

Research Article

Magnitude of Prompt HIV-Seropositive Status Disclosure to Partner and Associated Factors among Adult Clients on ART at Holeta Health Center, Central Ethiopia, 2020

Guta Kebede,¹ Adugna Dufera ,² Tufa Kolola,³ Teka Girma,⁴ and Daniel Belema⁴

¹Welmera District Health Office, Holeta, Ethiopia

²Ethiopian Public Health Institute, Addis Ababa, Ethiopia

³Department of Public Health, College of Medicine and Health Sciences, Ambo University, Ambo, Ethiopia

⁴Department of Midwifery, College of Medicine and Health Sciences, Ambo University, Ambo, Ethiopia

Correspondence should be addressed to Adugna Dufera; adidiid633@gmail.com

Received 14 October 2021; Revised 3 March 2022; Accepted 28 April 2022; Published 13 May 2022

Academic Editor: Daniel Diaz

Copyright © 2022 Guta Kebede et al. This is an open access article distributed under the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original work is properly cited.

Background. Disclosure of HIV-seropositive status is important for HIV prevention and maintenance of health for people living with HIV and the community at large. Most of the disclosure in our country and elsewhere were after putting the partner at risk of contracting HIV/AIDS. This study aimed to assess prompt HIV-seropositive status disclosure to partner and its associated factors among people living with HIV and attending care and treatment at a health center, in central Ethiopia. **Methods.** A cross-sectional study was carried out from September 15, 2019, to March 15, 2020, among 438 people living with HIV who were more than 18 years old and had sexual partner attending ART clinic at Holeta Health Center, central Ethiopia. The data were collected through face-to-face interviews using a structured questionnaire. The data were entered into Epi data version 3.1 and exported to SPSS version 21 for analysis. Descriptive analysis was conducted to determine the magnitude of prompt HIV seropositive status disclosure to partner and multivariable logistic regression analysis was computed to identify factors associated with prompt HIV seropositive status disclosure. **Results.** A total of 434 study participants took part in this study giving a response rate of 99%. Three hundred thirteen (72.1%) respondents disclosed their seropositive status to their partners promptly. Being married (AOR = 2.99, 95% CI = 1.09–8.21), less than 24-months duration on treatment (AOR = 0.185, 95% CI = 0.076–0.454), discouraging response of partner about the test (AOR = 0.34, 95% CI = 0.0149–0.780), knowing serostatus of one's own partner (AOR = 10.42, 95% CI = 4.19–25.19), and using condom always with a partner (AOR = 11.44, 95% CI = 3.37–38.79) were factors significantly associated with prompt HIV seropositive status disclosure to partner. **Conclusion.** The proportion of prompt disclosure of HIV seropositive status to partner was low when compared to the overall partner disclosure rate. Being in marriage, less than 24 months duration on treatment, discouraging response of partner about the test, knowing serostatus of one's partner, and using condom always with a partner were identified as predictors of prompt HIV seropositive status disclosure to partner.

1. Background

Globally, 38 million people were living with HIV and 1.7 million of them were new infections in 2019. An estimated 32.2 million adults aged 15–49 years worldwide are living with HIV [1, 2]. These increments in the number of patients resulted because of continuing new infections, living longer with HIV, and population growth [2]. In 2019, sub-Saharan Africa, the hardest-hit region, is home to nearly 54% of people living with HIV, 1.1 million children living with HIV,

300,000 AIDS-related deaths, and 730,000 new infections [3]. Ethiopia also has a large and very vulnerable population that there were more than half-million (671,941) HIV-positive population, 14,405 new HIV infections, and 24,813 deaths in 2016 [4]. A common concern within HIV prevention is that HIV-positive individuals do not disclose their HIV status to their partners who are thus at increased risk for HIV infection [5]. HIV disclosure to sexual partners is an important HIV prevention strategy and is associated with a reduced risk of HIV transmission by 18% to 41% [6]. HIV

discordance among couples considerably contributes to the HIV epidemic and represents an unmet HIV prevention need in sub-Saharan Africa. In East Africa, less than 10% of HIV-seropositive individuals know their partners' status and only about 20% of the couples know that they are living in a discordant relationship [7–9]. On-time disclosure makes the partner either look to be diagnosed and adhere to ART or to be prevented from infection or reinfection with new strains [6]. It also helps the couples to discuss their reproductive health and their future of having a child which would have great success in reducing vertical transmission of HIV/AIDS [10, 11]. Furthermore, intervention programs will be in accordance with the scenarios as a seroconcordant should be put for the same interventions (ART or prevention packages) while in the case of serodiscordant, the negative partner should be engaged in effective HIV prevention (condom and PrEP) and test while the other should initiate ART [12].

