonment 25(45.5%), fear of confidentiality 21(38.2%) and fear of accusation of infidelity 2(3.6%) (Table 4).

Table 4 Barriers to disclose HIV positive status among women with regular and non regular sexual partners attending ART clinic, Hawassa Referral Hospital, SNNPR, April 2008 (n=55)

Barriers to status disclosure	Women having regular sexual partner (n=44)	Women having non regular sexual partners (n=11)	Total (n=55)
	Number (%)	Number (%)	Number (%)
1. Fear of stigma and rejection	38(86.4)	11(100)	49(89.1)
2. Fear of abandonment	17(38.6)	8(72.7)	25(45.5)
3. Fear of confidentiality	13(29.5)	8(72.7)	21(38.2)
4. Client skill and psychological factor	18(40.9)	8(72.7)	26(47.3)
5. Fear of accusation of infidelity	0(0)	2(18.2)	2(3.6)

5.4 Outcomes of HIV sero-status disclosure to sexual partners

Following disclosure of the HIV test result to their partners, the reaction was positive in 123(40.7%) of regular partner and 9(33.3%) of non regular partner. But the negative reaction after status disclosure was 179(59.3%) for regular partners and 18 (66.7%) for non regular partners.

Positive outcome following HIV positive sero status disclosure to sexual partner as reported by the respondents were receiving kindness 132(40.1%), neutral 85(25.8%), and increased support 104(31%).

The negative outcome commonly encountered following sero status disclosure were abandonment 81(24.6%), anger 181(55%), blame 187(56.8%), stigma 91(27.7%), violence 52(15.8%) and break up in the relationship 47(14.3%)(Table5)

Table 5 Outcome of HIV positive status disclosure among women with regular and non regular sexual partners attending ART clinic, Hawassa Referral Hospital, SNNPR, April 2008

Outcomes	Women having regular sexual partner (n=302)	Women having non regular sexual partners (n=27)	Total (n=329)
	Number (%)	Number (%)	Number (%)
Positive outcome	**123(40.7%**	**9(33.3)**	**132(40.1)**
1. Receiving kindness	102(33.8)	7(25.9)	109(33.1)
2. Neutral	77(25.5)	8(29.6)	85(25.8)
3. Increased support	96(31.8)	8(29.6)	104(31.6)
4. Decide to be tested	123(40.7)4	13(48.1)	136(41.3)
Negative outcome	**179(59.3%)**	**18(66.7)**	**197(59.9)**
1. Abandonment	70(23.2)	11(40.7)	81(24.6)
2. Anger	164(54.3)	17(63)	181(55)
3. Blame	169(56)	18(66.7)	187(56.8)
4. Stigma and discrimination	79(26.2)	12(44.4)	91(27.7)
5. Violence	45(14.9)	7(25.9)	52(15.8)
6. Breakup in relationship	44(14.6)	3(11.1)	47(14.3)

5.6 Predictors of HIV positive status disclosure to sexual partners

Logistic regression for HIV positive status disclosure to regular sexual partner and other variables were done and as shown in table six women who were cohabiting in marital status were less likely to disclose HIV positive status to sexual partner [AOR=0.158(0.04-0.598)].

Positive statistical association found between status disclosure to regular sexual partner and Knowledge of partner HIV status [AOR =0.016(0.003-0.08)]. Participants who did not know the HIV status of their sexual partners were less likely to disclose their HIV positive status (Table 6).

Women who had been on ARV treatment for more than one year were significantly more likely to disclose the HIV positive status to their regular partner [AOR=8.62(1.347-55.22)].

Illiterate(do not read and write) in educational status, house wife in occupation and smooth social relationship before HIV test were significantly more likely to disclose their HIV positive status, which was not observed after adjustment.

Participant with a monthly income of less than or equal to 250 Ethiopian Birr and those in relation with their partner for more than two years were more likely to disclose their status in bivariate analysis but this did not remain significant when controlled for other variables.

