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ORIGINAL RESEARCH

Disclosure of HIV Status and Associated Factors Among People Living With HIV/AIDS (PLWHA) in Ibadan, Nigeria

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Abstract

Background: HIV-positive status disclosure has many potential benefits, including increased opportunities for social support, implementation of risk reduction with partners, and improved access to antiretroviral treatment.

Objective: To assess the disclosure status and factors associated with HIV-positive status disclosure among people living with HIV/AIDS (PLWHA) in Ibadan, Southwest Nigeria.

Methods: This descriptive-exploratory cross-sectional study was conducted among PLWHA and assessed antiretroviral therapy at Adeoyo Maternity Hospital, Ibadan. A total of 440 respondents were recruited using a systematic random sampling method. Data was collected using a pre-tested interviewer-administered questionnaire.

Results: The mean age of respondents was 33.4±7.8 years. The majority (375; 85.2%) had disclosed their HIV status to at least one significant person, of which 299 (68.0%) informed their sexual partners. Educated respondents were five times more likely to disclose their status than those uneducated (OR = 5.43). Employed respondents were less likely to disclose their status compared to those who were unemployed (OR = 0.13). Respondents whose partners were HIV positive (OR = 2.89) and those whose partners were HIV negative (OR = 3.55) were more likely to disclose their status compared with those whose partners' HIV status was unknown.

Conclusion: Interventions and adherence counselling should continue to encourage HIV status disclosure, especially among uneducated, employed, and those unaware of the HIV status of their partners.

Keywords: Status disclosure, HIV status, PLWHA, Nigeria.

Introduction

Human Immunodeficiency Virus (HIV) continues to be a significant global public health

issue, having claimed about 40 million lives with ongoing transmission in all countries globally.^[1] There were approximately 39.0 million people across the globe living with HIV in 2022.^[2] The World Health Organization (WHO) African

Region is the most affected region, with 25.7 million people living with HIV in 2018.^[3] Nigeria has the second-largest HIV epidemic in the world.^[4] In 2019, 1.8 million people were living with HIV in Nigeria, although the HIV prevalence among adults is much less (1.3%) than in other Sub-Saharan African countries.^[4] Together with South Africa and Uganda, Nigeria accounts for around half of all new HIV infections in sub-Saharan Africa every year.^[5]

Counselling and testing is a potent weapon against the spread of Human Immunodeficiency Virus/Acquired Immune Deficiency Syndrome (HIV/AIDS) and is a critical entry point for needed medical, psychological, social, and legal interventions for HIV-positive individuals and their families. The relevance of HIV status disclosure among HIV-infected clients is emphasised in HIV testing and counselling programs.^[6] The disclosure of HIV status by people living with HIV to others – family, friends, and sexual partners – facilitates treatment uptake, drug adherence, and retention in care.^[7] Disclosure is also crucial for HIV prevention, including the prevention of mother-to-child transmission of HIV.^[7]

Communication regarding a potentially life-threatening, stigmatising, and transmissible illness is required when HIV seropositive status is revealed. Some HIV-positive individuals may choose not to disclose the serostatus due to the fears of rejection or harm, feelings of shame, desire to maintain secrecy, feelings that disclosure is unnecessary with safer sex, fatalism, perceived community norms against disclosure, and beliefs that individuals are responsible for their protection.^[8] In general, disclosure rates in developing countries are lower than those reported in developed countries.^[9] For instance, previous studies done in Oyo and Ogun States, Nigeria, revealed a disclosure rate of 81.8% and 50.9%, respectively, compared to a study done in the USA, which had a disclosure rate of 97%.^[10-12]

Stigma and prejudice towards People Living With HIV/AIDS (PLWHA) are widespread in sub-Saharan Africa, including Nigeria, and have been proven to impact PLWHA care and treatment adherence negatively.^[13]

Due to the benefits of disclosure regarding access to care and the adoption of HIV prevention behaviours, it is essential to study factors that influence the likelihood of disclosure. Research efforts into this area have not been explored in the health facility. This study thus assessed disclosure status and factors associated with HIV status disclosure among People Living With HIV/AIDS attending a secondary health facility in Ibadan, Southwest Nigeria.

Methods

Study design

A descriptive, exploratory, cross-sectional design was employed.

