

HIV Patients' Satisfaction with Services Provided at Tertiary Health Institutions in Ogun East Senatorial District, Ogun State, Nigeria: Public-private Comparison

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Abstract

Background: Patient satisfaction is defined as the extent to which patients feel that their needs and expectations are being met by the services provided. A good number of HIV patients often drop out of treatment programs because they are not satisfied with some aspects of the services provided. This study assessed and compared HIV patients' satisfaction with health services provided at public and privately owned tertiary health institutions in Ogun State, Nigeria.

Methods: This is a facility-based 2-center (a government-funded and a privately funded), cross-sectional comparative study carried out among HIV-positive patients who received care at these two tertiary hospitals. HIV patients' satisfaction was assessed using PSQ III. Two hundred patients were recruited from each institution. A comparison of mean satisfaction scores was done using the student's t-test. Logistic regression analysis was used to predict the factors associated with patients' satisfaction.

Results: The mean ages of study participants were 42.25±10.81 and 44.04±9.97 for public and private health facilities, respectively ($t=-1.717$ $P=0.087$). The mean satisfaction scores of the private health facility (3.48±0.42) were higher compared to those of the public health facility (3.29±0.54) ($t=-3.912$, $P=0.000$). Also, more patients in the private health facility were satisfied with the care received compared to the public health facility in six domains out of the seven domains studied.

Conclusion: Patients' satisfaction evaluation should be done periodically in health facilities to continually identify the gaps in service delivery and monitor progress towards the ending of HIV/AIDS epidemics which is one of the targets of the sustainable development goals.

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Introduction

The focus on hospital-based and disease-based health care models hamper access to universal, equitable, high

quality, and financially sustainable health services.¹ World Health Organization (WHO) called for change in the management and delivery of health services to people. This change is people-centered health services

as opposed to hospital- and disease-based models. This approach considers the opinions and values of individuals and families. It involves patients in decisions about their care and asks their opinions about their outcomes and process of care.² Patients' evaluation of health services is one of the best ways of assessing health services that are provided in health facilities.³ Patients provide the best information on how satisfied or dissatisfied they are with the health care they receive.³ Patient's satisfaction is defined as positive or negative patient's evaluation on the quality and outcome of care.³ This refers to how much the patients' needs and expectations are met.⁴ Periodic assessment of patients' satisfaction is necessary for the identification of the strengths and weaknesses of health systems. Patient satisfaction has been proven to be associated with retention in Human Immunodeficiency Virus (HIV) care and adherence to Highly Active Antiretroviral Treatment (HAART).⁵ Patients retained in care with excellent adherence to HAART are significantly more satisfied with care than those who are not retained in care.

The healthcare sector has two main divisions (public and private hospitals). The public hospitals are completely owned by governments, while the private hospitals are owned by private institutions or organizations.⁶ Private hospitals or private health facilities are grouped into two private for-profit and private not-for-profit hospitals. The role of facilities, use and availability of materials, number and level of personnel, service delivery, and utilization levels are the differences between public and private health facilities.⁷ In a review of 17 studies of 5500 hospitals done in Europe to assess which groups of hospitals offer superior service quality, the results obtained were mixed with no significant difference between the two. According to Hollingsworth, public facilities are more efficient than private facilities, while Tiemann concluded that private facilities do not have a higher efficiency when compared to public facilities.⁸ World Health Organization identified the problems of public health facilities in low-income countries as lack of physical access, shortage of health workers, weak supply chain, instances of verbal abuse, intimidation and physical abuse, and poor physical environments.¹ World Health Organization also noted that private hospitals are meant to complement public hospital, but in low-income countries governments typically lack information on private hospitals and the services they provide and rarely have effective regulatory authority over the private sector.¹ According to these studies, the true effect of ownership is dependent on institutional context. In a study carried out in South Africa, private hospitals were perceived as more hospitable, caring, respectful, and better equipped with more competent staff than public health facilities though patients always complain about the high cost of care in private health facilities.⁹ Nigeria 2016 National Health policy identified the following as