No statistically significant association was observed in the other socio-demographic variables in relation to positive status disclosure to sexual partner (Table 6)

Table 6 Determinants of HIV positive status disclosure to regular sexual partner, of women PLWHA attending ART clinic Hawassa Referral Hospital, SNNPR, April 2008

Variable (n=346)	HIV status disclosure		Crude OR (95%CI)	AOR (95%CI)**
	Yes	No		
Marital status				
Married	233	14	1.00	1.00
Cohabiting	27	19	0.09(0.04-0.20)*	0.158(0.04-0.598) *
Others	42	11	0.23(0.09-0.59)*	0.880(0.224-3.453)
Occupation				
Gov't employee	39	11	1.00	1.00
House wife	141	9	4.42(1.56-12.63)*	0.922(0.151-5.636)
Merchant	54	8	1.90(0.63-5.80)	1.036(0.204-5.270)
Other s	68	16	1.20(0.46-3.08)	0.360(0.059-2.210)
Educational status				
Do not read and write	77	4	3.42(1.12-11.66)*	1.254(0.264- 5.950)
Literate	225	40	1.00	1.00
Own monthly income(Birr)				
250	192	18	2.52(1.27-5.05)*	3.989(0.903-17.62.)
>250	110	26	1.00	1.00
Duration of relation with partner				
2year	42	22	0.16(0.08-0.34)*	0.598(0.187-1.918)
>2year	246	21	1.00	1.00
Knowledge of Partner status				
Yes	200	3	1.00	1.00
No	102	41	0.04(0.01-0.13)*	0.016(0.003-0.08)*
Duration of HIV test				
11month	112	24	0.52(0.26-1.03)	1.594(0.527-4.823)
12month	172	19	1.00	1.00
Relationship before test				
Smooth relation	270	32	1.00	1.00
With disagreement	32	12	0.32(0.14-0.72)*	0.391(0.109-1.395)
Duration since ARV started				
1 year	111	20	1.34(0.66-2.75)	1.243(0.432-3.582)
>1 year	100	2	12.09(2.64-76.59)*	8.62(1.347-55.22)*
Not started	91	22	1.00	1.00

* Statistically significant

** Adjusted for other variables

6. Discussion

Overall 85.7% the participants reported that they had shared their HIV positive test result with their partners. The meta-analysis studies by WHO for developing countries found disclosure rate range 16.7% to 86%. From the studies conducted in Mettu and Gore towns and Addis Ababa, St. Paul Hospital (MPH thesis 2007 unpublished) found disclosure rate of 69% and 92% respectively (16, 40).

The rate of HIV positive status disclosure in this study was relatively higher than many studies. This could be explained by first, more than 90% of the participants were from urban area where access to HIV/AIDS information and services are abundant; the other explanation could be the relatively longer duration of diagnosis of the participants, which ranged 1month to 84months.

For 14.3% of the women in this study disclosure of HIV infection is a difficult issue. Like many other studies both in developing and developed countries including local studies (5, 17), the main reasons for non disclosure reported in this study were fear of abandonment, stigma and client psychological factor. Fear of abandonment can be explained by, in settings where resources are extremely scarce and women's access to resources independent of their partner is uncommon, fear of losing instrumental support from a partner is a major consideration when deciding whether to share results or not. The absence of social security and health insurance also make women dependent on their partner and family for their health care, therefore women may choose not to disclose HIV status in order to benefit from family support.

Fear of discrimination can also be related with fear of social discrimination leading to social isolation and lack of support and fear of socioeconomic discrimination which may lead to problems with jobs, housing, and other practical socioeconomic considerations(5).

In our study only 30.6% of the women used condom always since they learned their HIV positive status and 67.9% of the respondents did used condom during most recent sexual intercourse with their regular partner. From St. Paul Hospital, Addis Ababa study 65.2% and 73.4% used condom always and during most recent sexual intercourse respectively (40). Condom use in this study was relatively low; this could be explained by first, the women might feel powerless to negotiate safer sex practices with their partner. Second, the miss-understanding that once both the partners were HIV positive importance of condom use will be ignored or due to lack of knowledge on re-infection, or unavailability of condom or none disclosure of the status. So that those couples with none or inconsistent condom use were at risk of HIV transmission of resistant viral strains and re-infection with new strains, which are serious public health risks.

