

HIV positive status disclosure to sexual partner among women attending ART clinic at Hawassa University Referral Hospital, SNNPR, Ethiopia

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Abstract

Background: Disclosure of HIV positive status has key role in the prevention and control of HIV/AIDS. Reports of non-disclosure and negative outcome of disclosure are common. Thus, disclosure of HIV positive status is a theme that demands investigation.

Objective: The objective of this study was to determine the magnitude and outcome of HIV positive status disclosure to sexual partner among women living with HIV/AIDS and attending Hawassa University Referral Hospital, South Nations and Nationalities Peoples Region (SNNPR) during a period of March to April 2008.

Methods: A cross sectional survey was conducted at Hawassa University Referral Hospital. Single population proportion formula was used to determine sample size. Using a structured and pre-tested questionnaire, data on disclosure were collected through interview. After explaining purpose of the survey, data collection was continued until the required sample was obtained. Then, data were entered using EPI info version 2002 statistical package and cross checked for reliability. Using SPSS 12.1 for windows statistical package, analysis was done.

Results: Overall 85.7% of the women had disclosed their HIV positive status to sexual partner. Main barriers of disclosure reported by non-disclosed subjects were; fear of abandonment, fear of break-up in relationship and fear of stigma. More than 59% of the women with regular sexual partner faced negative partner reaction after disclosure. Compared with married women, those women who were in a cohabiting relationship were less likely to disclose their HIV status to sexual partners (AOR 0.16; 95% CI 0.04, 0.60); women who did not know HIV status of their sexual partners were less likely to disclose their HIV positive status than their counter parts (AOR 0.02; 95% CI 0.00, 0.08) and women who had been on ART for more than one year were more likely to disclose their HIV positive status than the reference groups (AOR 8.62; 95% CI 1.35, 55.22).

Conclusion: HIV positive status disclosure to sexual partner in this study was higher than what was reported in other studies in Ethiopia, for Mettu and Gore (69%) but slightly lower than the report from Jimma (94.5%) and Addis Ababa (92%). Negative partner reaction following disclosure was higher. Effectively addressing issues of disclosure was recommended to encourage disclosure and cope with negative reactions after disclosure in People Living with HIV/AIDS (PLWHA). Besides, currently existing Information Education Communication (IEC) interventions on HIV/AIDS should be strengthened, to reduce negative partner reaction following disclosure. [*Ethiop. J. Health Dev.* 2010;24(1):9-14]

Introduction

According to the 2007 Ministry of Health (MOH) single point prevalence report, adult prevalence of Human Immunodeficiency Virus (HIV) infection in Ethiopia was 2.1 %. Projected number of People Living with HIV/AIDS (PLWHA) in Southern Nation and Nationalities Peoples Region (SNNPR) for 2008 was 141,545; with female constituting 59% (1). Until 2006, the number of AIDS cases on Anti Retroviral Therapy (ART) was 4259 (52.4 % female, 44.2 % male and 3.4% children) in SNNPR (2). Disclosure of HIV positive status and its negative outcome are one of the challenges in HIV/AIDS care. Studies conducted in developing countries showed that, disclosure rate of ranging from 16.7% to 86% (3). Similarly, local studies carried out in Gore and Mettu, Jimma as well as Addis Ababa towns reported, HIV positive status disclosure rate of 69%, 94.5% and 92% respectively (4, 5, 6)

Disclosure of HIV positive status has two sets of contrary effects. It may motivate partner for Voluntary Counseling and Testing (VCT), reduce risk behaviors, and increase receiving support and adherence to ART (3, 7). On the other hand, it may cause blame, discrimination, abandonment, anger, violence, depression, loss of economic support and disruption of family relationship. Due to fear of these risks patients may not disclose their HIV positive status (8).

Reason for non-disclosure reported in various studies were fear of accusations of infidelity or being considered unfaithful, fear of divorce, fear of embarrassment, fear of being abandoned, fear of blame, fear of rejection, discrimination, verbal abuse and concerns about public ignorance of the disease. Failure to disclose HIV positive status could lead to unsafe sexual practice, which in-turn increases risk of infecting sexual partner, couples re-

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infection with new strains and HIV transmission to the child (9, 10).

