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Patient Satisfaction with Care Provided at the Antiretroviral Clinic of the Federal Medical Centre, Makurdi, Nigeria

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KEYWORDS

Patient satisfaction,

antiretroviral clinic,

quality of care

ABSTRACT

Introduction:
Patient satisfaction is considered an important indicator of quality of care. In Nigeria, there is a dearth of information on patient satisfaction with HIV/AIDS care. This study sought to assess patient satisfaction; and to identify associated factors.

Methodology
A cross-sectional survey of patients at the antiretroviral clinic of the Federal Medical Centre, Makurdi, Nigeria, was conducted between June and August 2008. An adapted version of the RAND Patient Satisfaction Questionnaire Long Form was used to assess seven dimensions of care: general satisfaction, technical quality, interpersonal manner, communication, financial aspects, time spent with doctor, and access/availability/convenience. Data were analyzed using SPSS 16. Associations were tested using chi-square and multivariable logistic regression. Statistical significance was set at 5%.

Results
Of 409 respondents, 108 (26.4%) were males and 301 (73.6%) females. Mean age was 35.7 ± 9.4 years, 86 (21%) had primary school education, 210 (51.3%) were married, and 357 (87.3%) were employed. About two-thirds (65.2%) spent less than 60 minutes waiting for the doctor, and 225 (63.6%) spent at least 10 minutes in consultation with the doctor. Satisfaction rates were: 94.9% technical quality, 90.2% communication, 77.8% interpersonal manner, 67.5% general satisfaction, 57% access/availability/convenience, 46% time spent with doctor, and 45.7% financial aspects. Lower education and waiting less than 60 minutes for the doctor were independently associated with satisfaction across multiple dimensions of care.

Conclusion
Respondents were satisfied with the seven dimensions of care to varying degrees. Attending to patients promptly would improve satisfaction, and thus, quality of care.

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INTRODUCTION

Patient satisfaction is considered an important indicator of quality of care for adults with HIV/AIDS;[1] and can be used to evaluate performance of health care providers and to inform quality improvement activities.[1] Furthermore, patients' view of medical care is becoming increasingly important to researchers and clinicians, as it is believed to be a means of holding health care

providers accountable to their consumers.[2] Moreover, studies have shown that satisfied patients are more likely to continue with medical care[3-5] and adhere to treatment.[6,7] Given that HIV has become a chronic illness when being managed with highly active antiretroviral therapy (HAART),[8,9] the importance of continuity of care and adherence to treatment cannot be over-emphasized; especially since near perfect adherence to HAART is crucial for the successful treatment of HIV.[8,10] In Nigeria however, retention of people living with HIV/AIDS (PLWHA) in care has been a major challenge of the antiretroviral therapy (ART) programme[11] and this could partly be due to the level of satisfaction with services received; bearing in mind that retention in care is influenced by patient satisfaction.[12,13]

Satisfaction surveys typically focus on patients' subjective assessment of care. Various authors have been able to identify and classify the different aspects of the delivery of care into several dimensions of patient satisfaction[14] such as: interpersonal manner, technical quality of care, accessibility/convenience, finances, efficacy/outcomes of care, continuity of care, physical environment and availability. Thus, patient satisfaction is considered to be a valid and measurable multidimensional construct.[4,15] Furthermore, a satisfaction rating is reported to reflect the following variables: the patient's expectations, the patient's personal preferences, and the patient's realities (experiences) of care received.[14] Therefore, a satisfaction rating is considered to be both a measure of care and a reflection of the respondent.[14]

Hence, determinants of satisfaction have been reported to include: patients' socio-demographic characteristics such as age, gender, level of education, marital status, occupational level, etc;[3,14,16,17] and experience of the services received.[14,18]

In the general medical literature, divergent findings have been reported with regards the association between patient satisfaction and patients' socio-demographic characteristics; except for (older) age which has been more consistently reported to be associated with satisfaction.[14,16] This phenomenon is also reflected in the HIV literature. For instance, a study among HIV-infected males showed that persons of colour expressed greater satisfaction with several aspects of care compared with Caucasian men;[19] while in another study among HIV-positive females, Hispanic/Latina women were more likely to be dissatisfied with four dimensions of care compared with African American women.[20] However, several studies among HIV-infected persons have shown older age to be associated with satisfaction.[12,19,21]