Unprotected sex also carries the risk of unwanted pregnancy and the subsequent risk of HIV transmission to the child. This study showed considerable proportion of women get pregnant since they learned their HIV positive status, of which one fourth of the pregnancies were not intentional. This is an important reminder that emphasis should be given to involve partners and educating clients on the use of Condom in the prevention of unwanted pregnancy, re-infection, and transmission to partners as well as to child.

In our study of all the participants who disclosed their sero-status to their partner, 40.7% reported positive outcomes such as being supportive or neutral in response to the disclosure. This finding is by far lower than other studies (5, 26, 27, 38).

From a study in Gore and Mettu towns and Addis Ababa, St. Paul Hospital found 75.9 % and 90% of HIV positive women who disclosed their result reported positive partner's reaction (16, 40).

Most of the findings from both developed and developing country studies showed that disclosure was not associated with the break-up of long-term relationships. Even if the fear of most women to disclose is break-up of relations, disclosure was not associated with abandonment (5, 26, 27, 39).

Negative partner reaction following HIV status disclosure to sexual partner was reported by considerable proportion of woman (59.3%) in this study. Even though blaming and anger were the commonest reactions; abandonment, violation, stigma and break-up in relationship was also common reactions reported by study participants which was again by far higher than other studies.

The study conducted in Gore and Mettu towns reported 24.1% negative outcomes following status disclosure (13). Only 6.4% negative partner reaction following status disclosure was reported from the study conducted in Addis Ababa, St. Paul Hospital (40).

Despite, most marriages survived disclosure in our study; significant number of the women 14.6% reported that disclosure ended up break in marriage and 11.1% break in sexual

relation. This finding is nearly similar with studies conducted in Cape Town, South Africa and Dar Es Salaam, Tanzania 14.6% and 13% of violence following disclosure respectively (36,37). Beside to this study conducted in Tanzania, Kenya, and Trinidad, 27% of the women reported a break-up of a sexual relationship, 5% reported a break-up in the marriage and 4.5% reported physical abuse by a sexual partner (30)

This implies with rapid scale up of VCT and PMTCT services in the region larger absolute numbers of women would be at risk of experiencing abuse and even violence. So that, mechanisms should be devised for identifying and supporting those women who are likely to experience negative outcomes while scaling up VCT services. Researchers reported that male involvement must be a key element in addressing and eliminating potential negative consequences of sero-status disclosure. Men dominate decision-making in many relationships, and while many women would accept testing, they can return for the result, in many cases, only after discussion with their partner. It was suggested that women should be enabled to negotiate disclosure of their partner's sero-status along with disclosure of their own and that they are left at a serious disadvantage disclosing their own sero-status without knowing their partner's (3).

So that counselors should assist PLWHA's to determine whether fears of negative outcomes are grounded in reality or whether they can be overcome. This finding suggests the need for encouraging disclosure when it is safe and feasible for the woman. Additionally, whenever possible women should be encouraged to bring their partners with them to voluntary counselling and testing clinics and the couples should be counselled together to facilitate disclosure in a safe environment.

Only 30% and 58.7% of the respondents reported that they used to discuss on HIV and VCT issues prior to the study and knew their partners HIV status respectively.

The St. Paul Hospital study reported 95.8% discuss on HIV/VCT issues and 79.8% knew partner status (40).

Similar to other findings (40), in this study women who were married in marital status were more likely to disclose HIV positive status to sexual partner. This could be due to intimacy, strength of their relationship, strong confidence and might have chance to raise issues related to HIV and test.

Knowledge of partner HIV status was found to be predictor of HIV positive status disclosure to regular sexual partner. However, more than 40% of the women did not know the HIV status of their partners.

Consistent with other studies women who had been on ARV treatment for more than one year was significantly more likely to disclose the HIV positive status to their regular partner. This could be explained by repeated counselling given for the patients in the ART clinic during follow up and treatment.

Unlike other studies (5, 17) no statistical association was observed between sex partners who hold prior discussions about HIV/VCT issues, age, own income, duration of test, education and HIV status disclosure.

There are reports that HIV status disclosure to sexual partner is affected by multiple factors such as age, duration of relationship with sexual partner, education, socioeconomic status, level of education, culture, ethnic group, discussion on HIV and VCT prior to test, number of partner and partner involvement in the test (5, 17,40).

