Patient Satisfaction with Services at a General Outpatient Clinic of a Tertiary Hospital in Nigeria

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Authors' contributions

This work was carried out in collaboration between all authors. Author HA prepared the research protocol, supervised the data collection, performed the statistical analysis, performed the literature searches and wrote the first draft of the manuscript. Author MOO came up with the research concept, proposed the research protocol, edited the whole manuscript and approved the final manuscript.

ABSTRACT

Aims: To determine the factors influencing patient satisfaction with services at the general outpatient clinic of a tertiary hospital in Nigeria.
Study Design: A descriptive cross sectional study.
Place and Duration of Study: We carried out the study between February and July 2011, in the General Outpatient Department of Usmanu Danfodiyo University Teaching Hospital Sokoto, Ni.
Methodology: One hundred respondents were sampled using systematic sampling technique. We developed a structured questionnaire, which sought information on socio-demographic characteristics of patients, registration/wait times and patients' satisfaction. We analyzed the data using the Statistical Package for Social Sciences (SPSS) version 17.0.
Results: Out of the 100 patients sampled, 4 opted out, thus giving a response rate of 96%. Their ages ranged between 15-70 years with mean of 32±13 years. Students constituted 28.4% of the participants, followed by full term housewives (27%). Those participants having up to tertiary education accounted for 36.1%. Up to 62.5% of participants were females and majority of them were from urban areas (88.5%).

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Registration time ranged between 1-132 minutes (mean = 76±22.7 minutes) whereas clinic wait time ranged between 10-167minutes (mean = 83.7±38.6 minutes). Sixty five percent of them expressed satisfaction with neatness of the clinic environment, 48.5% expressed satisfaction with communication with the doctors while 65% expressed satisfaction with the explanations offered concerning their ailments. The overall satisfaction with services at the clinic was 52%. Determinants of satisfaction were total clinic wait time (P=.001, r=-0.4), clinic wait time (P=.007, r=-0.25) and age (P=.001, r=0.31).

Conclusion: The overall satisfaction with services at the clinic was above average, patients expressed dissatisfaction with registration time, wait time and condition of consulting room. Health care managers should commence appointment system to reduce the number of patients who turn out at the same time. They should also address provider-related factors that cause dissatisfaction.

ABBREVIATIONS

SPSS   : Statistical Package for Social Scientist
GOPD   : General Outpatient Department
SERVICOM: Service Compact
UDUTH   : Usmanu Danfodiyo University Teaching Hospital
LGA   : Local Government Area
NHIS   : National Health Insurance Scheme
CT   : Consultation Time
RT   : Registration Time
CWT   : Clinic Wait Time
TCWT   : Total Clinic Wait Time
WTAC   : Wait Time Assessment Card

1. INTRODUCTION

Patient satisfaction is an important outcome measure for health services. Data on patient satisfaction are the key indicators for the quality of care and treatment delivered by the physicians, paramedical staff and the hospital as a whole [1]. Healthcare industries define quality of services by attending to consumer satisfaction [2]. Patients' satisfaction refers to patients' value judgments and subsequent reactions to what they perceive in the health environment just before, during, and after the course of their inpatient stay or clinical visit [3]. It is patients' appraisal of their desires and expectation of healthcare.

Hospitals and other healthcare centers are increasingly using this information while making important decisions regarding operational and treatment plans.

One of the factors that influence patient satisfaction is efficiency of services rendered to patients. This includes promptness of the care given to patients, duration of wait time (i.e. the time a patient spends since registration up to the time of the start of consultation), consultation time, quick response to emergencies, quick dispensation of drugs, fast and accurate laboratory tests [4]. Satisfied patients are more likely to comply with prescribed treatment and advice from doctors; they are also more likely to return for additional care when necessary and may be more willing to pay for services, thereby increasing revenue [5].

Patients' satisfaction is associated with several factors, such as wait time, competence/courtesy of care provider, privacy, outcome/cost of treatment, age and educational status [6-8].

The outpatient department in any hospital is considered the shop window of any hospital; hence, patients' perception of services obtained there reflects overall view of the hospital services [9,10].

There were many emphases made on investment in health, patient care and patient's access to good quality health care, thus leading to patient satisfaction [11,12].