common obstacles to accessing healthcare services in public health facilities: high cost of medical services, travel time to health facilities, and attitude of healthcare workers.¹⁰ The policy also identified poor quality of health services, ineffective diagnosis and poor management of clinical illnesses, low adherence to clinical guidelines, and persistent disruptions of healthcare services that are caused by labor disputes between healthcare workers and the government in public facilities.¹⁰ Patients also face various challenges in public health facilities like overcrowding, delay in consultation, poor attitude of staff, shortage of manpower, and poor state of facilities.^{11, 12} Although the private health sector has played a significant role in the provision of health services in Nigeria, there are issues with integration and oversight of the services that are provided by the private health facilities.¹⁰ In Nigeria, there is no institutional framework for regulating the quality and standards of health services. Although the National Health Act of 2014 mandates health facilities to obtain a certificate of standards, the criteria for this certificate are not specified in the Act, and the necessary regulations have not been passed yet.¹⁰

Rationale and Knowledge Gap

Research has been done on patient's satisfaction with services provided in public health facilities in Nigeria, but little is known about the patients' satisfaction with services provided in private health facilities. Also, there is a lack of information on patient's satisfaction with HIV healthcare services that are provided in Ogun East Senatorial District in Ogun State.

Study Objectives

This study was designed to assess and compare HIV patients' satisfaction with health services provided at public and private owned tertiary health institutions in Ogun State, Nigeria.

Methods

Study Setting

This is a descriptive, cross-sectional comparative study carried out in Ogun East Senatorial District in Ogun State, Nigeria. Ogun State has 3 Senatorial Districts: Ogun East, Ogun West, and Ogun Central. Ogun East Senatorial District was picked purposively for this study because it has the highest number of LGA and has two (1 public and 1 private teaching hospital) out of the three tertiary hospitals offering antiretroviral therapy (ART) services in Ogun State.

Ogun East Senatorial District has 9 Local Government Areas (LGA), Ogun West Senatorial District has 5 LGA, while Ogun Central Senatorial District has 6 LGA. Ogun East Senatorial District has a population of 1.25 million and projected population

of 1.73 million.¹³ Three out of the four tertiary health institutions in Ogun State offer antiretroviral therapy (ART) services: Babcock University Teaching Hospital, Ilishan, Olabisi Onabanjo University Teaching Hospital, Sagamu and Federal Medical Center Abeokuta. Two out of these three are in Ogun East Senatorial District. The major ethnic groups in Ogun East Senatorial Districts are the Ijebus and Remos.

Babcock University Teaching Hospital is a privately owned teaching hospital. The hospital is owned by the Seventh Day Adventist Church in Nigeria. Established in 2013, it is located in Ilishan-Remo in Ikenne (Local Government Areas) LGA of Ogun state. The hospital is a 240-bed health facility. The virology clinic at Babcock University Teaching Hospital was established in 2013. The virology clinic in the hospital is run by the Community Medicine Department. The clinic has staff strength of twenty-two (22) members. The clinic collaborates with Directly Observed Treatment Short-course (DOTS) clinic on Tuberculosis treatment and co-infections. Total number of adult HIV patients in care was 1120.

Olabisi Onabanjo University Teaching Hospital is a state government-owned tertiary health institution. The hospital was established in 1986. It is situated in Sagamu Local Government Area of Ogun State, Southwestern Nigeria. Olabisi Onabanjo University Teaching Hospital is a tertiary health facility that provides tertiary medical care. The virology clinic in Olabisi Onabanjo University Teaching Hospital was established in 2008. It is a multidisciplinary clinic involving different departments in the hospital (Community Medicine, Pediatrics, Internal Medicine, and Laboratory Medicine). The Clinic has staff strength of 40 members and collaborates with DOTS clinic on tuberculosis treatment and co-infections. The total number of adult HIV patients in care is 5120.

Study Population

Adult HIV patients (aged ≥ 18 years) that were on HAART for uninterrupted 6 months in HIV clinics in the two hospitals were recruited for this study. This afforded the patients the opportunity to pass through all the services offered in the two hospitals. Adult HIV positive patients who were too sick to answer the questions or were unwilling to participate in this study were excluded.