Strength of the Study

- Pre-tested and modified questionnaire used for data collection.
- Female nurses working in the ART clinic were used to collect the data from all respondents so that confidentiality reassured.
- The principal investigator and supervisor were supervising the daily data collection activity.

Limitation

- Convenient sampling was used that may incur selection bias.
- Qualitative methods were not used which could have enabled us to find out additional relevant information.
- Social desirability bias due to sensitive and personal questions related to sexuality.

7. Conclusion

- The study showed that married by marital status, those who knew partner status and took ARV drug for more than one year were predictors of HIV positive status disclosure to sexual partners.
- Despite, the rate of HIV positive status disclosure to sexual partner in this study is encouraging; still considerable proportion of women living with HIV/AIDS did not share their HIV positive result with sexual partners.
- The main reasons for disclosure of HIV result by the study participants were felt responsibility, concern for not to risk others health and seeking social support.
- The major barrier reported for not disclosing HIV positive result to sexual partners was fear of negative partner reaction such as abandonment, stigma and rejection.
- Negative outcome following HIV positive status disclosure to sexual partner was reported by a relatively large proportion of women.
- Significant proportion of women PLWHA did not use condom always. The common reasons reported for non use of condom were; partners objection, in order to avoid partner suspicion and having HIV positive sexual Partner.
- Majority of the women were sexually active and considerable proportion of women conceived (got pregnant) after learning their HIV positive status.
- Discussion on HIV and VCT issues among partners prior to the test was uncommon and many women still did not know their partner HIV status.

8. Recommendations

1. Emphasis should be given to behaviour rehearsal techniques in HIV testing and counselling programmes because it can assist women develop the skills they need to disclose results to sexual partners.

2. Special attention should be given to the efforts to promote couple counselling and testing that may help women to overcome the barriers to disclose their positive status and also facilitate positive outcomes and minimize negative outcomes.

3. Follow up counseling in VCT centers need to be strengthened to identify couples who either failed to disclose or faced negative outcome after disclosure and mechanisms should also be devised for supporting those women who were experiencing negative outcomes.

4. ART clinics should be linked with Reproductive Health services to address the sexual and reproductive health needs of PLWHA's with emphasis on Family Planning.

5. Further research is needed specially a qualitative study to explore the context before and following disclosure is vital as input for future Behavior Change Communication (BCC) and counseling programs.

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Annex I: Map of

SNNPR

Annex II: Questionnaire English version

Information sheet

AAU, MF, School of Public Health QUESTIONNAIRE of cross-sectional survey of

HIV status disclosure to sexual partners

Introduction

I am_____ ,working as a data collector in this study that assess HIV status disclosure rate, barriers and outcome at Awassa referral hospital in the ART clinic. The study is run by AAU, School of Public Health, in collaboration with Awassa referral hospital.

Please remember that all your answers are confidential. On this questionnaire your name will not be written and will not be linked to your name. This information will remain only with the research team**.**

The answer you give will be used to plan the ways to address women who have difficulty of disclosing and help them in order to increase their full participation in the PMTCT and ART program. Please do the best you can to answer all the questions. You do not have to answer, if you do not wish to answer a question, even you may end this interview any time you want.

Your refusal to participate in this study does not affect the quality of service given to you by the ART clinic. The time it will take for this interview is only 15-20 minutes.

Do you agree to participate in this study?

Yes_____ No_____

Identification Number_____ Date of interview_____

Time started_____ Time ended_____

Interviewer Signature_____

Supervisor Name_____ Sign._____

QUESTIONNAIRES

Section I: Socio- demographic characteristics

S.no.	Questions	Coding Categories	Skip Pattern
101	Address	Zone_____ Woreda _____ 1. Urban 2.Rural	
102	Age in years(enter number)	----------years	
103	Ethnic group	1.Sidamo 2.Wolayta 3.Gurage 4.Amhara 5.other specify	
104	Religion	1. Orthodox 2.Protestant 3.Muslim 4. other specify_____	
105	What is your highest educational level?	1. Illiterate 2.Read and write 3. Primary 4. Secondary 5. Technical and vocation/ Diploma and above	
106	Occupation	1. Government employee 2. Farmer 3. House wife 4. Merchant 5.Student 6.Non governmental 7. Daily laborer 8. Other (specify)_____	
107	Your own monthly income(birr)	1. < 200 2. 200-250 3. 251-500 4. 501-999 5. 1000 and above 6. Other (specify)_____	
107	Your sexual partner monthly income(birr)	1. < 200 2. 200-250 3. 251-500 4. 501-999 5. 1000 and above 6. Other (specify)_____	
108	What is your current marital status?	1.Currently married 2. Cohabiting 3. Never married 4.Divorced 5.Widowed 6.Other (specify)_____	

