Disclosure Pattern and its Determinants among Patients Attending Anti-Retroviral Clinics in a North Central Capital City in Nigeria

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Abstract

Background: It has been observed that contributory factors such as unprotected sexual intercourse and vertical transmission of HIV to the unborn child during childbirth still occur among women living with HIV.HIV status disclosure has also been found to lead to improved access to HIV prevention and treatment programmes.

Methodology: The study was a descriptive cross sectional study using quantitative and qualitative data collection tools. Four hundred patients were recruited for the study and systematic sampling was used to select respondents at each treatment centre. Data was collected using a semi-structured interviewer administered questionnaire and a patient focus group discussion (FGD) guide.

Results: The age of the respondents ranged from 20 to 70 years and 75.5% of the respondents were females. More than three-quarters of respondents (77%) had disclosed their status to their partners. Status disclosure to sexual partners was higher among respondents who were currently living with their partners (87.1%, p=<0.001)

Conclusion: The study recommended that Government, partners and multilateral agencies needs to consider establishing empowerment schemes for women and men living with HIV to enable them live economic viable lives and avoid using economic means as a determinant of status disclosure

Keywords: Disclosure; Determinants; Patients; ART Clinic.

Introduction

Nigeria is a major contributor to the global burden of HIV/AIDS representing 9% of the estimated global burden of the disease and second only to South Africa worldwide[1]. Sub-Saharan Africa is hugely represented on the HIV global map accounting for 70% of the world's new HIV infections in 2014 with 80% of people living with HIV in the world now living in just 20 countries – 13 of which are in sub-Saharan Africa[2].

Reproduction amongst People living with HIV (PLWHIV) generates concern worldwide among clinical and public health providers as well as the patients' themselves[3]. It has been observed that contributory factors such as unprotected sexual

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intercourse and vertical transmission of HIV to the unborn child during childbirth still occur among women living with HIV[4]. Sexual activity and relationships, status disclosure to sexual partners and the use of contraceptive methods are very important determinants in the spread of the disease and also vital in designing HIV prevention programmes. There are concerns that increased use of ART may be associated with increased sexual risk taking[5].

HIV testing and counselling is also a critical component of prevention strategies to reduce transmission of HIV from mother to child[6,7]. Unless pregnant women are willing to be tested and counselled for HIV, the encouraging advances made in the use of drugs to reduce perinatal transmission would have achieved nothing. Within HIV testing and counselling programmes emphasis is placed on the importance of HIV status disclosure among HIV-infected clients, particularly to their sexual partners[8]. Disclosure is an important public health goal for a number of reasons. First, disclosure may motivate sexual partners to seek testing, change behaviour and ultimately decrease transmission of HIV. In addition, disclosure may facilitate other reproductive health behaviours that may improve the management of HIV[6]. HIV status disclosure has also been found to lead to improved access to HIV prevention and treatment programmes, increased opportunities for risk reduction and increased opportunities to plan for the future[8]. Also, disclosure of the HIV status to one's sexual partner is an important prevention goal emphasized by the World Health Organization (WHO) and Centers for Disease Control and Prevention (CDC) in their protocols for HIV counselling and testing[9].

Disclosure of status has been found to vary across different populations with many factors being responsible for the variations. A literature review of studies conducted in sub-Saharan Africa and Asia revealed that disclosure rates to sexual partners ranged from 16.7% to 86%. Studies conducted in Tanzania and Cape Town, South Africa revealed that 20% and 34% respectively of HIV infected men and women had not disclosed their status to their partners[11,12]. A significant number (25.3%) of HIV infected women in Jos Nigeria reported not knowing their partners status[13] while 46.5% of HIV infected

men and women in South Africa had reported no knowledge of their partner's status as well[12]. Reasons given for not disclosing their status to their partners ranged from fear of partners reaction, fear of accusations of infidelity, abandonment, discrimination and violence, and loss of economic support amongst women[11-13].

