ASSESSMENT OF PREDICTORS AND EFFECT OF DISCLOSURE OF HIV SEROPOSITIVE STATUS TO SEXUAL PARTNER AMONG HIV POSITIVE PREGNANT WOMEN ATTENDING ANTENATAL CARE IN FOUR TEACHING HOSPITALS IN ADDIS ABABA

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ABSTRACT

BACKGROUND: It is very crucial that women have the ability to disclose safely the status of being HIV-positive to male partners for the uptake as well as the continued use of methods of mother-to-child transmission (PMTCT) services. The majority of the women are afraid to disclose their seropositive status to their partners due to denial, blame, physical violence, and lack of financial support. Because of these reasons they discontinue the antenatal care follow-up and anteretroviral medication for them as well as the baby. In Ethiopia, there are not many studies done to explore HIV positive status disclosure to partners, the predictors, and the effects of disclosure of HIV positive status among HIV positive women during pregnancy.

METHOD: A cross-sectional study was conducted among 328 HIV-positive pregnant women who were attending ANC in four teaching Hospitals in Addis Ababa. Data was collected using a pretested structured questionnaire and SPSS- 21 version was used to analyze the data.

RESULT: Among the study participants 80% of the women had disclosed their HIV status to their partner. Presence of partner discussion before HIV test, the duration of the relationship between the couples, and knowing partner's HIV status were found to be strongly associated with their disclosure and those with status disclosure to the partners are 12 times more likely to utilize the PMTCT services than those with no disclosure.

CONCLUSIONS: The HIV-positive status disclosure among pregnant women is found to be high in our study. It showed that those women with no disclosure were found to have less participation in PMTCT programs. It is very important to note that proper uptake of and continued utilization of all PMTCT programs is hugely affected by women's disclosure of their HIV-positive status to their partners.

KEYWORDS: Disclosure, HIV, PMTCT

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INTRODUCTION

It has been three decades since HIV started its spread across the globe with a devastating impact on populations and economies of countries and regions.. UNAIDS 2021 shows 37.7 million people globally were living with HIV in 2020 [1] Among them, 68% was estimated in sub-Saharan African countries. Globally studies showed that pregnant women living with HIV were nearly 90% and HIV infection among children under 15 years old were more than 90%. [2]

Ethiopia is one of the sub-Saharan Africa countries worst affected by the HIV/AIDS pandemic. According to a ministry of health report published in 2011, approximately a 1.1million people were living with HIV. From this number, the higher number was accounted by women aged greater than 15 years. The primary mode of transmission is through unprotected sex with infected individuals which constitute 88% of transmission. [2]

Prevention of HIV infection depends on how successful the strategies to preventing new infection and how successfully we can treat currently infected individuals. The most critical prevention and treatment tools in control of HIV epidemics are PMTCT and HCT (HIV counseling and Testing) program. The success of the programme is affected by HIV status disclosure among HIV infected clients to their sexual partners. [3]

Disclosure is one of the important public health goals because it will motivate sexual partners to seek testing, it might also help to change behavior and ultimately to decrease transmission of HIV. [4]

In addition disclosure has a number of potential benefits for the individual including increased opportunities for social support, improved access to necessary medical care including antiretroviral treatment, increased opportunities to discuss and implement HIV risk reduction with partners, and increased opportunities to plan for the future. [3]

Disclosure is crucial to pregnant women since adherence to the recommended HIV treatment and breastfeeding regimens that are necessary to reduce transmission of HIV to their infants protect their own health and ensure the health of their partner will be very difficult without the support of the partner. Currently, there are 23.3 million people globally on HIV treatment. In Ethiopia HIV incidence is 0.72 per thousand. [1]

Antiretroviral therapy coverage for PMTCT (% of pregnant women living with HIV) in Ethiopia was reported at 92 % in 2020. [5] In Ethiopia, only 65% of HIV infected pregnant women have received antiretroviral drugs to reduce the risk of mother to child transmission of HIV/AIDS during 2020. [6]

A different institution like WHO and the Center for Disease Control has put the importance of disclosure of status to the partner in their prevention protocols of HIV testing and counseling. [7]

It helps couples to make informed reproductive health choices that may ultimately reduce the unintended pregnancies rates among women with HIV.