Thus, status disclosure is one of the major areas that should be addressed in HIV prevention & control. So far, in SNNPR, there has not been any report on HIV positive status disclosure among women living with HIV. Therefore, the study aimed to determine the magnitude of HIV positive status disclosure and its outcome among women living with HIV at Hawassa University Referral Hospital (HURH), SNNPR.

Methods

Study design and setting: A cross sectional study was conducted from March to April 2008 among women attending ART clinic at Hawassa University Referral Hospital. Hawassa town is the capital of SNNPR and located at 270 km South of Addis Ababa. The hospital provides comprehensive health services including ART. The ART clinic was established in June 2006. According to the ART unit report, at the end of February 2008, 1110 people living with the virus were on ART follow up.

Study population: The study participants were all Out Patient Department (OPD), women living with HIV, at least 18 years old, able to give informed consent and not seriously ill (who were able to respond) while HIV positive status disclosure was the outcome variable; socio-demographic variables, sexual behavior and HIV related factors were independent variables included in this study.

Sample size and sampling: We used the formula for estimating single population proportion. Since we did not find any local study that addressed similar target population, we considered prevalence of HIV status disclosure for developing countries on average 49% (3). With 5% level of significance and 5% margin of error a sample size of 384 was calculated. Based on the inclusion criteria, while patients wait for ART service, all eligible women who came to the ART unit from March to April 2008 were consecutively interviewed until we obtained the required sample size.

Data collection and analysis: Training was provided to both interviewers (female counselors in the ART unit of the hospital) and a supervisor on objective of the study, discussing contents of the questionnaire and issues of maintaining confidentiality. After obtaining informed consent from each respondent, interviewers administered pre-tested questionnaire to collect the data. For all participants, the aim of the study was explained and they were reassured that their responses will be used only for research purposes and remain confidential. Daily checking of data for completeness, accuracy, clarity and consistency was done. Data then were cleaned and entered using EPI info version 2002 statistical software and then the whole data was cross checked for reliability.

Statistical analysis was done using SPSS version 12.1 software. Data were summarized using tables and bar chart. Odds Ratio and P-value at 5% were considered to assess the relationship between HIV positive status disclosure and independent variables. Sexual partner is defined as a person with whom one engages in sex acts. Regular partner is a sexual partner who lives with that partner or regular male partner. Non-regular partner is a sexual partner who is not married to and never lived with that partner. HIV positive status disclosure to sexual partner was defined as the act of informing HIV positive status of an infected person to sexual partner by the woman herself. HIV positive status disclosure to any one was defined as the act of informing HIV positive status to sexual partner, family or friends. For a single question on the outcomes of disclosure multiple responses were considered.

Ethical considerations: Ethical clearance was obtained from the Research and Publication Committee of Faculty of Medicine, Addis Ababa University. A written letter of permission from School of Public Health, Addis Ababa University and Hawassa University, Referral Hospital Medical Director was obtained. Interviews were conducted in a separate room after obtaining informed consent from each woman and identifier information was not recorded on the questionnaire.

Results

A total of 384 women were interviewed. Above 90% of the women were urban dwellers. The dominant ethnic groups were Wolayta and Amhara with 30.2% and 28.4% respectively. More than half (54.4%) of the women were Orthodox. The mean (SD) age was 29.5 (7.1) years. About 31% have attended primary school, 64.3% were married, 39.6% were house wives, and 56% had an average monthly income of less than or equal to 250 birr (Table 1). More than 70% of the participants were member of PLWHA associations.

Majority (90.1%) of the women had regular sexual partner whereas, 38 (9.9%) had non-regular partner. The mean (SD) duration of relationship with sexual partner was 7.7(6.2) years. Large number (70%) of all the women did not discuss on HIV with their sexual partner prior to HIV test. The proportion of women who had sexual intercourse in the past 6 months was 77.9%. Only 30.6% of the women with regular sexual partner were always using condom; while 67.9% used condom during their last sexual contact. Thirty five (9.1%) of all the women were pregnant since they knew their HIV positive status. Pregnancies were not intentional for 25.7 % of them. More than 58% of the women with regular partner knew HIV status of their partner of which, 16(7.1%) of their sexual partner were HIV negative.

