

PATIENTS' VIEWS ON PHARMACY SERVICES

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ABSTRACT Understanding the full scope of patient satisfaction and its underlying factors is essential to enhancing service quality. Thus, the purpose of this study was to determine how satisfied patients were with pharmacy service. A cross-sectional research of 422 patients was carried out between September and January 2018 to evaluate patient satisfaction with pharmacy services at public hospitals in Eastern Ethiopian. Exit interviews using standardised questionnaires were used to gather data. Multiple logistic regression was used to examine the relationships between the dependent and independent variables using an adjusted odds ratio at a 95 percent confidence interval and the p values less than 0.05 to examine the associations.

Keywords: Pharmacy service, patient satisfaction, Ethiopia

I. Introduction

The quality notion must be embraced by today's health care system. Healthcare quality evaluation and service improvement have become more important. (Sabater-Hernández, *et al.* 2018) notion remains the most often used method for measuring quality in health care, despite the fact that other methods have been developed. In order to evaluate and thereby improve the quality of health care, this researcher recommends looking at the structure, the process, and the outcome of the system.

Health care quality may be evaluated by looking at how satisfied patients are. In this aspect, patient happiness is thought to be correlated with the level of service quality (Hindi, Schafheutle, & Jacobs, 2018). Measuring patient satisfaction also includes getting people involved in the process of receiving care. Healthcare administrators have the chance to build strategies for meeting patients' expectations and enhancing their participation in the process of improving service quality by utilising this information.

The degree to which a patient's expectations and experiences with a healthcare provider line up is reflected in their level of satisfaction. Patients' sociodemographic characteristics, their previous experiences with health care services, and their expectations all play a role in determining how satisfied they are with their care (Neale, Tompkins, & Strang, 2019). Understanding the factors that influence patient satisfaction in public hospitals is essential to providing high-quality health care. The standard of pharmacy care provided in hospitals is one part of health care that must be met if that system's overall quality is to be improved.

II. Background

A hospital's pharmacy service is an essential part of the overall health-care system. The key services provided by this unit are pharmaceutical dispensing and distribution, compounding, medication use review, adverse drug reaction monitoring, and drug information service. Pharmacists' performance is likely to be positively influenced by high patient satisfaction, which might be a sign of their effectiveness. Health care in underdeveloped nations is heavily regulated by the government and is often plagued with inadequacies in service (Chevalier, *et al.* 2018). There has been a push in these places to get health administrators to look at health care quality as a way to improve health systems. There has been a significant growth in the focus on improving health care quality, but the measurement of quality of health care or its component is still in its infancy. Despite the fact that a number of

studies have been undertaken specifically to evaluate patient satisfaction with pharmacy services, there are no relevant, adequate, or effective research conducted in the Eastern region of the country (Katangwe, *et al.* 2019). This industry has been plagued by low patient satisfaction, according to some extant statistics. A research in southern India found that just 52.6 percent of patients were happy with the pharmaceutical treatments they got. Because of this, determining patient satisfaction and related criteria is critical in order to take the appropriate actions. As a result, the study's goal was to determine how satisfied Indian public hospital patients were with pharmacy services and other related criteria.

III. Methods

Study setting and period

Study population

Patients from public hospitals in eastern India's eastern region served as the study's subject population. Patients who were too unwell or mentally ill to participate in the trial were excluded. Patients who refused to participate in the study were also eliminated (Paudyal, *et al.* 2021). The poll also excluded customers who came to the drugstore on behalf of other patients.

Sample size and sampling procedure

With a 95 percent confidence interval and a patient satisfaction rate of 51.9% and a 20% sampling error, the sample size for the proportion of satisfied patients was calculated using the single population calculation. Thus, the sample size is 383. The number of patients needed for the first aim was found to be 422, assuming a 10% non-responder rate. There were a total of 80 percent power in this study, 95 percent two-sided confidence interval, 1:1 case-to-control ratio and 10% nonresponse rate when calculating the sample size for characteristics linked with patient satisfaction (Sabater-Hernández, *et al.* 2018). For the purposes of estimating the size of the sample, the parameters with the lowest odds ratios and proportions of cases with exposure that have been linked to patient satisfaction in prior research were chosen. Accordingly, independent factors such as age, education, and occupation were utilised to compute the sample size. When all was said and done, the poll had a total of 422.

Table 1. Sampling size allocation for the study conducted on patients' satisfaction with pharmacy service and associated factors in public hospitals, Eastern Ethiopia.

Serial number	Name of the hospital	Average number of prescriptions filled monthly in outpatient pharmacy	Proportionally allocated study participants
1.	Hivot Fana Specialized Hospital	1674	50
2.	Meles Zenawi Specialized Hospital	1475	44
3.	Jegol General Hospital	756	22
4.	Dil Chora General Hospital	1809	54
5.	Gara Muleta General Hospital	854	25
6.	Karamara General Hospital	872	26
7.	Gelemso General Hospital	988	29
8.	Chiro General Hospital	1608	48
9.	Bisidimo General Hospital	680	20
10.	Deder General Hospital	840	25
11.	Sabian Primary Hospital	950	28
12.	Haramaya Primary Hospital	865	27
13.	Cheleka Primary Hospital	760	24
Total		14,131	422

In order to choose the study units, a proportionate sampling method was employed. Based on the average number of prescriptions filled at outpatient pharmacies at each hospital each month, the sample was distributed equally to

each hospital (Jarab, *et al.* 2018). Table 1 displays the overall number of prescriptions filled at each hospital, together with the proportionate number of study participants for each institution. In each institution, every 23rd sequence of clients was included in the research using a rigorous random sample approach. Using a random drawing, each institution chose the first patient.