Nigeria has developed its health care services through the introduction of certain schemes such as the National Health Insurance Scheme (NHIS), Midwives Service scheme (MSS), Service Compact (SERVICOM),Targeted States High Impact Project (in partnership with the U.S government). These strategies were introduced to improve the quality of every aspect of patients' care according to their needs. Many key indicators are therefore, used to monitor and evaluate the performance of working organizations and their staff. Patients' satisfaction is the essential indicator that indicates the quality of health services at all levels of healthcare facilities. In order to improve healthcare provision, it is important for managers to understand the different factors that influence patients' satisfaction [13]. The SERVICOM observed that most hospitals do not have wait time standards for patients attending the outpatient department. There were frequent complaints from patients who attended the GOPD clinic that they spent too much time waiting to see the physician, and that services at the GOPD were sluggish [14].

Patients satisfaction depends on many factors such as hospital infrastructure, wait time before seeing the doctors, quality of clinical services provided, physical comfort, availability of medicine, behaviour of doctor and other health staff, emotional support and respect for patients' preferences [15]. Measurement of patients' satisfaction is increasingly playing important role in the growing push towards accountability among healthcare providers, thus some view it as an established indicator of quality of care [16].

Several studies in Nigeria have observed long wait time in outpatient clinics [17-20], thus leading to dissatisfaction with services offered in these clinics [19,20]. The lack of a time-specific appointment system has been suggested as a reason for this observation [21]. Time-specific appointments are not the usual practice in most outpatient clinics in Nigeria as most patients arrive at the general outpatient clinics within the same time block from 07:00 to 10:00 hours as a result of which physicians get so overwhelmed with the large number of patients waiting to be seen [22].

The aim of this study was to assess the level of satisfaction of patients after their consultations with the doctors at the general outpatient department and to determine the factors influencing their satisfaction.

2. MATERIALS AND METHODS

2.1 Study Area

We carried out the study between February and July 2011 at the general outpatient clinic of Usmanu Danfodiyo University Teaching Hospital (UDUTH), Sokoto, Nigeria. The hospital,

which is located in Wamako local government area (LGA) of Sokoto state, serves as a referral centre for patients from neighbouring states and the Niger Republic. It is a centre of excellence for Neurosurgery in the West African sub region and it presently has over 400 beds. The general outpatient clinic is usually the first point of call for all patients who visit the hospital. The sorting of patients depend on their conditions and only patients with medical conditions are left to be attended to by the clinic doctors. The clinic has six consulting rooms operated by about 4-5 doctors whose work schedule include consultation and referrals from 8:00 am-3:00 pm on weekdays. The clinic also takes care of the hospital staff, retainers and National Health Insurance Scheme (NHIS) clients.

2.2 Study Design

It was a descriptive cross-sectional study.

2.3 Eligibility

Only patients who were willing to participate in the study were eligible. Only new patients were included in the study in order to minimize the chances of recall bias, which might affect their rating of satisfaction. We excluded critically ill patients from the study because they required urgent attention and they may not be able to respond to the questions appropriately. We also excluded those below the age of 15 years.

2.4 Sample Size Determination

The minimum sample size was determined using the formula for estimating required sample size in a population less than 10,000 for descriptive studies [23].

$$N_f = n/1 + (n/N)$$

Value of n was calculated using the formula $n = Z^2 pq/d^2$

After adjusting for non-response and attrition, a minimum sample size of 96 was obtained, which was however, increased to 100 for this study, since the calculated sample size of 96 was just the minimum required (not maximum).

2.5 Sampling Technique

We recruited 100 patients into the study using systematic sampling technique, after calculating the sampling interval as follows:

$$K = \frac{\text{Average number of targeted population}}{\text{Minimum required sample size}}$$

Where, k is the sampling interval

= 150/100
= 1.50

This was however, approximated to 2.

Based on the above sampling interval, we carried out the systematic sampling technique as follows:

- Simple random sampling was done for the first two patients to get the starting point.
- Thereafter, every other new patient that came to the clinic was enrolled in the study (after obtaining informed consent) until the required sample size was obtained.

In the event of decline or not meeting the eligibility criteria, we recruited the next patient for the study. The recruitment of patients into the study continued for two weeks and at the end, four declined to participate in the study, giving a response rate of 96%.

2.6 Data Collection

We collected data using a set of structured questionnaire, which sought information on socio-demographic characteristics of participants, wait time and patients satisfaction with the different services of the clinic. The questionnaire was pretested at the general outpatient department of the specialist hospital located in another local government area (LGA) within the metropolis. The research assistants were resident doctors who received training on the objectives of the study and how to apply the study instruments. The research assistants administered the questionnaires to the study participants on completion of their consultation with the doctors.