Table 1: **Socio-demographic characteristics of women attending ART clinic, HURH, 2008**

Variables (n=384)	Number	Percent
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
Others	13	3.4
Marital status		
Currently married	247	64.3
Cohabiting	71	18.5
Never married	25	6.5
Others (Divorced, Widowed)	41	10.7
Education		
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
Sidama	61	15.9
Oromo	41	10.7
Gurage	27	7
Others	30	7.8

Three hundred fifty four (92.2%) of the respondents disclosed their HIV positive status to anyone; while 329 (85.7%) disclosed to their sexual partner. Among women with regular sexual partner, 302 (87.3%) disclosed their HIV positive status to their sexual partner. The first individual to whom the respondents disclosed their HIV test result was to sexual partner, which accounted 75.4%; while more than half (57%) of the women next disclosed to their family members. Out of 354 women who disclosed their HIV positive status; 80.5% disclosed in one month, 13.3% disclosed between 1 and 6 months and 2.8% disclosed after 6 months of being notified their test result. For 3.4% of the women date of disclosure was not specified. The commonest barriers of disclosure reported by the women were fear of stigma and rejection. Only two women reported fear of accusation of infidelity (Fig 1).

Following disclosure, partner reaction was positive for 40.7% and for 33.3% of the women with regular partner and non-regular partner respectively. It was negative for 59.3% of the women with regular partner and for 66.7% of the women with non-regular partner (Table 2).

Women who were in cohabiting relationship were less likely to disclose their HIV positive status to their sexual partner than those married (AOR 0.16; 95% CI 0.04, 0.60), women who did not know HIV status of their sexual partners were less likely to disclose their HIV positive status than the reference group (AOR 0.02; 95% CI 0.00, 0.08) and women who had been on ART for more than one year were more likely to disclose their HIV positive status than their counter parts (AOR 8.62; 95% CI 1.35, 55.22) (Table 3).