Some countries have also legislated guidelines regarding the disclosure of a positive status to their spouse or a sexual partner. Mali requires that the disclosure be made as soon as possible or within 6 weeks from the time of diagnosis[14] while New Jersey's HIV exposure law requires persons who know that they have HIV to disclose their positive serostatus and receive the informed consent of sexual partners prior to engaging in sexual penetration[15].

Because disclosure of status to sexual partners is an important prevention goal and non-disclosure a big player responsible for incidence of new infections, it was important to take a sneak peek into the pattern of status disclosure among patients on anti-retroviral therapy to further understand the burden of non-disclosure as well as to identify factors responsible for their choices. Furthermore, no previous research in the study area has been able to analyze the status disclosure and its determinants across all treatment centres in Ilorin metropolis. As ART becomes increasingly available in many African communities it is important to understand the effects on these reproductive behaviours of users as this has implications for the spread and control of the HIV epidemic.

This study therefore aimed to look into the status disclosure rates among patients attending HAART Clinics in Ilorin Nigeria as well as the various factors influencing their decisions for status disclosure with the intention to understand the magnitude of the risk of further spread of the infection and provide a basis for intervention in the various ART clinics.

Materials and Methods

Ilorin is the capital city of Kwara State, Nigeria. It is located at the geographical and cultural confluence of the North and South of Nigeria (in the North Central geopolitical zone) with a landmass of

32,500km. It has a projected population of 854,737 based on the 2006 National Census and annual growth rate of 3.2%. The indigenous people are mainly Yoruba and Hausa-Fulani. Other tribes include Hausa, Igbo, Nupe, Baruba and other ethnic groups of Nigeria. The major religions are Islam and Christianity.

There are six (6) HIV treatment centres in Ilorin metropolis, one tertiary health centre; University of Ilorin Teaching Hospital (UITH). Other HIV treatment centers are Sobi Specialist Hospital, Kwara State Civil Service Clinic and Children Specialist Hospital, Centre Igboro, Ilorin which are secondary health facilities, Cottage Hospital, Adewole – a primary health centre. The only Private facility accredited as treatment centre is Sabo-Oke Medical Centre. Presently, there are 32 HIV Counselling and Testing (HCT) sites distributed across various public and private facilities in Ilorin metropolis[16].

The study was a descriptive cross sectional study and was conducted at HAART service delivery sites using quantitative and qualitative data collection tools. The study population consisted of patients receiving ART services at the various health facilities in the study area. Patients who have been receiving HIV care and support services for at least 1 year in an ART accredited centre with at least 100 patients were recruited for the survey while patients who were not enrolled on ART and those on admission were excluded. Four hundred patients were recruited for the study using the Cochrane formula for minimum sample size determination and all the five public treatment centres were used in the study. The number of patients recruited per facility was recruited by proportional allocation using the sampling-by-size approach.

Systematic sampling was used to select respondents at each treatment centre to achieve the allocated sample size. The sample frame which was the register of all patients attending the clinic on a daily basis was obtained from the daily clinic attendance records and simple random sampling by balloting was used to select a number at random from the sampling frame based on the calculated sampling interval (k) for that particular day. Thereafter every k^{th} number was obtained from the sample frame till

the desired sample size for the day was achieved. The daily sample size across the various ART sites was determined by the number of patients who attended the clinic on that particular day and this varied by site because of the difference in number of clinic attendance across all clinics daily and the different number of clinic days in a week. In instances where some of the selected numbers declined to participate, the next number was selected to make up for the particular number and the kth interval was still maintained till the desired sample size allocated to each clinic was achieved for that particular day and this was done till the overall sample size was achieved.

Data was collected using a semi-structured interviewer administered questionnaire which was administered to patients attending HAART clinics and a patient focus group discussion (FGD) guide. The guide was used to conduct qualitative interviews among patients attending HAART clinics.

