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## Prevalence, Patterns and Predictors of Status Disclosure amongst HIV Clients Accessing Care in a Tertiary Health Facility in Nigeria

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#### Authors' contributions

This work was carried out in collaboration between both authors. Both authors read and approved the final manuscript.

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#### **ABSTRACT**

**Introduction:** Mankind has been battling the AIDS pandemic since its advent in the eighties. So far, diverse measures have been taken and strategies formulated to combat the disease one of which is geared towards establishing barriers to its spread. HIV status disclosure as a preventive tool amidst other strategies is key to achieving the end AIDS goal by 2030. The study aims to determine the prevalence, patterns and factors associated with HIV disclosure among HIV clients accessing care in the ART clinic of the University of Nigeria Teaching Hospital, Enugu.

**Methods:** A cross sectional analytical survey was conducted among 260 HIV seropositive clients using interviewer administered questionnaires. Simple random sampling was carried out. Ethical issues were considered. Data were analyzed using IBM SPSS and summarized using proportion, percentages and mean. Pearson Chi-square test was used for associations at significant level of p  $\leq 0.05$ .

**Results:** All participants chosen for the study responded (100%). The survey revealed that; 96.5% of the respondents had disclosed their status to someone, 82.7% to their relative/friend. For clients who had spouse/partner, 91.4% have informed them. Majority had disclosed to more than one person (74.6%). There was a relationship between gender (p = 0.031), length of on treatment (p = 0.009), parity status (p = 0.049), think it is important to disclose (p = 0.000) and years of diagnosis (p = 0.003) with disclosure status.

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**Conclusion:** Prevalence of disclosure was high. Characteristics of participants were associated with status disclosure. HIV disclosure though good but need to be sustained or improved as it is key to HIV control.

Keywords: HIV status disclosure; prevalence; patterns; Nigeria.

#### 1. INTRODUCTION

HIV/AIDS has remained a problem of public health significance since the first cases were diagnosed in 5 gay men in the United States in 1981 [1]. It was theorized to be a GAY disease but with the advent of technology and research it is now clearly known and understood that the virus can infect and affect anyone [2]. The number of newly infected persons peaked in 2005 with an estimated 2.5million people infected. Nonetheless, the pandemic is slowly being curtailed and the number of new cases Sadly, an estimated 35.4 drops each year. million people have died from AIDS-related illnesses since the start of the epidemic, a great loss for the human race [3]. Recent data shows that in 2017, 1.5 million new cases were reported with an estimated 36.9 million people globally living with the virus and 940000 deaths from AIDS-related illnesses [3]. Sub-Saharan Africa bears the greatest burden of the disease with about 70% of new cases reported in 2017 and of this population, 35.1 million adults and 1.8 million children were recorded. (<15 years) [3]. Nine of every ten Persons Living with HIV (PLWHIV) in the world are from non-industrialized countries [5].

Despite the fact that only 12% of the global population resides in Sub-Saharan Africa, this developing region has recorded a higher total number of death from HIV/AIDS than other developed regions [5]. Approximately 71% of PLWHA in Sub-Saharan Africa are women and children. It was asserted that social determinants health, including gender inequalities, differential access to health services, social violence, and socioeconomic status (SES) have contributed to disparities in HIV transmission rates. These inequalities have posed serious developmental challenges for Sub-Saharan African countries.

Disclosure is defined as the process of revealing a person's HIV status, whether positive or negative. Disclosure of HIV status is very important to People Living with HIV/AIDS (PLWHA), partners, and society at large. There are several factors associated with disclosure of HIV status such as fear of negative outcomes of disclosure, poor communication skills to disclose, having initiated antiretroviral therapy, and not aware of people who disclosed their HIV status [8]. In a study conducted in Tanzania close relationship to person disclosed to, the need for help, and advice from Voluntary Counseling and Testing (VCT) care providers were the factors which facilitated the disclosure of the HIV status [9]. In another study in Ethiopia educational status, and Antiretroviral Therapy (ART) status influenced disclosure [10].

Some of the potential benefits of disclosure were improving emotional and psychological wellbeing, early enrolment on antiretroviral therapy, and better adherence to therapy [11,12]. Disclosure to a sexual partner may increase HIV testing and reduce the risk of HIV transmission [13]. Including HIV transmission from the mother to child [13,14]. The disclosure of an HIV status to a sexual partner can have varying effects. It may motivate partners for VCT, reduce risky behaviour, and increase acquisition of support and adherence to ART [15].

However, on the contrary, it may cause blame, discrimination, abandonment, depression and loss of economic support and disruption of family relationships. Therefore, it is easy to see why some patients may not disclose their HIV-positive status [16]. It can also have a negative effect on treatment outcomes and feelings of regret about disclosing. Other negative effects include high levels of distress, low levels of self-esteem and social support, increased depression, as well as poorer mental and physical health [17-19]. A fear of stigma may also lead to non-disclosure of diagnosis [20].