A large body of the literature regarding patient satisfaction and its determinants has been contributed by studies carried out in Western countries. However, a very important question arises. Are those issues that inform patient satisfaction and its determinants in Western countries pertinent within the context of Nigeria, a developing country? In Nigeria, some studies have assessed patient satisfaction with care; but few have particularly considered satisfaction with HIV/AIDS care. For instance in a study among patients admitted into all the wards at the University of Benin Teaching Hospital (UBTH), Nigeria,[22] satisfaction ratings in four domains were: 37.2% adequacy of information provided by doctors; 31.2% adequacy of explanations given to patients regarding investigations and procedures carried out; 54.4% attitude of doctors; and 12.8% attitude of nurses. Furthermore, the study revealed that age and gender were not significantly associated with any of these four domains.[22] In another study that assessed

efficiency of services as an index of patient satisfaction at the UBTH,[23] only 34% of the patients were seen by a doctor within one hour of arrival at the hospital. However, 84% of the patients were satisfied with the time they spent with doctors.[23] Regarding HIV/AIDS care, a study had assessed patients' perception of quality of care at the HIV clinic of a tertiary health facility in Anambra, Nigeria.[24] Patients' overall satisfaction was reported to be high; though they were most satisfied with doctors' attitude and least satisfied with access to care.[24]

Nevertheless, there still remains a dearth of information on patient satisfaction with HIV/AIDS care in Nigeria. This study therefore sought to address this gap in scientific knowledge, as there is a need to understand context-specific issues that inform patients' subjective assessment of quality of care.

Data presented here are part of a larger study [25] that compared patient satisfaction with care between the antiretroviral (ARV) clinics of a public and private health facility. This paper assesses satisfaction with seven dimensions of care; and determines socio-demographic characteristics and clinical services experiences associated with satisfaction among patients attending the ARV clinic of the Federal Medical Centre, Makurdi, Nigeria. It is hypothesized that: (1) patients would be satisfied with the dimensions of care to varying degrees; and (2) socio-demographic characteristics and clinical services experiences would be associated with different satisfaction dimensions.

This study is believed to be clinically relevant because the research findings would provide useful information for improving quality of services. Firstly, the findings can help the management of the ARV clinic establish its level of responsiveness to the needs of its clients. Secondly, service areas showing deficiencies would be identified; at which quality improvement activities that are tailored to meet patients' needs should be targeted. Thirdly, a baseline data would be created against which changes in patient satisfaction can be measured; and such changes would be used to indicate improvement or deterioration in the quality of services.

METHODOLOGY

Study design and scope

The study was a cross-sectional descriptive survey of patients receiving care at the ARV clinic of the Federal Medical Centre (FMC), Makurdi, Nigeria. The FMC, Makurdi, is a government-owned tertiary health institution which is located in the North Central region of Nigeria. It has specialised care units which include: cardiology, pulmonology, endocrinology, and paediatric surgery units. There is also a dedicated ARV clinic which has been providing HIV/AIDS care and support since 2002. Components of care provided at the ARV clinic include highly active antiretroviral therapy (HAART), prevention of mother-to-child transmission (PMTCT), treatment and prevention of opportunistic infections, adherence counselling, and HIV counselling and testing (HCT).

Consenting adult patients aged 18 years and above, and who had been on HAART for two months or longer, were enrolled into the study. It was believed that within two months of HAART, patients would have had contact with the different aspects of their medical care including interactions with the various health workers involved in providing care and services. Data were collected between June and August 2008.

Sample size and sampling technique

Data presented here are part of a larger study 25 that compared patient satisfaction with medical care between the ARV clinics of a public and private health facility. Formula for calculating sample size for comparing two independent groups (proportions) was used26 and this yielded a minimum sample size of 368 for each group. Provision was made for 10% attrition for each group and eventually, 809 respondents were interviewed: 409 at the public health facility and 400 at the private health facility. A systematic sampling technique was used to select every 3rd patient who was registered to see the doctor in the clinic; and only consenting, eligible patients were enrolled into the study. Respondents were interviewed in privacy before they exited the clinic. Data presented here are for the public health facility.

Instrument and measures

Respondents were interviewed using an adapted version of the RAND Patient Satisfaction Questionnaire Long Form (PSQ-III).27 Two language experts at the Benue State University, Makurdi, translated the instrument into the local language and pidgin English. It was back-translated to English by two other language experts at the University of Mkar, Benue State.

The quality of translations was independently verified by two other language experts in order to ensure that the items retained their original meaning, while taking the social and cultural context into account. Furthermore, because of the social setting in which the study was conducted, the questionnaire was interviewer-administered. It was believed that this would minimize non-response[28] and would also accommodate non-literate persons.

The Patient Satisfaction Questionnaire (PSQ) was originally developed by Ware and colleagues.[29,30] A more recent, third generation version of the questionnaire is the PSQ-III; which is a 50-item, five-point Likert scale instrument, that measures patient satisfaction across seven dimensions of medical care31: general satisfaction (6 items), technical quality (10 items), interpersonal manner (7 items), communication (5 items), financial aspects (8 items), time spent with doctor (2 items), and access/availability/convenience of care (12 items). The Likert scale 5-point response categories are: "strongly agree", "agree", "uncertain", "disagree" or "strongly disagree", which correspond with a pre-coded numeric ranking of 1 to 5, respectively.31