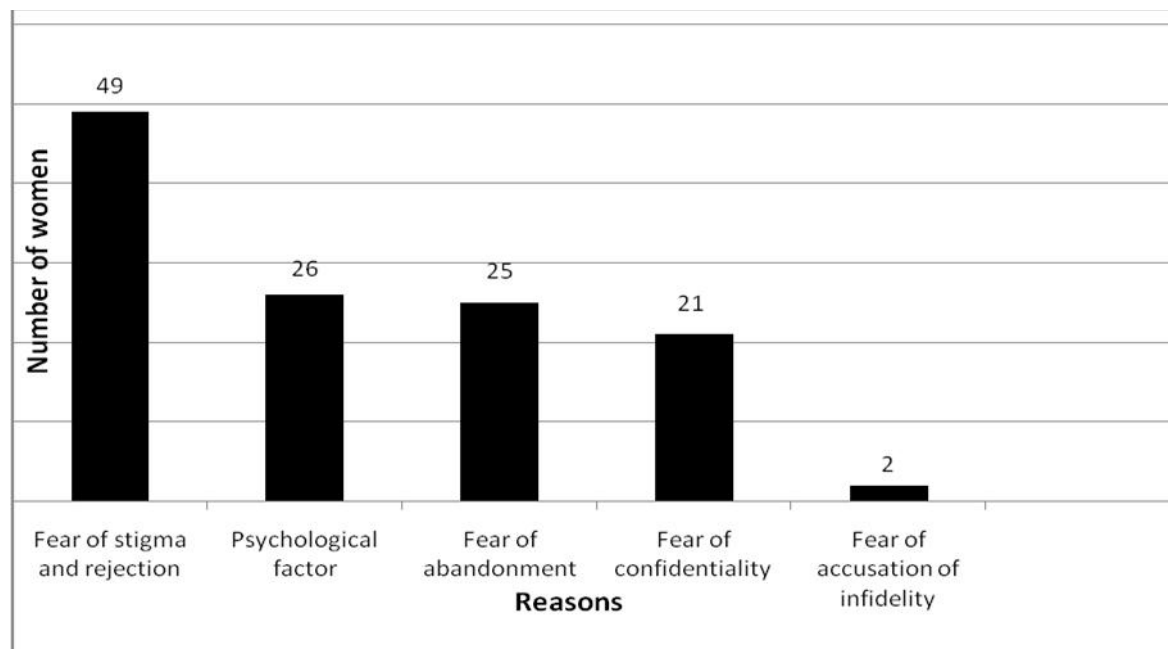


Figure 1: **Reasons of non-disclosure as reported by the women on ART, HURH 2008**

Table 2: **Outcomes of HIV positive status disclosure among women attending ART clinic, HURH, 2008**

Outcomes	Women with regular sexual partner (n=302)	Women with Non regular sexual partner (n=27)	Total (n=329)
	Number (%)	Number (%)	Number (%)
Positive outcome*			
Receiving kindness	102 (33.8)	7 (25.9)	109 (33.1)
Neutral	77 (25.5)	8 (29.6)	85 (25.8)
Increased support	96 (31.8)	8 (29.5)	104(31.6)
Decided to be tested	123 (40.7)	13 (48.1)	136(41.3)
Negative outcome*			
Abandonment	70 (23.2)	11 (40.7)	81(24.6)
Anger	164 (54.3)	17(63)	181(55)
Blame	169 (56)	18(66.7)	187(56.8)
Stigma and discrimination	79 (26.2)	12(44.4)	91(27.7)
Violence	45 (14.9)	7(25.9)	52(15.8)
Breakup in relationship	44 (14.6)	3(11.1)	47(14.3)

*More than one response was possible

Table 3: **Determinants of HIV positive status disclosure to regular sexual partner among women attending ART clinic, HURH, 2008**

Variables (n=346)	HIV status disclosure		COR (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)*	0.16 (0.04-0.60)*
Others	42	11	0.32 (0.90-0.59)*	0.88 (0.22-3.45)
Occupation				
Government employee	39	11	1.00	1.00
Housewife	141	9	4.42 (1.56-12.63)*	0.92 (0.15-5.64)
Merchant	54	8	1.90 (0.63-5.80)	1.04 (0.20-5.27)
Other	68	16	1.20 (0.46-3.08)	0.36 (0.06-2.21)
Educational status				
Do not read and write	72	4	3.42 (1.12-11.66)*	1.25 (0.26-5.95)
Literate	225	40	1.00	1.00
Personal monthly income (in birr)				
≤250	192	18	2.52 (1.27-5.05)*	3.99 (0.90-17.62)
>250	110	26	1.00	1.00
Knowledge of Partner status				
Know	200	3	1.00	1.00
Do not know	102	41	0.04 (0.01-0.13)*	0.02 (0.00-0.08)*
Relationship before test				
Smooth relationship	270	32	1.00	1.00
With disagreement	32	12	0.32 (0.14-0.72)*	0.39 (0.11-1.40)
Duration since ARV started				
≤1 year	111	20	1.34 (0.66-2.75)	1.24 (0.43-3.58)
>1 year	100	2	12.09 (2.64-76.59)*	8.62 (1.35-55.22)*
Not started	91	22	1.00	1.00

* Statistically significant at 5%

** Adjusted for other variables

Discussion

More than 85% disclosure rate in this study lies on the high side of the range 16.7% and 86% which was reported in the WHO meta-analysis study for developing countries (3). High disclosure rate in this study has positive implication in the prevention of HIV transmission from women to their sexual partner and children. Sexual partners of women who disclosed their HIV positive status may be motivated for VCT and

practice safe sex. Thus it prevents HIV infection of the male partner with a discordant sero-status. For 7.1% of the women in this study their sexual partners were HIV negative. Moreover, women who disclosed their HIV positive status are more likely to receive supports like Prevention of Mother to Child Transmission (PMTCT); which in turn reduces mother to child transmission of HIV.

