

## Original Research Article

# Patient satisfaction with anti-retroviral services at General Hospital, Ogoja, Cross River State, Nigeria: a cross-sectional study

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## ABSTRACT

**Background:** Patients have explicit desires for services when visiting hospitals and inadequate inquiries of their needs may result in dissatisfaction. This study aimed to assess the level of satisfaction and its correlates amongst clients receiving ART care and treatment at the General Hospital, Ogoja, Cross River State, Nigeria.

**Methods:** A cross sectional study was conducted among PLHIV age  $\geq 18$  years from June 2020 to August 2020 at RISE supported ART clinic of GH Ogoja and satisfaction level was assessed using the PSQ18 instrument. Data was collected using a structured interviewer administered questionnaire and was analyzed for descriptive and inferential statistics using IBM SPSS version 23.

**Results:** Out of the 365 participants enrolled into the study, 60.5% were females. The mean score of PSQ-18 domain was  $40.8 \pm 2.52$  with the highest scores reported in accessibility/convenience ( $9.4 \pm 0.76$ ) and technical quality ( $9.4 \pm 0.74$ ) domains while the lowest was in time spent with doctors/case managers ( $3.0 \pm 0.0$ ). The correlates of patient satisfaction were respondents involved in businesses, earning above the minimum wage, on TLD and no reported missed doses of ART and the only determinant was being on TLD.

**Conclusions:** Access, convenience and technical quality were perceived satisfied by patients receiving care. However, they were dissatisfied with the time spent with them and being on TLD was a determinant of patient satisfaction. Client-centric interventions should include health caregivers spending quality time with their patients and all clients weighing 20kg and above are on DTG-based regimen for their care and treatment.

**Keywords:** HIV/AIDS, PSQ 18, Ogoja, Nigeria

## INTRODUCTION

HIV/AIDS remains a pandemic with about 38 million people living with the disease globally, 70% of which reside in sub-Saharan Africa.<sup>1,2</sup> Nigeria is one of the countries in the world with the highest number of people living with human immunodeficiency virus (HIV).<sup>3</sup> It has a prevalence of 1.4% (1.9 million) among people between the age group 15-49 years and cross River state, in the south-southern Nigeria, has HIV prevalence of 2.0%.<sup>4</sup>

Efforts to eliminate the global HIV/AIDS burden have achieved substantial progress in recent years, thanks to the advancement of interventions like antiretroviral therapy (ART) and Dolutegravir-based regimen in particular.<sup>5,6</sup> In Nigeria, over the last decade, increasing access and improvements to antiretroviral therapy has resulted in greatly increased life expectancy, reduced morbidity and mortality among PLHIV as well as reduced transmission rates of the virus.<sup>3</sup> This rapid and continuous expansion is imperative to achieve the UNAIDS vision 95-95-95 by the 2030 to mark the end of HIV/AIDS

pandemic as a public health threat.<sup>7</sup> However, this raises a significant challenge to ensure the quality of services across our ART clinics. Patient satisfaction has been considered as an important part when evaluating the health outcomes and quality of healthcare service.<sup>8</sup> According to Donabedian and Maxwell, patient satisfaction is one of the several dimensions of quality of healthcare service, others includes technical competence, accessibility of service, coverage, effectiveness, efficiency, interpersonal relationship, continuity of care, safety, amenities and utilization of healthcare services.<sup>9</sup>

Patient's satisfaction is the patient's perceived experience of care received compared with the care expected.<sup>10</sup> The more satisfied patients are with their care, the better their self-care, adherence to ART, retention to ART care and treatment, and reduction in the burden of the disease. They also have a higher odd of developing longer lasting relationship with their healthcare providers. However, dissatisfied patients are more likely to have poor self-care, retention to care and treatment and worsening in the morbidity and mortality.<sup>11</sup> Patients have explicit desires for services when in hospital and inadequate discovery of their needs may result in patient dissatisfaction.<sup>12</sup> Thus the aspects of satisfaction and dissatisfaction should be continuously assessed which may draw attention of the healthcare providers and administrators in order to monitor performance, determine patients' felt needs, plan the development of services (to be client-centric as much as possible) and provide evidence to support targeted interventions.<sup>13</sup> In developing countries, patient satisfaction has received increasing attention in recent years<sup>14-16</sup> and despite the paucity of literatures in Africa and Nigeria in particular, studies have reported significant association of factors with patients' satisfaction, and these include socio-economic and clinical characteristics, features of clinics and health system.<sup>17-19</sup> A study in Sokoto in North-western Nigeria in 2013 by Oche et al reported that the respondents were generally satisfied with most of the services rendered at the clinic which includes triage, waiting time, consultation, courtesy of care provider, availability of drugs etc.<sup>20</sup> This study aimed to assess the level of satisfaction and its correlates amongst clients receiving ART care and treatment at the General Hospital, Ogoja cross River state, Nigeria.