We also used stop watches/waiting time assessment card (WTAC) to record the duration of various segments of wait time. We obtained information regarding activities of the clinic, and the condition of the waiting area using an observation checklist.

Each new patient was given a WTAC as he/she entered the clinic, and the time of entry (arrival) written on the card. The record clerk recorded the time of registration on the WTAC and returned to the patient as he/she received clinic card. The research assistants at the entrance into the consulting room recorded the time of entry into the consulting room and time of exit from the consulting room on the WTAC. After leaving the consulting room, the WTAC was then collected from the patient and attached to the questionnaire, followed by filling of the questionnaire for each of the participants by the research assistants. We used the observation checklist to obtain data on number of patients, number of each category of staff attending to patients, time of arrival of staff, time of commencement of clinic etc.

We considered four categories of wait time in this study as follows:

- Registration Time: considered as the length of time from when patient arrived at the clinic, until when he/she received clinic card.
- Clinic Wait Time (time spent in the waiting area): considered as the length of time from when patient received clinic card, until when he/she entered the consultation room.
- Consultation Time: considered as the length of time from when the patient entered the consultation room, until when he/she came out of the consultation room.
- Total Clinic Wait Time: considered as the length of time from when the patient arrived at the clinic until when he/she came out of the consultation room.

2.7 Data Analysis

We sorted out the questionnaires for accuracy and completeness immediately after collection, before entering the data into the computer for analysis.

The duration of the various segments of wait time (registration time, wait time in waiting room, consultation time and total clinic wait time) was calculated from the recorded times on the WTAC, using calculator.

The rating of patients' satisfaction was as follows:

1= very dissatisfied
2= dissatisfied
3= fairly satisfied
4= satisfied
5= very satisfied

Ratings of one and two were considered dissatisfied, rating of three was considered fairly satisfied (average satisfaction), while ratings of four and five were considered satisfied.

The data obtained were analysed with the Statistical Package for Social Sciences (SPSS) version 17, and Microsoft Excel 2007. Frequency distribution and cross tabulation were computed for categorical variables. The dependent variable was patient's satisfaction, while some of the independent variables were wait time, age, sex, educational and employment status etc, of the participants.

Chi square test was used to compare differences between proportions (satisfied and dissatisfied respondents) and Pearson's correlation for association between continuous variables. We used logistic regression to determine the predictors of satisfaction. Expression of satisfaction with services by the participants was either as dissatisfied or as satisfied. Level of statistical significance was set at 5% ($p \leq 0.05$).

2.8 Ethical Consideration

All the patients present in the general outpatient clinic were informed about the study and the possibility of being recruited into the study and they had to give their consent to participate in the study. We briefed the selected participants on the purpose of the study, potential benefits and harm (even though we did not anticipate any harm resulting from the study apart from the additional time the respondents had to wait in order to answer questions). Each of the respondents was thereafter, given a copy of the informed consent form to sign. We also informed the participants about their right to withdraw from the study at any point, without any consequence to them. The ethics committee of the hospital approved the conduct of the study.

3. RESULTS

The ages of the participants ranged from 15-70 years, with mean of 33 ± 12.9 years. Sixty (62.5%) of the study participants were females whereas 36 (37.5%) were males. Twenty-seven (28.4%) of the participants were students, whereas 12 (12.6%) of them were civil servants. Only one of the participants had no form of education whereas 35 (36.1%) had up

to tertiary education. More than two-thirds (73%) of the participants had formal education, with majority (88.5%) residing in the urban area (Table 1).

Table 1. Socio-demographic characteristics of participants

Variable	N (%)
Age group	
15-24 yrs	31(32.3)
25-34 yrs	27 (28.1)
35-44 yrs	16 (16.7)
45-54yrs	16 (16.7)
≥55yrs	6 (6.3)
Total	96(100)
Mean	32 ± 12.9
Educational Status	
Tertiary	35 (36.1)
Secondary	28 (28.9)
Primary	7 (7.2)
Adult education	1(1.0)
Quranic	24 (24.7)
None	1 (1.0)
Total	96 (100)
Occupation	
Student	27 (28.4)
Full time House wife	26 (27.4)
Business	20 (21.1)
Civil servant	12 (12.6)
Others(vocational jobs)	10 (10.5)
Total	95 (100)
Sex	
Male	36 (37.5)
Female	60(62.5)
Total	96(100)
Religion	
Islam	84 (87.5)
Christianity	12 (12.5)
Total	96(100)
Place of residence	
Urban	85 (88.5)
Rural	11 (11.5)
Total	96(100)

The registration time ranged from 1-132 minutes, with mean of 76±22.7 minutes whereas clinic wait time ranged from 10-167minutes with a mean of 83.7±38.57minutes. The mean consultation time was 7.2±4.55 minutes and the mean total clinic wait time from entry to the time of leaving the clinic was 168±35.73 minutes (Table 2).

