HIV positive status disclosure to a sexual partner: the influence of marital status and partner communication

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Abstract

Background Disclosure of HIV serostatus to sexual partner does not only facilitate partner's support and testing, but it also correlates with better treatment outcomes. We drew from a cross-sectional survey data conducted among postpartum women with HIV to examine the rate of serostatus disclosure to sexual partners, the influence of relationship status, and knowing one's partner's status on disclosure and reasons for non-disclosure.

Methods We conducted telephonic interviews with a final sample of 485 postpartum women with HIV drawn from the East London Prospective Cohort study database between January and May 2018. Disclosure of HIV status to partner was based on self-reporting. We fitted adjusted and unadjusted logistic regression models and also conducted descriptive statistical analyses.

Results Overall, 82.5% of the respondents had disclosed their status to their partners. After adjusting for important covariates (age, education level, employment status, number of years since HIV diagnosis, alcohol use and smoking behaviour), being married [adjusted odd ratio (AOR): 2.66; 95% confidence interval (CI):1.17-6.05] and knowing one's partner's status [AOR: 46.91; 95% CI:19.50-112.81] were significantly associated with a higher odds of having disclosed HIV status to sexual partners. Fear of rejection, stigma or being judged, new or casual relationships, and having a violent partner were the main reasons for not disclosing HIV status to sexual partners.

Conclusion We found a relatively high rate of HIV status disclosure in the cohort. Being married and having open communication with a partner about HIV status are important factors facilitating disclosure to sexual partners.

Background

Disclosure of HIV serostatus among women living with HIV/AIDS in sub-Saharan Africa (SSA) has substantial implications for health outcomes, particularly in reaching the goal of an AIDS-free generation. Evidence shows that disclosure of HIV status promotes voluntary testing, safer sexual practices and improves adherence to antiretroviral therapy (ART) [1]. Also, HIV status disclosure has been linked to positive mental health outcomes given that social support from family and social networks has been shown to improve psychological well-being and may play a significant role in the
facilitation of the development of effective coping strategies, in addition to obtaining financial support from family members[2].

The Joint United Nations Programme on HIV/AIDS (UNAIDS) had set a lofty goal of having 95% of people living with HIV knowing their serostatus, 95% of people who know their status to receive treatment and 95% of people on HIV treatment to have a suppressed viral load [3]. Disclosure of HIV status is critical to reaching this goal since heterosexual contact is the primary route of HIV transmission in sub-Saharan Africa [4]. HIV status disclosure is particularly important among pregnant and postpartum women. However, despite the importance of HIV disclosure, postpartum women tend to base their disclosure on past experiences, which are informed by their perceptions of stigma and discrimination from family members and friends [5]. It is no secret that the postpartum period is characterized by subjective, social, financial, and mental changes that could affect the behaviour of mothers [6].

Despite the documented advantages of the serostatus disclosure, rates vary widely, especially in sub-Saharan Africa. Among pregnant and postpartum African women living with HIV, disclosure rates to any individual range between 5% and 97%, and to male partners, rates range between 30 and 93% [7]. Sociocultural factors impacting gender and inequality are key factors influencing the low rates of serostatus disclosure among women living with HIV [8]. Varying rationale for the lack of disclosure includes, but is not limited to, fear of abandonment, especially where financial resources are involved, safety, and intimate partner violence [9–11].

Non-disclosure is usually dependent on the woman’s previous experience in terms of the direct observation of the maltreatment of others, which includes, but is not limited to, social ostracisation and gossiping [12, 13]. Sex deprivation, emotional abuse, and stigmatisation, especially from male partners and unfortunately, community members, are also factors that have been reported to impact HIV serostatus disclosure [14]. Supporting women in the postpartum period is essential to the successful implementation of PMTCT programmes [5]. Understanding sociocultural circumstances that act as barriers and facilitators to HIV serostatus disclosure, in addition to the decision-making process among postpartum women, is essential for understanding the factors that lead to disclosure among
partners. While it is clear that fear of rejection and stigma precludes people from disclosing their status, the role of marital status and partner communication is less clear. This study examines the rate of serostatus disclosure to sexual partners among postpartum women living with HIV in the Eastern Cape, South Africa. Also, the study examines the influence of marital status and partner communication on HIV serostatus disclosure as well as reasons for non-disclosure of serostatus. These findings might shed light on the context in which disclosure decisions occur, in order to develop interventions that support women in making decisions about HIV disclosure during a vulnerable period of their lives.