Sample Size Determination

The formula for comparing two independent proportions was used to determine the sample size. The calculated sample size was 165. Given 10% non-response rate, the calculated minimum sample size = 181.5. The sample size was increased to 200 for each institution, making a total of 400 in total.

Sampling Technique

In this study, we used multistage sampling technique. First stage, Olabisi Onabanjo University Teaching Hospital (OOUTH) and Babcock University Teaching Hospital (BUTH) were picked purposively. They are the only two tertiary health institutions offering HAART services in Ogun East Senatorial District, Ogun State.

In stage 2, sample selection was done by systematic sampling technique. In OOUTH, the average clinic attendance in a month was 850. Sampling interval in OOUTH = $850 \div 4.25$. In OOUTH, every 4th patient who had an appointment with the doctor was enrolled in the study. In BUTH, the average clinic attendance in a month was 264. Sampling interval in BUTH = $264 \div 200 = 1.32$. In BUTH, every patient who had an appointment with the doctor was enrolled in the study (consecutive recruitment).

Study Instrument

Data were collected using PSQ III questionnaire. This tool is a 50-item validated measure with a 5-point Likert scale for assessing the patient's satisfaction on health care along 7 dimensions (subscale) of quality. Subscale of Patients Satisfaction Questionnaire: general satisfaction 6 items, technical quality 10 items, communication 5 items, interpersonal manner 7 items, financial aspects 8 items, time spent with the doctor 2 items, accessibility, and convenience 12 items. The high scores reflect satisfaction with medical care, while low scores reflect dissatisfaction with medical care. Pre-coded responses; 1=strongly agree, 2=agree, 3=don't know, 4=disagree, and 5=strongly disagree are used for negatively worded questions, while recoded responses (reversed scores) are used for positively worded questions. The scores in each subscale were added and the mean score was calculated.

The method of data collection was interviewer based and was conducted by four trained research assistants. Confidentiality was guaranteed and verbal consent obtained from the study participants. The questionnaire was pre-tested on 10% of the adult HIV patients in the HIV clinic in Federal Medical Center, Abeokuta, Ogun State.

Data Analysis

IBM Statistical Package for the Social Sciences (SPSS) version 22 was used for data analysis. The student's t-test was used to compare mean satisfaction scores, and Chi square test was used to test for the association between categorical variables. The 5% (0.05) level of significance was selected. Predictors of satisfaction were determined using logistic regression.

Ethical Consideration

Ethical clearance was obtained from Babcock

University Health Research Ethics Committee (BUHREC 316/20), Olabisi Onabanjo University Teaching Hospital Health Research Ethics Committee (OOUTH/HREC/338/2020AP) and Ogun State Research Ethics Committee (HPRS/381/338), Department of Planning, Research and Statistics, Abeokuta, Ogun State. Written informed consents were obtained from the patients. Participation in this study was voluntary and details about the aims and objectives of the study were explained to the patients.

Results

Table 1 shows the socio-demographic characteristics of the respondents by institution type. About one third (32.5) of the respondents in the public tertiary institution were in the 30-39 age group.

In the private tertiary institution, 40-49-age group made up more than a third of the respondents (40.5).

Most of the respondents in the two institutions were female: OOUTH (71.5%), BUTH (80.5%), and this was statistically significant (P=0.035). The majority of the respondents in the two institutions were married, traders, and completed secondary school education. The respondents' level of education and their occupation had a statistically significant relationship (P=0.008, P=0.017). The association between the type of health institution and monthly income was statistically significant (P=0.029). The association between the tribe of respondents and type of institution was also statistically significant (P=0.025).

Table 2 shows the global mean satisfaction scores for the different sub-scales of patient satisfaction. Table 3 shows that more patients in BUTH were satisfied compared to OOUTH in six domains of satisfaction, and they were all statistically significant (general satisfaction, technical quality, interpersonal aspect of care, finance, communication, accessibility, and convenience).