Table 2. Duration of different categories of wait time

	CWT(mins)	RT(mins)	CT(mins)	TC WT(mins)
Mean	83.74	78.23	7.18	168.41
Median	79.00	76.00	6.45	167.00
Std. Deviation	38.57	22.70	4.55	35.73
Minimum	10.00	1.00	1.54	69.00
Maximum	167.00	132.00	25.15	246.00

Key: CWT- Clinic Wait Time; RT- Registration Time; CT- Consultation Time; TCWT- Total Clinic Wait Time.

For satisfaction with different services of the clinic, 65% of the participants expressed satisfaction with the neatness of the clinic environment and sitting arrangements. Ninety seven percent were satisfied with the reception they received on arrival to the clinic, 95.8% were satisfied with courtesy of the nursing staff, 82.3% with registration time and 48 (50 %) with the clinic wait time. Almost half (48.5%) of the study participants expressed satisfaction with communication with the doctors and 65% expressed satisfaction with the explanations offered with regards to their ailments. Seventy percent of the participants were satisfied with the examinations carried out by the doctors whereas only 30% of them expressed dissatisfaction with the doctors' examinations. The physicians satisfied Seventy eight percent of them with consultations and the overall satisfaction with the services of the clinic was 52.1% (Table 3).

Table 3. Respondent's satisfaction with clinic services

SN	Variable	Satisfaction	
		Satisfied n (%)	Dissatisfied n (%)
1	Are you satisfied with the reception you had on arrival to the clinic?	93(96.9)	3(3.1)
2	Are you satisfied with the registration process?	89(92.7)	7(7.3)
3	Are you satisfied with care and concern shown by nurses?	92(95.8)	4(4.2)
4	Are you satisfied with the registration time?	79(82.3)	17(17.7)
5	Are you satisfied with doctor's explanation of your condition?	62(65)	33(35)
6	Are you satisfied with consultation time?	75(78.1)	21(21.9)
7	Are you satisfied with the condition of the consulting room?	73(77.8)	26(22.2)
8	Are you satisfied with the wait time in the waiting area?	48(50)	48(50)
9	Are you generally satisfied with the services of the clinic (your overall satisfaction)?	50(52.1)	46(47.9)

Chi square test showed that 80% of the participants who waited for less than 180 minutes (3 hrs) were satisfied with overall services of the clinic, while 58.7% of those who waited for more than 180 minutes were dissatisfied with the GOPD services and this was found to be statistically significant (P=.001). Similarly, a significant association was found to exist between overall satisfaction and time spent in the waiting room (clinic wait time) (P=.02). Results of analysis also revealed that 80.4% of those that were dissatisfied had waited for > 60 minutes before registration, however, 88% of those satisfied had also waited for more

than 60 minutes, hence no statistically significant association was observed (P= .32). Significant association was also observed between overall satisfaction and age of respondents, with 54% and 23.9% of the study participants who were 35 years or more being satisfied and dissatisfied respectively with clinic services (P= .003). Form of education (formal or informal) and gender of the participants were found not to have any statistically significant association with the level of satisfaction with the services in the clinic (*P*= .08) (Table 4).

Table 4. Relationship between overall satisfaction and some variables

Level of Satisfaction			
TCWT	**Satisfied**	**Dissatisfied**	**Test statistic**
<180mins	40(80%)	19(41.3%)	X^2=15.15
≥180mins	10(20%)	27(58.7%)	df=1
	50(100%)	**46(100%)**	P=0.001
RT	Satisfied	Dissatisfied	
<60 mins	6(12%)	9(19%)	X^2=1.04
≥60 mins	44(88%)	37(80.4%)	df=1
	50(100%)	**46(100%)**	p= .31
	Level of Satisfaction		
Age	Satisfied	Dissatisfied	
<35yrs	23(46%)	35(76%)	X^2=9.06
≥35yrs	27(54%)	11(23.9%)	df=1
	50(100%)	**46(100%)**	P=.003
Form of education	Satisfied	Dissatisfied	
Formal	35(70%)	36(78.3%)	X^2=0.85
Non-formal	15(30%)	10(21.7%)	df=1
	50(100%)	**46(100%)**	p=.36
CWT	Satisfied	Dissatisfied	
<60 mins	20(40%)	8(17.4%)	X^2=5.92
≥60 mins	30(60%)	38(82.6%)	df=1
	50(100%)	**46(100%)**	P=.02
Gender	Satisfied	Dissatisfied	
Male	23(24.5%)	13(13.5%)	X^2=3.217
Female	27(28.1%)	33(34.5%)	df=1
	50(100%)	**46(100%)**	p=.08