Along with these benefits, however, there are a number of potential risks from disclosure for HIV infected women including loss of economic support, blame, abandonment, physical and emotional abuse, discrimination, and disruption of family relationships which might force women not to share HIV positive status to their partners which in turn leads to a missed opportunity for new infection prevention as well to get appropriate treatment, care, and support. [8]

The aim of our study was to explore the different associated factors and the effects of HIV seropositive status disclosure to sexual partner among HIV positive pregnant women attending antenatal care.

METHOD

328 HIV-positive pregnant women were included in the study. The Institution based cross-sectional study design that used quantitative data collection method was carried out in four teaching hospitals,namely Tikur Anbessa Specialized Hospital, Ghandi Memorial Hospital, Zewditu Memorial Hospital and Saint Paul's Millineum Medical College Hospital, in Addis Ababa, the

capital city of Ethiopia. The study was conducted from 1st May 2017 GC till 30th August 2017 GC
All consequative HIV-positive pregnant mothers who come for ANC follow-up during the study period were included till the sample size is filled. A structured questionnaire was developed to assess the variable regarding the disclosure of positive HIV status to a partner and the utilization of PMTCT. A trained data collector interview immediately after the patient was seen by the doctor. The sample was divided equaly in the four teaching hospitals.
An assesment was done on the determinant of disclosure of HIV status including socio-demographic characteristics (age, family income, level of education, religion, and occupation), relationship factors (the duration of the relationship, the fear of partner's reaction and the HIV status of partner), HIV Status disclosure barriers (fear of abandonment, fear of confidentiality, and fear of accusation of infidelity) and the outcomes of disclosure (acceptance, understanding, blame, and violence). The partner disclosure status was documented by asking if the woman had revealed her HIV-positive status verbally to her sexual partner.
The Ethical clearance for the study was obtained from the Department of Obstetrics and Gynecology Research and Publication Committee (DRPC) of Addis Ababa University.. Permission was also obtained from the study facilities to collect data. Participation in the study was completely voluntary and informed written consent was acquired from every participant before participation. The study did not involve vulnerable populations.
Data were coded, entered, and cleaned using SPSS version 21 statistical software. Descriptive statistical analysis is used to describe and analyze the data into graphs and tables for easy interpretation. The independent variables were tested for statistical significance using the chi-square test and a binary logistic regression model was used to identify the influencing factors for disclosing to their partner. Results were expressed using an adjusted odds ratio relative to the reference category at the statistical significance of 95% confidence intervals and a P-value of <0.05 as statistically significant.

RESULTS

The study population was 340 consecutive HIV-positive pregnant women, of whom 328 of them agreed to be interviewed, making the respondent rate of 96.47%. The majority of the study participants were married 237(72.3%) and belongs to Orthodox Christianity and majority 301 (91.8%) had formal education and 140(42.7%) were housewife/ homemaker.
More than one-third of the respondents 118(36%) had a monthly income of less than 500 birr. The study showed that majority respondents respondents were Amhara and 269(82.6%) had completed primary school education. More than three fourth of the respondents 249(75.9%) were in the age group of 25–34 years. Our study has not shown any statistically significant relationship between those disclosing their status compared to those who had not with respect to these above-mentioned variables on bivariate analysis with P value of 0.13 (0.61 – 1.013).

Table 1. Socio demographic characteristics of respondents (n = 328).

Age	Frequency	Percent
18-24	10	3
25-34	249	75.9
>35	69	21
Total	328	100
Marital status		
Never married	73	22.3
Married	237	72.3
Divorced	18	5.5
Total	328	100
Religion		
Orthodox	234	71.3
Muslim	51	15.5
Protestant	37	11.3
Catholic	3	0.9
Others	3	0.9
Total	328	100
Ethnicity		
Amhara	161	49.1
Tigray	31	9.5
Oromia	78	23.8
SNNP	49	14.9
Others	9	2.7
Total	328	100
Educational status		
Unable to write and read	27	8.2
Grade 1-4	30	9.1
Grade5-8	102	31.1
Grade 9-12	111	33.8
college &above	58	17.7
Total	328	100
Average monthly income		
<500	118	36
500-1000	72	22
1000-3000	120	36.6
>3000	18	5.5
Total	328	100

Two hundred sixty-four (80.5%) of the 328 respondents had disclosed their HIV seropositive status to their sexual partners. Out of the 328 participants, 186 (56.7%) of them had HIV-positive partners. However, 78(23.8%) of them had HIV-negative partners (discordant). Less than one-fourth of the participant 64 (19.5%) did not know the HIV status of their partners.