The decision on whether to disclose or not has been a dilemma as individuals are wary on fear of experiencing stigma (discrimination and feelings of shame) or the potential of receiving positive support. Tackling the reluctance to disclose one's status is key as there is evidence that non-disclosure is linked to poorer health and disclosing has been found to be strongly associated with positive aspects for health, such as, a better perception of physical health, lower

depression scores, and better mental health [21, 22].

Within HIV counseling and testing programs, HIV positive clients are generally actively encouraged to disclose to their partners. Despite this advice, disclosure to partners remains sub-optimal in many settings in Sub-Saharan Africa, with a significant proportion of HIV-positive individuals waiting for over a year to inform their partners [23]. Disclosure rates within countries differ by ethnicity, gender and by the kind of testing facility. Although study has found that health facilities offering HIV testing in Sub-Saharan Africa are trying to accommodate the needs of couples, uptake remains a challenge, with a low number of couples testing together [24]. Nevertheless, another study reported success in increasing testing among couple [25], especially through home-based testing, while one recent study on HIV testing within routine health services reported high rates of partner referral in post-test counseling [26]. Fear of enacted stigma including violence, abandonment and divorce negatively affects rates of partner disclosure [23,24]. The Multi-Country African Testing and Counseling for HIV (MATCH) study conducted in Burkina Faso, Kenya, Malawi and Uganda found that despite the emphasis on partner disclosure in post-test counseling, only 37% of the HIVpositive women tested within Prevention of Mother-to-Child Transmission programmes had disclosed to their partners [26]. When they did so, disclosure often led to serious rifts, including abandonment and divorce. Men disclosed more often and experienced less negative consequences upon disclosing than women [27]. Partner disclosure requires trust that the intimate other will provide care and will not contribute to the stigmatization of the affected individual. Small-scale ethnographic studies suggest that HIV positive individuals find it easier to disclose to other HIV-positive persons in support groups or in clinics than to their partners. These studies also suggest that HIV-positive pursue often strategies individuals incremental, partial or indirect disclosure, which in some cases allow their partners to disclose first [28,29].

Disclosure is complicated by the close and complex relationship between disclosure, stigma, and culture which impacts on each other. Furthermore, HIV disclosure is a complex and difficult personal matter that entails communication about a potentially life threatening, stigmatized, and transmissible

infection. The attempt to normalize nondisclosure by people affected by and infected with HIV, makes disclosure even more complex, given that the desire to maintain silence about an HIV test persists in many societies.

The vision of the national strategic plan (NSP) is "An AIDS-free Nigeria, with zero new infections, zero AIDS-related discrimination and stigma. Considering that disclosure of HIV status to sexual partners and relatives especially those who are most likely to come in contact with the virus is a key strategy in curbing the epidemic and preventing the emergence of new cases. This study will provide a guide in policy making towards achieving the end AIDS goal of 2030 in the country.

There already exist too many challenges associated with HIV/AIDS eradication. In other to combat the AIDS pandemic and end AIDS by 2030 as stipulated by the new Sustainable development goals, status disclosure has to be sought as a strategy for curtailing the spread of this infection. The study aims to determine the prevalence, patterns and factors associated with HIV disclosure among HIV clients accessing care in the ART clinic of the University of Nigeria Teaching Hospital, Enugu. This will contribute to the limited data on HIV serostatus disclosure among seropositive individuals. increase community members' awareness of importance of disclosing their HIV serostatus to someone especially those who are most likely to come in contact with the virus.

#### 2. METHODS

#### 2.1 Study Area

The study was conducted at the HIV/AIDS clinic of the University of Nigeria Teaching Hospital (UNTH) in Enugu Southeast Nigeria. Enugu metropolis has an estimated population of 722,664 according to the 2006 Nigerian census and has long been inhabited by the subgroup of the Igbo people called the Nike. However, thousands of individual are attracted to the city from other tribes and ethnic groups all around the country for business and studies predominantly. According to 2018 Nigeria HIV/AIDS Indicator and Impact Survey (NAIIS), prevalence of HIV/AIDS in this region stands at 2.1% in the country's list of prevalence by state. The hospital is the largest HIV treatment facility in the state of houses Enugu. The institution 41 main postsdepartments with three outComprehensive health centers and 9 training schools/programs. The community service rendered by the hospital extends beyond the South-East Geo-political zone of the country. The hospital has more than 10, 000 patients enrolled for ART services.

#### 2.2 Study Design and Population

The study is an institution-based analytical crosssectional survey among PLWHIV on treatment and care at ART clinic, aged 18 years and above willing to take part in the study who gave consent.

#### 2.3 Sample Size and Sampling Technique

The sample size was determined using single population proportion formula  $[n=Z^2pq/d^2]$ . Sample size determination was be based on disclosure status from a previous study which is  $81\%^{30}$  using a marginal error of 5% critical value, a confidence level of 95% and a non-response rate of 10%. A total of 260 respondents were studied.