Part II. General Information (from both respondents with regular and non regular sexual partners)

QID	Questions	Response Options	Skip Pattern
201	Are you a member of any PLWHA associations?	1. Yes 2. No	
202	Did you gate pregnant after you knew your HIV positive status?	1. Yes 2. No	If no. Q206
203	Did you give birth after you tested for HIV?	1. Yes 2. No If yes, how many? _____ Record the date of delivery of the last child? _____	
204	Did all the pregnancies are intentional?	1. Yes 2. No	
205	Did you have access for PMTCT service for the last delivery?	1. Yes 2. No	
206	How long since you have known your HIV status?	_____month _____year Do not remember	
207	Have you disclosed your HIV status to anyone?	1. Yes 2. No	If No Q212
208	If you disclosed your HIV test result, when did you disclosed?	1.Immediately 2._____month 3. _____year 4. Do not remember	
209	To who have you disclosed your status first?	1 Partner / spouse 2 Parent. 3 Sibling 4 Other Relatives 5 Friends 6 Neighbors/community members 7 Friends / Room mates 8 Others (specify)_____	
210	To who, have you disclosed your status next? (Circle all that apply to you)	1 Partner / spouse 2 Parent. 3 Sibling 4 Other Relatives 5 Friends 6 Neighbors/community members 7 Friends / Room mates 8 Others (specify)_____	
211	**Reasons for Disclosure of Sero-positive status to others**		
	Factor 1: Responsibility	Yes No	
1	I felt obligated to tell this person.	1 2	
2	Didn't want to risk any more health problems for me or the other person	1 2	
	Factor 2: Instruction	Yes No	
1	My goal was to teach others about the disease	1 2	
2	Other, specify_____		

212	Are you taking antiretroviral treatment?	1. Yes 2. No	If No Q214
213	How long since you are started on treatment?	_____ months _____ year Other, Specify_____	
214	As far as you know can a person get a disease or infection through sexual intercourse?	1. Yes 2. No	
215	Do you think you can transmit HIV to your sexual partners?	1. Yes 2. No	
216	Do you know how to protect your sex partners from being infecting them with HIV?	1. Yes 2. No	If No Q219
217	If yes to the above question, how?	_____	If answer is not condom Q219
218	Do you know any places or people where you can obtain condoms?	1. Yes 2. No	
219	How often have you had an alcoholic drink in the last 30 days (one month)?	1 Never 2 Once 3 2-3 times 4 Once or twice a week 5 3-4 times a week 6 Nearly every day 7 Daily	
220	Have you used any of the following drugs for the last 6 months? (Circle all that apply to you)	1 Alcohol 2 Chat 3 Cocaine 4 Marijuana 5 Others (specify)_____	

Part III. Sexual Behaviors, HIV Sero-status Disclosure and Barriers

I will now ask you some questions about your sexual history. Some of these questions may be sensitive. Please remember that all your answers are confidential and will not be linked to your name. This information will remain only with the research team.

QID	Questions	Response Options	Skip Pattern
301	How many sexual partners did you have during the last 6 months?	1. None 2. One 3. Two 4. Three and above	
302	Have you had sexual intercourse in the last 6 months?	1. Yes 2. No	

REGULAR PARTNERS

Now, I would like to ask you some questions about your regular partner (s)

By regular partner we mean spouse(s) or live-in sexual partners or regular boy friend.