Apart from the overall HIV-seropositive disclosure status [13–17], the study finding specifically on prompt HIV-seropositive disclosure status to the sexual partner is limited in Ethiopia including our study area. Therefore, this study aimed to assess the proportion of prompt HIV-seropositive status disclosure to their partner and associated factors among adult clients on ART at a health centre, in central Ethiopia.

2. Methods

2.1. Study Area and Period. The study was carried out in Holeta Health Centre, central Ethiopia from September 2019 to March 2020. Holeta Health Centre is found in Holeta town which is located 29 km to the west of Addis Ababa. There are 2 public health centres, 8 health posts, one primary hospital under construction, and 14 private clinics in the town. Holeta Health Center was the only antiretroviral therapy site in the town.

The health centre (HC) ART clinic started the provision of antiretroviral drugs in 2007 and currently gives follow-up and treatment services for about 1079 HIV/AIDS patients out of which 996 were adults.

2.2. Study Design and Study Population. A cross-sectional study design was carried out. All people living with HIV/AIDS (PLWHA) attending the ART clinic in Holeta Health Center were our source population. All PLWH on ART at Holeta HC ART clinic who were above 18 years old and had a sexual partner were the study population ($n = 438$) for this study.

2.3. Data Collection Tool, Quality Control, and Measurements. A structured, interview-administered questionnaire was prepared in English and translated into Afan Oromo. The tool was adapted from the previous literature in different parts of the world and modified according to the local context [14, 18–20]. Two nurses were recruited as data collectors. The data collectors were then trained for one day on how to collect data before the actual data collection started. Moreover, a pretest was performed on 5% of the

study participants and the necessary adjustment was made on some items of the questionnaire based on pretest results.

2.4. Operational Definition. Prompt disclosure: disclosing HIV-positive status to partner on the day of diagnosis before having sexual intercourse with a partner.

Seroconcordant is a couple with both partners having the same result (HIV-positive or HIV-negative).

Serodiscordant is a couple with one partner HIV-positive and the other HIV-negative.

2.5. Data Processing and Analysis. Before data entry, the questionnaire was checked for its completeness. The data were entered into Epi data version 3.1 and then exported to SPSS version 21 for further analysis. The descriptive analysis such as the frequency with its percentage and mean were calculated. The bivariate binary logistic regression analysis was used to identify associations between variables. Effects of confounders were controlled through multivariable logistic regression analysis entering variables in similar categories such as sociodemographic, magnitude, and reasons of nondisclosure characteristics together in their order. The variables that had a p value ≤ 0.05 in the bivariate analysis were transferred to multivariable logistic regression models. The adjusted odds ratio with its 95% confidence interval was computed for variables entered into the multivariable model. Variables that had a p value < 0.05 were considered statistically significant in a multivariable model.

3. Results

A total of 438 study subjects were recruited for this study, of which 434 responded making a response rate of 99%. The mean age of the respondents was 39 years with $SD \pm 10.03$ years. Slightly more than half of the respondents (229, 52.8%) were females. Concerning occupational status, 120 (27.6%) of the respondents were daily laborers while 46 (10.6%) were government employees. Out of four hundred thirty-four respondents, 95 (21.9%) had completed secondary education while 172 (39.6%) were not educated (Table 1).

The overall seropositive status disclosure rate to sexual partner was 378 (87.1%). Prompt HIV-seropositive status disclosure to sexual partner was 313 (72.1%). However, 65 (17.2%) of the study participants disclosed their seropositive status after committing sexual intercourse (Table 2).

3.1. Reasons for Prompt Disclosure. The main reasons for prompt disclosure of HIV-seropositive status to sexual partner were feeling of obligation to tell the partner (56.8%), not wanting to put the partner at more risk (22.6%), and letting others learn from (7.7%) (Table 3).

