

**Patients' Satisfaction with Pharmacy Services in a Secondary Health Care Facility in Benin City**

Odili VU<sup>1\*</sup>, Ihenyen AO<sup>2</sup>, Okhawere MI<sup>3</sup>

1. Department of Clinical Pharmacy, Faculty of Pharmacy, University of Benin.
2. Pharmacy Department, Central Hospital, Afuze.
3. Department of Community Health, University of Benin Teaching Hospital.

**ABSTRACT**

Patient satisfaction is a measure of how pharmacy services meet the needs of patients. It is one way of assessing the outcome of pharmacy services and identifying gaps. The aim of the study was to evaluate patients' satisfaction with pharmacy services in a secondary health facility in Benin City. A descriptive cross-sectional survey was conducted in the outpatient Pharmacy Department of Central Hospital, Benin City. A two-part structured questionnaire was used to assess respondents' level of satisfaction with pharmacy services. Overall, the respondents had a mean satisfaction score of  $4.00 \pm 0.82$ , implying that their level of satisfaction with pharmacy services was very good. The respondents were very satisfied with the explanatory skills and courtesy of the pharmacists with scores of  $4.44 \pm 0.66$  and  $4.33 \pm 0.72$  respectively. They were also very satisfied with the pharmacy location ( $4.25 \pm 0.64$ ). However, the respondents were relatively less satisfied with the waiting area, the length of time spent waiting for their drugs and the pharmacist's ability to advise them about their medicine related problems all with the following scores  $3.15 \pm 1.18$ ,  $3.43 \pm 1.25$  and  $3.70 \pm 0.83$ , respectively. The study showed that most of the respondents were satisfied with the pharmacy services they received at the facility.

**Keywords:** Patient satisfaction, pharmacy services, health care facility, waiting time, counselling

**INTRODUCTION**

Traditionally, the purpose of pharmacy has been to make medications available. The modern pharmacy, however, also provides access points to consumers and assures drug safety and compliance with legal and professional standards. The pharmacist also handles interpersonal relationships required at the interface of pharmacy system and the ultimate consumer, the patient. (Smith *et al*, 2011)

There is a paucity of literature that is focused exclusively on patient's satisfaction with pharmaceutical services. This is particularly true in Africa and Nigeria where pharmacy practice is still relatively in its infancy. Patient satisfaction in this context measures how well pharmacy services meet the needs of patients in acquiring their medications.

Sansgiry and Jayawant, (2005) carried out a cross-sectional survey of patients in Kelsey – Seybold

clinic and several pharmacies in the Houston area and reported that most of the respondents were satisfied with services offered by health clinics, and technical services provided by pharmacists. The attitude of the pharmacist, availability of special services, facilities, and convenient hours of pharmacy operation were significant factors contributing to satisfaction with pharmacy services. In the study, respondents were most pleased with the technical competence and dispensing accuracy of the pharmacist. Patients were also satisfied that their questions directed to pharmacists regarding medication issues were answered appropriately. Sansgiry and Jayawant, (2005)

A cross-sectional study by Mansour, *et al* (2013), investigated the level of satisfaction with the health services provided by pharmacists in an Ear Nose and Throat (ENT) hospital in the Eastern Region Alahsah, Kingdom of Saudi Arabia.

\*Corresponding author: vuodili@yahoo.com, valentine.odili@uniben.edu Phone: +2348023432237

The study reported that the items that received high satisfaction scores were; pharmacist was always available, pharmacist provides thorough explanations and clear labelling of drugs, pharmacist's politeness, and prompt services.

Another cross-sectional study conducted in five community pharmacies within the province of Alberta, Canada. Alghurair *et al.*, (2012) explored the effect of patient-perceived pharmacist expertise on relationship quality, self-efficacy, patient satisfaction and relationship commitment. In their result, they posited that patient-perceived pharmacist expertise is an independent determinant of relationship quality, patient satisfaction, and relationship commitment. Relationship quality also appeared to mediate the effect of perceived expertise on patient satisfaction and relationship commitment.