### ***TMEC/RISE support on HIV epidemic control in Nigeria***

Meeting targets maintaining epidemic control, reaching impact saturation and epidemic control of HIV/AIDS (TMEC/RISE) is a 5-year USAID funded project that commenced in October 2019. It is managed by a consortium that comprises of ICAP (technical lead) and Jhpiego (programmatic and administrative lead) and supports four states in Nigeria namely Akwa Ibom, Adamawa, Niger and Cross River States in supporting the UNAIDS vision 95-95-95 aimed at preventing HIV/AIDS as a public health threat by 2030. Cross River state-RISE supports seven (7) health facilities located in the northern

part of the state. These are namely General Hospital Ogoja, Catholic Maternity Hospital Ogoja, Sancta Maria Clinic Ogoja, Obudu Clinic, Sacred Heart Catholic Hospital Obudu, Lutheran Hospital, Yahe and General Hospital Okpoma. General Hospital Ogoja is the facility with the highest HIV patients in care and treatment (Tx\_Curr) while the least is General Hospital Okpoma.

### **METHODS**

General Hospital (GH) Ogoja, the study center, is located within Ogoja local government area in the northern part of Cross River State. It is a secondary health institution with about 100 bed capacity, serving as referral center to several hospitals within the Northern region of Cross River State. It offers general and specialty services to patients at the In-patients department, general outpatient department (OPD) including the ART clinic. The ART clinic is run by a multi-disciplinary team that comprises of staff of government of Nigeria (GoN) who are staff of GH, Ogoja and TMEC/RISE that comprises of ad-hoc staff (ESM clinicians, case managers and data entry clerks) and RISE office staff. The study utilized a descriptive cross-sectional design carried out between June 2020 to August, 2020. The study population comprised of people living with HIV/AIDS (PLHIV) attending the ART clinic of the GH Ogoja. Using the formula for cross sectional study and a prevalence of 65.5% of patients' satisfaction from a previous study, a total of 365 respondents were recruited into the study using systematic sampling technique.<sup>21,22</sup> Inclusion criteria were all PLHIV age  $\geq 18$  years visiting ART centre at GH Ogoja and had been on ART for at least 3 months and patients who refused to participate in the study were excluded. Android phones with installed kobocollect software containing the questionnaire, was used to obtain information on respondents' socio-demographic characteristics and patients' satisfaction was obtained using the patients satisfaction questionnaire 18 (PSQ-18). Patient satisfaction questionnaire short form (PSQ-18)' is an eighteen (18) item questionnaire that has been validated for use in different settings.<sup>23</sup> It was developed through rigorous research and abbreviated from much larger questionnaires (PSQ III), maintaining internal consistency and reliability.<sup>24,16</sup> This Likert scale questionnaire comprises of seven dimensions of patient satisfaction and they include general satisfaction, technical quality, interpersonal manner, communication, financial aspects, time spent with doctor, and accessibility and convenience. In each domain, the Likert scale ranges from 1 (strongly agree) to 5 (strongly disagree) with half of the questions reversed to prevent information bias. A score of 5 for each variable meant the highest satisfaction. The total score for PSQ 18 ranges from 18 (lower satisfaction) and 90 (best satisfaction). As a dependent ordinal variable, we used the evaluation of patient's satisfaction, which we obtained by recoding the overall PSQ 18 score into three ranks: good (PSQ 18 score from 90 to 66), medium (from 65 to 42) or poor (from 41 to 18) evaluation.<sup>25</sup>

The questionnaires were administered by trained research assistants (RAs) using an android phone after obtaining informed consent from the respondents. The responses from the questions were entered into and analyzed using statistical package for social sciences (IBM SPSS) statistical software package version 23. Analysis of data included description of data using mean and standard deviation for quantitative variables, counts and frequencies for qualitative variables. This was followed by inferential statistics (logistic regression) used to identify the major correlates and determinants of patient satisfaction at alpha level of <0.05. Permission to conduct the study was obtained from the management of GH Ogoja while informed consent was obtained from all participants in the study. Participants were informed of the objectives of the study and that participation was voluntary - they could opt out at any stage of the interview and all information were treated as highly confidential.