3.2. Factor Associated with Prompt HIV-Seropositive Status Disclosure. In bivariate analysis, educational status, relationship duration, marital status, duration of treatment, telling partner when went to get test service, response of

TABLE 1: Sociodemographic characteristics of adult clients on ART at Holeta Health Center, central Ethiopia, 2020.

Variable	Categories	Frequency	Percent
Sex	Male	205	47.2
	Female	229	52.8
Age	18–24	18	4.1
	25–29	42	9.7
	30–35	71	16.4
	>35	303	69.8
	Orthodox	293	67.5
Religion	Muslim	6	1.4
	Wokefata	6	1.4
	Protestant	129	29.7
Ethnicity	Oromo	337	77.7
	Amhara	77	17.7
	Tigre	13	3
	Gurage	7	1.6
	Single	23	5.3
Marital status	Married	344	79.3
	Divorced	41	9.5
	Widowed	17	3.9
	Separated	9	2
Educational status	Unable to read and write	172	39.6
	Primary school	129	29.7
	Secondary school	95	21.9
	College and above	38	8.8
Residence	Rural	114	26.3
	Urban	320	73.7
Income	<1500 ETB	276	63.6
	≥1500 ETB	158	36.4
Occupation	Government employee	46	11
	Merchant	54	12.4
	Housewife	109	25.1
	Daily laborer	120	27.6
	Private employee	26	6.0
	Farmer	67	15.4
	Other*	12	2.8

*NGO employed, students, and prisoners.

partner about the test, knowing serostatus of own partner, and frequency of condom use with the partner were found significant at p value <0.05 . After adjusting variables in the multivariate logistic regression analysis, marital status, duration of treatment, response of partner about the test, knowing serostatus of own partner, and frequency of condom use with the partner were significantly associated with prompt HIV-seropositive status disclosure at a p value <0.05 .

Respondents in marriage were about 3 times more likely to disclose their HIV-positive status to their partner promptly as compared to respondents out of marriage (AOR = 2.99, 95% CI: 1.09, 8.21). Respondents whose duration of treatment was <24 months were 81% less likely to disclose their HIV-positive status to their partner promptly as compared to respondents >24 -months duration of treatment (AOR = 0.185, 95% CI: 0.076, 0.454). Respondents who were discouraged about the test by their partner were 66% less likely to disclose their HIV-positive status to their partners promptly as compared to respondents who were encouraged about the test by their partners (AOR = 0.341, 95% CI 0.0149, 0.780). Respondents who had known

serostatus of their partner were 10 times more likely to disclose their HIV-positive status to their partner promptly as compared to those who had not known serostatus of their partners (AOR = 10.42, 95% CI 4.19, 25.19). Respondents who had used condoms always with their partners were 11 times more likely to disclose their HIV-positive status to their partner promptly as compared to those who had never used condoms (AOR = 11.44, 95% CI 3.37, 38.79) (Table 4).

4. Discussion

The proportion of prompt HIV-seropositive status disclosure to partner is 72.1% (95% CI: 67.7–76.7) which is higher than the studies conducted in Mekele Hospital (58%) [13] and Sagamu of Nigeria (49.3%) [21]. These differences may be due to differences in study periods and study areas. In the study conducted in Ambo, 84% of the participants disclosed their HIV-seropositive status immediately after diagnosis which is higher than the finding from the current study [22]. This could be because the study conducted in Ambo reported the disclosure to partner or other family members.

Study participants who were in marriage were about 3 times more likely to disclose promptly to their sexual partners compared with their counterparts which is consistent with studies conducted in Ambo Hospital [22] and Axum [23], Ethiopia. Respondents who were on treatment for less than 24 months were 81% less likely to disclose their HIV-positive status to partner promptly as compared to respondents who stayed ≥ 24 months duration of treatment which is agreed with studies conducted in Mekele [17] and Ambo Hospital [22]. This may be since the client stayed longer on HAART treatment and was counselled repeatedly to become stable, assured more, and become more comfortable which can increase their social relationship and disclosure. This study showed that respondents who were discouraged by their partner when they asked about their need for a test were 66% less likely to disclose their HIV-positive status to their partner promptly. This finding is in line with a study conducted in Kemissie, northern Ethiopia [15]. This might be due to the fact that discussing HIV/AIDS openly and test results with a partner might help the individual to be strong to disclose their result.

