

# Assessment of patient satisfaction with pharmaceutical services in two tertiary health facilities in Rivers State, Nigeria

Bagbi B. M.\*, Okonu A. I. and Mgbahurike A. A.

Department of Clinical Pharmacy and Management, Faculty of Pharmaceutical Sciences, University of Port Harcourt, Choba, Nigeria.

\*Corresponding author. Email: baribefe.bagbi@uniport.edu.ng; Tel: +234-803-672-4069

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**ABSTRACT:** Patient satisfaction measurements are necessary to evaluate the quality of care given to patients within a healthcare facility. Healthcare facilities in Africa are faced with numerous challenges such as lack of human and financial resources which can lead to inadequate provision of healthcare to patients. This study aims to assess the level of patient satisfaction with hospital pharmaceutical services in the two tertiary health facilities in Rivers State. A descriptive cross-sectional study was conducted at the various pharmacy units at the health facilities between September and December 2020. Qualitative data was collected using structured self-administered questionnaires. A total of 200 patients from each of the two tertiary health facilities participated in the study. The study showed that majority of the participants (34 and 64%) at the Rivers State University Teaching Hospital (RSUTH) were either very satisfied or satisfied with pharmaceutical services while 36.5 and 43.5% showed varied level of satisfaction with care by pharmacists. At the University of Port Harcourt Teaching Hospital (UPTH), those that reported satisfaction were 37 and 57.5% for the very satisfied and satisfied respectively for pharmaceutical services while it was 38 and 36% respectively for the very satisfied and satisfied with pharmaceutical care rendered by the pharmacists at the facility. However, there was no statistically significant difference in the satisfaction profile at the two facilities ( $p < 0.05$ ). This study concludes that majority of patients assessing the two tertiary health facilities were either very satisfied or satisfied with the pharmaceutical services and care rendered by Pharmacists. The study recommends that similar studies be conducted to assess patient satisfaction at secondary and primary health care facilities.

**Keywords:** Hospital, pharmaceutical services, Pharmacist, satisfaction.

## INTRODUCTION

Satisfaction is an individual's judgment about the extent to which a product or service provides a pleasurable level of consumption related fulfilment (Schommer and Kucukarslan, 1997). Patients' assessment of health care facilities is an important tool in assessing accessibility and the quality of care delivered.

Satisfaction is said to be attained once patient's awareness of excellence of care and facilities they take in health care setting has been sufficient, optimistic and meets their demands (Al Sharif, 2008). Patient's satisfaction is an important outcome measure for evaluating the extent to which health care sector meets

patients' needs and expectation.

Patients' satisfaction can affect patients' health-related decisions and treatment-related behaviours, which can contribute to treatment success and improved health outcomes (Rubin et al., 1993; Dearmin et al., 1995). Patient satisfaction is an indicator that can be used to assess the quality of health-care services (Hasan et al., 2013). The measure of patient satisfaction as a patient's subjective assessment of healthcare service is an important parameter to improve the service in both Community and Hospital Pharmacy settings (Lee et al., 2015; Mahmoud, 2016). Assessing patient satisfaction is

an approach to identify and track changes in patient needs, so that the results can be used to conduct program assessments for better services and maximize the professional capacity in pharmacies (Lee et al., 2015; Mahmoud, 2016).

The absence of a solid conceptual basis and consistent measurement tool for consumer satisfaction has led, over the past ten years, to a proliferation of surveys that focus exclusively on patient experience, i.e., aspects of the care experience such as waiting times, the quality of basic amenities, and communication with healthcare providers, all of which help identify tangible priorities for quality improvement (Bleich et al., 2009).

Measures of patient satisfaction are used to compare health care programmes, and to evaluate the quality of care (Ware et al., 1983). To identify which aspects of a service need improvement (Larson et al., 2002) and to assist organizations in identifying which consumers are likely to disenrollment (Brody et al., 1989). Factors such as patient demographics, health status, characteristics of the health care provider i.e. technical expertise, interest in patient oriented care, waiting time, pharmacy setting, medication availability, and service quality might be involved in patient satisfaction process (Mira and Aranaz, 2000; Al Doghaither et al., 2000).

