Assessment of Patients' Satisfaction with Pharmaceutical Services rendered in Staff Clinic, of Tertiary Hospital, Ilorin, Kwara State

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Abstract

The evaluation of patients' satisfaction on various matters concerning healthcare services provides insight about the drawbacks of different healthcare systems. The study aimed at assessing the level of patients' satisfaction with pharmacy services in staff clinic of tertiary hospital, Ilorin, Kwara State.

The overall mean patient satisfaction with services rendered is above average. The mean process satisfaction score contributed more to the overall satisfaction score than the mean structure satisfaction score, and both aspects correlated positively with the overall satisfaction score.

Keywords: Patient satisfaction, Pharmacy services, Healthcare facility, Pharmaceutical care, Ilorin

INTRODUCTION

Over the years, there is a paradigm shift in pharmacy being a product, such as drug dispensing, compounding to patient-oriented profession which encompasses provisions of quality health and drug services, information and pharmaceutical care to patients' (Wiedenmayer *et al.*, 2006). With this, the Pharmacists are now fully engaged in overall patients' well-being and health outcomes. In order to effectively communicate between the pharmacy system and the final customer, the patient, the Pharmacist also manages the interpersonal interactions that are necessary (Smith *et al.*, 2011).

The quality of healthcare services rendered in the hospital is often evaluated by patient satisfaction (Naik Panvelkar *et al.*, 2009). In this sense, it is thought that patient happiness and the degree of service quality are correlated. An essential factor in enhancing healthcare in both community and hospital settings is patient satisfaction, which is measured as the patient's subjective evaluation of the service (Lee *et al.*, 2015, Mahmoud, 2016). In this case, patients' satisfaction is a gauge of how well pharmacy services satisfy demands when it comes to getting prescription drugs.

One of the most important ways to gauge patient satisfaction is by having people participate in the healthcare process. This is a chance for healthcare administrators to devise plans to satisfy patients' needs and strengthen their involvement in raising the standard of care (Cheng, 2004, Souliotis, 2016). A patient's degree of satisfaction with a health care service is a measure of how well their expectations and actual experience match (Badri *et al.*, 2009). The process of ensuring patient satisfaction is highly intricate and is influenced by a wide range of variables, including expectations, the patient's experience with healthcare services, and sociodemographic characteristics. Comprehending the factors that influence patient's satisfaction is essential for public hospitals to deliver high-quality healthcare services (Gould *et al.*, 2013, Al-Abri & Al-Balushi, 2014,).

Improving the overall quality of healthcare requires that certain aspects of the system, such as hospital pharmacy services, be provided to the highest standards (Nau *et al.*, 2004). Within an institutional health care system, the services provided by the hospital pharmacy unit are essential. The primary services provided by this unit are pharmaceutical dispensing and distribution, compounding, medication use review, adverse drug reaction monitoring, and drug information service.

Previous study in Benin, reported low patients' satisfaction with waiting time for their medications (Oparah *et al.*, 2004), while in Ile Ife, patients were fairly satisfied with the pharmaceutical services rendered at the pharmacy, and the major barrier to satisfaction was long waiting time (Afolabi & Erhun, 2003). To the best of our knowledge, there are little or no studies on patients' satisfaction with healthcare services carried out in the North central region of Nigeria. The objective of this study hence is to assess the level of patients' satisfaction with the quality of pharmacy services rendered at the Federal staff clinic of the University of Ilorin Teaching Hospital, Kwara State.

MATERIALS AND METHODS

Study design

The study is an institutional based cross-sectional to assess the level of satisfaction of patients with the quality of pharmacy services rendered at the staff clinic of the University of Ilorin Teaching Hospital between April to October 2019.