A simple random sampling method was adopted using the appointment register to draw up the sampling frame of the clients. On each day during the research period, after the early morning health talk and prayers, the principal researcher or the assistant researcher informed the clients about the research. The random numbers are then generated. Each client was given a card bearing a number, from 1 to the maximum attendance number usually about 120. Then the Random Integer Generator (Random.org) was then used to generate 15 clients from the daily pull. Each selected client was checked to confirm if he/she meets the inclusion criteria, otherwise the client was replaced using the same software. Patients who visited the clinic during entire period of the study and fulfilled the selection criteria were recruited using same approach (no client was interviewed twice) until the required sample size was obtained.

# 2.4 Data Collection Instrument and Method

Pre-tested interviewer administered semistructured questionnaire was used for data collection.

The researcher and two trained research assistants administered the questionnaires. They

were trained on the tools to be used, purpose of the study and how to approach respondents and obtain consent. The instrument was pretested at Enugu State University Teaching Hospital similar hospital ART clinic among patients a week before the study. This was geared towards assessing the clarity of the instruments and making necessary modification prior main data collection.

#### 2.5 Data Analysis

Data was entered and analyzed using IBM Statistical Package for the Social Sciences (SPSS) version 21 for analysis. Frequency tables were used in presenting the data. Chi-square test was done to determine the association between independent variables and disclosure status at significance level of p<0.05.

#### 3. RESULTS

Table 1 shows that the study consisted of 260 HIV-positive clients aged between 18 to 70 years with a mean age of 40.70 years (SD = 10.38). About three quarters of the sample was between 18 and 49 years old. There were 60.8% female to 39.2% male with male: female ratio stood at 1:1.5. Majority had secondary education 122(46.9%) and employed 225 (86.6%). More than half of the study population were married, 155 (59.6%) and about three quarter reported having at least 1 living child, 194 (74.6%).

Table 2 shows that over a half of respondents were not aware of existing support groups 151(58.1%) even though only 34(13.1%) were actively participating in such groups. Many of the clients 113(43.5%) acknowledged to have been tested voluntarily and more than half of the clients said they were tested because they fell ill, 144(55.4%) followed by a comparatively smaller group of 32 (12.3%) persons who tested because they knew or suspected their partner was positive. Only 26 (10.0%) clients have not received any form of counseling prior to and after the test. Meanwhile, 162(62.3%) did not blame themselves for having the disease 159(61.2%) persons thought it important to disclose their status to someone. Also 208(80%) have been diagnosed for at least 5 years and 195(75%) on Highly Active Antiretroviral Therapy (HAART) for at least 5 years.

Table 3 shows that majority 251 (96.5%) of clients had disclosed their status to someone. Of

all the clients 185 (71.2%) who had sexual partners 167 (64.2%) of them knew their partners' HIV status. Also, 202 (77.7%) respondents have not witnessed someone who is seropositive disclose his/her status. Also, of this group of disclosed persons, 120 (46.6%) preferred to disclose to their relative for the first time, 117 (45.0%) preferred their partner and 14 (5.4%) preferred a friend. A great number of correspondents had told one person only, 66 (25.5%); also many correspondents had told many persons as is the case with 6 and above persons 47(18.1%).

Table 4 shows that major reasons for disclosure were because they felt it was their duty to tell whoever they told 96 (37.8%) and that they trusted the person to keep it secret 51(20.3%). Of 7 that have not disclosed their status to anyone, 6(2.3%) persons said they felt they don't have a close enough relationship and therefore saw no need to tell while 2(0.8%) cited fear of rejection. Nevertheless, 7 (2.7%) of the respondents promised future disclosure if need be. About half of the disclosed population 136 (54.2%) said they received advice and

encouragement on first disclosure, 79 (31.5%) said they received material and emotional support from those they told while 175 (69.7%) reported they had no negative effects. Also three quarter of the clients had disclosed immediately 199 (79.3%) followed by a much smaller number of 38 (15.1%) persons who took at least 1 year to disclose their status to someone.

Table 5 shows that there were statistical significant associations of status disclosure and gender ( $\chi$ 2 = 5.810, p = 0.031), length of time the clients have been on treatment ( $\chi$ 2 = 8.632, p = 0.009), parity status of the clients ( $\chi$ 2 = 4.480, p = 0.049), think it is important to disclose ( $\chi$ 2 = 14.676, p = 0.000), and year of diagnosis ( $\chi$ 2 = 12.689, p = 0.003). However, there were no statistical significant associations of status disclosure and age ( $\chi$ 2 = 2.808, p = 0.422), marital status ( $\chi$ 2 = 2.780, p = 0.249), occupation  $(\chi 2 = 4.770, p = 0.189)$ , participation in support group ( $x^2 = 1.403 p = 0.611$ ), pre and post test counseling ( $\chi$ 2 = 5.640, p = 0.050), witnessed disclosure ( $\chi 2 = 2.677 p = 0.214$ ), knowledge of partner status ( $\chi$ 2 = 3.934, p = 0.106) and blame  $(\chi 2 = 0.075, p = 1.000).$ 