### Justification of study

It is extremely important to understand patient satisfaction, needs and expectations, as this knowledge is essential to identify problems in the delivery of pharmaceutical care services. Understanding the pharmaceutical services from the patient's perspective is a key indicator of the quality of the health care system. Patients' perspectives of health services identify the sources of deficiencies in the system and direct health professionals and administrators to take corrective actions (Kaldenberg, 2001).

In a study by Oparah *et al.* (2004), to assess patient satisfaction with pharmaceutical services in a Nigerian Teaching Hospital, evidence showed that patients experience low satisfaction with current pharmaceutical services at the study hospital. Patient satisfaction has emerged as an increasingly important parameter in the assessment of health care quality (Bamidele et al., 2011). However, little work has been done on patients' satisfaction with hospital pharmaceutical services in South-South Nigeria (Oluwadiya et al., 2010). Dissatisfaction of patient with pharmaceutical services provided, can lead to lack of medication compliance, treatment failure, and use of services in an inappropriate manner. It is therefore important that these issues be looked at periodically and their prevalence known in order to guide necessary actions towards enhancing service improvement.

### Objectives

The general objective of this study is to assess the level of patient satisfaction with hospital pharmaceutical services at University of Port Harcourt Teaching Hospital and Rivers State University Teaching Hospital, Nigeria. However, the specific objectives are:

1. To assess the level of patient satisfaction with pharmaceutical services rendered in the two tertiary hospitals.
2. To assess the level of care rendered by the pharmacists to the patients in the hospitals.
3. To compare the level of patient satisfaction at these two tertiary hospitals.

### MATERIALS AND METHODS

#### Study design

A descriptive cross-sectional study was conducted among a total of 200 patients at each of the tertiary facilities: UPTH and the RSUTH, between September and December 2020. Patient satisfaction with pharmaceutical services was assessed at the different pharmacy units of each facility.

#### Sample size determination

The sample size was conveniently set at a total of 200 patients per facility (20 patients per pharmacy unit of the different specialty clinics selected).

#### Sampling technique

Patients were approached as they come to the units with the explanation of the questionnaire and the purpose of the study and a request for their participation. The first 20 patients that consented were considered for the study. If in a day the 20 is not gotten, the process is continued the following day(s) until the total of 20 for the unit is completed. The questionnaires were administered by two of the researchers.

#### Inclusion and exclusion criteria

Patients aged 18 years and above, entering the pharmacy during data collection and are willing to participate in the study were included in the study. On the other hand,

patients who are less than 18 years old or are too ill to respond to the questionnaire and those who did not give consent to participate are excluded from the study.

### Questionnaire design

The questionnaire used was modified mainly from the instruments developed, validated and used by Larson *et al.* (2002) and Traverso *et al.* (2007) to assess patient satisfaction with pharmaceutical care intervention. The questionnaire design consisted of three sections A, B and C. Section A consisted of socio-demographic data such as age, gender, level of education, marital status and occupation. Section B comprised counseling elements provided by the pharmacists. Section C covered the satisfaction profile which includes the reason for visiting the pharmacy, time spent, pharmaceutical care services, lifestyle and therapeutic intervention(s) as well as recommendations to improve the practice of pharmaceutical care.

### Validation of instrument

The questionnaire was subjected to face validation by two senior lecturers in the Department of Clinical Pharmacy and Management, University of Port Harcourt, River State, Nigeria. Following the validation, some corrections were made which involved the addition and deletion of some items. The final questionnaire was then considered suitable for administration in the study. A test for reliability was conducted using Cronbach's alpha coefficient and a value of 0.882 for section B and 0.836 for section C; indicating the reliability of the instrument for the study was gotten.