Subscales for the seven dimensions were computed and scored according to the instructions in the Medical Outcomes Study (MOS) memorandum on scoring the PSQ-III.31 Authors[20] have reported that the subscales can be dichotomized to represent "satisfaction" versus "dissatisfaction" without compromising the precision of the Likert scale; as this would enable comparison of the dimensions. Therefore, following similar procedures described in other studies, the two Likert points at the favourable end of the satisfaction scale were coded as "satisfied" while the three Likert points at the unfavourable end of the satisfaction scale were coded as "dissatisfied".[2,19,20]

Respondents' socio-demographic characteristics assessed included: age, gender, level of education, marital status, number of children, employment status and occupation. Two items were used to assess clinical services experiences. These were patient-reported: estimated length of time they waited outside the consulting room before seeing the doctor, and the estimated length of time they spent in consultation with the doctor.

The instrument was pre-tested on PLWHA attending the ARV clinic of another government hospital which was not part of this study. The purpose of the pre-test was to ascertain patients' understanding of the items asked and appropriateness of responses. Minimal amendments

were made after the pre-test since patients seemed to understand the items asked. In the Likert scale however, the response category "uncertain" was substituted with "don't know".

The reason for doing this was because consistently during the pre-test, when the patients did not give a response of "strongly agree", "agree", "disagree" or "strongly disagree", they would candidly say they "don't know". Generally, in the social and cultural context of the locality where the study was conducted, when a person says he / she is "uncertain" in the English sense of the word, that person more often than not means he / she "doesn't know".

Reliability tests were performed on the pre-test questionnaires, and these included calculations of mean inter-item correlation coefficient and Cronbach's alpha coefficient. According to Clark and Watson,[32] the mean inter-item correlation is a straightforward measure of internal consistency and a much more useful index of reliability than Cronbach's alpha coefficient.

Moreover, while the mean inter-item correlation coefficient is independent of the number of items in the scale, Cronbach's alpha coefficient on the other hand, is quite sensitive to the number of items in the scale.[32]

It is therefore more appropriate to report the mean inter-item correlation for short scales with fewer than ten items.[33] Clark and Watson[32] have recommend a mean inter-item correlation range of .15-.50. In our study, the seven subscales showed the following results for mean inter-item correlation coefficient (r bar) and alpha coefficient (α): general satisfaction (r bar =.21; α = .67), technical quality (r bar = .16; α = .64), interpersonal manner (r bar = .21; α = .64), communication (r bar = .10; α = .30), financial aspects (r bar = .41; α = .84), time spent with doctor (r bar = .10; α = .16), and access / availability / convenience (r bar = .16; α = .70).

Analysis

Statistical package for social sciences (SPSS) version 16 was used to analyze data. Descriptive statistics were generated for each study variable, including means and standard deviation for continuous variables; and frequencies and percentages for categorical variables.

Percentages were also calculated for satisfaction on each of the seven dimensions of care. Chi-squared test was used to test associations between categorical variables; and multivariate analyses were performed to identify socio-demographic characteristics and clinical services experiences predicting satisfaction with medical care. Only variables associated with a p value <0.10 in bivariate analyses were considered eligible for inclusion in multiple logistic regression analyses. Each of the satisfaction dimensions was used as a dependent variable in a separate logistic regression model; while the independent variables were socio-demographic characteristics and clinical services experiences. Level of statistical significance was set at $p <0.05$. Cases with missing data regarding clinical services experiences were excluded from analysis.

RESULTS

Socio-demographic characteristics and clinical services experiences

Respondents' socio-demographic characteristics and clinical services experiences are shown in Table I. Four hundred and nine respondents were interviewed. The study population was young (mean age = 35.7 ± 9.4 years); with almost two-thirds, 261 (63.8%) aged less than 40 years. The majority of respondents were females, 301 (73.6%) and about a quarter, 105 (25.7%) had post-secondary education. Slightly more than half, 210 (51.3%) were married; with over three-quarters, 315 (77%) having children. There were 357 (87.3%) employed persons; with a third, 136 (33.3%) being farmers.

Table I: Respondents' socio-demographic characteristics and clinical services experiences

	Number	Percentage
Socio-demographic characteristics		
Age (years)		
<30	113	27.6
30-39	148	36.2
40-49	103	25.2
⩾ 50	45	11.0
Mean (SD) = 35.7 (9.4)		
Gender		
Male	108	26.4
Female	301	73.6
Level of education		
No formal education	71	17.4
Primary	86	21.0
Secondary	147	35.9
Post secondary	105	25.7
Marital status		
Single	47	11.5
Married	210	51.3
Widowed	95	23.2
Others‡	57	14.0
Number of children		
None	94	23.0
At least one child	315	77.0
Employment status		
Currently employed	357	87.3
Currently unemployed	52	12.7
Occupation		
Civil servant	104	25.4
Trader/artisan	119	29.1
Farmer	136	33.3
Unemployed/student	50	12.2
Clinical services experiences		
Time spent waiting for doctor (minutes)		
<60	261	65.2
⩾60	139	34.8
Time spent in consultation with doctor (minutes)		
<10	129	36.4
⩾10	225	63.6

‡Others included cohabiting, separated, divorced

With regards to clinical services experiences, almost two-thirds, 261 (65.2%) had spent less than 60 minutes waiting for the doctor; while 225 (63.6%) had spent 10 minutes or more in consultation with the doctor.