The possible reasons for disclosure were concern for their partner's health 81(30.7%), ethical responsibility 122(46.2 %), fear of God to hide such things 19(7.2%) and to get support from the partner 36 (13.6%).

In addition, the study showed a very small percentage of participants disclosed their HIV seropositive status to their mother, father, and others 20(6.1%), 2(0.6%), and 1(0.3%) respectively. The study revealed that the majority of the respondents 148(56%) disclosed their status in the first six months of the diagnosis.

Table 2. Sero-positive HIV status disclosure experience among HIV Positive pregnant women

Disclosure HIV status to partner (n=328)		
	Frequency	**Percent**
Yes	264	80.5
No	64	19.5
Total	328	100
Duration of time for disclosure since diagnose(n=328)		
	Frequency	**Percent**
<6months	148	56.0
6-9months	96	36.4
>=9months	18	6.8
total	264	100
Reasons for disclosure of HIV status to sexual partner(n=328)		
	Frequency	**Percent**
I do not want to risk him	81	30.7
I want to get his support	36	13.6
It is usual to tell him every secret things	122	46.2
I feared God to hide such things	19	7.2
To feel free	6	2.3
Total	264	100
Discussion about VCT before HIV test (n=328)		
	Frequency	**Percent**
Yes	234	71.3
No	85	25.9
Not known	9	2.7
Total	328	100

The majority of participants 174(53.0%) of 186 study participants whose partners are HIV positive disclosed their HIV positive status to their partner and 75(22.9%) out of 78 discordant couples disclosed their HIV status. The majority of

participants 234 (71.3%) had discussed HIV testing prior to seeking PMTCT services but 85 (25.9%) of the respondents did not. From 234 women who had discussion about VCT, 224 (95.7%) had disclosed their status compare to from those 85 women who never had discussion 37 (43.5%) had diclosed.

Table 3. Sero-positive HIV status disclosure character among HIV Positive pregnant women

Variable	Frequency	Percent
Discordant		
HIV positive husband	186	56%
HIV negative husband	78	23.8%
Do not know husband status	64	19.5%
Total	328	100%
Discussion prior to seeking PMTCT		
Discussed	234	71.3%
Did not discussed	85	25.9%
DK	9	2.7%
Total	328	100%
Discussion before HIV testing		
Yes	224	68.3%
No	37	11.3%
DK	67	20.4
Total	328	100%

Factors influencing disclosure of HIV positive status including the duration of the relationship, the presence of prior discussion HIV test, and awareness about the partner's HIV status. The majority of participants 280 (85.4%) lived more than two years with their partners and of those 259 (79.9%) had disclosed their status when compared to those individuals who lived less which is five (1.5%).

Our study has found that prior communication about HIV testing with a partner, knowing Partner's HIV status, and HIV serostatus disclosure were strongly associated. Participants who had prior discussion before testing were 14 times more likely to disclose their status to partners than women without prior discussion (AOR 14.614, 95% CI (3.608-59.185). Women who know Partner's HIV status were nineteen times more likely to disclose their HIV status to partners than their counterparts (AOR 19.377, 95% CI (5.624-66.766) and women having less than two years duration of the relationship with partners were 99% less likely to disclose their HIV status to partners than the women who had a relationship more than 2 years (AOR 0.007, 95% CI (0.001-0.040).

The Positive outcomes reported by the participants were increased support and more intention to utilize PMTCT programs and out of 264 participants most 116(43.9%) reported that their partners reacted supportively to the disclosure of their HIV status. Fifty-four (20.5%) them are assured by their partner following disclosure. Fifteen (5.7%) care from their partner.

Some of the possible negative outcomes of disclosure reported by women were partner being annoyed 27(10.2%), partner yelling at women 24(9.1%), partner being worried about his HIV status11(4.2%), partners blaming the women 6(2.3%) partner talking about divorcing women 5(1.9%), and anger by partner 3(0.9%).