Table 1: Socio-demographic Characteristics of the Respondents

Variable	Public N=200 (%)	Private N=200 (%)	Test Statistic
Age Group (Years)			
<30	22 (11.0)	9 (4.5)	
30-39	65 (32.5)	56 (28.0)	
40-49	61 (30.5)	81 (40.5)	
50-59	36 (18.0)	39 (19.5)	
≥60	16 (8.0)	15 (7.50)	
Mean	42.25±10.809	44.04±9.968	t=-1.717, P=0.087
Sex			
Female	143 (71.5)	161 (80.5)	
Male	57 (28.5)	39 (19.5)	χ ² =4.441, P=0.035*
Marital Status			
Married	172 (86.0)	183 (91.5)	
Single	26 (13.0)	14 (7.0)	
Separated	2 (1.0)	1 (0.5)	
Divorced	0 (0)	2 (1.0)	χ ² =6.274, P=0.099
Educational Level			
Secondary	94 (47.0)	109 (54.5)	
Primary	77 (38.5)	52 (26.0)	
Tertiary	18 (9.0)	33 (16.5)	
No formal education	11 (5.5)	6 (3.0)	χ ² =11.836, P=0.008*
Occupation			
Trader	136 (68.0)	158 (79.0)	
Civil servant	30 (15.0)	27 (13.5)	
Unemployed	21 (10.5)	13 (6.5)	
Student	10 (5.0)	2 (1.0)	
Artisan	3 (1.5)	0 (0)	χ ² =12.02, P=0.017
Monthly Income (₦)			
<20000	79 (47.0)	50 (27.0)	
20,000-39,999	53 (31.5)	75 (40.5)	
40,000-59,999	18 (10.7)	38 (20.5)	
≥60,000	18 (10.7)	22 (11.9)	
Mean	27333.33±252.84	35310.81±404.77	t=-2.197, P=0.029
Ethnicity			
Yoruba	157 (78.5)	179 (89.5)	
Igbo	26 (13.0)	11 (5.5)	
Others	12 (6.0)	7 (3.5)	
Hausa	5 (2.5)	3 (1.5)	χ ² =9.337, P=0.025

*Significant

Table 4 shows that the mean satisfaction scores of the patients in BUTH were higher compared to OOUTH in six domains of satisfaction, and they

were all statistically significant (general satisfaction, technical quality, interpersonal aspect of care, finance, communication, accessibility, and convenience).

Table 2: Satisfaction cut-off values for different aspects of care

Variable	Global mean score	Cut off value for satisfaction
General satisfaction	3.39±0.49	≥3.39 satisfied ≤3.38 not satisfied
Technical quality	3.61±0.49	≥3.61 satisfied ≤3.60 not satisfied
Interpersonal aspect of care	3.44±0.53	≥3.44 satisfied ≤3.43 not satisfied
Finance	3.26±0.61	≥3.26 satisfied ≤3.21 not satisfied
Communication	4.10±0.58	≥4.10 satisfied ≤4.09 not satisfied
Accessibility and convenience	3.51±0.62	≥3.51 satisfied ≤3.50 not satisfied
Time spent with doctor	3.60±0.92	≥3.60 satisfied ≤3.59 not satisfied

Table 3: Association between the factors affecting satisfaction and type of hospital

Variable	Public		Private		Test statistic
	Not Satisfied	Satisfied	Not Satisfied	Satisfied	
General Satisfaction	152 (63.1)	48 (30.2)	89 (36.9)	111 (69.8)	$\chi^2=41.431$ P=0.000
Technical Quality	146 (64.9)	54 (30.9)	79 (35.1)	121 (69.1)	$\chi^2=45.603$ P=0.000
Interpersonal Aspect of care	138 (56.6)	62 (39.7)	106 (43.4)	94 (60.3)	$\chi^2=10.761$ P=0.001
Financial Aspect of care	127 (57.5)	73 (40.8)	94 (42.5)	106 (59.2)	$\chi^2=11.011$ P=0.001
Communication	125 (63.8)	75 (36.8)	71 (36.2)	129 (63.2)	$\chi^2=29.172$ P=0.000
Accessibility and Convenience	130 (63.4)	70 (35.9)	75 (36.6)	125 (64.1)	$\chi^2=30.269$ P=0.000
Time spent with doctor	105 (95.0)	106 (53.0)	123 (61.5)	77 (38.5)	$\chi^2=2.251$ P=0.134