Satisfaction ratings

Figure 1 shows satisfaction ratings of the seven dimensions of care. Respondents were most satisfied with technical quality of care, 388 (94.9%) and were least satisfied with financial aspects of care, 187 (45.7%).

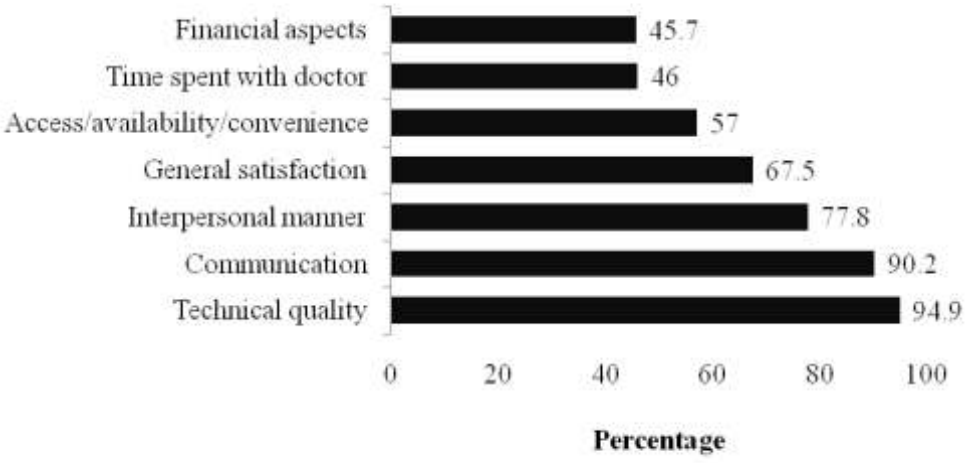

Figure 1: Percentages of respondents satisfied with seven dimensions of medical care

Association between respondents' socio-demographic characteristics, clinical services experiences and satisfaction with three dimensions of care

Bivariate analyses for general satisfaction, interpersonal manner and time spent with doctor dimensions are presented here; as only these three dimensions yielded associations (p value <0.10) eligible for inclusion in multivariate analyses. General satisfaction was significantly associated with primary school education ($p = 0.007$), being separated, divorced or cohabiting ($p = 0.048$), and waiting less than 60 minutes for the doctor ($p < 0.001$) (Table II).

Satisfaction with interpersonal manner was significantly associated with secondary school education ($p = 0.001$) and having one or more children ($p = 0.022$) (Table III).

Satisfaction with time spent with doctor was significantly associated with waiting less than 60 minutes for the doctor ($p < 0.001$) (Table IV).

Multiple logistic regression analyses of socio-demographic characteristics and clinical services experiences predicting satisfaction with three dimensions of medical care

Presented in Table V are significant predictors for the three dimensions of satisfaction: general satisfaction, interpersonal manner and time spent with doctor.

With regards to socio-demographic characteristics, primary school education, being a farmer, and secondary school education were significantly associated with general satisfaction, satisfaction with interpersonal manner, and time spent with doctor, respectively.

With regards to clinical services experiences, waiting less than 60 minutes for the doctor were independently associated with general satisfaction and satisfaction with time spent with doctor. Age, gender, employment status and time spent in consultation with the doctor were not significantly associated with any of these dimensions of satisfaction.

Table II: Association between general satisfaction and respondents' socio-demographic characteristics and clinical services experiences

	Satisfied n (%)	Dissatisfied n (%)	Chi-square	*P* value
Age (years)				
<40	178 (68.2)	83 (31.8)	0.169	0.681
⩾40	98 (66.2)	50 (33.8)		
Gender				
Male	69 (63.9)	39 (36.1)	0.863	0.353
Female	207 (68.8)	94 (31.2)		
Level of education				
No formal education	44 (62.0)	27 (38.0)	12.074	0.007
Primary	68 (79.1)	18 (20.9)		
Secondary	104 (70.7)	43 (29.3)		
Post secondary	60 (57.1)	45 (42.9)		
Marital status				
Single	30 (63.8)	17 (36.2)	7.929	0.048
Married	133 (63.3)	77 (36.7)		
Widowed	66 (69.5)	29 (30.5)		
Others‡	47 (82.5)	10 (17.5)		
Number of children				
None	66 (70.2)	28 (29.8)	0.415	0.520
At least one child	210 (66.7)	105 (33.3)		
Employment status				
Currently employed	243 (68.1)	114 (31.9)	0.439	0.508
Currently unemployed	33 (63.5)	19 (36.5)		
Occupation				
Civil servant	69 (66.3)	35 (33.7)	2.913	0.405
Trader/artisan	77 (64.7)	42 (35.3)		
Farmer	99 (72.8)	37 (27.2)		
Unemployed/student	31 (62.0)	19 (38.0)		
Time spent waiting for doctor (minutes)				
<60	196 (75.1)	65 (24.9)	22.265	<0.001
⩾60	72 (51.8)	67 (48.2)		
Time spent in consultation with doctor (minutes)				
<10	87 (67.4)	42 (32.6)	0.022	0.881
⩾10	150 (66.7)	75 (33.3)		