303	Do you have a regular sex partner?	1.Yes 2.No	If No Q321
304	How long since you have relation with this sexual partner?	_____month _____year Do not remember	
305	Your social relation with your partner before test result of HIV is	1.smooth relation 2.with disagreement 3. Other specify_____	
306	Did you discuss on HIV/AIDS issues and VCT with your partner before you tested for HIV?	1. Yes 2.No	
307	Did you ask your most recent regular partner about his/her HIV status?	1. Yes 2. No	
308	Do you know the HIV status of your Most recent regular partner?	1. Yes 2. No	If No Q310
309	What is his/her HIV sero-status?	1. HIV positive 2. HIV negative	
310	Have you disclosed your HIV sero-status to this partner?	1. Yes 2. No	If No Q312
311	What was the reaction from this partner?	Response	Next 316
	Positive outcome	**1. Yes 2. No**	
1	Receiving kindness	**1 2**	
2	Acceptance	**1 2**	
3	Increased support	**1 2**	
4	Decide to be tested for HIV	**1 2**	
5	Specify other_____-		
	Negative outcome	**1. Yes 2. No**	
1	Abandonment	**1 2**	
2	Anger	**1 2**	
3	Blame	**1 2**	
4	Stigma	**1 2**	
5	Violence	**1 2**	
6	Break up in the relationship	**1 2**	
312	Why did you not disclose your HIV sero-status to this partner?	**Response**	
	Factor I: Fear of abandonment	**Yes No**	
1	We weren't very close to one another	**1 2**	

2	All the financial and material resources are under the control of partner.	**1 2**	
	Factor II: Fear of stigma and rejection	**Yes No**	
1	Concerned how this person would feel about me after knowing.	**1 2**	
2	Concerned this person wouldn't understand	**1 2**	
3	I worried person would no longer like me after knowing.	**1 2**	
	Factor III: Fear of confidentiality	**Yes No**	
1	My diagnosis is my own private information	**1 2**	
2	I have a right to privacy	**1 2**	
3	Specify if any_____		
	Factor V :Fear of accusation of infidelity	**Yes No**	
1	I worried that my partner would accuse me, of being unfaithfulness.	**1 2**	
	Factor VI: Client skill and psychology	**Yes No**	
	I had difficulty of accepting my HIV status.	1 2	
	I didn't know how to tell the person about my diagnosis.	1 2	
	I don't have to tell anyone if I don't want to	1 2	
313	Do you think it is your duty to disclose your HIV sero-positive status to this partner?	1. Yes 2. No	If no. Q315
314	Do you think you are efficient enough to tell to this partner?	1. Yes 2. No	Next 316
215	Whom do you think is the right person to disclose your HIV positive sero-status	1. Father 4. brother 2. Mother 5. Friends 3. Sister 6. Religious leader 7. Health worker 8. Other, specify_____	
316	Have you had sexual intercourse with your regular sexual partner since you knew that you are living with HIV?	1. Yes 2. No	If no. Q 321
317	Did you use condom during this time?	1. Yes, always 2. Yes, most of the time 3. Yes, some times 4.No	

318	Did you use a condom the last time you had sexual intercourse with this partner?	1. Yes 2. No 3.Don't remember	If no and Don't Remember Q320
319	Who suggested condom use in the last night sexual intercourse?	1. I 2. He 3. Both of us	Next Q 321
320	If you did not put on a condom to your clients, what was the reason?	Yes No 1. He is living with HIV 1 2 2. It reduce my sexual pleasure 1 2 3.In order to not suspect me 1 2 4. Due to lack of knowledge about condom 1 2 5. Not available 1 2 6. Partner objected 1 2 7. Other specify ----------	

NON- REGULAR PARTNERS

*Now I would like to ask you some questions about your **non-regular partners** Sexual partners that you are not married to and never lived with and include commercial sex workers*

321	Do you have a non-regular sex partner?	1. Yes 2. No	If No Q236
322	How long since you have relation with this sexual partner?	_____month _____year Do not remember	
323	Your social relation with your partner before test result of HIV is	1.smooth relation 2.with disagreement 3. Other specify_____	
324	Did you discuss on HIV/AIDS issues and VCT with your partner before you tested for HIV?	1. Yes 2. No	
325	Did you ask your most recent regular partner about his/her HIV status?	1. Yes 2. No	
326	Do you know the HIV status of your Most recent regular partner?	1. Yes 2. No	If No Q328
327	What is his/her HIV sero-status?	1. HIV positive 2. HIV negative	
328	Have you disclosed your HIV sero-status to this partner?	1. Yes 2. No	If No Q330
329	What was the reaction from this partner?	**Response**	**Next 334**
	Positive outcome	**1. Yes 2. No**	
1	Receiving kindness	**1 2**	
2	Acceptance	**1 2**	