Study area

Ilorin is the capital city of Kwara state, one of the 36 states of Nigeria. Kwara state is located in the North Central geopolitical zone of the country. As of 2016 it had a population of 3.19 million (Kwara, 2019). University of Ilorin Teaching Hospital is a federal tertiary institution (UITH). As at 2018, UITH has 600 bed spaces with different specialties that cater for patients from Kwara, parts of Oyo, Osun, Ekiti, Kogi states (HIMD, 2018). It is also a known research center with a number of breakthroughs and successful operations such as the Open-Heart Surgeries. The Federal Staff Clinic of UITH is an annex situated at the Federal Secretariat in Ilorin. It caters for all federal government workers from various parastatals and their families as well as out-patients that need ambulatory care and has an average number of patients of 348 monthly.

Collection of samples

Sample selection was random sampling of every second patients within the study period who visited the pharmacy for their medications. Sample size was determine using single mean formula:

$$[N = (Z_{1-\alpha})^2 \times \sigma^2/SE^2]$$

Where N = Calculated sample size, Z = Given Z value (1.96), σ = Standard deviation, SE = Standard error (0.5 with 95% confidence interval)

Calculated sample size was 100 plus 10% attrition rate, which was later rounded up to 130. Consented out-patients/representatives, 18 years and above, who visited the pharmacy within the study period for their medications were included in the study. Those considered too old and not able to communicate effectively, and patients critically ill and unable to access the pharmacy along with those previously used for the pre-testing of the questionnaire were excluded from the study.

Data collection

Data was collected using a structured questionnaire adapted from previous study (Surur *et al.*, 2015). The questionnaire comprises of three sections, section one which focused on the socio-demographic profile of respondents, section two which focused on the level of satisfaction of the patients with the structure, that is, setting of the pharmacy and section three which focused on the level of satisfaction of the patients with the process, that is, services rendered in the pharmacy. The satisfaction sections contained Twenty-three five-point Likert scale items, ranging from 1, 2, 3, 4, and 5, representing "very low", "low", "moderate", "High" and "Very high", with a minimum satisfaction score of 23, and maximum of 115. The instrument was pretested on 20 clients to test for the reliability, and Cronbach's alpha was 0.93. Data was collected through interviewing patients after they had their prescriptions/orders filled in the pharmacy.

Data analysis

Data collected was entered on Microsoft Excel Window 10, and thereafter transported to Statistical Package for Social Sciences (SPSS) version 20 for analysis. Analyses were both descriptive and inferential. A mean score of satisfaction of > 3 was considered for patients who were satisfied with the services being rendered by the pharmacy, while mean score of \le 3. was regarded as not satisfied. Independent t test was employed to assess the difference in satisfaction of clients between sex, payment, services sought and patronage. In doing the different analyses 95 % CI and p value of 0.05 were used for deciding statistical significance of differences observed. Correlation analysis was done to determine patients' factors correlated with pharmacy services satisfactions. Results were considered significant at p value < 0.05.

Ethical considerations

Administrative approval was obtained from the Head of the studied unit, verbal inform consent was obtained from the studied participants. Respondents were guaranteed of utmost confidentiality.

RESULTS

Socio-demographic characteristics of respondents

More than half (53.8%) of the respondents were males, with highest (36.2%) within age range between 30 to 39 and majority (99.2%) were married. Regarding the educational status of the respondents, 87.7% had tertiary education. The Yoruba speaking respondents were the highest (86.9%) of the participants. Most (77.7%) were employees of government-owned institutions. The highest (26.9%) income range were between \mathbb{N} 30,000 to \mathbb{N} 59,000. Very many (80.8%) of the respondents had frequent patronage of the pharmacy, with majority (76.9%) which sought services for themselves, and 80.0% were registered on National Health Insurance Scheme (NHIS).

