

HIV serostatus disclosure and associated factors among HIV positive pregnant women attending antenatal care services in northwest Ethiopia

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Abstract

Disclosure of HIV serostatus by pregnant women to their sexual partners is critical for the successful prevention of mother to child transmission of HIV. This study examined the magnitude and factors associated with disclosure of HIV serostatus by pregnant women attending antenatal care services to their sexual partners in northwest Ethiopia.

Institutional-based cross-sectional study design was employed from June to September 2013. All HIV positive pregnant women attending antenatal care follow up at government health facilities of Gondar, Bahir Dar and Metema town during the data collection period were included in the study. Data were collected by using pretested and structured interview questionnaire. Data analyses were done using SPSS for windows version 17.0. Multivariable analyses were applied to identify the relative effect of explanatory variables on the dependent variable.

Out of the 263 HIV positive pregnant women that participated in the study, 236 (89.7%) disclosed their HIV test result to their sexual partners. Knowing HIV serostatus of the sexual partner [AOR: 13.4, 95%CI: (2.6, 70.2)], knowing the importance of HIV serostatus disclosure [AOR: 10.3, 95%CI: (1.1, 98.7)] and being a rural resident [AOR: 0.2, 95%CI: (0.0, 1.0)] were the independent factors that determine HIV positive serostatus disclosure.

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This study showed that the magnitude of HIV serostatus disclosure by HIV positive pregnant women attending antenatal care services to their sexual partners was high. However, this doesn't mean that there will be no need for further intervention activities as significant proportions of the study population still demonstrates nondisclosure. So, it is crucially important for HIV prevention programs to focus on factors, such as residence, increasing people's awareness about HIV and ensuring smooth communication between sexual partners concerning HIV serostatus to address the problem.

Keywords: HIV serostatus; Pregnancy complications, infectious; Disclosure; Sexual partners

Introduction

Sub-Saharan Africa accounts for 68% of all persons infected with HIV, and 72% of global AIDS deaths.^{1,2} Women in sub-Saharan Africa remain disproportionately impacted by the HIV epidemic, accounting for 58% of all people living with HIV in the region in 2011. In the same year, 92% of pregnant women living with HIV resided in the region.³ The seroprevalence for HIV among currently pregnant women in Ethiopia was about 0.8%.⁴

To combat the transmission of HIV, one of the most important strategies is to test pregnant mothers for HIV when they come to have antenatal care (ANC) services at a health facility and to encourage them to disclose the HIV test result to their sexual partners. Here serostatus disclosure plays an important role for involving the partner of women in prevention of mother to child transmission of HIV.^{5,6} However, only few studies state that HIV serostatus nondisclosure has been a major public health challenge among pregnant women of the country.^{4,7} Therefore, knowledge about HIV serostatus disclosure among pregnant women might help to promote prevention of mother to child transmission of HIV (PMTCT) and to monitor the performances of HIV control activities.⁸ Therefore, the current study was conducted to determine the magnitude of HIV serostatus disclosure by pregnant women attending ANC services to their sexual partners and to identify the associated factors in northwest Ethiopia.

Methods and materials

Study area, design and period

Institutional-based cross-sectional study was conducted in Gondar, Metema and Bahir Dar town government health facilities providing PMTCT services, northwest Ethiopia from June to September 2013. The study covered three hospitals namely Gondar University

Hospital, Felege Hiwot Hospital and Metema hospital, and ten health centers (HC) namely Azezo HC, Maraki HC, Poly HC, Bahirdar Town HC, Hidar 11 HC, Han HC, Ganda Wuha HC, Metema Yohannes HC, Kokit HC, Shinfu HC. According to the 2007 Ethiopian population statistics Gondar, Bahirdar and Metema town has a total of 227100, 170300 and 83000 population, respectively. Out of which, pregnant women constitutes about 4% of the population.⁹

Participants and data collection

All HIV positive pregnant women attending ANC follow up at government health facilities of Gondar, Bahir Dar and Metema town during the data collection period were included in the study until the required sample size was obtained. Such women who were seriously ill, having overt psychiatric problem and presenting with labor pain were excluded from the study.