## RESULTS

About a third of the respondents 113 (31.0%) were between the age group of 31-40 years with majority being females 221 (60.5%). Almost half 165 (45.7%) had secondary school education and about a third were either Farmers 115 (31.5%) or involved in Business 110 (30.1%) with over half 202 (55.3%) earning less than the minimum wage (Table 1). Majority of the respondents 323 (88.7%) were on TDF/3TC/DTG and had not missed 303 (83.0%) their ART medications (Table 2). Amongst those who missed, a third was due to forgetfulness (Figure 1). The mean score of PSQ 18 domains general satisfaction (4.7±0.49), technical quality (9.4±0.74), interpersonal manner (4.8±0.37), communication (4.8±0.36), financial aspects (4.7±0.61), time spent with doctors/case manager (3.0±0.00) and accessibility and convenience (9.4±0.76) were estimated. The composite score was 40.8±2.52 with the highest score observed in accessibility and convenience and technical quality domains while the lowest score was time spent with doctors/case manager domain (Table 3).

The correlates of medium satisfaction compared with poor satisfaction were Occupation, income, ART regimen and missing of drugs. Almost half of the respondents with medium satisfaction 76 (40.9%) were business persons ( $\chi^2=29.5$ ,  $p<0.001$ ). Over two - fifth of the respondents 100 (62.9%) that earned N18,000 and above had medium satisfaction ( $\chi^2=11.1$ ,  $p=0.001$ ).

Most of the respondents that were on TDF/3TC/ATV/r 24 (61.5%) and those that missed their ART regimen 36 (63.2%) had poor satisfaction ( $\chi^2=3.9$ ,  $p=0.049$ ) and ( $\chi^2=7.3$ ,  $p=0.007$ ) respectively (Table 4). Respondents on TDF/3TC/DTG were 2.5 times more likely to have medium satisfaction compared with those on TDF/3TC/ATV/r and this was statistically significant (OR = 2.54, 95% CI;1.215-5.305) (Table 5).

**Table 1: Sociodemographic characteristics of respondents.**

Variables	N (%)
<b>Age (years)</b>	
≤30	93 (25.5)
31-40	113 (31.0)
41-50	80 (21.9)
51-60	57 (15.6)
≥61	22 (6.0)
Mean±SD	<b>39.9±12.3</b>
<b>Sex</b>	
Female	221 (60.5)
Male	144 (39.5)
<b>Education of respondents</b>	
None	54 (15.0)
Primary	53 (14.7)
Secondary	165 (45.7)
Tertiary	89 (24.7)
<b>Occupation of respondents</b>	
Students	58 (15.9)
Unemployed	36 (9.9)
Farmer	115 (31.5)
Civil servants	46 (12.6)
Business	110 (30.1)
<b>Income (Naira)</b>	
<18,000	202 (55.3)
≥18,000	163 (44.7)

**Table 2: Treatment parameters.**

Variables	N (%)
<b>ART regimen</b>	
TDF/3TC/DTG	323 (88.7)
TDF/3TC/ATV/r	41 (11.3)
<b>Missed ART</b>	
No	303 (83.0)
Yes	62 (17.0)