Qadri *et al.*, (2012) assessed patient's satisfaction with services obtained at the different units of the hospital. The results revealed that majority of the respondents were satisfied with the pharmacy, particularly, with respect to availability and quality of drugs provided. However, the respondents were dissatisfied with the cost of drugs.

In Nigeria, Oparah *et al.*, (2010) sampled five hundred outpatients recruited consecutively at the University of Benin Teaching Hospital, Nigeria. They found that patients experienced low satisfaction with the time they waited for their medication to be dispensed, and the length of time the pharmacist offered to spend with them. Perceived satisfaction was significantly higher in friendly explanation than in managing therapy. The socio-demographic characteristics of the patient were found not to have any influence on their level of satisfaction.

Afolabi and Erhun (2003) studied patient's response to waiting time in an out-patient pharmacy of the University Teaching Hospital in Ile-Ife This study showed that majority of the patients were fairly satisfied with the pharmaceutical services at the pharmacy and the major cause of dissatisfaction was long waiting time. Although the level of satisfaction varied among different groups of patients, those with the post-secondary level of education, which were mainly students and civil servants, were the least satisfied.

Agu *et al.*, (2014) in their assessment of satisfaction with pharmaceutical services in patients receiving anti-retroviral therapy in seventeen outpatient HIV treatment centres in Nigeria; reported that the satisfaction with overall quality of pharmaceutical

services received by participants was positive. Longer waiting times resulted in lower patient satisfaction. The high patient load may be the cause of the long waiting time and the inadequate duration of interaction between pharmacist and the patient.

To the best of our knowledge, no study has been conducted to assess patient satisfaction with pharmacy services in a secondary health care facility in Benin City. This study, therefore, aims to specifically evaluate patients' satisfaction with pharmacy services they receive at a secondary health facility.

## **METHODS**

This was a descriptive cross-sectional study carried out in the outpatient Pharmacy Department of Central Hospital, a secondary health facility in Benin City, Edo state, South-South, Nigeria.

Central Hospital Benin City is a 420-bed state government-owned secondary hospital and serves as a referral centre for other secondary and primary health care facilities. The inhabitants of the state are mainly civil servants, traders, and farmers.

The Pharmacy department is broadly divided into; outpatient and inpatient units. The outpatient unit comprises; a main (bulk) store, a dispensing store, an open dispensing area, three counselling rooms, a call duty room and two administrative offices. These units are manned by twenty-six personnel, comprising; ten registered pharmacists, seven intern-pharmacists, and one National Youth Service Corp pharmacist. Others are six ward assistants and two storekeepers.

## **DISPENSING PROCESS**

Patients' prescriptions (medication-order-forms) are transferred from the doctor's consulting rooms at the out-patient-department (OPD) to the pharmacy department by a hospital ward assistant. The latter hands them over to another assistant in the pharmacy, who in turn delivers them to a pharmacist for evaluation and costing. After the assessment, the patient proceeds to make payment. The payment teller is then submitted to a cashier at the pharmacy entrance, who subsequently issues a receipt to the patient. The patient submits the receipt to the ward assistant who then shows it to the pharmacist. The latter having seen proof of payment commences the process of dispensing. The pharmacist dispenses the prescription only medication (POM) from the dispensing store, while over-the-counter (OTC)

medications are dispensed by the pharmacy technologists. The interaction between the pharmacists and prescribers is mainly through physical contact as the facility lacks communication devices. The dispensed medications and prescription forms are then transferred to the pharmacist occupying any of the three counselling rooms for patient's adherence counselling. The entire dispensing process takes between 20-30 minutes.

### **SAMPLE**

The records from the pharmacy department of the Central Hospital, Benin show that a monthly average of 800 patients visits the outpatient pharmacy unit. A systematic sampling technique was used to select respondents from among outpatients in the pharmacy department. The calculated minimal sample size of 126 was obtained using an appropriate statistical formula for estimating minimum sample size in descriptive health studies [ $n = Z^2 pq/d^2$ ]; where  $p=91\%$  (the proportion from a previous study), representing the proportion of patients who were satisfied with pharmacy services in a health facility.