Quantitative data analysis of was done using Statistical Package for Social Sciences (SPSS) version 23.0. Data collected was presented in prose and frequency tables. Frequency distribution and other relevant summary statistics were generated. Appropriate tests of significance (chi-square test and logistic regression analysis) were used to test statistic. Statistical significance level was set at p-value <0.05 at a confidence level of 95%. Multiple regression analysis was performed to predict the relationship between the dependent variables and the independent variables. The FGD sessions were recorded on a tape recorder and the transcripts were then processed, coded and interpreted using the detailed content analysis method until saturation point was reached. Similar FGD responses were group coded based on thematic areas for analysis. Ethical clearance to conduct the study was obtained from the ethical review committee of University of Ilorin Teaching Hospital before the commencement of the study.

Results

Table 1: Socio demographic characteristics of respondents

Variable	Frequency (N=400)	Percentage
Age group (years)		
< 21	2	0.5
21-30	60	15.0
31 - 40	186	46.5
41 - 50	128	32.0
> 50	24	6.0
Mean ± SD	39.05 ± 8.06	
Range	20 - 70	
Gender		
Male	98	24.5
Female	302	75.5
Education		
No formal education	25	6.3
Primary	77	19.2
Secondary	153	38.3
Tertiary	145	36.2
Religion		
Islam	220	55.0
Christianity	180	45.0
Marital status		
Single	38	9.5
Married	321	80.2
Divorced	14	3.5
Separated	9	2.3
Widowed	18	4.5
Ethnicity		
Yoruba	301	75.2
Hausa	38	9.5
Igbo	22	5.5
Others	39	9.8
Partner employed (n=381)		
Yes	307	80.6
No	74	19.4
Monthly Earnings of respondents (Naira)		
8,000	242	60.5
> 18,000	158	39.5

The age of the respondents ranged from 20 to 70 years with a mean age of 39.05 ± 8.06. Majority (75.5%) of the respondents were females. Majority of the respondents were married 321(80.2%), 18(4.5%) were widowed, 14(3.5%) had been divorced and 9 (2.3%) had been separated from their spouses.

Table 2: Family and Treatment history of respondents

Variable	Frequency (N=400)	Percentage
Currently living with partner		
Yes	311	77.8
No	89	22.2
Had own children		
Yes	370	92.5
No	30	7.5
Number of children ever had (n=370)		
1	64	17.3
2 – 3	187	50.5
	119	32.2
Number of living children (n = 370)		
None	73	19.7
1 – 2	138	37.3
	159	43.0
Ever had a child since HIV diagnosis (n = 370)		
Yes	248	67.0
No	122	33.0
Child's HIV status after parents diagnosis (n = 248)		
Positive	25	10.1
Negative	223	89.9
Ever lost a child to HIV related illness (n = 370)		
Yes	49	13.2
No	321	86.8
Children lost to HIV related illness (n=49)		
1	35	71.4
> 1	14	28.6
Ever lost a pregnancy		
Yes	170	42.5
No	230	57.5
Loss of pregnancy after HIV diagnosis (n = 170)		
Yes	42	24.7
No	128	75.3
Duration of status diagnosis (years)		
1 – 2	105	26.3
3 – 4	84	21.0
	211	52.7
Duration of ARV treatment (years)		
1 – 2	107	26.7
3 – 4	85	21.3
	208	52.0

More than three-quarters of the respondents (77.8%) were currently living with their partners and almost all respondents (92.5%) have had children of their own with 82.7% of them admitting having had more than 1 child.