Table 1. Socio-demographic characteristics of respondents

Variable	Frequency (N=260)	Percentages (%)
Gender		
Female	158	60.8
Male	102	39.2
Age Category		
18-29	42	16.2
30-39	68	26.2
40-49	90	34.6
50-69	60	23.0
Level of Education		
Primary	65	25.0
Secondary	122	46.9
Tertiary	73	28.1
Marital Status		
Single	83	31.9
Married	155	59.6
Widowed	22	8.5
Occupation		
Civil Servant	53	20.4
Self Employed	172	66.2
Unemployed	11	4.2
Student	24	9.2
Number of living children		
At least 1 child	194	74.6
None	66	25.4

Table 2. HIV related characteristics of participants

Variable	Frequency (N=260)	Percentage (%)
Knowledge On Existing Support Groups		
Yes	109	41.9
No	151	58.1
Active participation in support group		
Yes	34	13.1
No	226	86.9
Pre and post-test counseling		
Not counseled	26	10.0
Counseled	234	90.0
Voluntary testing		
No	147	56.5
Yes	113	43.5
Reasons for testing		
Fell sick	144	55.4
Do the test regularly to know status	29	11.2
Suspected that my partner was HIV positive	32	12.3
Came for pregnancy clinic and was tested	16	6.2
Health provider recommended the test	13	5.0
Family/friend encouraged to test self	8	3.1
Others	18	6.9
Diagnosed (years)	52	20.0
<5 years	208	80.0
≥5 years		
HAART Commencement (Years)	65	25.0
<5 years	195	75.0
≥5 years		
Blame following result		
No	162	62.3
Yes	98	37.7

Table 3. HIV disclosure status and patterns of disclosure of participants

Frequency (N=260)	Percentage (%)
101	38.8
159	61.2
251	96.5
9	3.5
185	71.2
75	28.8
167	90.3
18	9.7
58	22.3
202	77.7
16	8.6
169	91.4
45	17.3
	101 159 251 9 185 75 167 18 58 202

Variable	Frequency (N=260)	Percentage (%)
Yes	215	82.7
Preferred disclosure party for first time (N=251)		
Partner	117	46.6
Relative	120	47.8
Friend	14	5.6
Number of persons HIV status disclosed to (N=251)		
1	66	25.4
2	52	20.0
3	52	20.0
4	21	8.1
5	22	8.5
>6	47	18.1

Table 4. Reasons, impact, Outcome of disclosure and time of disclosure from diagnosis

Variable	Frequency (N=260)	Percentage (%)
Reason for disclosure (N=251)		<u> </u>
It is my duty to tell the person	95	37.8
I needed advice	34	13.5
I knew that the person is HIV positive too	10	4.0
I needed material and emotional support	32	12.7
I needed to prepare for the future	29	11.6
I trusted the person to keep it a secret	51	20.3
Reason for non-disclosure (N=9)		
Fear of rejection	2	0.8
I don't know how to tell someone I'm positive	1	0.4
I don't have a close relationship with people so I see no	6	2.3
need to tell		
Possibility of future (N=9)		
No	2	.8
Yes	7	2.7
Immediate reaction		
Silence	34	13.5
sadness and disappointment	73	29.1
Encouragement and advice	136	54.2
Blame	8	3.2
Negative impacts		
Depression because of rejection by those who know status	28	11.2
Family relationship is destroyed	14	5.6
Loss of intimacy with spouse	17	6.8
Personal wellbeing is threatened	17	6.8
None	175	69.7
Positive impacts		
Increased support from those close to client	79	31.5
Take drugs regularly	78	31.1
Partner was encouraged to test self	32	12.7
Feel more confident and relieved because the burden is	40	15.9
lifted		
Able to share feelings and experiences with those close	16	6.4
to client		
None	6	2.4
Length of time from diagnosis to disclosure	Variable (N=260)	Percentage (%)
Immediately	199	79.3
≤1year	14	5.6
>1 year	38	15.1