‡**Others included cohabiting, separated, divorced**

Table III: Association between satisfaction with interpersonal manner and respondents' socio-demographic characteristics and clinical services experiences

	Satisfied n (%)	Dissatisfied n (%)	Chi-square	*P* value
Age (years)				
<40	203 (77.8)	58 (22.2)	0.000	0.986
⩾40	115 (77.7)	33 (22.3)		
Gender				
Male	90 (83.3)	18 (16.7)	2.644	0.104
Female	228 (75.7)	73 (24.3)		
Level of education				
No formal education	51 (71.8)	20 (28.2)	16.030	0.001
Primary	56 (65.1)	30 (34.9)		
Secondary	127 (86.4)	20 (13.6)		
Post secondary	84 (80.0)	21 (20.0)		
Marital status				
Single	37 (78.7)	10 (21.3)	0.299	0.960
Married	164 (78.1)	46 (21.9)		
Widowed	72 (75.8)	23 (24.2)		
Others‡	45 (78.9)	12 (21.1)		
Number of children				
None	65 (69.1)	29 (30.9)	5.220	0.022
At least one child	253 (80.3)	62 (19.7)		
Employment status				
Currently employed	282 (79.0)	75 (21.0)	2.500	0.114
Currently unemployed	36 (69.2)	16 (30.8)		
Occupation				
Civil servant	88 (84.6)	16 (15.4)	6.792	0.079
Trader/artisan	88 (73.9)	31 (26.1)		
Farmer	108 (79.4)	28 (20.6)		
Unemployed/student	34 (68.0)	16 (32.0)		
Time spent waiting for doctor (minutes)				
<60	207 (79.3)	54 (20.7)	1.057	0.304
⩾60	104 (74.8)	35 (25.2)		
Time spent in consultation with doctor (minutes)				
<10	100 (77.5)	29 (22.5)	0.003	0.955
⩾10	175 (77.8)	50 (22.2)		

‡**Others included cohabiting, separated, divorced**

Table IV: Association between satisfaction with time spent with doctor and respondents' socio-demographic characteristics and clinical services experiences

	Satisfied n (%)	Dissatisfied n (%)	Chi-square	*P* value
Age (years)				
<40	121 (46.4)	140 (53.6)	0.045	0.832
⩾40	67 (45.3)	81 (54.7)		
Gender				
Male	57 (52.8)	51 (47.2)	2.742	0.098
Female	131 (43.5)	170 (56.5)		
Level of education				
No formal education	27 (38.0)	44 (62.0)	7.090	0.069
Primary	42 (48.8)	44 (51.2)		
Secondary	78 (53.1)	69 (46.9)		
Post secondary	41 (39.0)	64 (61.0)		
Marital status				
Single	18 (38.3)	29 (61.7)	6.493	0.090
Married	100 (47.6)	110 (52.4)		
Widowed	37 (38.9)	58 (61.1)		
Others‡	33 (57.9)	24 (42.1)		
Number of children				
None	41 (43.6)	53 (56.4)	0.271	0.603
At least one child	147 (46.7)	168 (53.3)		
Employment status				
Currently employed	162 (45.4)	195 (54.6)	0.390	0.532
Currently unemployed	26 (50.0)	26 (50.0)		
Occupation				
Civil servant	49 (47.1)	55 (52.9)	1.665	0.645
Trader/artisan	49 (41.2)	70 (58.8)		
Farmer	65 (47.8)	71 (52.2)		
Unemployed/student	25 (50.0)	25 (50.0)		
Time spent waiting for doctor (minutes)				
<60	137 (52.5)	124 (47.5)	15.893	<0.001
⩾60	44 (31.7)	95 (68.3)		
Time spent in consultation with doctor (minutes)				
<10	65 (50.4)	64 (49.6)	2.207	1.890
⩾10	95 (42.2)	130 (57.8)		

‡ **Others included cohabiting, separated, divorced**

Table V: Respondents' socio-demographic characteristics and clinical services experiences predicting satisfaction with three dimensions of medical care