Table 1: Socio-demographic characteristics of respondents

VARIABLES	FREQUENCY (N)	PERCENTAGE (%)
Gender		
Male	70	53.8
Female	60	46.2
Age (Years)		
18 – 29	10	7.7
30 - 39	47	36.2
40 - 49	46	35.4
50 - 59	25	19.2
60 and above	2	1.5
Marital status		
Single	15	11.5
Married	114	99.2
Separated	0	0
Divorced	1	0.8
Religion		
Christianity	52	40.0
Islam	78	60.0
Traditional	0	0
Educational level		
Primary	1	0.8
Secondary	14	10.8
Tertiary	114	87.7
Arabic	1	0.8
Ethnicity		
Yoruba	113	86.9
Igbo	3	2.3
Hausa	1	0.8
Nupe	4	3.1
Baruba	8	6.2
Others	1	0.8
Occupation		
Government	101	77.7
Private	5	3.8
Self-employed	13	10.0
Unemployed	11	8.5
Income level (N)		
< 30,000	26	20.0

30 - 59,000	35	26.9	
60 - 89,000	23	17.7	
90 - 119,000	21	16.2	
120,000 and above	25	19.2	
Patronage			
First time	25	19.2	
Repeat	105	80.8	
Service sought for			
Self	100	76.9	
Others	30	23.1	
Payment status			
Insurance	104	80.0	
Out-of-pocket	26	20.0	

Level of respondents' satisfaction with pharmacy services

The overall mean scores the respondents gave to satisfaction with pharmacy services was 3.31 out of a maximum of 5.00 score. Both "Good professional appearance of the Pharmacy" and "The clarity of the pharmacy professional's instructions about how to take your medication" had the highest mean score (3.61). The parameter with the lowest mean score (2.75) was "The availability of medications that are prescribed to you in the pharmacy" (Table 2). Overall, there was above average structure and process mean score (> 3) with respect to gender, patronage, payment status and services sought for self or others. However, service sought for self, was significantly (p < 0.05) associated with the process mean score (Table 3).

Table 2: Distribution of satisfaction scores of respondents

Variables	Very low (%)	Low (%)	Moderate (%)	High (%)	Very high (%)	Mean (sd)
Reasonable privacy for	1	11	77	28	13	3.32
discussions	(0.8)	(8.5)	(59.2)	(21.5)	(10.0)	(±0.798)
Adequate Pharmacy space	7	19	79	19	6	2.98
	(5.4)	(14.6)	(60.8)	(14.6)	(4.6)	$(\pm .835)$
Good professional	1	2	62	47	18	3.61
appearance of the Pharmacy	(0.8)	(1.5)	(47.7)	(36.2)	(13.8)	(± 0.773)
The location of the	2	12	72	31	13	3.32
pharmacy relative to other service areas	(1.5)	(9.2)	(55.4)	(23.8)	(10.0)	(±0.836)
The Pharmacist's	0	5	83	28	14	3.39
professional relationship with you	(0.0)	(3.8)	(63.8)	(21.5)	(10.8)	(±0.731)
The pharmacist's interest in	2	8	64	35	21	3.50
your health	(1.5)	(6.2)	(49.2)	(26.9)	(16.2)	(±0.891)
The courtesy and respect	ò	3	71	37	Ì9 ´	3.55
shown to you by the pharmacy staff	(0.0)	(2.3)	(54.6)	(28.5)	(14.6)	(±0.768)
The promptness of	1	13	76	30	10	3.27
prescription medication service	(0.8)	(10.0)	(58.5)	(23.1)	(7.7)	(± 0.775)
Involved decision-making	1	20	85	21	3	3.04
responsibilities	(0.8)	(15.4)	(65.4)	(16.2)	(2.3)	(± 0.664)
How well the pharmacist	7	18	66	27	12	3.15
explains possible side effects	(5.4)	(13.8)	(50.8)	(20.8)	(9.2)	(±0.957)
The care the pharmacy staff	0	9	63	39	19	3.52
takes while supplying your medications	(0.0)	(6.9)	(48.5)	(30.0)	(14.6)	(±0.828)