### Data collection method

Data for this study were collected over a period of three months between September and December 2020 using a well-structured, self-administered questionnaire. Data collected include age, gender, level of education, marital status and occupation, responses from the counselling elements provided by pharmacists as well as patient satisfaction profiles relating to pharmaceutical services, lifestyle, therapeutic intervention(s) and recommendations to improve pharmaceutical care practice. The first 20 patients that consented to the study having met the inclusion criteria were given the questionnaire to fill in the patient waiting area of each of the hospital's pharmacy units. Each study lasted between 10 to 15 minutes. Administration of the questionnaires was made by one researcher for each facility.

### Ethical consideration

Ethical approval was obtained from the Research and Ethics committee of the Hospitals with the Reference numbers; UPTH: UPTH/ADM/90/S.II/VOL.XI/960 and RSUTH: RSUTH/REC/2020025 respectively for each of the facilities. Each participant gave informed consent before proceeding with the study.

### Data analysis

Data generated from the study was compiled and analyzed statistically, using IBM SPSS (Statistical Package for Social Sciences) statistical analysis software version 23. Simple descriptive statistic was used while means were compared using Chi-squared analysis. P-value of  $\leq 0.05$  was considered significant.

## RESULTS AND DISCUSSION

**Demographics:** A total of 400 respondents participated in the study, 200 from each facility. The target respondents were patients aged 18 years and above, who visited the hospital pharmacies for consultation or refill of their medication and were willing to participate in the study. The age distribution of the respondents is shown in Table 1 and Figure 1.

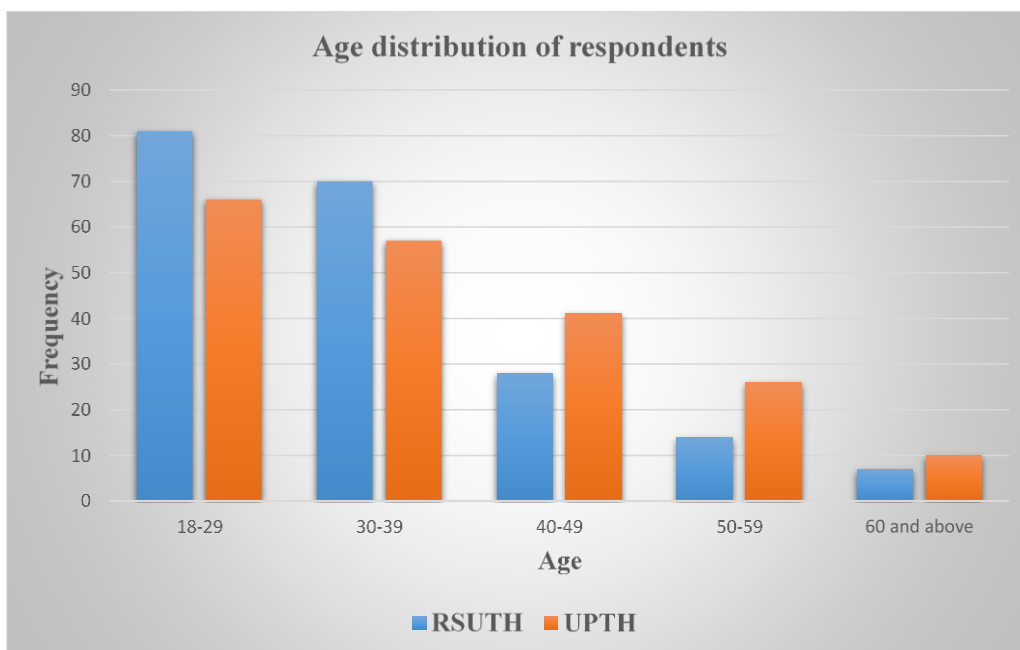
The dissatisfaction of patients with pharmaceutical services provided can lead to a lack of medication adherence, treatment failure and inappropriate use of services. Analysis from the study showed that females constituted a significant number of the respondents (69.5% for the Rivers State University Teaching hospital and 57.5% for the University of Port Harcourt Teaching Hospital) than males (30.5% for the Rivers State University Teaching Hospital and 42.5% for the University of Port Harcourt Teaching Hospital). This is consistent with work done in southeast Nigeria which shows that more females tends to be available and consent to studies in the health facilities than men (Obi *et al.*, 2018 and Meremikwu *et al.*, 2007).