## DISCUSSION

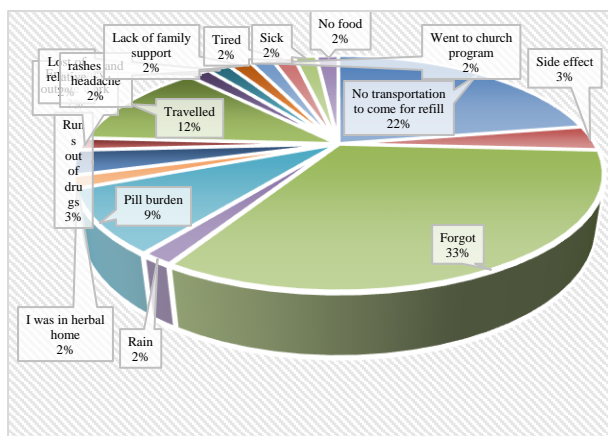
Patients' perception of their satisfaction is an imperative outcome of healthcare delivery. It can instrumentally affect health outcomes because it determines adherence to ART and long term retention in care and in scaling up HIV treatment, programme managers should not only focus on increasing number of patients on treatment to decrease HIV-related mortality but also on aspects of treatment delivery that could affect patients' satisfaction.<sup>26</sup>

Our study reported that about a third of the respondents were within the age group of 31-40 years with a mean age of 39.9±12.3 years. This may be due to the fact that most people present at the clinic for their care within the age range 30-40 years.<sup>27, 28</sup> This is consistent with reports from previous studies done in Uyo, South Southern

Nigeria and Sokoto, North Western Nigeria.<sup>29,20</sup> Most of the respondents were females and this could be related to having a higher HIV prevalence amongst them and secondly, a better health seeking behavior. This is similar to the report from a previous study by Olowokere in Ibadan in 2008.<sup>30</sup>

**Table 3: Domains of patient satisfaction questionnaires (PSQ 18).**

Domain scores	Mean±SD
General satisfaction	4.7±0.49
Technical quality	9.4±0.74
Interpersonal manner	4.8±0.37
Communication	4.8±0.36
Financial aspects	4.7±0.61
Time spent with doctor/case manager	3.0±0.00
Accessibility and convenience	9.4±0.76
Composite scores	40.8±2.52
<b>PSQ 18 level</b>	
Medium satisfaction (42–65)	164 (46.9)
Poor satisfaction (18–41)	186 (53.1)



**Figure 1: Reasons for missing ART medications.**

The mean scores of PSQ 18 domains general satisfaction, technical quality, interpersonal manner, communication, financial aspects, time spent with doctors/case manager and accessibility and convenience were 4.7±0.49, 9.4±0.74, 4.8±0.37, 4.8±0.36, 4.7±0.61, 3.0±0.00 and 9.4±0.76 respectively. The highest scores were observed in accessibility/convenience and technical quality domains. Access and convenience to receiving ART care and treatment has significantly improved over the years and this is consistent with the perception of PLHIV in this study. This has been made possible through several client-centric strategies using various differentiated service delivery (DSD) methodologies to enrol and retain clients on ART at the facilities, communities, and clinical/non clinical platforms that includes PHCs (primary healthcare centres), pharmacists, TBAs (traditional birth attendants) etc. Clients due for refill can also access their ART through home refills, buddy system and waybills due to COVID-19 pandemic to ensure

seamless access to clients in areas where there were no movements of people, one of the public health measures put in place to mitigate the spread of the disease. Technical quality was the second highest domain as perceived by the respondents. This implies that the clients were more confident in the technical skills of their healthcare providers and this was needed to support their self-care in adhering to appointments, ART and viral load schedules. The lowest score was observed in Time spent with doctors/case manager. This implies that these healthcare workers spent less time with their clients. A study by Anderson and colleagues in 2007 found that shorter consultation time was the strongest prognostic index causing poorer satisfaction and suggested that if consultation time was extended by at least 5 minutes, the patients would be more satisfied.<sup>31</sup> The findings in our study is not consistent with findings by Sunita and colleagues in 2018 who reported highest scores for interpersonal manner and time spent with doctors and the lowest for general satisfaction.<sup>11</sup> Chakraborty and colleagues in 2016 reported highest domain for General Satisfaction and least in time spent with doctor.<sup>32</sup> Vahab and colleagues found that the mean scores of PSQ 18 domains was highest in technical quality & interpersonal manner and lowest in accessibility and convenience and Rai and colleagues noted the mean scores was highest in General Satisfaction and lowest score in Accessibility and Convenience score.<sup>33,34</sup>