Methods

**Study design and settings**

This cross-sectional analytical study was conducted between January to May 2018 on a sample of parturient women with HIV enrolled in the electronic database of the East London Prospective Cohort Study [15]. This database was created for research purposes between September 2015 and May 2016 to track the PMTCT outcomes of parturient women with HIV and their infants in three hospitals in Buffalo City and the Amathole district of the East Cape Province of South Africa. These hospitals serve a combined population of 1.7 million people residing in the rural and urban communities of the central region of the Eastern Cape [16].

**Participants and Sample size**

The sample size for this sub-study (exit interview) was estimated as 485, using the Cochran formula for categorical data, at a confidence level of 95%, a precision level of $+/-4\%$ and 10% possible attrition. Parturient women with HIV enrolled in the East London Prospective Cohort Study database, who were accessible telephonically, were considered eligible for this exit survey. Each participant was offered a choice to either complete an interviewer-guided interview face-to-face or telephonically. A few participants (n=43) who chose to attend interviews at one of the three hospitals were reimbursed for the cost of transportation. Those who chose to complete telephonic interviews agreed to a scheduled time with our research team.
We employed and trained two research assistants, who were fluent in both IsiXhosa (local language) and English for this study. The research team successfully contacted 509 participants who responded to the study questionnaires. Some of the eligible participants were no longer accessible through any of the three contactable mobile numbers obtained from the electronic database. We designed a questionnaire specifically for the exit interview, which was piloted with 12 parturient women with HIV in one of the hospitals to ascertain the validity of the instrument. We subsequently adjusted the questionnaire using feedback from the participants and the investigators.

**Measures**

The questionnaire consisted of three main sections: socio-demographic, lifestyle behaviours, and clinical information.

**Socio-demographic characteristics:** We obtained information on the participants’ ages (which were coded as continuous variables), level of education, and marital status. We obtained information on the employment status of the participants, occupation in the preceding 12 months at the time of the study, and whether they were engaged in a salary paying job. We obtained additional information on whether participants were receiving child support grants (social grants) from the South African government.

**Lifestyle behaviours:** We obtained information on the smoking status and alcohol consumption in the past year as categorical data with "yes" or "no" response.

**Clinical characteristics:** The following clinical information was obtained through self-reporting by the participants: awareness of partner's HIV serostatus, disclosure of HIV serostatus to a sexual partner, and complete adherence to ART (no missed dose of ART in the preceding week of the study). A binary response of "yes” or “no” was provided for the participants. We also documented the duration of HIV infection (period since diagnosis) among the participants, which was categorised as a continuous variable. We asked participants to provide open responses to reasons for not disclosing their status to their respective partners.
**Data analysis**

Disclosure of HIV serostatus to sexual partners was the main outcome measure of this study.

Complete responses were available for 485 respondents on the main outcome measure and were included in this analysis. All analyses were conducted with the IBM Statistical Packages for Social Sciences, version 24.0 (SPSS, Chicago, IL, USA). Descriptive statistics (means, frequency, and percentages) were used to summarise the characteristics of the participants disaggregated by their disclosure status. We performed adjusted and unadjusted logistic regression models to examine the associations between marital status, knowing the partner's status, and HIV positive status disclosure. The 95% confidence intervals were reported for all analyses, and p-values less than 0.05 were considered statistically significant.

**Results**

**Socio-demographic characteristics**

The average age of participants was 32.91± 5.74 years. Most participants were single (74.0%), had up to grade 12 level of education (86.8%), were unemployed (67.6%), but received social grants (93.6%). The majority of the participants knew their partner's HIV status (65.8%), did not smoke cigarettes in the past year (91.1%), had consumed alcoholic beverages in the past year (64.3%), had been living with HIV for more than five years (57.5%) and self-reported complete adherence to ART (63.9%) (Table 1).

**Level of serostatus disclosure to partners**

A total of 400 participants (82.5%) had disclosed their HIV serostatus to their partners. However, the proportion of respondents who had disclosed their status varies by age, marital status, alcohol use, and knowing a partner's status. The HIV disclosure rate was highest among women who were married (92.1%), had Grade 7 level of education or less (90%), and knew their partner's status (98.1%) (Table 1).