The majority of the respondents were within the age range of 18-29 (40.5% for the RSUTH and 33.0% for UPTH), while those above 60 years (3.5% for the Rivers State University Teaching hospital and 5.0% for the University of Port Harcourt Teaching Hospital) were the least frequent respondents. This is expected as the younger age group could easily independently seek health care services than the elderly who will need assistance from other members of the family or community to do the same (Table 1 and Figure 1).

For the occupational level of participants, at the Rivers State University Teaching Hospital, 27 (13.5%) were

**Table 1.** Age distribution of the respondents.

Age	RSUTH		UPTH	
	n	%	n	%
18-29 years	81	40.5	66	33.0%
30-39 years	70	35.0	57	28.5%
40-49 years	28	14.0	41	20.5%
50-59 years	14	7.0	26	13.0%
60 years and above	7	3.5	10	5.0%



**Figure 1.** Showing age distribution of respondents.

traders, 34 (17.0%) were civil servants, 20 (10.0%) were teachers, 28 (14.0%) were students, 17 (8.5%) were unemployed, 48 (28.0%) were self-employed, and 26 (13.0%) had other occupation not listed above. While at the University of Port Harcourt Teaching Hospital, 17 (8.5%) were traders, 37 (18.5%) were civil servants, 15 (7.5%) were teachers, 33 (16.5%) were students, 16 (8.0%) were unemployed, 61 (30.5%) were self-employed, and 21 (10.5%) had other occupation not listed above (Figure 2). This was a bit more diverse than respondents' occupations reported in the study by Obi *et al.* (2018). Respondents' occupation did not so much affect their level of satisfaction with services rendered in the facilities.

**Patient satisfaction with pharmaceutical services**

The study shows that majority of the participants at the

Rivers State University Teaching Hospital and the University of Port Harcourt Teaching Hospital were satisfied (62.0% and 57.5% respectively) with pharmaceutical services rendered by the pharmacists, while few participants were dissatisfied (4.0% and 5.5% respectively) with the pharmaceutical services rendered at the two tertiary health facilities (Table 2).

Pearsons' correlation data shows that the pharmaceutical services offered by the Pharmacists positively influenced the satisfaction of the patients at the two tertiary health facilities. This finding agrees with a study conducted by Iliyasu *et al.* (2010) in Kano Nigeria, which observed patient satisfaction with services provided in a teaching hospital by a good number of patients (83%). Emelumadu *et al.* (2012) also observed overall satisfaction with services in the general outpatient department of the Nnewi Teaching hospital, Anambra State, Nigeria from a good number of patients (79%).