Table 4. Factors influencing disclosure of HIV positive status to sexual partner among HIV Positive pregnant women

Variables	Duration	Disclosed (N = 264)	Not disclosed (N-64)	COR (95% CI)	AOR (95% CI)
Duration of relationship:	<2yrs	5	43	0.009(0.003-0.026)	0.007(0.001-0.040)
with partners	>=2yrs	259	21	1	1
Discussion about VCT	yes	224	10	29.059(13.523-62.446)	14.614(3.608-59.185)
before HIV test	no	37	48	1	1
Knowing Partner's HIV status	yes	249	15	54.227(24.896-118.113)	19.377(5.624-66.766)
	no	15	49	1	1

Table 5. Partner reaction when he knew that I am HIV positive

Partner reaction	Frequency	Valid percent
Was supportive	116	43.9
Assured me	54	20.5
Annoyed	27	10.2
Yelled at me	24	9.1
Took care of me	15	5.7
Worried about his/her own HIV status	11	4.2
Blamed me to infect him	6	2.3
Talked about divorcing me	5	1.9
Was angry	3	0.9

The study demonstrated that those women who disclosed their positive status to their partners were twelve times more likely to participate in Prevention of Mother to Child Transmission programs than those who didn't disclose (COR 12.01(3.64-39.81).

Table 6. Effects of HIV status disclosure on intension to utilize PMTCT service

	N=328	ART use	COR
Disclosed	264	260	12.1
Did not disclose	64	1	

DISCUSSION

From our study, we have found that two hundred sixty-four (80.5%) of the 328 respondents had disclosed their HIV seropositive status to their sexual partner which is significantly higher than a study done in Tanzania (16.7%), Burkina Faso (31.6%) and Kenya (65%) and this could be related to advances in PMTCT and antiretroviral treatment programs in our country, the study setting and the time of the study. Counseling of HIV-positive pregnant women who did not disclose their HIV status during ANC would help them to disclose their status.

The delayed disclosure rate is found to be lower than those reported in other studies like the study done in Tanzania which showed around 22% of women disclosed to someone within 18 months period following diagnosis. In our study, the women who disclosed to a partner about their HIV positive status within less than six months of knowing their HIV status were more than half (56.8%), while 36.4% of the disclosures were delayed by 6-9 months, and 6.8% of the participant delayed by more than nine months.

In a similar study of 52 women who reported timing of disclosure, 31 (60%) had disclosed within 3 days of testing, and 79% of disclosures occurred in the first 30 days after a positive test. [6]

These study participants might have at least one sexual contact with their partner before disclosure which might raise the possibility of transmission risk if condoms were not used and may limit the beneficial aspect of disclosure making negotiating safer sex difficult and perhaps putting the partner at risk of infection. [8]

Unlike other studies, our study found that there was a greater proportion of disclosure to partners 80.5% disclosed to husband, and other family members which could be explained by the different levels of concern about the health condition of one's partner.. Our study identified that partner's health concern was the major reason cited for disclosing to sexual partner which is in line with some other studies. [7, 9]

Despite the high rate of HIV status disclosure, some (19.5%) of the participants did not know their partner's HIV status. The absence of disclosure to the partners could be either acknowledging that she is already infected with HIV or the result of the emotional rejection of the partner.

In this study, prior discussion with partners about HIV tests, is significantly associated with higher disclosure and it might be helpful to anticipate their partner's reaction and helpful for women to make decision making about disclosures better. This finding is in line with other studies which suggested individuals with prior discussion before testing are more likely to disclose their HIV positive status. [10]

The majority of women in this study reported that their partners reacted supportively to disclosing their HIV status but the reported negative outcome by women included partner being annoyed, yelling at the partner, being worried about his HIV status, blaming the women, raising issues of divorce, fear of confidentiality and accusation of infidelity. These findings were also demonstrated by a study done in Kenya. [11]

Those women with fear of the negative consequences of disclosure were less likely to disclose their status which could be explained that these perceptions and beliefs are some of the important predictors of behavior. [12, 13]

Our study concluded that women who disclose their status are found to be more likely to utilize PMTCT service . The possible explanation could be disclosure facilitates other behaviors that may improve utilization of PMTCT programs and HIV/AIDS prevention. [13]

Our study showed a 12 times more likely participation in PMTCT services in women who disclosed than the counterparts, (COR 12.01(3.64-39.81) which is somewhat different from other studies. [4]

CONCLUSIONS

Our study showed a high number of women disclosing their HIV positive status to their partners. It showed that those women with no disclosure were found to have less utillization of PMTCT programs. It is very important to note that proper uptake of and continued utilization of all PMTCT programs is hugely affected by women's disclosure of their HIV-positive status to their partners.

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CONFLICTS OF INTEREST

There are no conflicts of interest.

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