Study setting and study population

The study was conducted at Adeoyo Maternity Hospital, a secondary health facility in Ibadan, the capital of Oyo State, Southwest Nigeria. The hospital was established in 1928, and it provides maternal and child healthcare services to the people of Ibadan and its environs. The Harvard PEPFAR/APIN Plus site, which offers antiretroviral therapy services, is located in the health facility. Patronage of the hospital is mainly due to the high quality of specialised healthcare services rendered to patients. The study was conducted in the Antiretroviral therapy (ART) clinic, and the study population comprised People Living With HIV/AIDS (PLWHA), assessing treatment at the health facility. Only patients who had been confirmed HIV-infected based on the positive confirmatory test (Western Blot) were included in the study.

Sample size determination and sampling methodology

This sample size was determined using the formula derived by Leslie Kish for cross-sectional studies:

$n = Z^2pq / d^2$ where n = minimum sample size, z = Standard normal deviate (1.96), p = proportion of people who have disclosed their HIV status to their partners = 50%, $q = 1-p$, d = margin of error (0.05).^[14] The minimum sample size calculated was 384. Adjusting for non-response using the formula $N = n / (1 - q)$, where q is the anticipated non-response rate - 20 per cent, brought the sample size to 480. Four hundred and forty respondents (440) completed the questionnaire with a response rate of 91.7%.

Systematic random sampling (with a sampling interval of 5) was used to recruit study participants over three months. An average of 30 clients were seen daily in the ART clinic. A register was created where clients to be seen in the ART clinic for the day wrote their names as they arrived. The first participant was selected from the register by simple random sampling using the ballot technique. Consequently, every fifth client who presented for care every clinic day was recruited until the sample size was achieved.

Data collection

A semi-structured, interviewer-administered questionnaire adapted from previous studies^[7,10] was used to obtain information from the respondents on the socio-demographic characteristics, social/clinical characteristics, disclosure status, reasons for disclosure, and outcome of disclosure. The questionnaire was pre-tested in the ART clinic, University College Hospital, Ibadan. The questionnaire was administered by trained research assistants (counsellors) with a minimum qualification of Ordinary National Diploma (OND).

Data analysis

The data was entered into the Microsoft Excel® software 2010 and analysed using IBM® SPSS (International Business Machines Corporation, Armonk, NY, United States) version 20. Descriptive statistics such as mean (with standard deviation) and frequencies (with percentages) were used to describe the study population. Univariate logistic regression was done and reported using odds ratios. The significance level (α) was set at <0.05 at 95% CI.

Ethical considerations

Ethical clearance for the study was obtained from the Oyo State Research Ethical Review Committee with approval number AD 13/479/144. Written informed consent was obtained from each of the participants. Adequate privacy was ensured during the interview, and anonymity and confidentiality of the information obtained were assured and maintained.

Results

Most of the respondents were females (353; 80.2%), and 87 (19.8%) were males. The mean age of respondents was 33.4 ± 7.8 years, ranging from 17 to 65 years. The majority of the respondents were married (337; 77.0%). Over half of the respondents (223; 51.0%) were Christians, 387 (88.0%) were of Yoruba ethnicity, 208 (47.3%) had secondary education, and 399 (91.0%) were employed (Table I). Most of the respondents (372; 85.0%) had more than one lifetime sexual partner, and (356; 81.0%) had been diagnosed with HIV for ≥ 1 year. Close to half of them (214; 49.0%) did not know the HIV status of their partner. However, over half of the respondents (257; 58.4%) discussed HIV testing with their sexual partners (Table II).

Table I: Socio-demographic characteristics of the respondents

Variables	Frequency (n = 440)	Percentage
Age (in years)		
</=19	4	0.9
20-29	137	31.1
30-39	206	46.8
40-49	71	16.1
50-59	19	4.3
>/=60	3	0.7
Sex		
Male	87	19.8
Female	353	80.2
Marital status		
Single	28	6.4
Cohabiting	6	1.4
Married	337	76.6
Divorced/Separated	59	13.4
Widow	10	2.3
Religion		
Christianity	223	50.6
Islam	215	48.9
Traditional	2	0.5
Ethnic group		
Yoruba	387	88.0
Igbo	17	3.9
Hausa	12	2.7
Others*	24	5.5
Level of education		
No formal education	27	6.1
Primary	132	30.0
Secondary	208	47.3
Tertiary	73	16.6
Occupational status		
Employed	399	90.7
Unemployed	41	9.3

Others- Ijaw, Tiv

The majority of the respondents (375; 85.2%) had disclosed their HIV status to at least one significant person while 14.8% had not. For those who disclosed their status, a higher proportion (299; 68.0%) informed their sexual partners, followed by their mothers (160; 36.3%), other family members (83; 19.0%), fathers (55; 13.0%), relatives (29; 7.0%), child (18; 4.0%), and religious leaders (16; 4.0%) as shown in Figure 1.