A pre-tested and structured interview questionnaire was used to collect the data. The questionnaire contained detailed information on socio-demographic factors, HIV test, and HIV serostatus disclosure.

Sample size calculation

A single population proportion formula was used to determine the sample size of the study. The total sample size was determined to be 263 by taking 95% confidence interval, 22% prevalence of HIV serostatus disclosure,¹⁰ and 5% margin of error.

Data quality assurance

The training of data collectors and supervisors emphasized issues such as data collection instrument, field methods, inclusion/exclusion criteria, and record keeping. The principal investigator and supervisors coordinated the interview process, spot-checked and reviewed the completed questionnaires on a daily basis

to ensure the completeness and consistency of the data collected. The interview questionnaire was pre-tested on 25 respondents who had characteristics nearly similar to women in study areas in order to identify potential problem areas, unanticipated interpretations, and cultural objections to any of the questions. Based on the pre-test results, the questionnaire was adjusted contextually.

Data management and statistical analysis

Data entry and cleaning were carried out using the Epi Info Version 3.5.1 statistical software. Analyses was done with SPSS software package version 17.0. Descriptive statistics, such as frequency distribution, mean, standard deviation and percentage were employed for most variables. Forward stepwise binary logistic regression analysis was done to assess the relative importance of the explanatory variables on the dependent variable (HIV serostatus disclosure). The odds ratio (OR) with a 95% confidence interval (CI) was used to test the statistical significance of variables.

Operational definitions

Extended Family

Refers to a family unit which includes grandmothers, grandfathers, aunts and uncles, etc in addition to parents (husband, wife) and children.

HIV serostatus disclosure

Refers to the action of telling status of HIV positive test result to a sexual partner and making it revealed and known by him.

Household income

In this study, income referred to monthly household income of the participants. Employed respondents were

asked their monthly salary, whereas farmers were asked the annual amount of cereal harvested and livestock reared and changed to Birr which was then divided by the months of the year. For the analysis, we used 500 Birr, which is the average urban and rural monthly total consumption expenditure set by the Federal Ministry of Finance and Economic Development of Ethiopia.¹¹

Ethical considerations

The study protocol was reviewed and approved by the Institutional Review Board of the University of Gondar via School of Medicine. Permission was obtained from the respective hospitals and health centers prior to data collection. Study participants were interviewed after informed written consent was obtained. Individual records were coded and accessed only by the research staff.

Results

Socio-demographic characteristics of participants

A total of 263 HIV positive pregnant women were enrolled in the study. The mean age of the study participants was 28.3 ± 4.7 years. Two hundred thirty-two (88.2%) of the participants were urban residents. The majority, 240 (91.3%) of them were married. Housewives accounted 158 (60.1%) of the participants. Ninety four (35.7%) of the study participants attended primary school. Nearly half, 121 (46.0%) of the participants monthly household income was more than 1,000 Ethiopian birr. The majority, 227 (86.3%) of the respondents lived together with their sexual partner. Two-thirds, 173 (65.8%) of the study participant's family is economically dependent on the sexual partner for survival. More than three-fourth (84.8%) of the women were on antiretroviral therapy (ART) for the current pregnancy. More than half, 138 (52.5%) of the study participants were classified as

Table I. Socio-demographic and medical characteristics of HIV positive pregnant women attending ANC service in northwest Ethiopia, June to September 2013

Variables	Number (N=263)	Percent
Age		
15 - 30	197	74.9
31 - 49	66	25.1
Residence		
Rural	31	11.8
Urban	232	88.2