Table 4: Comparison of the mean satisfaction scores of the dependent variables in the two hospitals

Variable	Public	Private	t test	P value
General satisfaction	3.29±0.544	3.48±0.417	-3.912	0.000*
Technical quality	3.45±0.445	3.76±0.487	-6.659	0.000*
Interpersonal	3.35±0.543	3.54±0.496	-3.610	0.000*
Financial aspect	3.18±0.594	3.35±0.625	-2.742	0.006*
Communication	3.99±0.623	4.20±0.504	-3.580	0.000*
Access and Convenience	3.37±0.555	3.65±0.666	-4.593	0.000*
Time spent with doctor	3.62±1.032	3.59±0.81	0.324	0.746

*Significant

Table 5: Predictors of general satisfaction and interpersonal aspect of care

Variable	Public			Private		
	Adjusted Odds Ratio (AOR)	95% Confidence Interval	P value	Adjusted Odds Ratio (AOR)	95% Confidence Interval	P value
General Satisfaction						
Waiting time before collection of drugs (in minutes)						
<25	1.598	0.774-3.298	0.205	0.532	0.254-1.116	0.095
≥25	1.00			1.00		
Waiting time at the lab (in minutes)						
<850	2.788	1.300-5.981	0.008*	2.855	1.117-7.295	0.028*
≥850	1.00			1.00		
Inter personal aspect of care						
Educational level						
Non secondary	0.830	0.433-1.590	0.574	0.499	0.242-0.833	0.011*
Secondary	1.00			1.00		
Ethnicity						
Yoruba	0.912	0.420-1.984	0.817	3.903	1.306-11.666	0.015*
Non-Yoruba	1.00			1.00		

*Significant

Table 6: Predictors of Finance

Variable	Public			Private		
	Adjusted Odds Ratio (AOR)	95% Confidence Interval	P value	Adjusted Odds Ratio (AOR)	95% Confidence Interval	P value
Monthly Income (in Naira)						
<30,000	2.306	1.178-4.514	0.015*	1.263	0.688-2.317	0.451
≥30,000	1.00			1.00		
Cost of non-ARV drugs (in Naira)						
<3000	0.455	0.233-0.887	0.021*	0.963	0.449-2.067	0.924
≥3000	1.00			1.00		

*Significant

Table 5 shows that the predictor of general satisfaction in both facilities was waiting time at the laboratory. The predictors of the interpersonal aspect of care in BUTH (private) were educational level and ethnicity. Table 6 shows that the predictor of finance in OOUTH was monthly income (P=0.015) and cost of non-ARV drugs (P=0.021).

Discussion

The disparity in patient satisfaction in the two institutions may be due to the structure of the HIV program, service delivery in the two institutions, and the high patient load in OOUTH. In BUTH (private), the Community Medicine Department is in total control of the HIV clinic, and residents are always in the clinic to attend to patients. This possibly allows for better efficiency in the day-to-day running of the clinic. Also, the ART coordinator is always appointed by the Community Medicine Department. In OOUTH, the HIV program is a hospital-based program and not under the control of any department, though the project coordinator can be appointed from any of the departments offering services in the clinic. The doctors that were always in the clinic in OOUTH were National Youth Service Corps doctors who were always few in number in contrast to resident doctors in BUTH who were always on the ground. Staff patient ratio in BUTH was 1:51, while that of OOUTH was 1:128. These possibly account for the higher satisfaction ratings in BUTH compared to OOUTH. Economic factors and the use of health facilities were found to be associated in previous research in low- and middle-income countries (LMICs).¹⁴ A study done in Ghana showed that the odds of private facility utilization compared to public facility increased with wealth quintile. Patients in higher quintiles are four times more likely to use private facilities compared to public facilities.¹⁴

The theory on public-private comparison of health facilities states that private hospitals are likely to perform better than public hospitals because private owners are held accountable to shareholders and are under competitive pressure to perform better than public facilities. The results are comparable to a study done in India which showed that levels of satisfaction varied with the type of hospital