The reasons for disclosure to sexual partners included that it was usual to share secrets with them (205; 47.0%), to get their support (161; 37.0%), not wanting to lose the partner (97; 22.0%), and not to be legally accused (24; 6.0%). Others included concern for partners' health, failing health, disease severity, and preventing transmission to a partner, as shown in Figure 2.

Table II: Socio-clinical characteristics of the respondents

Variables	Frequency (n = 440)	Percentage
Number of lifetime sexual partners		
1	68	15.5
>1	372	84.5
Duration of diagnosis		
<1 year	84	19.1
≥1 year	356	80.9
Currently on HAART		
Yes	261	59.3
No	179	40.7
Duration of relationship with sexual partner		
<10 years	294	66.8
≥ 10 years	146	33.2
Partner's HIV status		
HIV-positive	90	20.5
HIV-negative	136	30.9
Unknown	214	48.6
Discussion of HIV testing with sexual partner		
Yes	257	58.4
No	183	41.6

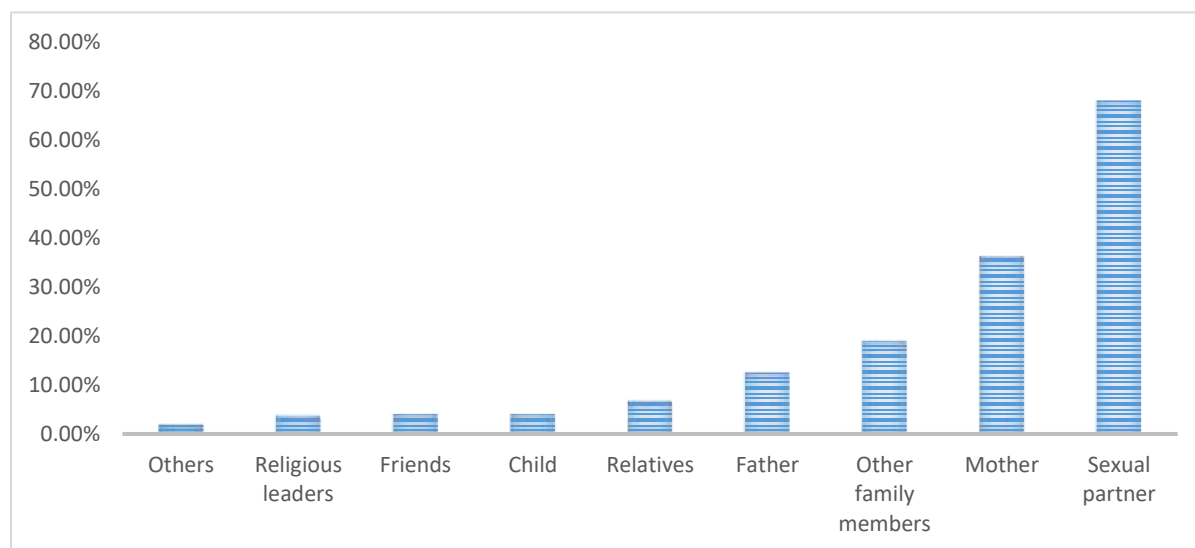


Figure 1: Persons to whom status disclosure was made.

*Multiple responses allowed



Figure 2: Reasons for disclosing to a sexual partner

*Multiple responses allowed

A positive outcome of support was reported by 170 (67.0%) respondents, and being taken care of was reported by 100 (39.2%). In contrast, adverse outcomes included violence (13; 5.1%), anger (30; 12.0%), and abandonment (10; 4.0%). Disclosure

outcomes also included confusion (66; 33.3%), worries about their status (16; 6.3%), asking about sexual history (12; 5.0%), and talking about abandoning the relationship (1; 0.4%), as depicted in (Table III).