The rate of HIV positive status disclosure in this study was higher than that reported in Mettu and Gore towns but was slightly lower than the reported in Jimma and Addis Ababa (4, 5, 6). This could be explained by the fact that ART service was not started in the country at the time when study was carried out in Mettu and Gore town. Women living with HIV are confident to disclose their HIV positive status in order to benefit from an existing ART services. Additionally, majority (90%) of the participants in this study were from urban area where HIV/AIDS information, care and support services are accessible. Moreover, participants involved in this study were on ART for long duration (79% of the women were on ART for at least 6 months). As patients stay longer duration in HIV care services; they obtain information about HIV including the benefits and way of disclosure, which in turn helps them to disclose their HIV positive status. These finding imply that access to and utilization of specific services for PLWHA help women living with HIV in disclosing their status. On the other hand, presence of slight variation between our study report and those of Addis Ababa and Jimma could be explained by the presence of methodological and contextual variation. Unlike our study, these studies were conducted on both male and female ART clients. In most of the cases women are economically dependent on men thus disclosure of HIV positive status to sexual partner could be difficult to them.

Some of the reasons for non disclosure reported in this study were fear of abandonment, fear of stigma and psychological factors; which agrees with that reported in other studies (6, 11, 12).

Our study showed that only 30.6% of the women were using condom always; while 67.9% of them used condom during their most recent sexual intercourse with their regular partner. This finding is lower than what other studies reported. The study conducted in Addis Ababa reported that 65.2% of the participants had been using condom always and 73.4% of participants used condom during their most recent sexual intercourse (5). Unprotected sex and inconsistent use of condom among PLWHA increases the risk of transmission of resistant HIV strains and re-infection with new strains, unwanted pregnancy and mother to child transmission of HIV. More than 9% of the women in this study were pregnant after they have learned their HIV positive status and 25.7% of the pregnancies were not intentional. This is a reminder for educating sexual partners living with HIV on using of family planning methods, particularly condom, to prevent unplanned pregnancies and its effects.

Higher rate (59.3%) of negative outcome was reported in our study unlike the studies conducted in Gore and Mettu towns and Jimma town which reported 24.1% and 5.2 % respectively (4, 6). Our finding with 14.3% of break in sexual relation ship following disclosure was similar to that reported in South Africa (14.6%) but it was higher

than that reported in sub-Saharan Africa (5%) (13,14). This implies with rapid scale up of VCT and PMTCT services in the region, large number of women would be at risk of experiencing negative outcome of disclosure. Thus, mechanisms should be devised for identifying and supporting those women who are likely to experience negative outcomes while scaling up VCT services. Involving the male partner in issues related to disclosure could be considered as a key element in addressing and eliminating potential negative consequences of HIV positive status disclosure.

Consistent to other findings, in this study, married women were more likely to disclose HIV positive status to sexual partners (3, 15). This could be due to intimacy of partners; strength of their relationship, feeling of responsibility and the confidence they have on each other facilitated open communication which in turn caused to disclose their status. Another study also reported that, individuals were more likely to disclose HIV positive status to steady sexual partners (5).

Moreover, knowledge of partner HIV status was found to be a predictor of HIV positive status disclosure; which agrees with what others reported (3, 6). Majority of the partners (92.9%), in our study, had similar HIV positive status which might have helped them to have open communication and freedom to disclose. Partners' communication among themselves concerning their HIV status is beneficial. Through health communications, service providers can address sexual partners on the benefits of disclosing their HIV positive status to one another.

In agreement with other studies, women who were on ART for more than one year were more likely to disclose HIV positive status to their regular partner (5). This could be explained by the repeated counseling services the patients would have obtained in the ART clinic during the long follow up period. A continuous counseling at each contact of health professionals and use of behavior rehearsal technique may help patients to develop healthy behaviors including disclosure of HIV positive status. However, result of multivariate analysis for all variables that predicted HIV positive status disclosure in this study has wide confidence interval, which might be related to the limitation in the study design we used. Cross-sectional studies are less effective in determining associations between variables.