Table 5. Factors associated with status disclosure among HIV clients in UNTH

Variables	Disclosure status of clients		X <sup>2</sup> (P value)
	No (%)	Yes (%)	<u> </u>
Gender			5.810(0.031)
Female	2(0.8)	156(60.0)	
Male	7(2.7)	95(36.5)	
Age group			
18-29	2(0.8)	40(15.4)	2.808(0.422)
30-39	3(1.2)	65(25.0)	, ,
40-49	4(1.5)	86(33.1)	
50-69	0(0.0)	60(23.1)	
Marital status	,	,	
Single	5(1.9)	78(30.0)	
Married	4(1.5)	15Ì(58.1)	2.780 (0.249)
Widowed	0(0.0)	22(8.5)	()
Occupation	` -/	· -/	
Civil servant	0(0.0)	53(20.4)	
Self employed	9(3.5)	163(62.7)	4.770(0.189)
Unemployed	0(0.0)	11(4.2)	(0.100)
Student	0(0.0)	24(9.2)	
Length of treatment	0(0.0)	Z 1(0.2)	
< 5 years	6(2.3)	59(22.7)	8.632(0.009)
≥5 years	3(1.2)	192(73.8)	3.002(0.000)
Parity	J(1.2)	102(10.0)	
None	5(1.9)	61(23.5)	4.480(0.049)
At least 1child	4(1.5)	190(73.1)	+.+00(0.0 <b>+</b> 0)
Participation in support group	٦(١٠٥)	100(10.1)	
No	9(3.5)	217(83.5)	1.403 (0.611)
Yes	0(0.0)	34(13.1)	1.700 (0.011)
ਾਦਨ Pre and Post test counseling	0(0.0)	J <del>4</del> (1J.1)	
Not Counseled	2(1.2)	22/0 0)	5 640 (0 050)
Not Counseled Counseled	3(1.2)	23(8.8)	5.640 (0.050)
Counseled Witnessed disclosure	6(2.3)	228(87.7)	
	0/2 F\	102/74 2\	2 677 (0 244)
No You	9(3.5)	193(74.2)	2.677 (0.214)
Yes	0(0.0)	58(22.3)	
Knowledge of partner status(N=185)	0 (4 1)	10/0.6	0.004/0.400
No	2 (1.1)	16(8.6)	3.934 (0.106)
Yes	4(2.2)	163(88.1)	
Think it is important to disclose			
No	9(3.5)	92(35.4)	14.676 (0.000)
Yes	0(0.0)	159(61.2)	
Blame			
No	6(2.3)	156(60.0)	0.075 (1.000)
Yes	3(1.2)	95(36.5)	
Diagnosis			
< 5 years	6(2.3)	46(17.7)	12.689 (0.003)
≥5 years	3(1.2)	205(78.8)	( /

#### 4. DISCUSION

Disclosure dynamics are context-specific. They are influenced by the practices of healthcare providers and support groups, by cultural views on HIV/AIDS as well as by kinship dynamics and gender relations. The overall high HIV disclosure rate in this study is comparable to previous

studies in Nigeria on the prevalence, pattern and predictors of disclosure amongst clients in Federal Medical Center Bida [31] and also similar to another study on associated factors of disclosure by clients in the Northeast of the country [32]. These similar results are extracted from a different geopolitical zone of the country so reason for this high disclosure cannot be

explained in the southeast and Enugu context in particular. However, it was speculated in the other studies that women who are the vast majority in the study, may be getting adequate HIV related information that empowers them to disclosure their status (ongoing disclose counseling). Nonetheless, comparatively lower rates of disclosure in Illorin, Tanzania and elsewhere in Africa have been reported [32,34]. Another of such study carried out in the same institution but on infected children adolescence revealed a comparatively low level of disclosure to these individuals [30]. This can partly be due to their dependence on parents or quardians as well as anticipated after effect including stigma which is worse at this age. This finding is encouraging and if well applied can lead to higher detection of HIV, improved enrollment in HIV programmes and ultimately control of HIV.

This study reported that most of the respondents had received counseling in which they were advised on the need and importance of disclosure. This may have contributed to the high proportion that thought that their status disclosure is necessary. This finding agrees with that of a Northern Ethopian study which reported a good level of knowledge on the importance of disclosure [35]. Most of the respondents in their studies agreed that it was important to disclose their HIV status. Although the attitudes towards disclosure and the actual disclosure practices reported by the participants in the study were encouraging, the participants only disclosed their status to trusted individuals. This if upheld or improved on will positively impact greatly on HIV care and control.

The length of time in which the respondents knew their status differed. Majority of them had been diagnosed over 5years ago and beyond and were tested through VCT. This study also reported that a large number of individuals were not members of any support group even though most were aware of support group just like the study in Ethopia [36] but contrasts other countries like Tanzania [37]. Being a member of HIV/AIDS support system/group could provide clients with information on the merits of disclosure as well as for sharing and discussing their problems freely with other individuals so as to help them in acquiring possible solution. This in turn might have an effect in disclosure of HIV status. It is obvious that as patients stay longer in HIV care services, they are informed about the benefits of HIV/AIDS care, including disclosure,

experience sharing with others and counseling. With regard to reason for testing, over half got tested because they fell sick and had need for HIV testing. Second to that was suspicion of partners' seropositve status and then routine check for most of the clients. This agrees with studies done in Mekelle Ethopia [35].

All the respondents had disclosed their HIV status to someone (96.5%) with majority reporting to family members/ friends (82.7%) and for those who had partners, the disclosure rate to their partners (91.4%). Similar to the finding is the results of a study on ANC women in South Africa: 74.4% had disclosed their HIV serostatus to their sex partners. An even higher proportion of the participants (80.0%) had disclosed their HIV serostatus to at least a family member [38]. Of the 62.2% that consisted female disclosed population, 35.5% disclosed to a family member or a friend, compared to only 17.9% of the 37.8% of disclosed males. This finding is consistent with results reported elsewhere with family members being the most frequent group disclosed to [38] and men being more reluctant to disclose to family and friends compared to women [39] Contrary to this finding is what was observed in Federal Medical Center Bida correspondents mostly disclosed to their spouse [31]. Disclosure of serostatus was also done within a year of diagnosis and even about 80% of the disclosed persons reported to have done so on the same day. This particular finding is creditable if it is true as the study was based on self-report and wasn't confirmed by the disclose party. It falls in line with a study carried out in Niger state, Northern Nigeria [31].