**Multivariable Analysis**
We used adjusted and unadjusted logistic regression models to examine the influence of marital status and knowing one's partner’s status on HIV positive status to a sexual partner. In the adjusted regression, being married and knowing one's partner's status were associated with increased odds of HIV serostatus disclosure to partner, while alcohol use was associated with reduced odds of HIV serostatus disclosure. However, after adjusting for relevant covariates, only being married and knowing a partner's status were independently and significantly associated with higher odds of HIV serostatus disclosure to partners.

**Reasons for non-disclosure**

The main reasons for not disclosing HIV serostatus to sexual partners were: lack of readiness, fear of rejection and violent reaction from the partner, having broken up the relationship, and being in a casual relationship (Table 3).

**Discussion**

Given the importance of HIV status disclosure in promoting voluntary testing, safer sexual practices, adherence to ART[1], compliance with interventions for vertical transmission in the postpartum period [17], this study specifically examined the rate and the influence of marital status and knowing a partner's status on serostatus disclosure to sexual partners. Also, the study assessed the reasons for non-disclosure. The overall disclosure rate of postpartum women to their sexual partner was 82.5%. Given that HIV disclosure is an independent predictor of ART adherence, which mediates viral suppression [18–20], the disclosure rate reported in this study is commendable. Status disclosure to partners should be strengthened in order to prevent HIV breastmilk transmission in the region by consolidating the counselling sessions at the postnatal clinic visits. The high rate of disclosure in the present study (82.5%) is higher than the rate reported in the same population during the pregnancy period (74.4%)[21]. Similar disclosure rates were reported in the literature among pregnant and postpartum women [17, 22, 23]. Given that HIV status disclosure is a dynamic process that evolves [2, 24], the seven-point increase in the disclosure rate observed after 24 months post-delivery is not surprising. This further demonstrates that individuals living with HIV become more open and
comfortable with their partners, thus, facilitating discussion about their status [22, 25].

Our results show that being married and knowing the partner's status were associated with increased odds of HIV status disclosure. Participants who had not disclosed their status indicated that they had broken up the relationship with their partner, or they were not close enough to warrant disclosure of HIV status. Women in a marital relationship had higher odds of disclosure than others. This finding is similar to previous studies conducted in Tanzania, Ethiopia, Kenya and Burkina Faso [9, 14, 26, 27]. Daily contact in marital relationships might increase the likelihood of HIV status disclosure compared to those who were only dating. It should, however, be noted that the majority of the study participants were single (74%). As such, this poses the challenge for public health practitioners and medical providers to reach partners of single women who are at risk of contracting HIV for testing. Interventions should, therefore, be crafted to promote HIV status disclosure among single women in the region.

Knowing a partners' HIV serostatus was a significant predictor of HIV status disclosure among postpartum women. This result is consistent with previous studies in Africa [28, 29]. Knowing one's partner's status may be essential in ensuring open communication among HIV positive women and their partners without the potential fear of rejection and violence. It could also be that the disclosure of HIV status to a partner facilitates the partner's testing.

Surprisingly, the duration of the infection did not influence the disclosure rate observed in this study, as the majority of the participants (57.5%) had been diagnosed more than five years before. Nevertheless, all participants had been diagnosed with HIV for over two years, suggesting that they had had sufficient time to process their HIV status and decide on who and when to disclose their status. Perhaps, the duration with a current partner might have shed light on the association between the duration of infection and disclosure of HIV status. Whether change of sexual partners after the diagnosis mediated the association between HIV status' disclosure and duration of infection is unclear in this study.

Reasons for non-disclosure among the participants were fear of rejection and violent reactions of partners, and not being ready to disclose. These are consistent with previous studies in a similar
setting in South Africa [21] and elsewhere [23, 28]. Addressing these reasons through counselling will further increase the rate of disclosure in the study setting. The ultimate goal of status disclosure is to motivate partners to get tested for HIV and access treatment if tested positive, which is in line with the UNAIDS 95-95-95 goal of achieving an HIV free generation. Also, achieving undetectable viral load levels has been proven to eliminate the chances of HIV transmission with the Undetectable = Untransmittable campaign [30]. Educating the public on this important advancement in HIV treatment will help to reduce stigma and facilitate HIV disclosure and testing [30].