### **INSTRUMENT**

Data collection was done with the aid of a pre-tested structured questionnaire containing questions on a two-part structured interviewer, administered questionnaire. The first part of the questionnaire contained 11 questions which elicited the socio-demographic characteristics of the respondents such as; age, level of education, ethnic group, occupation, religion, and health status. Other questions included the number of prescriptions received in the last one month; and frequency of usage of the pharmacy by the respondents. The respondents were also asked if they had received any medications that day and finally if any additional written instructions were given to them.

The second part consisted of 15 questions which assessed the respondents' level of satisfaction with pharmacy services on a five-point graded Likert scale with 1 and 5 indicating the lowest and highest levels of satisfaction respectively. The range included very dissatisfied (=1); Dissatisfied (=2); Undecided (=3); Satisfied (=4) and very satisfied (=5). The score very satisfied (=5) had the highest ranking; while very dissatisfied (=1) had the lowest.

The items were adapted from existing instruments used in previous patient satisfaction surveys. Three

pharmacy interns were specifically trained in the conduct of interviews and the collection of data.

The purpose of the study was explained to the respondents individually and their consent obtained before the questionnaires were administered.

### **DATA ANALYSIS**

Data collected were entered into Microsoft Excel spreadsheet software package and cross-checked for accuracy. Statistical analysis using the Statistical Package for Social Sciences (SPSS version 17.0) was used for descriptive analysis of the data and the result presented in frequency tables.

### **RESULTS**

#### **DEMOGRAPHIC DATA OF RESPONDENTS**

A total of 129 respondents were sampled in the study and their mean age was  $37.72 \pm 13.73$  with a range of 16-82 years. They had varying educational background. Majority 48(37.2%) and 41(31.8%) had secondary and post-secondary education, respectively. Others are as shown in Table 1. Traders and business people made up the majority of the occupation encountered 35(27.1%) and 27(20.9%) respectively. With regard to ethnicity and religion, Edos, 55(42.6%) and Christians, 117(90.7%) constituted the majority. All other demographics are as shown in Table 1.

Seventy-seven (59.7%) of the respondents visit the pharmacy regularly, while the rest 52 (40.3%) do not. Majority of the respondents 90 (69.8%) claimed they were in good health, while 14(10.9%) said they were in very good health, however, 20 (15.5%) and 5 (3.9%) affirmed that they were in a fair and bad state of health respectively. All the respondents received their medicines from the pharmacy and went through the process of their prescription being filled by the pharmacist. Only 16 (12.4%) of them agreed that they were given a written instruction, the remaining 113(87, 6%) were not. Table 2, shows the respondents' responses with regard to their satisfaction with pharmacy services in the health facility. Overall, the respondents had a mean satisfaction score of  $4.00 \pm 0.82$ , which implies a very high level of satisfaction with the pharmacy services in the facility. The respondents were most satisfied with the explanatory skills and courtesy of the pharmacists with scores of  $4.44 + 0.66$  and  $4.33 + 0.72$ , respectively. They were also very satisfied with the pharmacy location ( $4.25 \pm 0.64$ ).

Table 1: Respondents Demographics

Variable	Frequency (N=129)	Percentage (%)
<b>EDUCATION</b>		
None	3	2.3
Primary	16	12.4
Junior Secondary School	18	14.0
Senior Secondary School	48	37.2
Post-secondary	41	31.8
Post-graduate	3	2.3
<b>ETHNIC GROUP</b>		
Bini	17	13.2
Delta	11	8.5
Edo	55	42.6
Esan	16	12.4
Estsako	3	2.3
Igbo	14	10.9
Ijaw	2	1.6
Others	9	6.9
<b>OCCUPATION</b>		
Accountant	1	0.8
Business	27	20.9
Caterer	3	2.3
Civil servant	13	10.1
Cleaner	1	0.8
Driver	2	1.6
Farmer	5	3.9
Fashion Designer	2	1.6
House Wife	1	0.8
Marketer	1	0.8
Pensioner	5	3.9
Public Servant	1	0.8
Security Man	1	0.8
Student	2	1.6
Stylist	5	3.9
Tailor	1	0.8
Teacher	13	10.1
Technician	1	0.8
Trader	35	27.1
Unemployed	9	7.0
<b>RELIGION</b>		
Christian	117	90.7
Islam	3	2.4
Nil	9	6.9