KEY: TCWT: Total Clinic Wait Time; RT: Registration Time; CWT: Clinic Wait Time

Pearson correlation between overall satisfaction and TCWT was -0.397 thus implying a negative correlation between the two variables, (*P* =.001). Longer duration of TCWT was associated with lower satisfaction (r = -0.40, *P*=.001). The overall satisfaction and clinic wait time (CWT) showed a weak negative correlation (r = -0.25), however it was statistically significant (*P*= .007). The overall satisfaction and age of respondents however, showed a positive correlation (r = 0.31), which was also statistically significant (*P*= .001), thus the higher the age the higher the satisfaction (Table 5).

Table 5. Correlation between overall satisfaction and other variables

		Overall satisfaction	CWT	CWT	Age
Overall satisfaction	Pearson Correlation	1	-.397[**]	-.248[**]	.307[**]
	Sig. (1-tailed)		.000	.007	.001
	N	96	96	96	96
TCWT	Pearson Correlation	-.397[**]	1	.367[**]	.016
	Sig. (1-tailed)	.000		.000	.440
	N	96	96	96	96
CWT	Pearson Correlation	-.248[**]	.367[**]	1	.051
	Sig. (1-tailed)	.007	.000		.312
	N	96	96	96	96
Age	Pearson Correlation	.307[**]	.016	.051	1
	Sig. (1-tailed)	.001	.440	.312	
	N	96	96	96	96

The variables presented in Table 6 below represent those that were observed to be significantly associated with satisfaction. Overall satisfaction was significantly associated with age of the respondents (OR=1.055, 95% CI= 1.013-1.099, *P*=.01), thus older age predicted higher satisfaction. Total clinic wait time had a negative association with satisfaction (OR=0.97, 95% CI=0.949-0.996, *P*=.02), longer clinic wait time therefore predicted lower satisfaction (dissatisfaction). Clinic wait time (time spent in the waiting area) was not a significant predictor of satisfaction, as seen in the table (OR=0.99, 95% CI=0.971-1.009, *P*=.293).

Table 6. Predictors of satisfaction

	B	Sig.	OR	95% CI for OR	
				Lower	Upper
Age	.054	.010	1.055	1.013	1.099
TCWT	-.028	.020	.972	.949	.996
CWT	-.010	.293	.990	.971	1.009
Constant	3.967	.012	52.850	.l	

4. DISCUSSION

The health care system has become an important indirect marketing tool as it has direct impact on improving the quality of the 'product' i.e. health service [20].

The mean age of the participants was lower than the 38 years and 45 years obtained in similar studies [12,13]. The lower mean age observed in this study could be because up to 57% of the participants were below the age of 35 years.

The mean total clinic wait time observed in this study (168 minutes) was similar to that observed in a similar institution [4]. Patients experienced long wait times in our institution possibly because of the dearth of qualified manpower. Findings from our study revealed that longer duration of total clinic wait time was associated with lower satisfaction. This long wait time observed in our study may be because the GOPD does not operate specific

appointment system, hence leading to large turnout of patients with various ailments. Several studies in Nigeria have observed long wait time in outpatient clinics [17-20].

In this study, 65% of the respondents expressed satisfaction with the neatness of the clinic environment. This finding is similar to the observation made in similar studies in Pune, India and Scotland [15,24]. Studies conducted in other developing countries however, showed contrasting figures [25,26]. Studies conducted in India and Kano, Nigeria observed higher levels of satisfaction with the neatness of GOPD environment [27,28].