The way your pharmacist	1	14	61	37	17	3.42
works together with your	(0.8)	(10.8)	(46.9)	(28.5)	(13.1)	(± 0.879)
doctor to make sure your						
medications are the best for						
you						
The fairness of cost of	2	11	77	25	15	3.31
medications in the	(1.5)	(8.5)	(59.2)	(19.2)	(11.5)	(± 0.843)
pharmacy	, ,	, ,	, ,	, ,	, ,	, ,
The amount of time the	1	9	92	18	10	3.21
pharmacy professional	(0.8)	(6.9)	(70.8)	(13.8)	(7.7)	(± 0.712)
spends with you	, ,	,	` ,	, ,	` '	,
The clarity of the pharmacy	0	3	67	38	22	3.61
professional's instructions	(0.0)	(2.3)	(51.5)	(29.3)	(16.9)	(± 0.792)
about how to take your	` /	()	,	,	,	,
medication						
The information the	4	12	77	24	13	3.23
pharmacist gives you about	(3.1)	(9.2)	(59.2)	(18.5)	(10.0)	(± 0.867)
the proper storage of your	()	()	()	()	()	()
medication						
How well the pharmacy	1	3	71	39	16	3.51
professional answers your	(0.8)	(2.3)	(54.6)	(30.0)	(12.3)	(±0.770)
questions	(0.0)	(=10)	(====)	(0010)	(==)	(=====)
The information the	2	16	85	16	11	3.14
pharmacy professional	(1.5)	(12.3)	(65.4)	(12.3)	(8.5)	(±0.795)
gives you about the results	()	()	()	()	()	()
you can expect from your						
medication therapy						
The amount of time you	9	12	86	17	6	2.99
spend waiting for your	(6.9)	(9.2)	(66.2)	(13.1)	(4.6)	(±0.831)
prescription to be filled	()	()	()	()	('-')	()
The availability of	10	35	64	19	2	2.75
medications that are	(7.7)	(26.9)	(49.2)	(14.6)	(1.5)	(±0.854)
prescribed to you in the	(* **)	(=0.5)	(13.12)	(1110)	(1.0)	(=0.001)
pharmacy						
The clarity of the label on	2	11	72	27	18	3.37
the medication supplied to	(1.5)	(8.5)	(55.4)	(20.8)	(13.8)	(±0.882)
you	(2.0)	(0.0)	(55.1)	(20.0)	(20.0)	(_0.002)
The overall cleanliness and	1	5	69	32	23	3.55
comfort of the waiting area	(0.8)	(3.8)	(53.1)	(24.6)	(17.7)	(±0.855)
Your pharmacy services	1	6	71	33	19	3.48
overall	(0.8)	(4.6)	(54.6)	(25.4)	(14.6)	(±0.828)
Overall	(0.0)	(4.0)	(34.0)	(20.7)	1.0)	(±0.020)

On the scale, 1= very low, 2= low, 3= moderate, 4= High, 5= Very high, SD = Standard Deviation

Table 3: Test of association between mean satisfaction level of patients by sociodemographic characteristics

Variable	SMS	SD	p-value	PMS SD p-value
Gender: Male	3.304	±0.67	0.128	3.329 ±0.55 0.409
Female	3.308	± 0.54		3.300 ± 0.51
Patronage: First time	3.320	± 0.45	0.250	$3.278 \pm 0.52 0.840$
Repeat	3.302	± 0.64		3.324 ± 0.53
Payment Status: Insurance	3.245	±0.59	0.326	$3.233 \pm 0.48 0.088$
Out-of-pocket	3.548	±0.62		3.646 ± 0.58
Services sought for: Self	3.285	± 0.64	0.595	$3.331 \pm 0.56 0.027$
Others	3.375	±0.49		3.265 ± 0.39

p-value < 0.05, SD- Standard Deviation, SMS- Structure Mean Satisfaction, PMS- Process Mean Satisfaction