However, the respondents were relatively, less satisfied with the waiting area, the length of time spent waiting for their drugs, the pharmacists' ability to advise them about the problems they have with their medicines, all with the following scores  $3.15 \pm 1.18$ ,  $3.43 \pm 1.25$  and  $3.70 \pm 0.83$ . Other rated items and their corresponding scores are as shown in Table 2. There was a statistically significant difference in the levels of satisfaction with regard to how frequently the respondents visit the pharmacy. Those who visit the pharmacy infrequently were statistically significantly more satisfied, than regular visitors to the pharmacy, with items such as; the pharmacist's ability to advise on their medicine related problems ( $3.90 \pm 0.79$ ;  $3.56 \pm 0.82$ )  $p < 0.05$ , the time spent with the pharmacist they saw ( $4.22 \pm 0.75$ ;  $3.87 \pm 0.82$ )  $p < 0.05$ , how carefully the pharmacist checks their prescriptions; ( $4.18 \pm 0.62$ ;  $3.91 \pm 0.73$ )  $p < 0.05$ , the waiting area, ( $3.48 \pm 1.21$ ;  $2.93 \pm 1.11$ )  $p < 0.05$  and the pharmacy services overall, ( $4.13 \pm 0.74$ ;  $3.70 \pm 0.98$ )  $p < 0.05$ . Other results are as shown in Table 3.

## DISCUSSION

There was a preponderance of Edo speaking respondents in the study, this is likely because the health facility is located in Benin City which is predominantly Edo speaking. However, the patient population was diverse. The study did not reveal any association between ethnic origin and the patient's level of satisfaction. In one study Mansour and Tahir; (2013) found that Egyptians were more satisfied with pharmacy services than Saudis however, in their study no reason was provided for this ethnic difference in satisfaction.

Respondents in the study with a high level of education were more satisfied with pharmacy services than those with a low level of education. A study in Saudi Arabia, (Mansour and Tahir; 2013) found that level of education was a key indicator of satisfaction. Patient's health status has been shown to positively influence patient satisfaction (Khudair, et al., 2013). In this study, most of the respondents claimed that they were in good health as at when they accessed the facility's pharmacy services. Furthermore, many of the patients interviewed may

have been repeat visitors coming for medication refills or former inpatients who are now in stable health. The study found that first time and irregular users of the pharmacy were more satisfied with pharmaceutical services than regular users. This may be due to the fact that those visiting the facility for the first time were able to compare services at other facilities and pharmacy outlets; many of which may not have a resident pharmacist on duty. On the other hand, regular visitors to the pharmacy may have been slightly dissatisfied because, over time, there may not have been an appreciable improvement in pharmaceutical services from what they were already used to at the facility. Majority of the respondents were very satisfied with the location of the pharmacy. This is especially so; because the pharmacy shares the same building with the consulting rooms at the out-patient-department; and patients could easily shuttle between the doctor and the pharmacist. More so, the outpatient pharmacy is close to the hospital

exit gate which facilitates respondents' easy transportation back home. Kamei, et al., (2001) reported that pharmacy location had a very minimal influence on patient's satisfaction levels. Most respondents expressed their satisfaction with the availability of a pharmacist to answer their questions. At the health facility surveyed, the out-patient pharmacy runs a 24-hour call system with a pharmacist always on duty to attend to patients. The respondents were generally very satisfied with the explanatory skills and courtesy of the pharmacist on duty at the facility. This may be because of the pharmacist's training which places emphasis on counseling and development of good communication skill. This is in agreement with the study by Smith, et al., (2011) in which majority of the respondents thought that the pharmacy staff was professional in carrying out their duties and showed much respect and courtesy in their dealings with patients.