Respondents had different reasons to disclose their HIV status or not. Some reasons revealed include; is a duty for the clients to tell the significant person, trusting that the person will keep it a secret, need for advice and getting support. A wide range of reasons which coincides with those of this study were found in Uganda and elsewhere although the Ugandan study categorized these reasons to be targetspecific [40]. On the other hand participants who had not disclosed expressed lack of close relationship as reason for not disclosing but assured that there is room for disclosure in the nearest future. This contradicts a number of studies in which nondisclosure was mostly influenced by issues such as the fear of being blamed, the belief that HIV status disclosure is against traditional practice, fear of divorce, fear of loss of traditional support, and fear of being

abused [37,40]. In two particular studies, the reason for nondisclosure varied with the sexes. Men were more concerned about their partners' reaction while women were concerned about losing material support [36,41].

Immediate disclosure reaction from this study showed that a majority of the disclosers said they received encouragement and advise from the person they disclosed to. Nonetheless, a good number of them reported that the partner, family or loved one was saddened and disappointed by the news. In the long run, people seemed to come to terms with the status of the disclosed as two thirds of these persons reported they had no negative experience since they disclosed. Those who suffered bad experiences reported rejection. loss of intimacy with spouse/partner and threats to personal wellbeing. The finding of an Ethopian study confirmed that women who disclosed their status to sexual partners experience negative outcomes such as discrimination, stigma, and rejection [42]. The implication of disclosure from this study is an increased support from those close to them, taking drugs regularly and feeling more confident because the burden was shared and getting partners to test themselves. The analysis of disclosure narratives in another study revealed that acceptance of a partner's HIV status is a gradual process. While the initial reaction was often one of shock and disbelief, most partners grew more supportive over time [43].

Concerning factors that determine HIV status disclosure, the present study identified clients' perception on the importance of disclosure, sex, parity, length of ARV treatment and time of diagnosis as relevant. A study in Ogun state reported that disclosure increased with age unlike this study [44]. Also, having children was positively associated to disclosure status. The present study revealed that knowledge on the importance of HIV disclosure was associated with status disclosure; most respondents knew that disclosing their status was important. This corresponds with a study done in Ethopia [35]. None of the undisclosed thought it important to tell someone about their status. As opposed to other studies, blame, witnessing someone else disclose, being a part of a support group, marital status and occupation had no relationship with status disclosure of clients. This may be due to differences in setting and study design.

#### 5. CONCLUSION

The proportion of disclosure status was very high especially to household member, friend or sexual The immediate and subsequent consequences of HIV status disclosure were predominantly positive. Disclosure of HIV status helped respondents to adhere to anti-retroviral therapy and encouraged their partner to test themselves. Factors associated with disclosure were: gender, age, length of treatment, parity, counseling, time of diagnosis and knowledge on partner status. Effective decisions on disclosure improve well-being and quality of life of HIV clients. This in turn have a considerable impact on levels of stigma and discrimination as well as on the HIV epidemic especially as we progress towards the global vision of zero new HIV infections, zero discrimination, and zero AIDSrelated deaths.

#### **CONSENT AND ETHICAL APPROVAL**

Ethical approval for the study was obtained from the University of Nsukka Enugu Campus School of postgraduate, Ethical Review Committee with number NHREC/05/01/2008B-FWA00002458-1RB00002323. Written informed consent was obtained from all those interviewed after the purpose of the study was explained to them. Information obtained from clients were kept confidential. Client's freedom to withdraw from the study at any point in time in spite of the consent was also respected.

#### **COMPETING INTERESTS**

Authors have declared that no competing interests exist.

#### **REFERENCES**

- Coté TR, Biggar RJ, Rosenberg PS, Devesa SS, Percy C, Yellin FJ, Lemp G, Hardy C, Geodert JJ, Blattner WA. Non-Hodgkin's lymphoma among people with AIDS: incidence, presentation and public health burden. International journal of cancer. 1997;73(5):645-50.
- Ho M. The history of cytomegalovirus and its diseases. Medical microbiology and immunology. 2008;197(2):65-73.
- Palombi L, Moramarco S. Health in sub-Saharan Africa: HIV, TB and malaria epidemiology. In Multi-disciplinary