Table III: Response of spouse/partner to HIV status disclosure

Reason*	Frequency (n = 440)	Percentage
Supportive	170	67.0
Confused	66	33.3
Angry	30	12.0
Violent	13	5.1
Took care of me	100	39.2
Worried about their own HIV status	16	6.3
Asked about my sexual history	12	5.0
Talked about abandoning the relationship	1	0.4
Left the relationship	10	4.0

*Multiple responses allowed

Those who were educated were five times more likely to disclose their status compared to those who were uneducated (OR = 5.43, 95%CI = 2.41-12.24). Those who were employed were less likely to disclose their status compared to those who were unemployed (OR = 0.13, 95%CI = 0.02-0.97). Respondents whose partners were HIV-positive were two times more likely to disclose their status than those with unknown HIV status (OR = 2.88, 95%CI = 1.30-6.39). Likewise, respondents whose partners were HIV-negative were three times more likely to disclose their status than those whose HIV status was

unknown (OR 3.55, 95% CI 1.72-7.29), as shown in Table IV.

Discussion

This study found an overall HIV status disclosure of 85.2% among respondents to at least one significant person. This figure is high but comparable to those of similar studies conducted in Northeast Nigeria (97.5%), [15] Southwest Nigeria (81.8%), [10] and China (83.6%).[16] The

findings contrast significantly with what Amoran [11] found in Sagamu, Southwest Nigeria, where the disclosure rate was low, at 50.9%. The low disclosure rate among the respondents in the Sagamu study [11] was because most participants

were diagnosed less than a year before the study and were still at the early stage of the disease. It has been shown that many HIV- infected individuals delay disclosure until their disease has progressed [11]

Table IV: Factors associated with HIV disclosure to significant persons

Variables	Disclosure of HIV status to significant persons		OR (95% CI)	p-value
	Yes no (%)	No no (%)		
Age (years)				
<30 (RC)	123 (87.2)	18 (12.8)	1	
30-39	173 (84.0)	33 (16.0)	0.77 (0.41-1.42)	0.401
40+	79 (84.9)	14 (15.1)	0.83 (0.39-1.75)	0.618
Marital status				
Unmarried (RC)	85(82.5)	18(17.5)	1	
Married	290 (86.1)	47(14.0)	1.31 (0.72-2.37)	0.377
Ethnic group				
Yoruba	328 (84.8)	59 (16.6)	0.71 (0.29-1.73)	0.450
Others*(RC)	47 (88.7)	6 (11.3)	1	
Level of education				
Uneducated (RC)	15(55.6)	12(44.4)	1	
Educated	360(87.2)	53(12.8)	5.43 (2.41-12.24)	0.000
Occupational status				
Unemployed (RC)	40 (97.6)	1 (2.4)	1	
Employed	335(84.0)	64(16.0)	0.13 (0.02-0.97)	0.019
Number of lifetime sexual partners				
1 (RC)	53 (77.9)	15 (22.1)	1	
>1	322 (86.6)	50 (13.4)	1.82 (0.96-3.48)	0.066
Duration of diagnosis (years)				
<1 (RC)	72 (85.7)	12 (14.3)	1	0.889
≥1	303 (85.1)	53 (14.9)	0.95 (0.48-1.88)	
Currently on HAART				
Yes	225 (86.2)	36 (13.8)	1.21 (0.71-2.05)	0.484
No (RC)	150 (83.8)	29 (16.2)	1	
Duration of relationship with sexual partner (years)				
<10 (RC)	252 (85.7)	42 (14.3)	1	
≥ 10	123 (84.2)	23 (15.8)	0.89 (0.51-1.55)	0.683
Partner's HIV status				
HIV positive	82(91.1)	8(8.9)	2.88 (1.30-6.39)	0.007
HIV negative	126 (92.6)	10 (7.4)	3.55 (1.72-7.29)	0.000
Unknown (RC)	167 (78.0)	47 (22.0)	1	

RC-Reference category; OR-Odds ratio; CI-Confidence Interval; Others (Igbo, Hausa, Ijaw and Tiv)

However, some studies, including those of Salami *et al.*,^[17] and Mengwai,^[18] reported lower disclosure rates. The high disclosure rate in this study could be attributed to ongoing adherence to counselling sessions, which encourage HIV-infected individuals to disclose their status.