	Dimensions of satisfaction		
	General satisfaction	**Interpersonal manner**	**Time spent with doctor**
Socio-demographic characteristics and clinical services experiences	**aOR (95% CI)**	**aOR (95% CI)**	**aOR (95% CI)**
Gender			1.51 (0.93-2.46)
Male			Reference
Female			
Level of education	1.22 (0.62-2.42)	0.42 (0.17-1.06)	1.02 (0.50-2.06)
No formal education	2.69 (1.35-5.35)**	0.33 (0.15-0.76)**	1.54 (0.82-2.88)
Primary	1.68 (0.97-2.91)	1.52 (0.71-3.23)	1.86 (1.09-3.17)*
Secondary	Reference	Reference	Reference
Post secondary			
Marital status			
Single	0.46 (0.18-1.18)		0.47 (0.20-1.09)
Married	0.42 (0.19-0.90)*		0.70 (0.37-1.30)
Widowed	0.51 (0.22-1.18)		0.51 (0.25-1.04)
Others‡	Reference		Reference
Number of children			
None		0.48 (0.26-0.86)*	
At least one child		Reference	
Occupation			
Civil servant		2.10 (0.91-4.87)	
Trader/artisan		1.41 (0.62-3.19)	
Farmer		2.51 (1.04-6.08)*	
Unemployed/student		Reference	
Time spent waiting for doctor (minutes)			
<60	2.79 (1.79-4.37)***		2.34 (1.50-3.64)***
⩾60	Reference		

***P <0.05; **P <0.01; ***P <0.001**
‡Others included cohabiting, separated, divorced
Note: aOR = adjusted odds ratio; CI = 95% confidence interval

With regards to clinical services experiences, waiting less than 60 minutes for the doctor were independently associated with general satisfaction and satisfaction with time spent with doctor. Age, gender, employment status and time spent in consultation with the doctor were not significantly associated with any of these dimensions of satisfaction.

DISCUSSION

This study sought to assess patient satisfaction with medical care; and to determine socio-demographic characteristics and clinical services experiences associated with satisfaction at an ARV clinic. The results show that a higher proportion of the patients were: aged 30-39 years, females, married, and with a secondary education. In the 2010 National HIV sero-prevalence sentinel survey in Nigeria, the highest age-specific prevalence was found among women aged 30-34 years.[34] The findings of the present study appear to reflect the Nigerian situation, since the HIV prevalence obtained from the sentinel survey is used to estimate the prevalence in the general population.[34]

Furthermore, several studies have also found that a higher proportion of patients attending HIV and ARV clinics in Nigeria are females,[24,35-38] married,[24,37,38] and with a secondary education.[24,38] Anecdotal experience and reports have shown that Nigerian females generally have a higher tendency to seek medical attention than males. Moreover, based on gender-specific anatomical and physiological characteristics, it has been postulated that male-to-female transmission of HIV is higher than female-to-male transmission,[39] suggesting that females are more vulnerable to acquiring HIV infection than males. However, authors have commented that there is a need to explore factors that perpetuate gender disparity in hospital attendance in our environment.[22] The higher proportion of married persons in the present study suggests that one spouse might have initially been infected, and over time, might have infected the other spouse. Alternatively, both spouses might have married each other knowing that they were both infected. Regarding the latter supposition, anecdotal observations have shown that patients have become familiar with each other from their frequent visits to the ARV clinic. Over time, friendships have been formed, some of which have resulted in marriages. Furthermore, the unusually large proportion of widows/widowers suggests that spouses might have died of AIDS[38] or other HIV-related causes. The higher proportion of persons with secondary education is also reflective of the general Nigerian population. The 2008 Nigeria Demographic Health Survey (NDHS) which is a nationally representative population-based survey of women aged 15-49 years and men aged 15-59 years also showed that there were more persons with secondary education (35.7% and 46.9% for females and males, respectively) compared to persons with other levels of education.[40]

Overall, the present study demonstrated that patients were more satisfied than dissatisfied with their medical care. The reason being that, of the seven dimensions measured, patients expressed more satisfaction with five; while they expressed more dissatisfaction with only two. Furthermore, satisfaction rates varied with the different dimensions measured. This finding supports the use of a multidimensional rather than a global approach to measuring satisfaction, as it is regarded to be more valuable in providing detailed information about specific aspects of care.[20]

With regards to the dimensions, patients were most satisfied with technical quality of care, followed by communication, and interpersonal manner; and were least satisfied with financial aspects of care and time spent with doctor. The high ratings on technical quality, communication, and interpersonal manner suggest that patients felt they were receiving good quality care; that care providers were effectively conveying information which they were receiving and understanding appropriately; and that providers were interacting with them in an acceptable manner that was both respectful and friendly. In the literature there are arguments with regards patients' ability to differentiate between technical quality and interpersonal manner.[14,15] The large disparity (>17%) in satisfaction ratings between technical quality and interpersonal manner in the present study suggests that the patients were able to discern the differences between these two dimensions and to evaluate them separately. Other authors[20] have expressed a similar opinion. In their study, Burke and colleagues,[20] also found a considerable difference in dissatisfaction ratings between interpersonal manner and technical quality of care, demonstrating that the two dimensions had separate meanings to women with HIV/AIDS and thus should be evaluated independently.[20] In support of the present study's findings regarding high satisfaction ratings with technical quality, communication and interpersonal manner, a review article[41] had demonstrated that it was important to HIV-infected persons that health-care staff show high levels of technical ability, and caring attitudes such as friendliness and respect, as these elicit the highest positive measures of satisfaction. Furthermore, good communication and

information provision were reported to promote more satisfactory service.[41]