Study Limitations
The cross-sectional nature of the data limits the determination of the temporal nature of the associations. Also, the outcome variable was measured by self-reporting, as such, social desirability and recall bias cannot be excluded entirely, though this is a common phenomenon. Nevertheless, this study provides essential insights into the role of marital status and knowing a partner's status on HIV serostatus disclosure in the region that would allow health authorities to develop strategies to provide target HIV prevention programmes in the postpartum period.

Conclusions
While a hundred percent rate of disclosure is desirable, the rate of HIV disclosure in this cohort has increased from 74.4% during pregnancy to 82.5% during the postpartum period. Being married and having open communication with a partner about HIV status are important factors facilitating disclosure to sexual partners. Thus, clinicians' counselling should focus on strengthening open communication between partners at the postnatal clinic visits in order to improve status disclosure, HIV treatment outcomes, and further prevention of vertical transmission in this region.

Abbreviations
AIDS= Acquired immune deficiency syndrome; ART=Anti-retroviral therapy; HIV=Human immunodeficiency virus; PMTCT= Prevention of mother-to-child transmission; SSA=Sub-Saharan Africa

Declarations

Ethics approval and consent to participate
Ethical approval was granted by the Walter Sisulu University’s Ethics Committee (Reference:
The Eastern Cape Department of Health and the management of the hospitals granted permission for the implementation of the study. Though the participants had signed written informed consent at the baseline for a follow-up study, we obtained another informed consent either verbally for a telephonic interview or in writing (at the face-to-face interviews). Each participant understood her right to participate and to refuse to answer any question; she was also made aware that if she was not comfortable with the interview or process, she had the right to even drop out at any stage of the interview. Participants' rights to privacy and confidentiality of medical information were respected throughout the study period.

Consent for publish

Not applicable.

Availability of data and materials

All data and materials used for this study are available with the corresponding author upon reasonable request.

Competing interests

AIA – is an associate editor of the BMC Public Health journal. Other authors have no conflict of interests to declare.

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Authors’ contributions

OVA and AIA conceptualised, designed and implemented the study protocol. CN and OVA drafted the manuscript, and AIA performed the analysis. All authors reviewed, revised and approved the draft for submission.

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References

1. Hampanda KM, Rael CT. HIV status disclosure among postpartum women in Zambia with varied intimate partner violence experiences. AIDS Behav. 2018;22(5):1652–61.

2. Brittain K, Mellins CA, Remien RH, Phillips T, Zerbe A, Abrams EJ, Myer L. Patterns and predictors of HIV-status disclosure among pregnant women in South Africa: dimensions of disclosure and influence of social and economic circumstances. AIDS Behav. 2018;22(12):3933–44.

3. The Joint United Nations Programme on HIV/AIDS. Fast-Track: ending the AIDS epidemic by 2030 In. Geneva. Switzerland: UNAIDS; 2014.

4. Adejumo OA, Malee KM, Ryscavage P, Hunter SJ, Taiwo BO. Contemporary issues on the epidemiology and antiretroviral adherence of HIV-infected adolescents in sub-Saharan Africa: a narrative review. J Int AIDS Soc. 2015;18(1):20049.

5. Watt MH, Knippler ET, Knettel BA, Sikkema KJ, Ciya N, Myer L, Joska JA. HIV disclosure among pregnant women initiating ART in Cape Town, South Africa: Qualitative perspectives during the pregnancy and postpartum periods. AIDS Behav. 2018;22(12):3945–56.

6. Myer L, Phillips TK. Beyond "option B+": understanding antiretroviral therapy (ART) adherence, retention in care and engagement in ART Services among pregnant and postpartum women initiating therapy in sub-Saharan Africa. JAIDS Journal of Acquired Immune Deficiency Syndromes. 2017;75:115–22.

7. Tam M, Amzel A, Phelps BR. Disclosure of HIV serostatus among pregnant and postpartum women in sub-Saharan Africa: a systematic review. AIDS care. 2015;27(4):436–50.
8. Medley A, Garcia-Moreno C, McGill S, Maman S. Rates, barriers and outcomes of HIV serostatus disclosure among women in developing countries: implications for prevention of mother-to-child transmission programmes. Bull World Health Organ. 2004;82:299–307.