Furthermore, knowing the serostatus of their partner is significantly associated with prompt HIV-seropositive status disclosure to their partner. Respondents who knew the serostatus of their partner were more likely to disclose promptly when compared with respondents who did not know the serostatus of their partners. A consistent finding was reported by other studies conducted in Jimma [18], Hawassa [14], Mekele [13], Ambo [22], Axum [23], Kemissie [15], and Bale [16].

Similarly, respondents who had always used a condom with their partner were 11 times more likely to disclose their HIV-seropositive status to their partner promptly as compared to those who had never used a condom. This may be due to the fact that using condoms regularly is safe for partners and as far as the partner was not put at risk of getting HIV-positive, disclosing may not be frustrating so

TABLE 2: Magnitude of prompt disclosure to partner among clients on ART at Holeta Health Center, central Ethiopia, 2020.

Variables	Categories	Frequency	Percent
Did you tell your partner that you were living with HIV any time before sexual intercourse?	Yes	313	72.1
	No	121	27.9
If no, did you tell your partner that you were living with HIV after sexual intercourse?	Yes	65	17.2
	No	56	12.9
Did your partner currently know that you are HIV-positive?	Yes	378	87.1
	No	56	12.9

TABLE 3: Reason for disclosure and nondisclosure by the client on ART at Holeta Health Center, central Ethiopia, 2020.

Variables = 434	Category	Frequency	Percent
Reasons for not disclosed promptly/not disclosed totally	Fear of abandonment	40	33
	Fear of stigma or rejection	31	26
	Fear of break-in confidentiality	26	21
	Other*	24	20
	I felt obligated to tell this person	178	56.8
Reason for disclosing your HIV-seropositive status to partner promptly	I did not want to risk anymore	71	22.6
	To let others learn from	24	7.7
	Other**	40	12.6
Is it your duty to disclose your seropositive status to this partner?	Yes	261	60
	No	173	40

*Fear of accusation of infidelity, client skill, and psychology;**Religious motives, to adhere to treatment.

TABLE 4: Factor associated with prompt HIV-seropositive status disclosure to the partner among clients on ART at Holeta Health Center, central Ethiopia, 2020.

Variables	Alternative	Prompt disclosure		COR (95% CI)	AOR (95% CI)	P value
		Yes	No			
Educational status	Unable to read and write	106	66	1	1	
	Primary school	98	31	1.97 (1.18, 3.27)	0.62 (0.25, 1.52)	0.29
	Secondary school	81	14	3.60 (1.89, 6.87)	0.50 (0.14, 1.80)	0.28
	College and above	28	10	1.74 (0.80, 3.82)	0.65 (0.18, 2.37)	0.51
Relationship duration	<48 months	200	90	1		
	≥48 months	113	31	1.64 (1.03, 2.62)	1.581 (0.66, 3.78)	0.3
Marital status	Out of marriage	57	33	1	1	
	In marriage	256	88	1.68 (1.03, 2.76)	2.99 (1.09, 8.21)*	0.03
Duration on treatment	≥24 months	221	73	1	1	
	<24 months	92	48	0.63 (0.41, 0.981)	0.18 (0.08, 0.45)*	0.001
Did you tell your partner when went to get tested?	No	131	67	1	1	
	Yes	182	54	1.72 (1.13, 2.63)	1.09 (0.54, 2.22)	0.79
Response of your partner	Encouraging	28	26	1	1	
	Neutral	10	12	0.77 (0.29, 2.09)	0.60 (0.17, 2.09)	0.42
	Discouraging	40	78	0.48 (0.25, 0.92)	0.34 (0.15, 0.78)*	0.001
Knowing serostatus of own partner	No	192	97	1	1	
	Yes	121	24	2.55 (1.54, 4.20)	10.42 (4.19, 25.91)*	0.001
Frequency of condom use with partner	Never used	62	27	1	1	
	Always	101	13	3.38 (1.62, 7.04)	11.44 (3.37, 38.79)*	0.001
	Some times	150	81	0.81 (0.48, 1.36)	0.98 (0.39, 2.48)	0.97

that the one who disclose may not feel guilt. The finding was in line with studies conducted in Addis Ababa [24].