Table 4: Correlation of overall satisfaction of patients with structure and process

Mean overall satisfaction score		Mean structure satisfaction score	Mean process satisfaction score	
Mean structure	.717**	1	.589**	
satisfaction score	.000		.000	
Mean process	.986**	.589**	1	
satisfaction score	.000	.000		

Correlation is significant at 0.05 level

Table 5 showed that there is a positive correlation between mean overall satisfaction score and mean structure as well as process satisfaction score (r value is 0. 717 and 0.986 respectively); there is also a positive correlation also between mean structure satisfaction score and mean process satisfaction score (r value is 0.589). In all, these associations are statistically significant, (p-value is 0.000).

DISCUSSION

The response rate in this study was 100%. Male respondents were the highest (53.8%), this is in tandem to the result seen in a similar study (Martínez-López-de-Castro *et al.*, 2018). Married respondents (99.2%), aged between 30 to 39 years old (36.2%) were also ranked highest as seen in a previous study (Surur *et al.*, 2015). The high proportion of married male, respondents in this study could stem from the cultural beliefs in Nigeria, especially Yorubaland, where men are the primary breadwinners of the family and take care of all needs, including accessing pharmacy services on behalf of other members of the family, often waiting till critical times before allowing the member who needs care to be brought to the health care specialist.

The clear majority of respondents in this study were customers who repeatedly visited the pharmacy, with the same percentage of patients (80%) enjoying the benefit of health insurance. This means that patients are likely to repeat patronage at pharmacies where they are able to enjoy insurance services and where their needs are covered by the insurance companies. This is common in developing countries like Nigeria, and is corroborated in Northwestern Ethiopia (Surur *et al.*, 2015).

The mean satisfaction score in the index study (3.31) was higher than the moderate level on the five-point Likert scale. Although this was lower than previous studies in Benin City and Addis Ababa (Woldekidan et al., 2019, Odili et al., 2020), it is similar to the mean score reported in a tertiary hospital, Benin, Nigeria (Oparah et al., 2004), and higher than the mean scores reported in Government owned hospitals in Addis Ababa and Northern Ethiopia (Eshetu and Gedif, 2010, Surur et al., 2015). This is due to the fact that these countries are at different levels of development, as this has a direct effect on the quality of pharmacy services provided especially at government hospitals. This is further corroborated by findings of studies done in better developed parts of the world. Marquez-Peiro and Perez-Peiro, (2008) in Spain found a higher mean satisfaction level of 4.04. Further studies in China also found that 3 out of every 4 patients were satisfied with pharmacy services (Lee et al., 2015). The attitude of Nigerian pharmacists to implementation of quality pharmaceutical care has been found to be high, and this could also be attributed to higher than average and mean satisfaction score found among Nigerian patients. (Oparah & Eferakeya, 2005). It is worthy of note that out of all the parameters assessed, only three had mean scores less than 3.00, "adequate pharmacy space", "the amount of time you spend waiting for your prescription to be filled" and "the availability of medications that are prescribed to you in the pharmacy", this is similar to findings in the research done by (Jande et al., 2013). This shows that time, availability of medications and

adequate space which may provide good counselling area are major factors in determining the level of patients' satisfaction with pharmacy services.

The parameters with the highest satisfaction score in this study included "the clarity of the pharmacy professional's instructions about how to take your medication" and "the courtesy and respect shown to you by the pharmacy staff". Marquez-Peiro and Perez-Peiro, (2008) found that the "Pharmacists' skills" had the highest satisfaction score, and similar findings in Punjab (Aziz *et al.*, 2018) and Ethiopia (Surur *et al.*, 2015) found that staff attitude and professionalism both had a high mean satisfaction score. Eze *et al.* (2018) in Sagamu also found that the courtesy shown to the patient and privacy of conversations with patient had the highest satisfaction scores among older patients. This confirms that the professionalism and competence of the Pharmacist on duty, is an important predictor of patients' satisfaction and should be an integral question to be asked about the pharmaceutical processes in the audit of a pharmacy aiming to deliver quality care. Previous report in Nigeria showed the positive effect of professionalism and educational counselling of patients by achieving higher post intervention satisfaction scores among psychiatric patients (Offor & Enato, 2011).