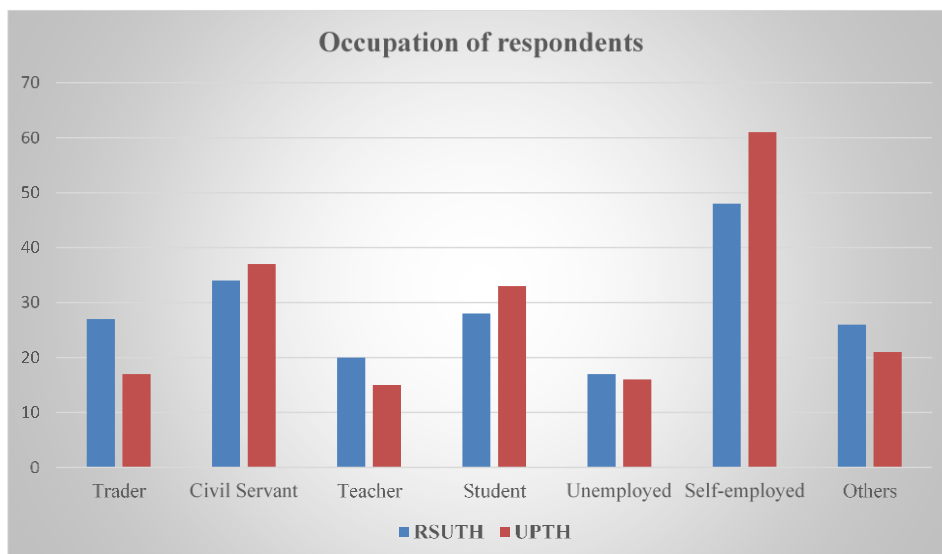


Figure 2. Showing the occupation of respondents.

Table 2. Patient satisfaction profile.

Variables	Response	Frequency (%) RSUTH	Frequency (%) UPTH	p-value	χ <sup>2</sup> (Chi-square)
Professional appearance of the Pharmacist.	Very Satisfied	82 (41.0)	93 (46.5)	0.483	1.455
	Satisfied	113 (56.5)	101 (50.5)		
	Dissatisfied	5 (2.5)	6 (3.0)		
Pharmacist's interest in your health.	Very Satisfied	69 (34.5)	85 (42.5)	0.192	3.306
	Satisfied	123(61.5)	105 (52.5)		
	Dissatisfied	8 (4.0)	10 (5.0)		
Pharmacist's professional relationship with you.	Very Satisfied	58 (29.0)	86 (43.0)	0.011	9.022
	Satisfied	134 (67.0)	105 (52.5)		
	Dissatisfied	8 (4.0)	9 (4.5)		
Availability of medication prescribed to you in the pharmacy.	Very Satisfied	65 (32.5)	70 (35.0)	0.007	9.942
	Satisfied	122 (61.0)	99 (49.5)		
	Dissatisfied	13 (6.5)	31 (15.5)		
Cost of medicine in the pharmacy.	Very Satisfied	46 (23.0)	62 (31.0)	0.113	4.368
	Satisfied	125 (62.5)	105 (52.5)		
	Dissatisfied	29 (14.5)	33 (16.5)		
Patient education and counselling.	Very Satisfied	57 (28.5)	80 (40.0)	0.007	10.021
	Satisfied	131 (65.5)	100 (50.0)		
	Dissatisfied	12 (6.0)	20 (10.0)		
Professional appearance of the pharmacy.	Very Satisfied	63 (31.5)	81 (40.5)	0.027	7.198
	Satisfied	128 (64.0)	117 (58.5)		
	Dissatisfied	9 (4.5)	2 (1.0)		

Note: p-value < 0.05 indicate a significant relationship.

Table 2. Contd.

Variables	Response	Frequency (%) RSUTH	Frequency (%) UPTH	p-value	$\chi^2$ (Chi-square)
Pharmacist's effort to help you improve your health or stay healthy	Very Satisfied	72 (36.0)	83 (41.5)	0.229	2.944
	Satisfied	118 (59.0)	102 (51.0)		
	Dissatisfied	10 (5.0)	15 (7.5)		
How well the pharmacist answers your question(s)	Very Satisfied	87 (43.5)	75 (37.5)	0.473	1.495
	Satisfied	105 (52.5)	116 (58.0)		
	Dissatisfied	8 (4.0)	9 (4.5)		
Privacy of your conversation with the pharmacist	Very Satisfied	70 (35.0)	75 (37.5)	0.399	1.839
	Satisfied	126 (63.0)	117 (58.5)		
	Dissatisfied	4 (2.0)	8 (4.0)		
Patient monitoring and evaluation	Very Satisfied	39 (19.5)	61 (30.5)	0.030	7.013
	Satisfied	124 (62.0)	112 (56.0)		
	Dissatisfied	37 (18.5)	27 (13.5)		
Time spent at the pharmacy unit.	Very Satisfied	40 (20.0)	58 (29.0)	0.022	7.609
	Satisfied	130 (65.0)	103 (51.5)		
	Dissatisfied	30 (15.0)	39 (19.5)		
Communication effectiveness with the pharmacist	Very Satisfied	79 (39.5)	76 (38.0)	0.061	5.607
	Satisfied	115 (57.5)	107 (53.5)		
	Dissatisfied	6 (3.0)	17 (8.5)		
Courtesy and respect shown by the pharmacy staff	Very Satisfied	79 (39.5)	80 (40.0)	0.874	0.269
	Satisfied	113 (56.5)	107 (55.0)		
	Dissatisfied	8 (4.0)	10 (5.0)		
Generally, how satisfied are you with pharmaceutical services delivered by the pharmacist	Very Satisfied	68 (34.0)	74 (37.0)	0.587	1.066
	Satisfied	124 (62.0)	115 (57.5)		
	Dissatisfied	8 (4.0)	11 (5.5)		