The highest level of satisfaction observed in this study was on courtesy of the nursing staff towards the patients. Other studies have also reported high level of patient satisfaction with courtesy of nursing staff [15,18,21]. The high level of satisfaction recorded for courtesy of nursing staff in this study is highly commendable because nurses are usually the closest health workers to patients and any change in their attitude towards patients is likely to affect the satisfaction of their clients. Another study however, showed a lower level of satisfaction with courtesy of nursing staff [10].The proportion of the respondents who were dissatisfied with the registration time is in consonance with the findings from a similar study in India where only few of the patients expressed dissatisfaction with the registration time [15]. Half of the study participants were satisfied with the clinic wait time. This finding is in contrast with the findings in a previous study, where more than three-quarter of the respondents were satisfied with clinic wait time [2]. The mean clinic wait time observed in our study was 83.7 minutes. Studies from within and outside Nigeria have recorded lower clinic wait times [29,30,31]. The Institute of Medicine have since recognized the problems of prolonged wait time in the clinics, resulting in dissatisfaction amongst patients and had therefore recommended that at least 90% of patients should be seen within 30 minutes of their scheduled appointments time [32].

The proportion of patients satisfied with overall services found in this study was similar to the findings in a previous study, where 54% of the respondents expressed satisfaction with the overall services of the clinic [33]. However, results from studies conducted in Kano, Nigeria and in other countries such as Turkey and Kuwait showed higher satisfaction with overall services in the GOPDs [28,2,34]. A similar study conducted in Thailand revealed a very low level of satisfaction, which was in contrast to the findings of our study [35]. These differences could be because hospitals in developing countries such as Nigeria, experience long wait time due to high patient load and shortage of staff, which could in turn, decrease their satisfaction. In addition, this centre being a teaching hospital allows for the use of patients for clinical teaching, thereby delaying the processes in the clinic and consequently increasing the wait time, thus causing dissatisfaction for the patients. The level of overall satisfaction observed in our study may not be a true reflection of quality of services rendered to patients, hence the need for the managers of health institutions to consider improving the quality of care at every point of service delivery.

The mean consultation time observed in this study was higher than the 3.4 minutes recorded in a previous study [36]. Most of the study participants were satisfied with physicians' consultation and similar findings were reported in another study in Northwestern Nigeria, where 90% of the study participants expressed satisfaction with the physicians [28]. In contrast to our observations in this study however, a study in Calabar, Nigeria reported lower levels of satisfaction with physicians' consultation [37]. With respect to patients' satisfaction with communication with the doctor, the proportion of satisfied respondents in this study was lower than what a study conducted in India reported, where majority of the respondents expressed satisfaction with communication with the physicians [21]. A study conducted by

Coelho and Galan showed that physicians' skills of nonverbal communication with the patient influenced patients' satisfaction and outcome [38]. The time a patient spends with the physician in the GOPD has important cost and quality-of-care implications. Patient-physician communication is an important aspect of healthcare quality and patient safety [39, 40]. Efficient and effective communication between patients and providers ensures the achievement of truly adequate healthcare. Patients who have difficulty communicating, for whatever reason, will continue to experience unnecessary pain, premature deaths, consequential medication errors and dissatisfaction [41].

The findings from our study showed that 65% of the participants were satisfied with the explanations offered by the physicians and this is in contrast to the observations made in other studies, where over 90% of the respondents expressed satisfaction with the explanations of the consulting physicians [15,21]. The more a patient understands his illness during consultation, the more the likelihood of the patient being satisfied with the consultation [42,43], but most often than not, patients get less information than they expected [44].

The negative correlation observed between overall satisfaction and total clinic wait time means that the longer the total clinic wait time, the lower the overall satisfaction. Studies have also reported this relationship [15,16,17]. An inverse association was also observed between overall satisfaction and wait time in the waiting area, with level of satisfaction dropping as the duration of wait time increased (r=-0.25). The negative associations observed in this study and in other studies as well, were probably due to the worsening of illness or poor outcome of treatment caused by long wait time before medical intervention. Jeffery et al reported in their study that the primary goal of a patient going to the hospital is to receive treatment, of which the outcome of such treatment also determines whether the patient will be satisfied or whether he will not be satisfied [45]. Older patients were more satisfied with services, as suggested by the positive correlation observed between overall satisfaction and age of respondents. Previous studies also showed that younger patients had lower satisfaction as compared to older patients [16,17]. This could be because the older patients have higher health needs and thus visit the hospital more frequently than the younger ones, thereby having more experience regarding the procedures and services of the clinic. The result of the logistic regression showed that age was the strongest predictor of satisfaction, followed by total clinic wait time. Sun et al also observed age to be the strongest patient characteristic that predicted satisfaction [46]. Other variables such as registration time, gender, educational and employment status were not found to be significantly associated with overall satisfaction (p>0.05).