Table 3: HIV status disclosure among respondents

	Frequency (N=400)	Percentage
Disclosed status to partner		
Yes	308	77.0
No	92	23.0
Partner's initial reaction (n = 308)		
Supportive	242	78.6
Indifferent	37	12.0
Quarrelsome/abusive/denial	15	4.9
Withdrawn	9	2.9
Stigmatizing	5	1.6
Partner's subsequent reaction (n = 308)		
Supportive	264	85.7
Indifferent	22	7.1
Quarrelsome/abusive/denial	6	2.0
Withdrawn	12	3.9
Stigmatizing	4	1.3
Disclosed to anyone else apart from partner		
Yes	262	65.5
No	138	34.5
***Person disclosed to (n=262)**		
Sibling	92	35.1
Children	36	13.7
Friends/Neighbours	15	5.7
Parents	105	40.1
Other family members	43	16.4
Member of support group	17	6.5
Religious leader	23	8.8
Colleagues	9	3.4

*multiple response

More than three-quarters of respondents (77%) had disclosed their status to their partners while 23% respondents had not disclosed their status to their partners. More than half of the respondents (65.5%) had disclosed their status to other persons other than their partners.

Table 4: Reasons given for disclosure by respondents

Variable	Frequency (N=400)	Percentage
***Reasons for disclosure to partner (n = 308)**		
Encouraged by HW	232	75.3
Desire children so had to tell partner	45	14.6
Wanted children to be tested	35	11.4
Wanted partner to be tested	101	32.8
Others that disclosed encouraged me	16	5.2
Couldn't keep it any longer	15	4.9
Testing during illness in presence of partner	20	6.5
Obligation	23	7.5
Fear/Faith	3	1.0

***Reasons for non-disclosure to partner (n = 92)**		
Fear of adverse response from partner	41	44.6
Suspect that partner is infected	12	13.0
Negative partner	34	37.0
Fear of stigmatization	103	74.6
Other reasons	2	1.5
Should legislation against non disclosure be made		
Yes	83	20.7
No	256	64.0
Don't know	61	15.3
Timing of disclosure (n=308)		
Less than one year	119	38.7
Between 1-5 years	139	45.1
>5years	50	16.2

*: n differs (Multiple responses)

The most common reason given for disclosure by respondents was encouragement by health workers (75.3%) and the need to have their partners tested for the infection (32.8%).

The respondents who did not disclose their status cited reasons such as fear of stigmatization (74.6%), fear of adverse response from partner (44.6%) and having a negative partner (37.0%).

Less than half of the respondents (45.1%) disclosed their status to their partners between 1-5 years, 38.7% of the respondents disclosed their status to their partners within 1 year while it took more than 5 years for 16.2% of respondents to disclose their status.

More than half (64%) of the respondents did not want legislation against non-disclosure.

Table 5: Socio demographic determinants of status disclosure to sexual partner

	Disclosure to sexual partner		χ^2	p value
	n (%)	n (%)		
Age (years)	47 (75.8)	15 (24.2)	0.827	0.843
31 - 40	147 (79.0)	39 (21.0)		
41 - 50	96 (75.0)	32 (25.0)		
> 50	18 (75.0)	6 (25.0)		
Gender	76 (77.6)	22 (22.4)	0.022	0.881
Female	232 (76.8)	70 (23.2)		
Occupation				
Employed	273 (76.0)	86 (24.0)	1.805	0.179
Unemployed	35 (85.4)	6 (14.6)		

Education				
Less than secondary	73 (71.6)	29 (28.4)	2.281	0.131
Secondary and above	235 (78.9)	63 (21.1)		
Religion				
Islam	167 (75.9)	53 (24.1)	0.329	0.567
Christianity	141 (78.3)	39 (21.7)		
Marital status				
	275 (85.7)	46 (14.3)	68.982	<0.001*
Not married	33 (41.8)	46 (58.2)		
Ethnicity				
Yoruba	230 (76.4)	71 (23.6)	0.237	0.626
Others	78 (78.8)	21 (21.2)		
Monthly Earnings				
	189 (78.1)	53 (21.9)	0.418	0.518
> 18,500	119 (75.3)	39 (24.7)		

χ^2: Chi square test, *: *p* value < 0.05 (statistically significant)

Disclosure of status to sexual partners was higher among the respondents who were married (85.7%) and this relationship was statistically significant (p=<0.001).