About two-thirds of the patients in the present study had expressed general satisfaction with care received. Compared to this finding, a lower rating has been reported elsewhere.[19] Of the seven satisfaction sub-scales measured in a study among HIV-infected men, the lowest mean scores were obtained for general satisfaction.[19] In another study, out of the 12 satisfaction domains assessed at the HIV clinic of a tertiary health facility in Anambra, Nigeria, patients had expressed the least satisfaction with access to care.[24] Long travel distance in order to access care was mentioned as the main reason for this low rating.[24] In a national survey involving ART and HCT sites across Nigeria, it was also observed that PLWHA had to travel long distances in order to access ART.[36] Though insufficient treatment facilities was noted to be primarily responsible for this behaviour, it was believed that community perception and stigma might also have been other driving forces since patients travelled out of their locality to ART facilities elsewhere.[36] In comparison, the present study found that slightly over half of the patients were satisfied with care access/convenience/availability. This implies that many of the patients were still experiencing barriers to the use of HIV/AIDS services. In another study, HIV-positive women had expressed the most dissatisfaction with access/convenience of care and it was suggested that women were also lacking ready access to the kind of care they felt they needed.[20]

Low satisfaction had been expressed with regards to the dimension concerning time spent with doctor. This implies that the patients felt they needed more time with the doctors. In other studies however, HIV-positive women were more satisfied than dissatisfied with the time spent with provider;[20] while HIV-positive men also expressed satisfaction with time spent with provider.[19] In the present study, patients reported the least satisfaction with financial aspects of care. Though ARVs and HIV-related treatments are provided free-of-charge at the ARV clinic where this study was conducted, patients still had to make out-of-pocket payments for their transportation, non-HIV treatments and other incidentals. These extra expenses were considered to be a significant financial burden by the patients, and would probably explain for the low rating. The importance of the issue of costs may be explained by the socio-demographic characteristics of many of the patients. Higher proportions of them had less than post-secondary (no formal/primary/secondary) education and were subsistence farmers. By extrapolation therefore, this would suggest that the study population was comprised largely of persons of low socio-economic status. Furthermore, the ARV clinic is a reference centre and as such, many of the patients reported that they travelled long distances to receive treatment and this involved huge transportation costs. In another study, HIV-infected men had also given a low rating on satisfaction with financial aspects of care.[19] Conversely, women with HIV/AIDS had demonstrated that they were least dissatisfied with the financial aspects of their care.[20]

Of the seven satisfaction dimensions assessed, only with three were there significant associations between patients' socio-demographic characteristics and clinical services experiences. These dimensions were: general satisfaction, interpersonal manner and time spent with doctor. Even so, while some socio-demographic characteristics were associated with multiple dimensions, some were associated with only particular dimensions. Similarly in another study, some patient characteristics where shown to be associated with dissatisfaction across multiple dimensions while other characteristics were associated only with certain domains.[20] In the present study, results showed that there were inconsistencies in the association between education and satisfaction dimensions. On the one hand, those with primary and secondary education were more likely than respondents with higher education to express satisfaction with general care and time spent with doctor, respectively; while on the other hand, primary

education was associated with lesser odds of satisfaction with interpersonal manner. A plausible explanation for the former two positive associations may be that less educated people are more likely to be less informed; and because of this, are more likely to have fewer expectations and felt needs from health care services and therefore make fewer demands. When even a little fraction of their expectations, felt needs and demands are met, they are more likely to give higher satisfaction ratings. With regards to the negative association between educational level and satisfaction with interpersonal manner, the lower likelihood might have been due to patients' experience with specific aspects of the doctor-patient interaction. The less educated patients probably had difficulties in expressing their felt needs but were expecting that doctors would understand and respond appropriately. When the doctors failed to recognize and address these expectations, the patients gave them low satisfaction ratings on their interpersonal skills. In the literature, a lack of unmet expectations has been found to be a powerful predictor of satisfaction.[42] In support of this finding in the present study, a meta-analysis also showed that greater satisfaction was significantly associated with less education.[16] However, other studies have found no significant association between education and several dimensions of (dis)satisfaction.[19,20]