4.1. Limitation and Strength of the Study. As far as a cross-sectional study is a snapshot, respondents were expected to remember information retrospectively at that moment.

Recall and interviewer bias were the potential limitations of this study. However, several scientific procedures have been employed to minimize the possible effects. To reduce the recall bias, for instance, only about the recent partner was asked for the respondents frequently changed their partner. The study was also cost-effective and versatile.

5. Conclusion and Recommendation

The proportion of prompt disclosure of HIV seropositive status to partners was low as compared to the overall partner disclosure rate of the national target of the country. Being in marriage, having less than 24-months duration on treatment, discouraging response of partner about the test, knowing serostatus of one's partner, and using a condom always with a partner were identified as predictors of prompt HIV-seropositive status disclosure to partner. Thus, counsellors and respective health care providers in collaboration with concerned stakeholders should focus on treatment adherence, partner testing, regular condom use, and partners' open discussion so that they in turn affect the prompt serostatus disclosure among partners.

Abbreviations

HIV: Human immunodeficiency virus

PrEP: Pre-exposure prophylaxis

HAART: Highly active antiretroviral therapy.

Data Availability

Full data for this research are available through the corresponding author upon request.

Ethical Approval

The proposal of this study was approved by the Ethics Review Committee of the College of Medicine and Health Sciences, Ambo University (ref: CMHS-ERC: 035/12). Then, the ethical clearance letter was obtained from the college and submitted to the Holeta Town Administration Health Office for permission to undertake the study. Moreover, the study participants were not identified for confidentiality reasons.

Consent

Verbal informed consent was obtained from all study participants before the interview since the study presents no more than minimal risk of harm to subjects and involves no procedures as well as significant number of our study participants cannot read and write to provide written informed consent.

Conflicts of Interest

The authors declare that they have no conflicts of interest.

Authors' Contributions

GK and AD conceptualized the study, searched the literature, trained field researchers for data collection, and wrote the results and discussion sections. TK and TG contributed to the design of the study, data interpretation, and took part in the analysis. DB has critically reviewed the result and prepared the manuscript for publication. Finally, all authors have proofread the final manuscript.

Acknowledgments

The authors thank all the study participants for their cooperation in providing the necessary information. The authors also thank the research assistants who participated in data collection and supervision during this study.

References

- [1] UNAIDS, *Global AIDS Update*, UNAIDS, Geneva, Switzerland, 2020.
- [2] UNAIDS, *Global HIV & AIDS Statistics-2020 Fact Sheet*, UNAIDS, Geneva, Switzerland, 2020.
- [3] UNAIDS, *HIV and AIDS in East and Southern Africa Regional Overview*, UNAIDS, Geneva, Switzerland, 2019.
- [4] A. Misganaw, T. N. Haregu, K. Deribe et al., "National mortality burden due to communicable, non-communicable, and other diseases in Ethiopia, 1990–2015: findings from the Global Burden of Disease Study 2015," *Population Health Metrics*, vol. 15, no. 1, p. 29, 2017.
- [5] R. Smith, K. Rossetto, and B. L. Peterson, "A meta-analysis of disclosure of one's HIV-positive status, stigma and social support," *AIDS Care*, vol. 20, no. 10, pp. 1266–1275, 2008.
- [6] A. A. O'Connell, S. J. Reed, and J. A. Serovich, "The efficacy of serostatus disclosure for HIV transmission risk reduction," *AIDS and Behavior*, vol. 19, no. 2, pp. 283–290, 2015.
- [7] R. Kairania, R. H. Gray, N. Kiwanuka et al., "Disclosure of HIV results among discordant couples in Rakai, Uganda: a facilitated couple counselling approach," *AIDS Care*, vol. 22, no. 9, pp. 1041–1051, 2010.
- [8] K. Deribe, K. Woldemichael, N. Bernard, and B. Yakob, "Gender difference in HIV status disclosure among HIV positive service users," *East African Journal of Public Health*, vol. 6, no. 3, pp. 248–255, 2009.
- [9] F. C. Lampe, "Sexual behaviour among people with HIV according to self-reported antiretroviral treatment and viral load status," *AIDS*, vol. 30, no. 11, pp. 1745–1759, 2016.
- [10] F. Lanre-Babalola, K. Salami, O. Oke, and F. Alo, "Parent-child communication and the prevalence of sexual molestation among adolescents," *Journal of Education, Society and Behavioural Science*, vol. 3, no. 5, pp. 1–9, 2019.
- [11] M. W. Gitahi, *A Comparative Study on Factors that Differentiate HIV Positive Women Who Disclose Their Status from Women Who Not Disclose*, University of Nairobi, Nairobi, Kenya, 2016.
- [12] World Health Organization, *Guidance on Couples HIV Testing and Counselling Including Antiretroviral Therapy for Treatment and Prevention in Serodiscordant Couples: Recommendations for a Public Health Approach*, WHO, Geneva, Switzerland, 2012.
- [13] M. Genet, G. Sebsibie, and T. Gultie, "Disclosure of HIV seropositive status to sexual partners and its associated factors among patients attending antiretroviral treatment clinic follow up at Mekelle hospital, Ethiopia: a cross sectional study," *BMC Research Notes*, vol. 8, no. 1, p. 109, 2015.
- [14] T. Gari, D. Habte, and E. Markos, "HIV positive status disclosure to sexual partner among women attending ART clinic at Hawassa University referral hospital, SNNPR, Ethiopia," *The Ethiopian Journal of Health Development*, vol. 24, no. 1, pp. 9–14, 2010.
- [15] M. Seid, B. Wasie, and M. Admassu, "Disclosure of HIV positive result to a sexual partner among adult clinical service users in Kemissie district, northeast Ethiopia," *African Journal of Reproductive Health*, vol. 16, no. 1, pp. 97–104, 2012.