9. Alemayehu M, Aregay A, Kalayu A, Yebyo H. HIV disclosure to sexual partner and associated factors among women attending ART clinic at Mekelle hospital, Northern Ethiopia. BMC Public Health. 2014;14(1):746.

10. Odiachi A, Erekaha S, Cornelius LJ, Isah C, Ramadhani HO, Rapoport L, Sam-Agudu NA. HIV status disclosure to male partners among rural Nigerian women along the prevention of mother-to-child transmission of HIV cascade: a mixed methods study. Reproductive health. 2018;15(1):36.

11. Rujumba J, Neema S, Byamugisha R, Tylleskär T, Tumwine JK, Heggenhougen HK. "Telling my husband I have HIV is too heavy to come out of my mouth": pregnant women's disclosure experiences and support needs following antenatal HIV testing in eastern Uganda. J Int AIDS Soc. 2012;15(2):17429.

12. Olley B, Ogunde M, Oso P, Ishola A. HIV-related stigma and self-disclosure: the mediating and moderating role of anticipated discrimination among people living with HIV/AIDS in Akure Nigeria. AIDS care. 2016;28(6):726–30.

13. Visser MJ, Neufeld S, De Villiers A, Makin JD, Forsyth BW. To tell or not to tell: South African women's disclosure of HIV status during pregnancy. AIDS care. 2008;20(9):1138-45.

14. Kiula ES, Damian DJ, Msuya SE. Predictors of HIV serostatus disclosure to partners among HIV-positive pregnant women in Morogoro, Tanzania. BMC Public Health. 2013;13(1):433.

15. Adeniyi OV, Ajayi AI, Issah M, Owolabi EO, Ter Goon D, Avramovic G, Lambert J.
Beyond health care providers' recommendations: understanding influences on infant feeding choices of women with HIV in the Eastern Cape, South Africa. International breastfeeding journal. 2019;14(1):7.

16. Statistics South Africa: Mid-year population estimates 2017. In. ISibalo Statistics South Africa: Mid-year population estimates 2017. In. ISibalo. House, Koch Street, Salvokop, Pretoria, 0002; 2017.

17. Jasseron C, Mandelbrot L, Dollfus C, Trocmé N, Tubiana R, Teglas J, Faye A, Rouzioux C, Blanche S, Warszawski J. Non-disclosure of a pregnant woman's HIV status to her partner is associated with non-optimal prevention of mother-to-child transmission. AIDS Behav. 2013;17(2):488–97.

18. Biadgilign S, Deribew A, Amberbir A, Deribe K. Barriers and facilitators to antiretroviral medication adherence among HIV-infected paediatric patients in Ethiopia: A qualitative study. SAHARA-J: Journal of Social Aspects of HIV/AIDS 2009, 6(4).

19. Stirratt MJ, Remien RH, Smith A, Copeland OQ, Dolezal C, Krieger D, Team SCS. The role of HIV serostatus disclosure in antiretroviral medication adherence. AIDS Behav. 2006;10(5):483–93.

20. Trinh TT, Yatich N, Ngomoa R, McGrath CJ, Richardson BA, Sakr SR, Langat A, John-Stewart GC, Chung MH. Partner disclosure and early CD4 response among HIV-infected adults initiating antiretroviral treatment in Nairobi Kenya. PloS one 2016, 11(10).

21. Adeniyi O, Ajayi A, Selanto-Chairman N, Goon D, Boon G, Fuentes Y, Hofmeyr G, Avramovic G, Carty C, Lambert J. 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. 2017;12(8):e0181730.
22. Makin JD, Forsyth BW, Visser MJ, Sikkema KJ, Neufeld S, Jeffery B. Factors affecting disclosure in South African HIV-positive pregnant women. AIDS Patient Care STDs. 2008;22(11):907-16.

23. Yonah G, Fredrick F, Leyna G. HIV serostatus disclosure among people living with HIV/AIDS in Mwanza, Tanzania. AIDS research therapy. 2014;11(1):5.

24. Obermeyer CM, Baijal P, Pegurri E. Facilitating HIV disclosure across diverse settings: a review. American journal of public health. 2011;101(6):1011-23.