5. CONCLUSION

The findings from this study showed that the overall satisfaction with services at the general outpatient clinic was above average, however, we observed varying degrees of dissatisfaction with some services. The satisfaction of patients with services in healthcare settings has turned out to be an important issue which if properly handled could help educate healthcare providers about their shortcomings and achievements, thus making them more responsive to the needs of patients. There is therefore the need for healthcare managers to commence appointment system for non-emergency cases in order to reduce the large number of patients who turn out at the same time and to address provider-related factors causing dissatisfaction. There is also the need to strengthen physicians' skills of nonverbal communication through development of cultural sensitivity training programs in medical schools, continuing medical education and public health programs. Since younger

age is associated with lower satisfaction, there is therefore, a need for research to investigate in details, the determinants of patient satisfaction among the younger age groups.

CONSENT

We declare that written informed consent was obtained from the patient for publication of this study.

ETHICAL APPROVAL

We hereby declare that the study protocol have been examined and approved by the appropriate ethics committee and have therefore been performed in accordance with the ethical standards laid down in the 1964 Declaration of Helsinki.

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COMPETING INTERESTS

Authors have declared that no competing interests exist.

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APPENDIX

QUESTIONNAIRE

Patients' Satisfaction in the General Out-Patient Department of a Tertiary Health Institution in Northern Nigeria

Dear sir/ma,

This is a questionnaire on the above topic. You will be required to answer some questions at the end of your clinic session if you agree to participate in the study. The purpose of the study is to assess your level of satisfaction with the services rendered at this clinic. We will not give you any compensation by way of reward or otherwise, as we do not anticipate any risk associated with your participation in the study. You may however, benefit from the overall findings/recommendations of the study. You are free to withdraw your consent to participate in the study at any point you so wish without any consequences to you. We shall use the information sought from you academic purpose, which shall serve as a basis for offering appropriate recommendations to the relevant authorities in order to improve service delivery. We shall try our possible best to handle the information with utmost confidentiality. Do you agree to participate freely? Yes [ ] No [ ]

1. Waiting time assessment card/questionnaire number……………………………..…….

SECTION A: Socio-demographic profile

2. Age (yrs)…………………

3. Sex
   a. Male
   b. Female

4. Religion
   a. Islam
   b. Christianity
   c. Others …………………………(specify)

5. Tribe
   a. Hausa/Fulani
   b. Igbo
   c. Yoruba
   d. Others……………………….. (specify)

6. Place of residence
   a. Urban
   b. Rural

7. Educational status
   a. Primary
   b. Secondary

    c. Tertiary

    d. Adult education

    e. Quranic school

    f.   None

8. Occupation

    a. Student

    b. Civil servant/public servant

    c. Business

    d. Others (specify)

SECTION B: Waiting Time

9.   How long have you been waiting since your arrival?

    a. <30 mins

    b. <1hr

    c.   1-2hrs

    d. >2hrs

10. Do you think you have stayed too long since your arrival?

    a. yes

    b. No

11. If yes why?

    a. No /few record clerk(s) on desk

    b. No /few doctor (s) to attend to me on time

    c. Patients were too many

    d. Shunting by other patients/staff

    e. Others……………………………………………………………………..(specify)

12. Do you think you have waited for a long time in the course of receiving services at the clinic?

    a. Yes

    b. No

SECTION C: Patient's satisfaction

13. Are you satisfied with the reception (by record clerk/nurses) you had on arrival to the clinic?

    a. Very satisfied

    b. Satisfied

    c. Fairly satisfied

      d. Dissatisfied

      e. Very dissatisfied

14. Are you satisfied with wait time before registration?

      a. Very satisfied

      b. Satisfied

      c. Fairly satisfied

      d. Dissatisfied

      e. Very dissatisfied

15. Are you satisfied with the registration process?

      a. Very satisfied

      b. Satisfied

      c. Fairly satisfied

      d. Dissatisfied

      e. Very dissatisfied

16. If no, with what are you dissatisfied?

      a. Long registration time

      b. Record clerk was not on the desk on time

      c. The record clerk was too harsh

      d. Disruption of queue by staff and other patients

      e. Registration materials were not available/inadequate

      f. Other reasons, (specify)…………………………………………..