(P<0.001), with private hospitals (97%) having higher satisfaction ratings compared to public ones (70%).¹⁵ Numerous comparative studies showed that patients favored private hospitals over public hospitals because of the following reasons: improved technology, lack of waiting list and treatment delays, hygienic environment, and more individualized care from health workers. These studies also emphasized that patients only chose private facilities because they were dissatisfied with healthcare delivery from public hospitals. According to a study done in central Nigeria, patients in private health facilities expressed greater satisfaction with the technical aspect of care, communication, finance, and accessibility of service, whereas patients in public health facilities were more satisfied with overall health care and time spent with doctors. Predictors of satisfaction in the public facility were time spent with the doctor, while the predictors of satisfaction in the private facility were communication, accessibility, and convenience of care.¹⁶ According to a study done to examine outpatient health services at public and private hospitals in Addis Ababa, private health hospitals had higher patient satisfaction ratings than public health hospitals in Central Ethiopia.¹⁷ Another study in eastern Nigeria reported that patients in public health facilities were more satisfied across all the seven satisfaction domains compared to private health facilities in Anambra State.¹⁸ The proportional difference was statistically significant ($\chi^2=116.85$, P<0.001). The predictor of satisfaction in public health facilities was good retention (AOR:22.3,95%CI:1.5-3.5) in care, while the predictor of satisfaction in private health facilities was primary education (AOR:2.3,95%CI:1.5-3.4), residing in rural areas (AOR:2.0,95%CI:1.4-2.9), and once-daily dosing (AOR:3.2,95%CI:2.1-4.8).¹⁸ Patients in public health facilities expressed higher satisfaction ratings compared to private health facilities. This is consistent with the findings of the research from Cameroon and Zambia.¹⁸ Reasons for higher satisfaction with public facilities could be lower level of education and inability to pay for healthcare.¹⁹

In this study, the predictor of general satisfaction in this study was the waiting time in the laboratory for the two health facilities. The predictors of satisfaction for finance in OOUTH (public) were monthly income

and cost of non-ARV drugs. Patients who earned thirty thousand nairas or less every month were more likely to be satisfied with the financial aspect of care, and patients who spent three thousand nairas or less on non-ARV drugs were more likely to be satisfied with the financial aspect of care. The predictors of the interpersonal aspect of care in BUTH were education and ethnicity.

In a study done in a public health facility in Sokoto State, in northern Nigeria, the predictors of satisfaction were education and age, but the strongest predictor in this study was age with an odd ratio of 1.96 (CI=93 to1.00).²⁰ In the study done in Anambra State, eastern Nigeria, the predictor of satisfaction in public health facilities was good retention (AOR:22.3,95% CI:1.5-3.5) in care, while the predictors of satisfaction in private health facilities were primary education (AOR:2.3,95%CI:1.5-3.4), residing in rural areas (2.0,95%CI:1.4-2.9), and once-daily dosing (AOR:3.2,95%CI:2.1-4.8).¹⁸ Patients who took their medications once daily were more likely to be satisfied than those who took them twice daily, patients living in rural areas were more likely than those in urban areas to be satisfied, and those with a primary education or less were more likely to be satisfied with the services they received compared to patients with secondary education.¹⁸

Conclusion

There is a disparity in HIV patients' satisfaction with health services provided in public and private health institutions. Previous studies on patients' satisfaction in public and private health institutions yielded divergent results. There is a need for periodic evaluation of patients' satisfaction in public and private health institutions in Africa and Nigeria.

To checkmate the growing disparity in satisfaction of care in hospitals in Nigeria, the Sustainable Development Goals (SDGs), which is the roadmap designed to build a better world by 2030 with its 17 Goals which were adopted by all United Nations Member States in 2015, should be fully implemented. Worthy of mention is goal 3 of the SDGs which thrives to ensure healthy lives and promote well-being for all at all ages with a target of ending the epidemics of AIDS, tuberculosis, malaria, and neglected tropical diseases by 2030.

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