Table I. continued

Variables	Number (N=263)	Percent
Marital Status		
Married	240	91.3
Divorced	17	6.5
Widowed	5	1.9
Single	1	0.4
Education		
Illiterate	62	23.6
Primary	94	35.7
Secondary and above	24	9.1
Occupation		
House wife	158	60.1
Gov't employee	33	12.6
Daily laborer	43	16.3
Merchant	28	10.6
Farmer	1	0.4
Income (in birr)		
≤ 500	47	17.9
501 - 1000	95	36.1
> 1000	121	46.0
Family economically dependent on sexual partner		
Yes	173	65.8
No	90	34.2
Live together with sexual partner		
Yes	227	86.3
No	31	11.8
Know sexual partner's HIV status		
Yes	216	82.1
No	47	17.9
Taking ART		
Yes	223	84.8
No	40	15.2
Taking ARV prophylaxis		
Yes	29	11.0
No	234	89.0
WHO stage HIV disease		
Stage I	138	52.5
Stage II	49	18.6
Stage III	70	26.6
Stage IV	6	2.3

WHO stage I of HIV disease. Two hundred sixteen (82.1%) of the participants knew the HIV serostatus of their sexual partner/husband (Table I)

HIV serostatus disclosure

Out of the 263 HIV positive pregnant women participated in the study, 236 (89.7%) of them disclosed their HIV test result to their sexual partners. About three-fourth, 196 (74.5%) of the respondents reported that they knew they were HIV positive and retained in care for more than 6 months. Nearly all, 259 (98.5%) of the respondents received HIV test counseling before they were tested. The majority, 249 (94.7%) of them got individual counseling. One hundred sixty-two

(61.6%) of the respondents did not discuss on having HIV test with their sexual partner/husband prior to HIV test. More than three-fourth, 205 (77.9%) of the respondents disclosed their HIV serostatus to their sexual partner within three months of receiving their test result. Above half, 135 (51.3%) of the respondents reported that the disclosure process was difficult. Nearly all, 256 (97.3%) of the respondents replied that HIV serostatus disclosure to sexual partner to be important (Table II).

Partner reaction after disclosure

Following HIV positive serostatus disclosure, 125 (47.5%) of the sexual partners accepted and were

Table II. HIV serostatus disclosure by HIV positive pregnant women attending ANC service in northwest Ethiopia, from June to September 2013

Variables	Number (N=263)	Percent
Disclosed to a sexual partner		
Yes	236	89.7
No	27	10.3
Knew being HIV positive and retained in care for		
≤ 6 months	67	25.5
> 6 months	196	74.5
Received HIV test counseling		
Yes	259	98.5
No	4	1.5
Type of HIV counseling received (n=259)*		
Yes	101	38.4
No	162	61.6
Disclosed HIV serostatus (n= 236)**		
< 3 months after HIV test	205	77.9
≥ 3 months after HIV test	31	11.8
Disclosure process (n=236)**		
Easy	101	38.4
Difficult	135	51.3
Is disclosure important?		
Yes	256	97.3
No	7	2.7

* the total sum excludes women who did not receive HIV test counseling

** the total sum excludes women who failed to disclose to their sexual partner

supportive, 75 (28.5%) were shocked, 25 (9.5%) reacted of denial/disbelief, 7 (2.7%) showed overt emotional reaction, and 4 (1.5%) were violent.

Reasons for non-disclosure

Out of the respondents, 27 (10.3%) did not disclose their HIV positive serostatus to their sexual partners. Reasons for non-disclosure were: 10 (3.8%) fear of separation/divorce, 8 (3.0%) fear of being criticized, 4 (1.5%) fear of emotional abuse, and 5 (1.9%) sexual partners lived in other place which was not accessible for phone call.

Factors associated with disclosure

Table III presents factors which remained statistically significant in the bivariate and multivariate logistic regression analyses. In this study, the independent predictors of HIV serostatus disclosure on multivariate analysis were: rural residence [AOR=0.2, 95% CI (0.0, 1.0)], knowing HIV serostatus of sexual partner [AOR: 13.4, 95% CI (2.6, 70.2)], knowing the importance of HIV serostatus disclosure [AOR: 10.3, 95% CI (1.1, 98.7)] (Table III).