Studies revealed that HIV status disclosure to sexual partner is affected by multiple factors; such as age, duration of relationship, education, socioeconomic status, culture, ethnic group, discussion on HIV and VCT prior to test, number of partner and partner involvement in the test (3, 15). Unlike other studies, in our study occupation, educational status, income, duration of relationship and type of relationship before test were not significantly associated with HIV positive status disclosure. This

could be related to the effect of confounders or limitations in the sampling method and the design we used in our study. Confounders might have masked the real relationship between disclosure and some of these variables. In addition, our sampling method might have not provided equal chance of involvement for study subjects in the study. The study design we used here was not effective in revealing the association between independent variables and outcome variable.

This study is relevant and identified the extent of HIV positive status disclosure and its outcomes. The result has positive implication in the prevention of HIV transmission which could be applied in HIV control interventions in similar settings. Based on the results effectively addressing issues of disclosure was recommended to encourage disclosure and cope with negative reactions after disclosure in PLWHA. Moreover, currently existing Information Education Communication (IEC) interventions on HIV/AIDS should be strengthened at individual and community levels in order to reduce negative partner reaction following disclosure.

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References

1. Federal Ministry of Health. National HIV/AIDS Prevention and Control Office of Ethiopia. Single point HIV prevalence estimate, June 2007. Addis Ababa, Ethiopia.
2. Federal Ministry of Health. National HIV/AIDS Prevention and Control Office. AIDS in Ethiopia 6th ed, 2006. Addis Ababa, Ethiopia.
3. World Health Organization. Gender Dimension of HIV status disclosure to sexual partners: Rates, Barriers, and outcomes for women. Geneva: WHO; 2003.
4. Kebede D, Wassie L, Yismaw D. Determinants and outcomes of disclosing HIV-sero positive status to sexual partners among women in Mettu and Gore towns, Illubabor Zone, Southwest Ethiopia, *Ethiop J Health Dev.* 2005;19(2):126-131.
5. Lemma F. HIV Sero-positive Status Disclosure to Sexual Partner and Sexual Risk Behaviors of PLWHA in Addis Ababa [MPH Thesis]. Addis Ababa University; 2007.
6. Kebede D, Kifle W, Mekitie W, et al. Disclosure experience and associated factors among HIV positive men and women clinical service users in Southwest, Ethiopia. *BMC Public Health.* 2008;8:81.
7. Michael J, Robert H, Anna S, et al. The Role of HIV Serostatus Disclosure in Antiretroviral Medication Adherence. *AIDS and Behavior.* 2006 Sep;10:5.
8. Seals B F, Phillips K D, Julious C. Disclosure of HIV infection: how do women decide to tell? *Health Education Research Theory and Practice* 2003;18(1):32-44.
9. Farquhar C, et al. Prevalence and correlates of partner notification regarding HIV-1 in an antenatal setting in Nairobi, Kenya; 13th International Conference on AIDS: Durban South Africa. 2000 July 9-14. p. 381.
10. Sigxaxhe T, Mathews C. Determinants of disclosure by HIV positive women at "Khayelitsha mother to child transmission pilot project" South African setting. 13th International Conference on AIDS. Durban South Africa. 2000 July 9-14. p. 381.
11. Levy A, et al. Disclosure of HIV sero-positivity. *Journal of Clinical Psychology.* 1999;55:1041-1049.
12. Yang H, Stanton B, Fang X, et al. HIV-related knowledge, stigma, and willingness to disclose: A mediation analysis, *AIDS Care.* 2006;18(7):717-724.
13. Kilewo C, et al. HIV counseling and testing of pregnant women in Sub-Saharan Africa. *JAIDS* 2001;28:458-462.
14. Matthews C, et al. Disclosure of HIV status and its consequences. *South African Medical Journal* 1999;89:1238.
15. Bouillon, Kenneth A. Factors correlated with disclosure of HIV infection in the French Antilles and French Guiana. *JAIDS* 2007;21 Supplement 1:89-94.