17. Satisfaction with care and concern shown by nurses

      a. Very satisfied

      b. Satisfied

      c. Fairly satisfied

      d. Dissatisfied

      e. Very dissatisfied

18. Are you satisfied with the wait time in the waiting area?

      a. Very satisfied

      b. Satisfied

      c. Fairly satisfied

      d. Dissatisfied

      e. Very dissatisfied

19. Are you satisfied with care/concern and technical skills of the doctors?

      a. Very satisfied

      b. Satisfied

      c. Fairly satisfied

      d. Dissatisfied

      e. Very dissatisfied

20. Are you satisfied with doctor's explanation of your condition?
    a. Very satisfied
    b. Satisfied
    c. Fairly satisfied
    d. Dissatisfied
    e. Very dissatisfied

21. Are you satisfied with instructions given by the doctor on investigations/prescriptions?
    a. Very satisfied
    b. Satisfied
    c. Fairly satisfied
    d. Dissatisfied
    e. Very dissatisfied

22. Are you satisfied with the amount of time you spent with the doctor?
    a. Very satisfied
    b. Satisfied
    c. Fairly satisfied
    d. Dissatisfied
    e. Very dissatisfied

23. If dissatisfied, why?
    a. Consultation time was short
    b. Consultation time too long
    c. Teaching of students/residents
    d. Distraction of other patients/staff
    e. Others…………………………………………………………(specify)

24. Are you satisfied with the amount of time you spent at the clinic?
    a. Very satisfied
    b. Satisfied
    c. Fairly satisfied
    d. Dissatisfied
    e. Very dissatisfied

25. Are you satisfied with the condition (comfort, privacy etc) of the consulting room?
    a. Very satisfied
    b. Satisfied
    c. Fairly satisfied
    d. Dissatisfied
    e. Very dissatisfied

26. Is the waiting area comfortable? (your satisfaction)
    a. Very satisfied
    b. Satisfied

   c. Fairly satisfied
   d. Dissatisfied
   e. Very dissatisfied

27. If no, what makes it uncomfortable? (you can select more than one option)
   a. Lack of adequate/comfortable seats
   b. Lack of fans/air conditioners
   c. Waiting area is untidy
   d. Waiting area is smelling
   e. Poor /lack of toilet facilities

28. Was there any health talks given while you were in the waiting area?
   a. Yes
   b. No

29. If yes, were you satisfied with it (was it beneficial to you)?
   a. Very satisfied
   b. Satisfied
   c. Fairly satisfied
   d. Dissatisfied
   e. Very dissatisfied

30. Are you generally satisfied with the overall performance (services) of the clinic/staff?
   a. Very satisfied
   b. Satisfied
   c. Fairly satisfied
   d. Dissatisfied
   e. Very dissatisfied

31. What activity were you engaged in, while waiting to see the doctor?
   a. Reading
   b. Chatting
   c. Watching TV
   d. Listening to health talks
   e. Sleeping
   f. Others (specify)

32. What activity do you prefer most?
   a. Reading,
   b. Chatting
   c. Watching TV
   d.   H/E talks
   e.   Others (specify)

33. Would you be willing to recommend the services of this clinic to others?
   a. Yes
   b. No

34. Are there any things you want the hospital to put in place to make patients comfortable and satisfied?
   a. ……………………………………………………………………………………………
   b. ……………………………………………………………………………………………
   c. …………………………………………………………………………………………..

Waiting Time Assessment Card

- **Serial number……………………………………………**
- **Time of clinic arrival………………………….…**
- **Time of registration…………………………….…**
- **Time of entry into consulting room…………….**
- **Time of exit from consulting room……………...**

- **Total clinic waiting time………………………….**

OBSERVATION CHECKLIST

1. Date/day of the week…………………………………………………………………….
2. Time of arrival of 1st patient………………………………………………………………
3. Time of arrival of first record clerk………………………………………………………..
4. Time of arrival of first nurse………………………………………………………………..
5. Time of arrival of first doctor………………………………………………………………
6. Time of commencement of registration……………………………………………………
7. Time of commencing consultation………………………………………………………..
8. Number of patients on seat at the start of consultation………………………..
9. Number of doctors attending to patients at the start of consultation …………………
10. Number of nurses attending to patients at the start of consultation ……………………
11. Number of record clerks present at the start of registration…………………………….
12. Number of patients registered for the day…………………………………………………
13. Number of patients seen by the doctors…………………………………………………..
14. Conduct of health education while patients are waiting   [yes]   [No]
15. Presence of posters on H/E and other health issues   [Yes]   [No]
16. Presence of TV in the waiting room   [Yes]   [No]
17. Availability of functional toilets within the clinic premises [Yes]   [No]

18. Other irregular activities taking place in the clinic,

Shunting	[Yes]	[No]
Sales of commodities	[Yes]	[No]
Denying patients access to service(s)	[Yes]	[No]
Poor attitude of staff towards patients	[Yes]	[No]

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