Occupation and income of respondents, ART regimen and missing of ARVs were correlates of patient satisfaction. Respondents involved in businesses and those that earned minimum wage and above (N18,000 and above) had better satisfaction while those on TDF/3TC/ATV/r and those that missed their ART medications had poor satisfaction and these were statistically significant. TDF/3TC/ATV/r is a second line regimen and has posed a couple of challenges to clients like pill burden and side effects that affect the gastrointestinal tract (GIT), jaundice etc. These often make the clients taking this medication dissatisfied with their care and treatment with some stopping their medications or ‘drug holiday’ leading to poor adherence to ART, emergence of opportunistic infections, treatment failure and death. TDF/3TC/DTG was the only determinant of patient satisfaction after adjusting for confounders. Respondents on TDF/3TC/DTG were 2.5 times more likely to have better satisfaction (medium) compared with those on TDF/3TC/ATV/r and this was statistically significant. Dolutegravir (DTG) based regimen, TDF/3TC/DTG also known as TLD is now recognized as the first line ART regimen among adults and adolescent due to several empirically proven reasons superior efficacy over other standard of care resulting in viral load suppression within 3 months of commencement; demonstrated better tolerability with fewer adverse drug reactions that limit treatment; high genetic barrier lowering the risk of resistance from poor adherence to ART; favourable pharmacokinetic and metabolic profile with a prolonged intracellular half-life



allows for the convenience of once-daily dosing, thereby promoting adherence and finally it is cheaper compared

to other NNRTIs or PIs in current use, hence the perceived satisfaction by clients placed on them.<sup>35-37</sup>

**Table 4: Correlates of overall patient satisfaction (PSQ 18).**

Variables	PSQ 18 level		Test statistics and p value
	Poor N (%)	Medium N (%)	
<b>Age (years)</b>			
≤40	99 (49.5)	101 (50.5)	$\chi^2=1.3, p=0.253$
≥41	65 (43.3)	85 (56.7)	
<b>Sex</b>			
Female	96 (46.2)	112 (53.8)	$\chi^2=0.102, p=0.750$
Male	68 (47.9)	74 (52.1)	
<b>Occupation</b>			
Students	25 (15.2)	31 (16.7)	$\chi^2=29.5, p<0.001$
Unemployed	28 (17.1)	8 (4.3)	
Farmer	53 (32.3)	52 (28.0)	
Civil servant	26 (15.9)	19 (10.2)	
Business	32 (19.5)	76 (40.9)	
<b>Income (Naira)</b>			
<18,000	105 (55.0)	86 (45.0)	$\chi^2=11.1, p=0.001$
≥18,000	59 (37.1)	100 (62.9)	
<b>ART regimen</b>			
TDF/3TC/DTG	139 (44.8)	171 (55.2)	$\chi^2=3.9, p=0.049$
TDF/3TC/ATV/r	24 (61.5)	15 (38.5)	
<b>Missed ART medications</b>			
No	128 (43.7)	165 (56.3)	$\chi^2=7.3, p=0.007$
Yes	36 (63.2)	21 (36.8)	

**Table 5: Logistic regression of patient satisfaction questionnaire 18 evaluation.**

Variables	B	P value	OR	95% CI for OR	
				Lower	Upper
<b>Occupation</b>	0.156	0.113	1.168	0.964	1.417
<b>Income (categorized)</b>	0.542	0.052	1.720	0.995	2.974
<b>Reasons for missing ART</b>	-0.019	0.786	0.981	0.854	1.127
<b>Missed a dose of ART (yes/no)</b>	-0.589	0.146	0.555	0.251	1.228
<b>ART Regimen (TDF/3TC/DTG*)</b>	0.932	0.013*	2.539	1.215	5.305

\*p<0.05; binary logistic regression.

## CONCLUSION

In conclusion, our study revealed higher level of satisfaction among ART patients for accessibility/ convenience and technical quality domains while the lowest score was time spent with doctors/case manager. The only determinant of patient satisfaction was taking TLD medication. Client-centric interventions should focus more on health caregivers spending quality time (>5 minutes) with their patients and ensuring that all clients weighing 20 kg and above are on DTG-based regimen for their care and treatment with special considerations and assessment given to those with adverse effects to the medication for better treatment outcome.

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