3	Increased support	**1** **2**	
4	Decide to be tested for HIV	**1** **2**	
5	Specify other_____-		
	Negative outcome	**1. Yes** **2. No**	
1	Abandonment	**1** **2**	
2	Anger	**1** **2**	
3	Blame	**1** **2**	
4	Stigma	**1** **2**	
5	Violence	**1** **2**	
6	Break up in the relationship	**1** **2**	
330	Why did you not disclose your HIV sero-status to this partner?		
	Factor I: Fear of abandonment	**Yes** **No**	
1	We weren't very close to one another	**1** **2**	
2	All the financial and material resources are under the control of partner.	**1** **2**	
	Factor II: Fear of stigma and rejection	**Yes** **No**	
1	Concerned how this person would feel about me after knowing.	**1** **2**	
2	Concerned this person wouldn't understand	**1** **2**	
3	I worried person would no longer like me after knowing.	**1** **2**	
	Factor III: Fear of confidentiality	**Yes** **No**	
1	My diagnosis is my own private information	**1** **2**	
2	I have a right to privacy	1 2	
3	Specify if any_____		
	Factor V :Fear of accusation of infidelity	**Yes** **No**	
1	I worried that my partner would accuse me, of being unfaithfulness.	1 2	
	Factor VI: Client skill and psychology	**Yes** **No**	
	I had difficulty of accepting my HIV status.	1 2	
	I didn't know how to tell the person about my diagnosis.	1 2	
	I don't have to tell anyone if I don't want to	1 2	
331	Do you think it is your duty to disclose your HIV sero-positive status to this partner?	1.Yes 2. No	If no. Q333

332	Do you think you are efficient enough to tell to this partner?	1. Yes 2. No	Next 334
333	Whom do you think is the right person to disclose your HIV positive sero-status	1. Father 4. brother 2. Mother 5. Friends 3. Sister 6. Religious leader 7. Health worker 8. Other, specify_____	
334	Have you had sexual intercourse with your regular sexual partner since you knew that you are living with HIV?	1. Yes 2. No	
335	Did you use condom during this time?	1. Yes, always 2. Yes, most of the time 3. Yes, some times 4.No	If no. Q 338
336	Did you use a condom the last time you had sexual intercourse with this partner?	1. Yes 2. No 3.Don't remember	If no and Don't Remember Q338
337	Who suggested condom use in the last night sexual intercourse?	1. I 2. He 3. Both of us	
338	If you did not put on a condom to your clients, what was the reason?	Yes No 1. He is living with HIV 1 2 2. It reduce my sexual pleasure 1 2 3.In order to not suspect me 1 2 4. Due to lack of knowledge about condom 1 2 5. Not available 1 2 6. Partner objected 1 2 7. Other specify ----------	

Annex III Questionnaires Amharic Version

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104		1. 3. pò 2. 4. 5. 6. K?L ÃÖke _____	
105		1. 2. 3. 1— Å[Í (1-6) 4. 2— Å[Í (7-10) 5. 6.	
106		1. W^}— 2. Ñu_ 3. 4. (’ÒÈ 5. 6. 7. 6.K?L ÃÖke_____	
107	¾ÓKA ¾¨` Ñu= SÖ” (uw`)	1. < 200 2. 200-250 3. 251-500 4. 501 –999 5. 1000 “ Ÿ²=Á uLÃ 6. K?L ÃÖke_____	
108	¾vKu?„/ ¾Õ ¾¨` Ñu= SÖ” (uw`)	1. < 200 2. 200-250 3. 251-500 4. 501 –999 5. 1000 “ Ÿ²=Á uLÃ 6. K?L ÃÖke_____	
109		1. 2. ¹ 3. 4. 5. 6.K?L Öke_____	

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