Discussion

In this study, the magnitude of HIV serostatus disclosure by HIV positive pregnant women to their sexual partners is satisfactorily high. This finding is in line with researches done in South Africa and northern Nigeria.^{12,13} In contrary, it is extremely higher than reports from Uganda, Tanzania and Zimbabwe.^{6,14,15} The difference could be due to variations in study population, study design, sampling size. In the other way, the improvement may be due to continuous efforts to strengthen the health system infrastructure, build staff capacity, increase public awareness, involve community health extension workers, and step up the number of sectoral collaborations to enhance maternity and child health programs.

This study showed that knowing the HIV serostatus of sexual partner is significantly associated with HIV positive serostatus disclosure. A study done in Uganda also supported this finding.⁵ The possible explanation for this could be that knowing the HIV serostatus of sexual partner might give the women strength and courage to disclose their HIV serostatus. And it is

Table III. Factors associated with HIV serostatus disclosure among HIV positive pregnant women attending ANC service in northwest Ethiopia, from June to September 2013

Variables	Disclosed HIV positive serostatus		Crude OR (95% CI)	Adjusted OR (95% CI)
	Yes	No		
Residence				
Rural	24	7	0.3 (0.1, 0.8)	0.2 (0.0, 1.0)
Urban	212	20	1.0	1.0
Know sexual partner's HIV serostatus				
Yes	211	5	37.1 (12.9, 106.7)	13.4 (2.6, 70.2)
No	25	22	1.0	1.0
HIV positive serostatus disclosure is important				
Yes	233	23	13.5 (2.9, 64.1)	10.3 (1.1, 98.7)
No	3	4	1.0	1.0

* the total sum excludes women who did not receive HIV test counseling

** the total sum excludes women who failed to disclose to their sexual partner

also true that a person's ability to effectively prevent HIV transmission and acquisition is supported by knowledge of one's own and sexual partner's HIV serostatus.^{5,12,15}

The odds of disclosing HIV serostatus to a sexual partner among HIV positive pregnant women who perceived serostatus disclosure as important is 10.3 times higher than those who did not. This is also true according to other studies.¹² The reason behind this may be that women who believe HIV serostatus disclosure is important share their HIV positive serostatus because they feel responsible both for the health of their sexual partner and their infant. At the same time, they may believe that HIV positive serostatus disclosure creates opportunities to discuss and implement HIV risk reduction strategies with their sexual partner, improves access to necessary medical treatment and care, and increases opportunities for financial and psychosocial support.^{5,16}

In this and other studies, pregnant women from rural settings were less likely to disclose their HIV positive serostatus to sexual partners as compared to those from urban settings.¹⁵ This indicates that women from rural settings are unaware of the importance of disclosing HIV serostatus. One possible explanation for this could be that women from rural settings have less access to information due to household work overload that includes caring for family members. Furthermore, in countries like Ethiopia, women are economically more dependent on their husbands, and their health is given less priority by family or community members. Also they are not autonomous in making household decisions including seeking healthcare in time of illness and mainly depend on their husbands' decisions. Literature also indicates that women are more likely to have high social and perceived stigma associated with HIV infection.¹⁷

The possible limitation of this study could be that we used self-reported data which might influence the reliability and validity of results as the majority of the study participants had completed only primary and lower education.

Conclusion

This study showed that the magnitude of HIV serostatus disclosure by HIV positive pregnant women attending antenatal care services to their sexual partners was high. However, this doesn't mean that there will be no need for further intervention activities as significant proportions of the study population still demonstrates nondisclosure. So, it is crucially important for HIV prevention programs to focus on factors, such as residence, increasing people's awareness about HIV and ensuring smooth communication between sexual partners concerning HIV serostatus to address the problem.

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