The respondents were observed to have disclosed their status to various persons who were largely immediate family members. Commonly reported confidants were sex partners, mothers, fathers, other family members, and relatives. This finding is similar to what Olumide and Owoaje reported in Ibadan,^[10] where close relatives, mothers and fathers accounted for the significant relatives to whom HIV status were disclosed. There was a preponderance of disclosure to sex partners over other persons in this study, a finding which is in agreement with the studies of Dankoli *et al.*^[15] in North-east Nigeria among adult HIV-infected patients and Gultie *et al.*^[19] in Tigray, Ethiopia, among ART clinic follow-up patients who reported the highest proportions for sexual partners, among persons to whom disclosure of HIV seropositive status was made. These findings might not be unconnected with the close ties between these partners, which was further revealed when asked why such disclosures were made. The top reasons suggested were "being usual to share secrets with them" and "to gain their support," which were similar to what was reported in other studies.^[15,19]

The outcome of disclosure of HIV seropositivity among the respondents in this study was majorly supportive, as the majority reported being cared for. However, other reactions varying from outright abandonment of the relationship to anger and violent behaviours were also encountered. A similar pattern was observed in a study by Ogoina *et al.*^[20] where most study participants reported positive initial partner reactions to status disclosures. In the same

survey, a few respondents reported adverse reactions varying from feeling sad/unhappy, quarrelsome, and abusive to a relationship breakup.^[20] The positive and supportive attitude could come about as a result of a more standing relationship between respondents and their sexual partners/spouses since the majority of them were married.

The factors that predicted disclosure in the current study were being educated, employment status, and knowledge of the partner's HIV status. Educated respondents were five times more likely to disclose their status than those uneducated. Educational status was significantly correlated with HIV status disclosure. This finding was in contrast to a study in China^[16] which reported that participants with higher educational levels were less likely to disclose their HIV status to others. A possible explanation might be that uneducated people had increased self-stigma, which causes fear of disclosure. The difference in the two studies could have arisen from socio-cultural differences.

This study also found that the employed respondents at the facility were less likely to disclose their status than those unemployed. This finding is consistent with the study by Salami *et al.*^[17] in Ilorin. Unemployed individuals are more likely to be dependent on others for financial needs. Such people, for instance, may need to request money for transportation to health facilities, necessitating disclosure of their status to others. On the other hand, those employed may not frequently require financial assistance from others and thus may choose to keep their status private. Such practice should be discouraged as the benefits of disclosure go beyond the provision of financial support. Respondents whose partners were HIV positive were two times more likely to disclose their status compared with those whose partners' status was unknown. Likewise, those whose

partners were HIV-negative were three times more likely to disclose their status compared to the ones whose partners' HIV status was unknown. This finding agrees with those of other researchers like Olumide and Owoaje [10] and Mengwai *et al.* [18], who reported that respondents who knew their partner's status were over nine times more likely to have disclosed their HIV status compared to those who did not know their spouses'/partners' status, either positive or negative. Respondents who knew their partners' status were more likely to have disclosed their status. These findings buttress the importance of couples undergoing HIV testing together and partners knowing their spouse's status, as this can enhance disclosure even when the partner is HIV-negative.

This was an observational survey, which is easily prone to social desirability bias and, thus, could have affected how respondents reported their disclosure of HIV status due to socio-cultural reasons. However, this is not expected to have significantly altered the findings of this study because respondents were adequately informed of the purpose of the study and reassured of the confidentiality of the information divulged.

Conclusion

This present study reveals that the majority of the respondents had disclosed their HIV status to at least one significant person, with most informing their sexual partners and family members. Level of education, employment status, and awareness of partner's serostatus were determinants of disclosure of HIV serostatus.

As the importance of HIV status disclosure cannot be overemphasised, adherence counselling sessions and other interventions should continue to encourage disclosure,

especially among the uneducated, employed, and those unaware of the HIV status of their partners.

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References

1. World Health Organization (WHO). HIV and AIDS. 2023. Available at: <https://www.who.int/news-room/fact-sheets/detail/hiv-aids/> Accessed on 15 September 2023.
2. Human Immunodeficiency Virus (HIV).gov: The global HIV and AIDS epidemic. 2023. Available at: <https://www.hiv.gov/hiv-basics/overview/data-and-trends/global-statistics/> Accessed on 21 September 2023.
3. World Health Organization (WHO) Regional Office for Africa: HIV/AIDS. 2023. Available at: <https://www.afro.who.int/health-topics/hivaids/> Accessed on 28 September 2023.
4. National Agency for the Control of AIDS (NACA): Nigeria prevalence rate. 2023. Available at: <https://naca.gov.ng/nigeria-prevalence-rate/> Accessed on 01 October 2023.
5. Akinnusi OO, Bello AJ, Adeleye IA, Nutor JJ. Evaluation of HIV infection in febrile patients visiting health centres in Lagos, Nigeria. BMC