Table 6: Association between reproductive/family history and disclosure to sexual partner

	Disclosure to sexual partner			
Variable	Yes n (%)	No n (%)	χ^2	*p* value
Timing of status diagnosis (years)				
1 – 2	75 (71.4)	30 (28.6)	3.750	0.153
3 – 4	70 (83.3)	14 (16.7)		
	163 (77.3)	48 (22.7)		
Currently living with partner				
Yes	271 (87.1)	40 (12.9)	81.122	<0.001*
No	37 (41.6)	52 (58.4)		
Had own Children				
Yes	293 (79.2)	77 (20.8)	13.350	<0.001*
No	15 (50.0)	15 (50.0)		
Number of children ever had				
1	47 (73.4)	17 (26.6)	4.900	0.086
2 - 3	144 (77.0)	43 (23.0)		
	102 (85.7)	17 (14.3)		
Number of living children				
None	57 (78.1)	16 (21.9)	6.222	0.045*
1 - 2	101 (73.2)	37 (26.8)		
	135 (84.9)	24 (15.1)		
Duration of ARV treatment (years)				
1 – 2	78 (72.9)	29 (27.1)	3.994	0.136
3 4	72 (84.7)	13 (15.3)		
	158 (76.0)	50 (24.0)		
Ever lost a child to HIV related illness (n = 370)				
	40 (81.6)	9 (18.4)	0.205	0.651
No	253 (78.8)	68 (21.2)		

χ^2: Chi square test, *: *p* value < 0.05 (statistically significant)

Status disclosure to sexual partners was higher among respondents who were currently living with their partners (87.1%, p=<0.001), respondents who had children (79.2%, p=<0.001), and respondents

who were having sexual intercourse with their partners (83.2%, p=0.001) and all these relationships were statistically significant.

Table 7: Association between current condom use/sexual activity and status disclosure to sexual partner

	Disclosure to sexual partner				
Variable	Yes n (%)	No n (%)	Total n (%)	χ^2	*p* value
Current condom use					
Yes	215 (80.5)	52 (19.5)	267	5.632	0.018*
No	93 (69.9)	40 (30.1)	133		
Sex with partner					
Yes	267 (83.2)	54 (16.8)	321	10.565	0.001*
No	39 (65.0)	21 (35.0)	60		

χ^2: Chi square test, *: *p* value < 0.05 (statistically significant)

A higher proportion of respondents (80.5%) who had disclosed their status to their sexual partners were currently using condoms and this relationship was statistically significant (p=0.018), however 30.1% of those who had not disclosed were not using condoms with their sexual partners.

Table 8: Predictors of status disclosure to sexual partners among respondents using multivariate logistic regression

				95% Confidence interval	
	p value	Odds Ratio		Lower	Upper
Marital status					
Married	1.073	0.040*	2.924	1.053	8.122
Not married REF					
Currently living with partner					
Yes	1.522	0.002*	4.581	1.772	11.839
No REF					
Number of living children					
None	-0.174	0.707	0.840	0.339	2.084
1 - 2	-0.606	0.098	0.545	0.266	1.118
REF					
Current condom use					
Yes	-0.013	0.970	0.987	0.504	1.933
No REF					
Sex with partner					
Yes	-0.133	0.783	0.876	0.341	2.251
No REF					

B: Coefficient of regression, *: *p* value < 0.05

Marital status and currently living with partner were significant predictors of status disclosure to sexual partners among respondents in this study. Respondents who were married had greater odds (≈ 3.0) of disclosing their status to their sexual partners than those who were not married (95% CI 1.053 – 8.122; *p*= 0.040). Also the odds that those living with their partners would disclose their status to

them were greater ($\approx$ 5.0) than in those who were not living with their partners (95% CI 1.772 – 11.839; *p*= 0.002).