25. Chaudoir SR, Fisher JD, Simoni JM. Understanding HIV disclosure: A review and application of the Disclosure Processes Model. Soc Sci Med. 2011;72(10):1618-29.

26. Msuya SE, Mbizvo E, Hussain A, Uriyo J, Sam N, Stray-Pedersen B. Low male partner participation in antenatal HIV counselling and testing in northern Tanzania: implications for preventive programs. AIDS care. 2008;20(6):700-9.

27. Nebié Y, Meda N, Leroy V, Mandelbrot L, Yaro S, Sombié I, Cartoux M, Tiendrébeogo S, Dao B, Ouangré A: Sexual and reproductive life of women informed of their HIV seropositivity: a prospective cohort study in Burkina Faso. Journal of acquired immune deficiency syndromes (1999) 2001, 28(4):367–372.

28. Bachanas P, Medley A, Pals S, Kidder D, Antelman G, Benech I, DeLuca N, Nuwagaba-Biribonwoha H, Muhenje O, Cherutich P. Disclosure, knowledge of partner status, and condom use among HIV-positive patients attending clinical care in Tanzania, Kenya, and Namibia. AIDS Patient Care STDs. 2013;27(7):425–35.

29. King R, Katuntu D, Lifshay J, Packel L, Batamwita R, Nakayiwa S, Abang B, Babirye F, Lindkvist P, Johansson E. Processes and outcomes of HIV serostatus disclosure to sexual partners among people living with HIV in Uganda. AIDS Behav. 2008;12(2):232-43.

30. Tobin SC. U = U gains strength with release of PARTNER2 data. Aids. 2019;33(3):N1.
### Table 1: Demographic and clinical characteristics of study participants

| Variables                          | All participants | Disclosed serostatus to partner | Had not disclosed serostatus to partner |
|------------------------------------|------------------|---------------------------------|----------------------------------------|
| All                                | 485 (100.0)      | 400 (82.5)                      | 85 (17.5)                              |
| Age                                |                  |                                 |                                        |
| 24 years and less                  | 36 (7.4)         | 27 (75.0)                       | 9 (25.0)                               |
| 25-29 years                        | 114 (23.5)       | 98 (86.0)                       | 16 (14.0)                              |
| 30-34 years                        | 144 (29.7)       | 122 (84.7)                      | 22 (15.3)                              |
| 35-39 years                        | 123 (25.4)       | 99 (80.5)                       | 24 (19.5)                              |
| 40 years and above                 | 68 (14.0)        | 54 (79.4)                       | 14 (20.6)                              |
| Marital status                     |                  |                                 |                                        |
| Single                             | 359 (74.0)       | 284 (79.1)                      | 75 (20.9)                              |
| Married                            | 126 (26.0)       | 116 (92.1)                      | 10 (7.9)                               |
| Education level                    |                  |                                 |                                        |
| Grade 7 and less                   | 30 (6.2)         | 27 (90.0)                       | 3 (10.0)                               |
| Grade 8-12                         | 421 (86.8)       | 344 (81.7)                      | 77 (18.3)                              |
| Higher education                   | 34 (7.0)         | 29 (85.3)                       | 5 (14.7)                               |
| Employed in a salary paying job    |                  |                                 |                                        |
| Yes                                | 157 (32.4)       | 124 (79.0)                      | 33 (21.0)                              |
| No                                 | 328 (67.6)       | 276 (84.1)                      | 52 (15.9)                              |
| Occupation in last 12 months       |                  |                                 |                                        |
| Government employee                | 17 (3.5)         | 11 (64.7)                       | 6 (35.2)                               |
| Non-government employee            | 114 (23.5)       | 93 (81.6)                       | 21 (18.4)                              |
| Self employed                      | 29 (6.0)         | 24 (82.8)                       | 5 (17.2)                               |
| Student                            | 23 (4.7)         | 17 (73.9)                       | 6 (26.1)                               |
| Unemployed                         | 302 (62.3)       | 255 (84.4)                      | 47 (15.6)                              |
| Receives government social grant   |                  |                                 |                                        |
| Yes                                | 453 (93.6)       | 372 (82.1)                      | 81 (17.9)                              |
| No                                 | 31 (6.4)         | 27 (87.1)                       | 4 (12.9)                               |
| Smoking                            |                  |                                 |                                        |
| Yes                                | 43 (8.9)         | 32 (74.4)                       | 11 (25.6)                              |
| No                                 | 442 (91.1)       | 368 (83.3)                      | 74 (16.7)                              |
| Drank alcohol in the last year     |                  |                                 |                                        |
| Yes                                | 173 (35.7)       | 134 (77.5)                      | 39 (22.5)                              |
| No                                 | 312 (64.3)       | 266 (85.3)                      | 46 (14.7)                              |
| Knows partner’s serostatus         |                  |                                 |                                        |
| Yes                                | 319 (65.8)       | 313 (98.1)                      | 6 (1.9)                                |
| No                                 | 166 (34.2)       | 87 (52.4)                       | 79 (47.6)                              |
| Year since HIV diagnosis           |                  |                                 |                                        |
| 1-5 years                          | 206 (42.5)       | 168 (81.6)                      | 38 (18.4)                              |
| 6-10 years                         | 163 (33.6)       | 132 (81.0)                      | 31 (19.0)                              |
| 11-17 years                        | 116 (23.9)       | 100 (86.2)                      | 16 (13.8)                              |
| Complete adherence                 |                  |                                 |                                        |
| Yes                                | 310 (63.9)       | 263 (84.8)                      | 47 (15.2)                              |
| No                                 | 175 (36.1)       | 137 (78.3)                      | 38 (21.7)                              |
Table 2: Adjusted and unadjusted logistic regression models showing the association between being married, knowing a partner’s status and HIV serostatus disclosure to sexual partner