- Res Notes. 2022, 15:71. [10.1186/s13104-022-05961-0](https://doi.org/10.1186/s13104-022-05961-0)
6. Alema HB, Yalew WA, Beyene MB, Woldu MG. HIV positive status disclosure and associated factors among HIV positive adults in Axum health facilities, Tigray, Northern Ethiopia. *Sci J Public Health* 2015;3:61-66. <https://doi.org/10.11648/j.sjph.20150301.21>
 7. Odiachi A, Ereka S, Cornelius LJ, Isah C, Ramadhani HO, Rapoport L, *et al.* 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. *Reprod Health*. 2018;15:36. <https://doi.org/10.1186/s12978-018-0474-y>.
 8. Hunter-Adams J, Zerbe A, Philips T, Rini Z, Myer L, Petro G, *et al.* The dimensionality of disclosure of HIV status amongst post-partum women in Cape Town, South Africa. *Afr J AIDS Res* 2017;16:101-107. <https://doi.org/10.2989/16085906.2017.1311932>.
 9. Melis Berhe T, Lemma L, Alemayehu A, Ajema D, Glagn M, Dessu S. HIV-positive status disclosure and associated factors among HIV-positive adult patients attending ART clinics at public health facilities of Butajira town, Southern Ethiopia. *AIDS Res Treat* 2020;2020:7165423. <https://doi.org/10.1155/2020/7165423>.
 10. Olumide A, Owoaje E. Patterns and predictors of disclosure of HIV positive status among youth living with HIV in Ibadan, Nigeria. *Int J Adolesc Med Health* 2018;32:/j/ijamh.2020.32.issue-1/ijamh-2017-0086/ijamh-2017-0086.xml. <https://doi.org/10.1515/ijamh-2017-0086>
 11. Amoran O. Predictors of disclosure of serostatus to sexual partners among people living with HIV/AIDS in Ogun State, Nigeria. *Niger J Clin Pract* 2012;15:385-390. <https://doi.org/10.4103/1119-3077.104507>
 12. Shacham E, Small E, Onen N, Stamm K, Overton ET. Serostatus disclosure among adults with HIV in the era of HIV therapy. *AIDS Patient Care STDs* 2012;26:29-35. <https://doi.org/10.1089/apc.2011.0183>.
 13. Dahlui M, Azahar N, Bulgiba A, Zaki R, Oche OM, Adekunjo FO, *et al.* HIV/AIDS-related stigma and discrimination against PLWHA in a Nigerian population. *PLoS One*. 2015;10:e0143749. <https://doi.org/10.1371/journal.pone.0143749>.
 14. Goyal RC. *Research Methodology for Health Professionals: Determination of Sample Size*. Goyal RC (1/e): Jaypee Brothers Medical Publishers, New Delhi; 2013. 127. [10.5005/jp/books/11799](https://doi.org/10.5005/jp/books/11799)
 15. Dankoli RS, Aliyu AA, Nsubuga P, Nguku P, Ossai OP, Tukur D, *et al.* HIV disclosure status and factors among adult HIV positive patients in a secondary health facility in North-Eastern Nigeria, 2011. *Pan Afr Med J* 2014;18:4. <https://doi.org/10.11694/pamj.supp.2014.18.1.3551>.
 16. Yin Y, Yang H, Xie X, Wang H, Nie A, Chen H. Status and associated characteristics of HIV disclosure among people living with HIV/AIDS in Liangshan, China: A cross-sectional study. *Medicine* 2019;98:e16681. <https://doi.org/10.1097/MD.00000000000016681>.
 17. Salami AK, Fadeyi A, Ogunmodede JA, Desalu OO. Status disclosure among people living with HIV/AIDS in Ilorin, Nigeria. *West Afr J Med* 2011;30:359-363.
 18. Mengwai K, Madiba S, Modjadji P. Low disclosure rates to sexual partners and unsafe sexual practices of youth recently diagnosed with HIV; Implications for HIV prevention interventions in South Africa. *Healthcare* 2020;8:253. <https://doi.org/10.3390/healthcare8030253>

19. Gultie T, Genet M, Sebsibie G. Disclosure of HIV-positive status to sexual partner and associated factors among ART users in Mekelle hospital. *HIV AIDS (Auckl)* 2015;7:209-214.
<https://doi.org/10.2147/HIV.S84341>

20. Ogoina D, Ikuabe P, Ebuenyi I, Harry T, Inatimi O, Chukwueke O. Types and predictors of partner reactions to HIV status disclosure among HIV-infected adult Nigerians in a tertiary hospital in the Niger Delta. *Afr Health Sci* 2015;15:10-18.
<https://doi.org/10.4314/ahs.v15i1.2>

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