- [16] T. D. Geremew, R. A. Nuri, and J. K. Esmael, "Sero status disclosure to sexual partner and associated factors among adult HIV positive patients in Bale zone hospitals, oromia region, Ethiopia: institution based cross-sectional study," *Open Journal of Epidemiology*, vol. 8, no. 2, pp. 43–53, 2018.
- [17] T. Gultie, M. Genet, and G. Sebsibie, "Disclosure of HIV-positive status to sexual partner and associated factors among ART users in Mekelle hospital," *HIV*, vol. 7, pp. 209–214, 2015.
- [18] T. Tesfaye, J. Darega, T. Belachew, and A. Abera, "HIV positive sero-status disclosure and its determinants among people living with HIV/AIDS following ART clinic in Jimma University Specialized Hospital, Southwest Ethiopia: a facility-based cross-sectional study," *Archives of Public Health*, vol. 76, no. 1, pp. 1–10, 2018.
- [19] O. V. Adeniyi, A. I. Ajayi, N. Selanto-Chairman et al., "Demographic, clinical and behavioural determinants of HIV serostatus non-disclosure to sex partners among HIV-infected pregnant women in the Eastern Cape, South Africa," *PLoS One*, vol. 12, no. 8, Article ID e0181730, 2017.
- [20] I. Kadowa and F. Nuwaha, "Factors influencing disclosure of HIV positive status in Mityana district of Uganda," *African Health Sciences*, vol. 9, no. 1, pp. 26–33, 2009.
- [21] A. A. Salako, O. O. Sholeye, and O. E. Amoran, "Disclosure of HIV status among clients accessing care at a tertiary health facility in Sagamu, southwestern Nigeria," *Current Research Journal of Biological Sciences*, vol. 8, no. 2, pp. 18–23, 2016.
- [22] S. Natae and M. Negawo, "Factors affecting HIV positive status disclosure among people living with HIV in west showa zone, Oromia, Ethiopia," *Abnormal Behavior Psychology*, vol. 2, no. 2, pp. 1–6, 2016.
- [23] H. Alema, K. Misgina, and M. Weldu, "Determinant factors of HIV positive status disclosure among adults in Axum Health Facilities, Northern Ethiopia: implication on treatment adherence," *Journal of AIDS and HIV Research*, vol. 9, no. 3, pp. 52–59, 2017.
- [24] N. G. Dessalegn, R. G. Hailemichael, A. Shewa Amare et al., "HIV disclosure: HIV-positive status disclosure to sexual partners among individuals receiving HIV care in Addis Ababa, Ethiopia," *PLoS One*, vol. 14, no. 2, Article ID e0211967, 2019.