Discussion

Majority (75.5%) of respondents were females. This is consistent with statistics from PLWHIV in Nigeria which suggests that most of the people living with the disease are females[17] and majority of people receiving treatment in sub-Saharan Africa are females[18]. In this study, 23% of the respondents had not disclosed their status to their sexual partners. The non disclosure rate in this study was similar to studies conducted among men and women living with HIV in South Africa[12] where 19% had not disclosed their status but was lower than another similar study in Tanzania[8] where 36% of PLWHIV had not disclosed their status to their partners. The non disclosure rate in this study was higher than a study conducted in a similar geographic area in Jos Nigeria where 11% of HIV positive mothers had not disclosed their status[13]. The reason for this is most likely because the study conducted in Jos was only done among only mothers who were HIV positive as men and other women who had not been mothers were not included in that study.

The initial reaction of partners to their positive status was supportive for 78.6% of respondents while it increased to 85.7% subsequently. A reverse trend was also noticed in the study conducted in Jos where 86.9% of respondents had initially supportive partners but this reduced to 74% subsequently[13]. The timing of disclosure in this study was such that 38.7% had disclosed their status within one year of diagnosis and this increased to 45.1% within one to five years. This pattern was also noticed in Tanzania where there was an increase in disclosure rates from 22% within the first year to 41% after 4 years[11]. This could be due to the fact that due to the increased support from partner's reaction as observed in the various gender based support groups they attend, they felt confident to disclose their status. Supportive reactions from partner have also been noticed to be a strong determinant in disclosure among PLWHIV[10].

About 66% of respondents had told someone other than their partner and 90.7% had told at least one person. Parents (40.1%) and siblings (35.1%) were

the category that respondents had disclosed to the most. The respondents probably felt more comfortable disclosing their status to family members who were less likely to be judgmental than others. The most reasons cited by respondents for disclosing their status were encouragement from health worker (75.3%) and desire for partner testing (32.8%) while reasons given for non disclosure were fear of stigmatization (74.6), fear of adverse response from partner (44.6%) and being sure their partner was negative (37%). These reasons were similar to those given by respondents in studies conducted on disclosure among PLWHIV in Mali[14], South Africa[12] and Tanzania[11].

Socio-economic reasons and the fear of being abandoned were some of the other reasons for non-disclosure as suggested by the respondents during the FGD sessions. One of them said "*I did not disclose to my husband. I do not know his status but I cannot tell him. I know someone that disclosed and the husband left her and she has no job to cater for herself and the kids*". Another participant said "*I haven't disclosed because I want more children. Once I tell my partner, I am sure he will leave me. Do not know partner's status*". Another male participant who had not disclosed his status also said "*I have not disclosed to my present partner because I disclosed to my former wife and she left me because she is negative. I do not know the status of my new wife because I am afraid she will leave me if she knows my status*". Living with partner (p=<0.001), having children (p=<0.001) and currently having sex with partner (p=<0.001) were significantly associated with disclosure of status to partners.

Non-disclosure of sero-positive status has a significant role to play in transmission and spread of HIV and the need to continually encourage PLWHIV to disclose their status had been advocated for. The ethical implication of this finding remains a huge challenge to HIV providers across many ART clinics because patient confidentiality must be respected at all times and it may be difficult trying to convince many HIV positive persons to disclose their status to their partners thus creating a constant risk of HIV transmission among them.

This study revealed that majority of PLWHIV (64%) would not support legislation on disclosure to

be made and the implication of this is that PLWHIV value their relationships much more above and over the risk of transmission and would not want to jeopardize the existing relationships by revealing their status despite the risk of transmitting the infection to their partners.

Conclusion

The study recommended that Government, partners and multilateral agencies needs to consider establishing empowerment schemes for women and men living with HIV to enable them live economic viable lives and avoid using economic means as a determinant of status disclosure.

Conflict of interest

No conflict of interest declared

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