In the present study, marriage was found to be associated with the less likelihood of satisfaction with general care. This might probably have been due to the effect of family interactions, which is particularly important in a society where the extended family system is practiced. Family interactions such as strong support from one's family has been shown to be independently associated with complete satisfaction with services and organization providing care.[12] Similarly, another study also demonstrated that being married or living with a partner was significantly associated with dissatisfaction with general care.[20] In contrast, a meta-analysis had revealed that greater satisfaction was marginally significantly associated with being married.[16] In another study that assessed patient satisfaction with hospital health care on six domains (information, humane care, comfort, visiting, intimacy and cleanliness), marital status was predictive of satisfaction with four of those domains.[43] Married persons had significantly higher satisfaction scores for the information domain while single or divorced persons had significantly higher satisfaction scores for comfort, visiting and cleanliness domains.[43] In the present study, having children was associated with the less likelihood of satisfaction with interpersonal manner. At the ARV clinic where this study was conducted, anecdotal experience with some of the patients has revealed a conflict between their desire to have children and their concerns about the health and social implications of this due to their HIV-positive status. Within the cultural and social context of the study area, a premium value is placed on children. Adults (of marriageable age) who do not have children feel they have failed to fully actualize themselves, while people in the society regard them with compassion. In some instances, women without children are looked upon with disregard. Patients in this study who did not have children probably lacked the psycho-social fulfillment that children give.

They were perhaps seeking for both from others, including their physicians. As a consequence when doctors failed to meet those needs, those patients probably gave them lower ratings on their relationship skills. It is believed that within the cultural and social context in which this study was conducted, one's marital status and having children or not may reflect one's level of social support from family, friends and society. Moreover, studies have shown that social support is associated with patient satisfaction.[12,20,43] In this regard, there is the tendency to agree with the opinion of authors who have suggested that the level of social support that patients benefit from their health care providers, and from family and friends, are co-existing factors that influence satisfaction;[12,43] such that patients who lack

social support from family and friends probably have greater needs for social support from their physicians and health care organizations. Thus when these needs are not met, patients are more frequently unsatisfied with their physicians and health care organizations.[12]

Being a farmer was shown to be associated with the likelihood of satisfaction with providers' interpersonal manner. In the study area, farming is mostly of a subsistence nature; and the farmers are generally of low socio-economic status and educational level. With these background characteristics, farmers might have felt that the doctors being the experts with regards managing their HIV disease were probably interacting with them in an appropriate manner.

With regards to the association between patient satisfaction and clinical services experiences, this study clearly demonstrated that shorter waiting time elicited the most satisfaction as it was most predictive of general satisfaction and time spent with doctor. It is evident that when patients are attended to in a timely manner, they are likelier to be more appreciative, as they are able to leave the clinic early and still have enough time to attend to their other businesses. Several other studies have also demonstrated that patient satisfaction is significantly associated with shorter waiting time.[44-48]

Of the socio-demographic characteristics and clinical services experiences assessed in this study, age, gender, employment status and time spent in consultation with the doctor were not significantly associated with any of the dimensions of satisfaction.

Finally, there is the need to mention some limitations that were identified in this study. Some patients might have responded favourably in order to please the interviewers; while others might have been dissatisfied with the medical care received but were afraid to report it for fear of discrimination. Prior to the interviews, the respondents were asked to answer truthfully and it was explained to them that recommendations for quality improvement would be made based on the information they provided. Furthermore, they had been reassured about confidentiality of the information they provided and they were informed that all data would be kept secure. These are all issues that had been addressed during the informed consent process.

CONCLUSION

This study demonstrated that respondents were more satisfied than dissatisfied with their medical care. However, respondents were satisfied with the seven dimensions of care to varying degrees. The least satisfaction was expressed with financial aspects of care. Factors responsible for this were the extra expenses incurred from non-HIV treatments, other incidentals and huge transportation costs of travelling long distances to receive treatment. Furthermore, while some socio-demographic characteristics were significantly associated with multiple dimensions, some were associated with only particular dimensions. Most evidently, shorter waiting time was shown to be most predictive of satisfaction with multiple dimensions of care. These results have practical implications for improving medical care among people living with HIV/AIDS (PLWHA). Firstly, quality of care can be informed through multidimensional assessment of patients' satisfaction with their care. Secondly, while some characteristics cannot be modified by the health system providing care e.g. patient's level of education; other service characteristics such as ensuring that patients are attended to promptly can be addressed by the health system providing care. A similar conclusion was reached by authors who reported that patient satisfaction is dependent upon a variety of factors (such as personal, cultural, social, etc), many of which may not be readily amenable to change.[18] However where deficiencies are identified,

alterations in services would lead to more satisfied patients.[18] Lastly, this study has generated a baseline data against which future changes in patient satisfaction can be measured. It is therefore recommended that periodic (6-monthly or yearly) satisfaction surveys should be carried out as a means of detecting improvement or deterioration in the quality of services offered at this ARV clinic.

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