Note: p-value < 0.05 indicate a significant relationship.

Looking at specific aspects of care, a good number of the respondents in this study were in agreement and satisfied with the availability of the pharmacists to answer their question(s) at both health facilities, ability of the Pharmacists to provide information on; the use of the medication and duration of treatment, the ability of the Pharmacists to label the patients' medication with dose and use instructions, make the patient feel comfortable and review patient's prescription for accuracy in terms of drug name and dose (Table 3).

The importance of Pharmacists in providing pharmaceutical care cannot be over-emphasized. Pharmacists are the most accessible and highly trusted

healthcare professionals and they play a major role in healthcare service delivery, so as to ensure effective and safe treatment among the patients, as the role of the Pharmacists revolves around patient-oriented services. The availability of Pharmacists to render the necessary pharmaceutical services and care was well reported by respondents in the study. This is in agreement with the studies by Mináriková *et al.* (2016) that reported that Pharmacists are always available to answer questions from patients and other health care professionals, with respect to the use of drugs and health outcomes. Overall, a good number of the participants at the Rivers State University Teaching Hospital (62.0%) and the University of

**Table 3.** Response on level of care rendered by the pharmacists at the Rivers State University Teaching Hospital (RSUTH) and the University of Port Harcourt Teaching Hospital (UPTH).