- Teleconsultation in Developing Countries 2018 (pp. 3-16). Springer, Cham.
- 4. Vu GT, Tran BX, Hoang CL, Hall BJ, Phan HT, Ha GH, Latkin CA, Ho CS, Ho RC. Global research on quality of life of patients with HIV/AIDS: is it socioculturally addressed? (GAPRESEARCH). International Journal of Environmental Research and Public Health. 2020;17(6): 2127.
- 5. Tran BX, Ho RC, Ho CS, Latkin CA, Phan HT, Ha GH, Vu GT, Ying J, Zhang MW. Depression among patients with HIV/AIDS: research development and effective interventions (GAPRESEARCH). International journal of environmental research and public health. 2019;16(10):1772
- Ssali SN, Atuyambe L, Tumwine C, Segujja E, Nekesa N, Nannungi A, Ryan G, Wagner G. Reasons for disclosure of HIV status by people living with HIV/AIDS and in HIV care in Uganda: an exploratory study. AIDS patient care and STDs. 2010;24(10):675-81.
- 7. Cloete A, Strebel A, Simbayi L, van Wyk B, Henda N, Nqeketo A. Challenges Faced by People Living with HIV/AIDS in Cape Town, South Africa: Issues for Group Risk Reduction Interventions. AIDS Res Treat. 2010;2010:420270.
- 8. Erku TA, Megabiaw B, Wubshet M. Predictors of HIV status disclosure to sexual partners among people living with HIV/AIDS in Ethiopia. The Pan African Medical Journal. 2012;13.
- Kwapong GD, Boateng D, Agyei-Baffour P, Addy EA. Health service barriers to HIV testing and counseling among pregnant women attending Antenatal Clinic; a crosssectional study. BMC health services research. 2014;14(1):1-0.
- Nel A, Kagee A. Common mental health problems and antiretroviral therapy adherence. AIDS care. 2011;23(11):1360-
- Mellins CA, Kang E, Leu CS, Havens JF, Chesney MA. Longitudinal study of mental health and psychosocial predictors of medical treatment adherence in mothers living with HIV disease. AIDS patient care and STDs. 2003;17(8):407-16.
- Menon A, Glazebrook C, Campain N, Ngoma M. Mental health and disclosure of HIV status in Zambian adolescents with HIV infection: implications for peer-support programs. JAIDS Journal of Acquired

- Immune Deficiency Syndromes. 2007; 46(3):349-54.
- 3. Knettel BA, Wanda L, Amiri I, Myers J, Fernandez KM, Muiruri C, Watt MH, Mmbaga BT, Relf MV. Assessing the influence of community health worker support on early Antiretroviral Therapy Adherence, anticipated stigma, and Mental Health Among people living with HIV in Tanzania. AIDS Patient Care and STDs. 2021 1;35(8):308-17.
- Safren SA, Mayer KH, Ou SS, McCauley M, Grinsztejn B, Hosseinipour MC, Kumarasamy N, Gamble T, Hoffman I, Celentano D, Chen YQ. Adherence to early antiretroviral therapy: results from HPTN 052, a phase III, multinational randomized trial of ART to prevent HIV-1 sexual transmission in serodiscordant couples. Journal of acquired immune deficiency syndromes (1999). 2015; 69(2):234.
- 15. Coyle RP, Schneck CD, Morrow M, Coleman SS, Gardner EM, Zheng JH, Ellison L, Bushman LR, Kiser JJ, Mawhinney S, Anderson PL. Engagement in mental health care is associated with higher cumulative drug exposure and adherence to antiretroviral therapy. AIDS and Behavior. 2019;23(12):3493-502.
- Simbayi LC, Kalichman SC, Strebel A, Cloete A, Henda N, Mqeketo A. Disclosure of HIV status to sex partners and sexual risk behaviours among HIV-positive men and women, Cape Town, South Africa. Sexually transmitted infections. 2007; 83(1):29-34.
- 17. Evangeli M, Foster C. Who, then what? The need for interventions to help young people with perinatally acquired HIV disclose their HIV status to others. Aids. 2014;28:S343-6.
- Brou H, Djohan G, Becquet R, Allou G, Ekouevi DK, Viho I, Leroy V, Desgrées-du-Loû A, ANRS 1201/1202/1253 Ditrame Plus Study Group. When do HIV-infected women disclose their HIV status to their male partner and why? A study in a PMTCT programme, Abidjan. PLoS medicine. 2007;4(12):e342.
- Stein MD, Freedberg KA, Sullivan LM, Savetsky J, Levenson SM, Hingson R, Samet JH. Sexual ethics: disclosure of HIV-positive status to partners. Archives of Internal Medicine. 1998;158(3):253-7.
- 20. Kalichman SC, DiMarco M, Austin J, Luke W, DiFonzo K. Stress, social support, and