Table 2: Respondents Satisfaction with Pharmacy Services in the Health Facility

Rated Item	No of respondent	Very Satisfied (5)	Satisfied (4)	Undecided (3)	Dissatisfied (2)	Very Dissatisfied (1)	Mean± SD
	N	F (%)	F (%)	F (%)	F (%)	F (%)	
1. Pharmacy location	129	42 (32.6)	81(62.8)	2(1.6)	4(3.1)	-	4.25± 0.64
2. Professional appearance of the pharmacy	129	44 (34.1)	67(51.9)	6(4.7)	1(8.5)	1(0.8)	4.10± 0.89
3. Availability to answer question	129	48 (37.2)	63(48.8)	10(7.8)	8(6.2)	-	4.17± 0.82
4. Pharmacists professional relationship with you.	129	41 (31.8)	71(55.0)	9(7.0)	8(6.2)	-	4.12± 0.79
5. Pharmacists ability to advice you about problems you have with your Medicines.	129	24 (18.6)	48(37.2)	51(39.5)	6(4.7)	-	3.70± 0.83
6. Length of time you spent waiting for your drugs to be filled.	129	25 (19.4)	57(44.2)	4(3.1)	35(27.1)	8(6.2)	3.43± 1.25
7. Technical skill of the pharmacist.	128	38 (29.5)	69(53.5)	18(14.0)	3(2.3)	-	4.11± 0.72
8. How well the pharmacist explains what your medicines do.	127	64 (49.6)	59(45.7)	4(3.1)	-	-	4.44± 0.66
9. The pharmacy services overall	129	30 (23.3)	69(53.5)	15(11.6)	14(10.9)	1(0.8)	3.88± 0.92
10. How well the pharmacist Answer's your questions.	127	39 (30.2)	74(57.4)	13(10.1)	1(0.8)	-	4.19± 0.64
11. The courtesy of the pharmacist you saw.	128	56 (43.4)	63(48.8)	4(3.1)	5(3.9)	-	4.33± 0.72
12. The time spent with the pharmacist you saw.	128	33 (25.6)	72(55.8)	14(10.9)	9(7.0)	-	4.01± 0.81
13. The waiting area.	126	14 (10.9)	50(38.8)	9(7.0)	47(36.4)	6(4.7)	3.15± 1.8
14. How carefully the pharmacist checks your prescription.	127	28 (21.7)	77(59.7)	18(14.0)	4(3.1)	-	4.02± 0.70
15. The friendliness and attentiveness of the pharmacist	129	33 (25.6)	83(64.3)	7(5.4)	5(3.9)	1(0.8)	4.10± 0.73

Table 3: Patient Satisfaction Scores and Regularity to Pharmacy Services

	Do you Visit this pharmacy regularly	N	Mean	Std Deviation	p-value
The professional appearance of the pharmacy	Yes	77	4.10	0.897	0.999
	No	52	4.10	0.891	
The location of the pharmacy	Yes	77	4.29	0.625	0.385
	No	52	4.19	0.658	
The availability to answer your question	Yes	77	4.13	0.848	0.499
	No	52	4.23	0.783	
The pharmacist professional relationship with you	Yes	77	4.10	0.821	0.726
	No	52	4.15	0.751	
The pharmacist's ability to advise you About problems that you might have with your medication	Yes	77	3.56	0.819	0.999
	No	52	3.90	0.799	
The length of time spent waiting for your drugs to be filled	Yes	77	3.35	1.285	<b>0.001</b>
	No	52	3.56	1.195	
The technical skill (thoroughness, carefulness, competence) of the person you saw.	Yes	76	4.03	0.748	0.999
	No	52	4.23	0.675	
How well the pharmacists explains what your medications do	Yes	76	4.45	0.700	0.868
	No	51	4.43	0.608	
The pharmacy services overall	Yes	77	3.70	0.988	<b>0.008</b>
	No	52	4.13	0.742	
How well the pharmacists answers your questions	Yes	76	4.16	0.634	<b>0.001</b>
	No	51	4.24	0.651	
The courtesy/respect of the pharmacist you saw	Yes	77	4.29	0.776	0.445
	No	51	4.39	0.635	
The time spent with the pharmacist you saw	Yes	77	3.87	0.817	<b>0.016</b>
	No	51	4.22	0.757	
The waiting area	Yes	76	2.93	1.112	<b>0.010</b>
	No	50	3.48	1.216	
How carefully the pharmacist checks your prescription	Yes	76	3.91	0.734	<b>0.033</b>
	No	51	4.18	0.623	
The friendliness and attentiveness of the pharmacist	Yes	77	4.09	0.710	0.819
	No	52	4.12	0.758	