Variables	Response	Frequency (%) RSUTH	Frequency (%) UPTH	p-value	X <sup>2</sup> (Chi-square)
A Pharmacist is always available to answer my question(s)	Strongly agree	72 (36.0)	98(49.0)	0.064	8.895
	Agree	86 (43.0)	71(35.5)		
	Neutral	33 (16.5)	22(11.0)		
	Disagree	6(3.0)	8(4.0)		
	Strongly disagree	3(1.5)	1 (0.5)		
Pharmacist provides counsel on the use(s) of medication	Strongly agree	80 (40.0)	92 (46.0)	0.272	5.149
	Agree	94 (47.0)	74 (37.0)		
	Neutral	19 (9.5)	22 (11.0)		
	Disagree	3 (1.5)	7 (3.5)		
	Strongly disagree	4 (2.0)	5 (2.5)		
Pharmacist provides explanation on duration of treatment	Strongly agree	79 (39.5)	99 (49.5)	0.096	7.882
	Agree	84 (42.0)	62 (31.0)		
	Neutral	27 (13.5)	23 (11.5)		
	Disagree	6 (3.0)	12 (6.0)		
	Strongly disagree	4 (2.0)	4 (2.0)		
Pharmacist provides information and education on medication interactions (if any).	Strongly agree	61 (30.5)	55 (27.5)	0.262	5.251
	Agree	69 (34.5)	68 (34.0)		
	Neutral	43 (21.5)	35 (17.5)		
	Disagree	22 (11.0)	30 (15.0)		
	Strongly disagree	5 (2.5)	12 (6.0)		
Pharmacist provides counsel on the side effects of medication	Strongly agree	46 (23.0)	53 (26.5)	0.137	6.974
	Agree	74 (37.0)	53 (26.0)		
	Neutral	39 (19.5)	42 (21.0)		
	Disagree	24 (12.0)	37 (18.5)		
	Strongly disagree	17 (8.5)	15 (7.5)		
Pharmacist provides patient education and counseling on proper storage of the medication	Strongly agree	48 (24.0)	66 (33.0)	0.067	8.786
	Agree	79 (39.5)	55 (27.5)		
	Neutral	37(18.5)	33 (16.5)		
	Disagree	25 (12.5)	34 (17.0)		
	Strongly disagree	11 (5.5)	12 (6.0)		
Pharmacist labels my medication with dose and use instruction	Strongly agree	120 (60.0)	123 (61.5)	0.309	4.795
	Agree	66 (33.0)	55 (27.5)		
	Neutral	8 (4.0)	16 (8.0)		
	Disagree	6 (3.0)	5 (2.5)		
	Strongly disagree	0 (0.0)	1 (0.5)		
Pharmacist reviews my prescription for accuracy in terms of drug names and dose	Strongly agree	92 (46.0)	101 (50.5)	0.107	7.610
	Agree	72 (36.0)	67 (33.5)		
	Neutral	29 (14.5)	17 (8.5)		
	Disagree	3 (1.5)	10 (5.0)		
	Strongly disagree	4 (2.0)	5 (2.5)		
Pharmacist monitors my health progress to ensure the safe and effective use of medication	Strongly agree	39 (19.5)	66 (33.0)	<b>0.007</b>	14.185
	Agree	57 (28.5)	49 (24.5)		
	Neutral	52 (26.0)	35 (17.5)		
	Disagree	24 (12.0)	32 (16.0)		
	Strongly disagree	28 (14.0)	18 (9.0)		

Table 3. Contd.

Variables	Response	Frequency (%) RSUTH	Frequency (%) UPTH	p-value	X <sup>2</sup> (Chi-square)
Pharmacist makes me feel comfortable	Strongly agree	62 (31.0)	70 (35.0)	0.090	8.034
	Agree	85 (42.5)	60 (30.0)		
	Neutral	34 (17.0)	39 (19.5)		
	Disagree	12 (6.0)	19 (9.5)		
	Strongly disagree	7 (3.5)	12 (6.0)		
Overall, I am satisfied with the care rendered by the pharmacist	Strongly agree	73 (36.5)	76 (38.0)	0.189	6.142
	Agree	87 (43.5)	72 (36.0)		
	Neutral	28 (14.0)	33 (16.5)		
	Disagree	6 (3.0)	15 (7.5)		
	Strongly disagree	6 (3.0)	4 (2.0)		

Port Harcourt Teaching Hospital (57.5%) were satisfied with the pharmaceutical services rendered at the two tertiary health facilities. This finding agrees with that of an earlier study by Onavbavba *et al.* (2017). The availability of pharmacists to provide a review of prescriptions, clerk patients and give relevant information about the drug has reduced irrational use of drugs among patients to a great extent and this has led to better clinical outcomes. The level of patient satisfaction with pharmaceutical services may not be totally influenced by the quality of the health team or the hospital, but it reflects how the pharmaceutical services have been delivered.

### Conclusion

The majority of the participants at the Rivers State University Teaching Hospital and the University of Port Harcourt Teaching Hospital were satisfied with pharmaceutical services and care rendered by the pharmacists, while only a very few participants were dissatisfied. There was no statistically significant difference in the services and level of care rendered by pharmacists at the two tertiary health facilities.

### Recommendations

1. Further studies should be conducted to assess patient satisfaction in secondary and primary health care facilities.
2. Efforts should be made to get regular feedback from the patients.
3. Pharmacists should deliberately and always strive to practice according to the philosophy of pharmaceutical care.
4. The awareness of patients on the expected pharmaceutical care and services from the pharmacists should be increased.

### CONFLICT OF INTEREST

The authors declared that there is no conflict of interest either between the authors or their Organization.

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