- HIV-status disclosure to family and friends among HIV-positive men and women. Journal of behavioral medicine. 2003; (4):315-32.
- Amin A. Addressing gender inequalities to improve the sexual and reproductive health and wellbeing of women living with HIV. Journal of the International AIDS Society. 2015;18:20302.
- 22. Wolitski RJ, Pals SL, Kidder DP, Courtenay-Quirk C, Holtgrave DR. The effects of HIV stigma on health, disclosure of HIV status, and risk behavior of homeless and unstably housed persons living with HIV. AIDS and Behavior. 2009;13(6):1222-32.
- 23. Patterson SE, Milloy MJ, Ogilvie G, Greene S, Nicholson V, Vonn M, Hogg R, Kaida A. The impact of criminalization of HIV non-disclosure on the healthcare engagement of women living with HIV in Canada: a comprehensive review of the evidence. Journal of the International AIDS Society. 2015;18(1):20572.
- 24. Wilson SR, Hintz EA, MacDermid Wadsworth SM, Topp DB, Southwell KH, Spoont M. Female US military veterans'(non) disclosure of mental health issues with family and friends: Privacy rules and boundary management. Health Communication. 2021;36(4):412-23.
- 25. Hardon A, Gomez GB, Vernooij E, Desclaux A, Wanyenze RK, Ky-Zerbo O, Kageha E, Namakhoma I, Kinsman J, Spronk C, Meij E. Do support groups members disclose less to their partners? The dynamics of HIV disclosure in four African countries. BMC public health. 2013;13(1):1-0.
- 26. Phoebe N, Ngige L. Nature and extent of HIV self-disclosure by seropositive adults in HIV support groups in Nairobi County, Kenya. Nature. 2015;5(16).
- 27. King R, Katuntu D, Lifshay J, Packel L, Batamwita R, Nakayiwa S, Abang B, Babirye F, Lindkvist P, Johansson E, Mermin J. Processes and outcomes of HIV serostatus disclosure to sexual partners among people living with HIV in Uganda. AIDS and Behavior. 2008;12(2):232-43.
- 28. World Health Organization. Gender dimensions of HIV status disclosure to sexual partners: rates, barriers and outcomes. World Health Organization; 2004. Adeoye-Agboola DI, Evans H,
- 29. Hewson D, Pappas Y. Factors influencing HIV disclosure among people living with

- HIV/AIDS in Nigeria: a systematic review using narrative synthesis and meta-analysis. Public health. 2016;136:13-28
- Ubesie AC, Iloh KK Emodi IJ, Ibeziako NS, Obumneme-Anyim IN, Iloh ON, et al. HIV status disclosure rate and reasons for nondisclosure among infected children and adolescents in Enugu, southeast Nigeria, Journal of Social Aspects of HIV. 2016:13(1):136-41
- 31. Adefemi SA, Abayomi MA, Adekanye AO Mohammed Y. Prevalence, Pattern and Predictors of Disclosure among HIV Positive Clients of FMC Bida Art Clinic. J. Med. Sci 2018;18: 172-179.
- 32. Raymond Salanga Dankoli, Alhaji A Aliyu, Peter Nsubuga, Patrick Nguku, Okechukwu P Ossai, Dahiru Tukur 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(1):4
- 33. Salami K, Fadeyi A, Ogunmodede JA, Desalu OO. Status Disclosure among People Living With HIV/AIDS in Ilorin, Nigeria. West African Journal of Medicine 2011; 30(5): 359–363.
- 34. David Hallberg, Trifonia D. Kimariob, Christina Mtuyab, Marycelina Msuyab, Gunilla Björling. Factors affecting HIV disclosure among partners in Morongo, Tanzania International Journal of Africa Nursing Sciences. 2019;10: 49–54
- 35. 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. Science Journal of Public Health, 2015;3(1): 6166.
- 36. Mussie Alemayehu, Alemseged Aregay, Abrhet Kalayu and Henock Yebyo. HIV disclosure to sexual partner and associated factors among women attending ART clinic at Mekelle hospital, Northern Ethiopia. BMC Public Health. 2014; 14:746
- 37. Maman S, Mbwambo J, Hogan M, Kilonzo GP, Weiss E, Sweat M: High Rates and Positive Outcomes of HIV Serostatus Disclosure to Sexual Partners: Reasons for Cautious Optimism from a VCT Clinic in Dar es Salaam, Tanzania. AIDS Behav 2003,(4): 373–382.
- 38. Adeniyi OV, Ajayi AI, Selanto-Chairman N, Goon DT, Boon G, Fuentes YO, et al. (2017) 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 12(8):e0181730.
- Bouillon K, Lert F, Sitta R, Schmaus A, Spire B, Factors correlated with disclosure of HIV infection in the French Antilles and French Guiana: results from the ANRS-EN13-VESPA-DFA Study. AIDS. 2007; 21(1): 89–94.
- 40. Ssali SN, Atuyambe L, Tumwine C, Segujja E, Nekesa N, Nannungi A, Ryan G, Wagner G. Reasons for disclosure of HIV status by people living with HIV/AIDS and in HIV care in Uganda: an exploratory study. AIDS Patient Care STDS. 2010 ;24(10):675-81
- 41. Deribe K, Woldemichael K, Bernard N, Yakob B. Gender difference in HIV status disclosure among HIV positive service

- users. East Afr J Public Health. 2009; 6(3):248-55.
- Bedilu Deribe1, Jemal Ebrahim and Lema Bush. Outcomes and Factors Affecting HIV Status Disclosure to Regular Sexual Partner among Women Attending Antiretroviral Treatment Clinic. J AIDS Clin Res 2018;9: 3
- 43. Anita Hardon, Gabriela B Gomez, Eva Vernooij, Alice Desclaux, Rhoda K Wanyenze, Odette Ky-Zerbo et al. Do support groups members disclose less to their partners? The dynamics of HIV disclosure in four African countries. BMC Public Health 2013;13: 589
- Amoran OE. Predictors of disclosure of serostatus to sexual partners among people living with HIV/AIDS in Ogun State, Nigeria. Niger J Clin Pract. 2012;15: 385-90.

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