The study showed a significant association between the pharmacist's technical skills, such as how he explains the action of the medications and the potential level of satisfaction. A study published in the pharmacy times found that patients' perception of pharmacist's expertise has a positive effect on their satisfaction levels. (Oldfield, 2012)

On the pharmacist professional relationship with respondents; many of the respondents indicated that they were very satisfied. This may be due to the professional courtesies the pharmacists accord the respondents which over time develops into a cordial therapeutic relationship.

A significant number of respondents were dissatisfied with the length of time they spent, waiting for their prescriptions to be filled. Several factors may be responsible for this. In most cases, the pharmacy is the last port of call for a patient who has been in the hospital since the early hours of the day and is most probably already tired and irritable before reaching the pharmacy. Another contributing factor might be the lengthy dispensing process. The above is in line with the findings of a study done by Afolabi and Erhun (2003), which showed that "A patient's experience of waiting can radically influence his/her perception of service quality". Overall satisfaction was more closely related to satisfaction with waiting

time and whether the pharmacy staffs are helpful and caring.

The absence of communication devices (intercoms) between the doctor's consultation rooms and the pharmacy meant that the pharmacist had to physically leave his office to discuss prescription/medication errors with the doctor. And when this happens frequently, it further worsens the patient's waiting time at the pharmacy.

In the facility, only three cubicles were available for patient counselling, and most often than not, only one or two pharmacists were on hand to counsel patients. Even then, the pharmacist was fond of taking short breaks without communicating same to the patient. This usually results in a pile-up of dispensed medications and delays the counselling process.

The inadequate number of pharmacists also contributed to delays in the dispensing process. It was observed that some of the most senior pharmacists were not involved in the dispensing process or counselling. They confined themselves to purely administrative duties and this puts a great strain on the remaining pharmacists who are usually overwhelmed by the number of patients during rush hours.

Patients' cards do not come to the pharmacy as soon as the former is attended to. They are usually accumulated at the doctor's consulting rooms until the ward assistant feels that it is large enough to be transferred to the pharmacy. This occurs while the patient is already waiting at the pharmacy and is oblivious to the fact that his/her case note/prescription forms are yet to reach the pharmacist. Furthermore, due to late commencement of consultation (usually starts at 10 a.m) by the doctors, there is usually a build-up of patients which when they move en mass to the pharmacy put pressure on the pharmacist on duty.

Patients were significantly less impressed with the waiting area of the pharmacy. This is likely because the benches provided at the waiting area were hard, uncomfortable and insufficient. In most cases, during rush hours, many patients could be found sitting on the bare floor, while waiting to be attended to.

Only an insignificant number of patients were found to have been given additional written instruction. This is considered poor because at best, it is only a fraction of the verbal instructions that the patient will remember after leaving the pharmacy. The above is especially true for the elderly and patients with many medications. In a study De Tullio, *et al.*, (1986) found higher levels of knowledge of drug use and side effects among patients who received written information than among those who did not.

#### **LIMITATIONS OF STUDY**

The study was performed at a single facility; therefore the findings may not be representative of what happens in other pharmacy departments and facilities across Edo state.

The study could not verify if a patient's gender had an influence on levels of satisfaction with pharmaceutical services at the facility.

#### **CONCLUSION**

Majority of the respondents indicated significant satisfaction with pharmaceutical services at the facility. However, first time and irregular users were more satisfied than regular patients.

The study found that a combination of factors rather than a single reason was responsible for the level of satisfaction observed with the respondents. While the socio-demographic characteristics of the respondents had little or no impact on the satisfaction levels of respondents, other factors such as the technical skills;

professional conduct; overall attitude; courtesy; friendliness and attentiveness of the pharmacist were major indicators.

The respondents were mainly dissatisfied with the length of time they spent waiting for their medications to be dispensed as well as the waiting area.

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