In this study, "overall cleanliness and good appearance of the pharmacy area" also had high mean satisfaction scores. This is in contrast to values found in a similar study in Ethiopia and no doubt contributed to the poor overall satisfaction score in that study. A clean, comfortable and well appearing waiting area has the ability to negate the effect of prolonged waiting times which are almost inevitable in busy and government hospitals, and is a positive predictor of overall patients' satisfaction with the structure of pharmacy services. In contrast, this study found the parameter with the lowest mean score to be the "availability of medications prescribed". This is similar to findings from two studies done in Ethiopia, but in contrast to findings in Punjab, where patients were satisfied with the availability of drugs in the pharmacies studied. This emphasizes the fact that the lack of funding and inability to access foreign products and active pharmaceutical ingredients is responsible for the dreaded "out of stock syndrome" which plagues pharmacies in poorly developed countries like Nigeria (PharmaTimes, 2016).

In this study patients who accessed services for themselves were only slightly more satisfied than those who accessed the pharmacy services on behalf of others, however both satisfaction scores were still above average. This is similar to findings by Surur *et al.* (2015), and could be attributed to the highly professional attitudes of Nigerian pharmacists, and the fact that patients are more impressed when their own needs are thoroughly discussed and taken care of compared to others.

The mean overall satisfaction score with pharmacy services correlated positively with the mean structure satisfaction score and mean process satisfaction score. This shows that once patients are satisfied with the structure and process in the pharmacy, they will be generally satisfied with the overall pharmacy services. This suggested that good structure and process must be in place to thoroughly satisfy patients that access pharmacy units for services. The pharmacy process however contributed more to the overall satisfaction, when compared with structure. This may stem from the fact that the procedural aspects of pharmacy services are likely to affect the patients wellbeing more than the structural aspects, and patients are likely to be happier with competent and professional pharmacists who take utmost care and time in counselling and prescribing medications, even if the location and appearance of the pharmacy is below par. A study done in Valencia, found higher satisfaction scores for questions relating to pharmacy processes (Marquez-Peiro and Perez-Peiro, 2008). Aziz *et al.* (2018) compared

structural aspects of pharmacy care with dispensing, counselling and handling of medication. They found lower total satisfaction scores for structural aspects such as location, convenience and the dispensing area. This is further buttressed by similar study which assessed satisfaction with healthcare services in Botswana and found Pharmacy services to have the highest satisfaction score among all healthcare providers (Bamidele *et al.*, 2011). The highest contributors to this high mean score of 4.1 were procedural aspects of pharmacy care such as information and quality of services provided.

The findings in the index study have thus shed more light on the possible benefits of optimizing pharmaceutical processes as a means to improving overall patient satisfaction and could potentially form a template for a policy which enables regular audits of pharmaceutical services in Nigerian pharmacies.

The study is however not without limitations, this is a single facility cross-sectional study, results cannot be generalized. Results on patient's satisfaction with pharmacy services may have been overestimated, because the study solely relied on the information provided by the patients, and may not be free from recall bias.

CONCLUSION

The overall mean patients' satisfaction with pharmaceutical services rendered in staff clinic, at University of Ilorin teaching Hospital was above average. Clarity of instructions and courtesy shown by the pharmacists contribute positively towards a higher satisfaction score. The cleanliness and appearance of the pharmacy are also important structural aspects contributing to satisfaction in this study. The mean process satisfaction score contributed more to the overall satisfaction score than the mean structure satisfaction score, but both aspects of pharmaceutical care correlated positively with the overall satisfaction score.

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