| Variables                          | Unadjusted Odds ratios | Adjusted Odds ratios |
|------------------------------------|------------------------|----------------------|
| Knows partner’s serostatus         |                        |                      |
| Yes                                | 47.37 (19.98-112.31)***| 48.88 (20.09-118.92)***|
| No                                 | 1                      | 1                    |
| Marital status                     |                        |                      |
| Married                            | 3.06 (1.53-6.13)*      | 2.64 (1.16-6.02)*    |
| Single                             | 1                      | 1                    |
| Age                                |                        |                      |
| 18-34 years                        | 1.31 (0.81-2.09)       | 1.54 (0.78-3.02)     |
| 35–46 years                        | 1                      | 1                    |
| Education level                    |                        |                      |
| Grade 7 and less                   | 1.55 (0.34-7.13)       | 2.59 (0.40-16.57)    |
| Grade 8-12                         | 0.77 (0.29-2.05)       | 1.03 (0.28-3.70)     |
| Higher education                   | 1                      | 1                    |
| Employed in a salary paying job    |                        |                      |
| Yes                                | 0.71 (0.44-1.15)       | 0.86 (0.46-1.61)     |
| No                                 | 1                      | 1                    |
| Smoking                            |                        |                      |
| Yes                                | 0.59 (0.28-1.21)       | 0.49 (0.18-1.33)     |
| No                                 | 1                      | 1                    |
| Drank alcohol in the last year     |                        |                      |
| Yes                                | 0.59 (0.37-0.96)*      | 0.95 (0.50-1.79)     |
| No                                 | 1                      | 1                    |
| Year since HIV diagnosis           |                        |                      |
| 1-5 years                          | 0.71 (0.38-1.33)       | 0.67 (0.28-1.60)     |
| 6-10 years                         | 0.68 (0.35-1.31)       | 0.50 (0.21-1.20)     |
| 11-17 years                        | 1                      | 1                    |
| Complete adherence                 |                        |                      |
| Yes                                | 1.55 (0.97-2.50)       | 0.88 (0.47-1.62)     |
| No                                 | 1                      | 1                    |

*p-value <0.05; ***P value < 0.001

Table 3: Reasons for non-disclosure of HIV serostatus

| Reasons for not disclosing serostatus | Frequency n=85 | Percent |
|---------------------------------------|----------------|---------|
| Fear of rejection and violent reaction| 14             | 16.5    |
| Broke up with him                      | 10             | 11.8    |
| Not ready to tell him                  | 55             | 64.7    |
| Not that close to him to discuss such topic | 6             | 7.8    |
This is a list of supplementary files associated with this preprint. Click to download.
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