Data collection tool and procedure

The patient's satisfaction with the pharmacy's service was assessed through the use of a structured interview guide during an exit interview. Previously published questionnaires were used to create validated questionnaires. The interview questions generated from both literatures were reworked to meet our needs. Interview questions were translated into local languages before being returned translated into English for consistency checks. Fluent speakers of each language completed the translations of the surveys (Chevalier, *et al.* 2018). A pre-test using 5% of the entire sample size was then undertaken to ensure that the tools were working before any additional adjustments were made. Sociodemographic characteristics, patient health experience, and patient satisfaction with pharmacy service were all included in the instruments. Patient satisfaction was measured using a variety of factors, including the pharmacy setting, the availability of medication and clinicians' interactions with patients (Hindi, Schafheutle, & Jacobs, 2018). We used a Likert-type scale of one to five points, with one being a very unhappy response and five representing a very satisfied response. Each hospital has a data collector assigned to it. Interview tactics and data gathering methods were taught to survey takers. The primary investigator and co-investigators were in charge of overseeing the data gathering procedure.

Data processing and analysis

Each participant's mean score was calculated using data collected on a five-point Likert-type scale. In order to measure overall patient satisfaction, we utilised the mean score after verifying that the data was normal. Respondents with an average score below the mean value were categorised as unhappy, while those with an average score above the mean value were categorised as content. Stata 14.2 was used to analyse the data that had been input into EpiData 3.1. The percentage, the mean, and the standard deviation were used to describe the data (SD). The link between each independent variable and patient satisfaction was examined using bivariate analysis (Chevalier, *et al.* 2018). Confounding factors were reduced by include in the multiple logistic regression analysis independent variables with a p value of less than 0.2. At a 95% CI and a p-value of less than 0.05, the adjusted odds ratio (AOR) was used to look for correlations between the dependent and independent variables. (Sabater-Hernández, *et al.* 2018) goodness-of-fit test was used to verify the final model's assumption of fit. The correlation coefficient value of 0.8 was utilised as a cut-off point to remove correlations between variables. The multivariate analysis did not reveal any significant correlations between variables.

IV. Results

Sociodemographic characteristics of participants

It was determined that 407 out of the 422 patients who were contacted had completed questionnaires, hence their data was included in this analysis. Table 2 shows that there were 212 men in the group, which is one more than there were females (52.09 percent). To put it another way, the average age of those who participated was 35.93 (SD = 12.56). 59.46 percent of the patients were from metropolitan areas, whereas 262 of the participants were single, accounting for 75 percent of the total (64.37 percent) (Aziz, *et al.* 2018). In terms of education, 152 patients

(37.35%) lacked a high school diploma or GED, whereas just one in four had a high school diploma or GED. Indian birr (SD 156.49) was the mean monthly income (SD = 3391.67).

Table 2. Sociodemographic characteristics of patients in public hospitals in Eastern Ethiopia, 2018 (n=407).

Variables	n (%)
Sex	
Male	212 (52.09)
Female	195 (47.91)
Age (years)	
18-25	102 (25.06)
26-35	141 (34.64)
35-50	112 (27.52)
above 50	52 (12.78)
Place of residence	
Urban	242 (59.46)
Rural	165 (40.54)
Marital status	
Single	262 (64.37)
Married	145 (35.63)
Educational status	
No formal education	152 (37.35)
Primary education	102 (25.06)
Secondary education	54 (13.27)
Certificate and above	99 (24.32)
Occupation	
No job	99 (24.32)
Government employee	88 (21.62)
Farmer	82 (20.15)
House wife	75 (18.43)
Merchant	44 (10.81)
Daily laborer	19 (4.67)

Pharmacists' interactions with patients

Table 3. Patient experiences with pharmacy services in public hospitals in Eastern Ethiopia, 2018 (n=407).

Variables	n (%)
Familiarity with institution	
First visit	249 (61.18)
Chronic care	158 (38.82)
Self-judged health status	
Severely sick	252 (61.9)
Sick	155 (38.1)
Medication dispensed	
All	143 (35.14)
None or some	264 (64.86)
Payment modality	
Out-of-pocket	342 (84.03)
Paid by insurance	33 (8.11)
Free	32 (7.86)
Waiting time	
< 15 min	323 (79.36)
> 15 min	84 (20.64)
Patients' view on the requirement to improve the service*	
Improve medication availability	204 (50.12)
Increase waiting area space	197 (48.40)
Increase number of staffs	195 (47.91)
Reduce bureaucracy	107 (26.28)
Reduce waiting time	92 (22.60)

Table 3 summarises what patients thought about the procedure while it took place. 61.18 percent of participants have never been to a hospital before. Only 35.14 percent of patients (35.14%) collected all of their prescription drugs, while 64.86 percent received little or no medication at all. More than 84% of individuals paid for their prescription out of pocket. Finally, the vast majority of patients (79.36 percent) were serviced within 15 minutes of their arrival.

Patients were also asked what they thought should be done to enhance pharmacy service quality. Nearly half of the 204 participants expressed a desire for better access to medications (50.12 percent). Patients commonly suggested that the quality of pharmacy service should be improved by expanding the waiting room, hiring more employees, and streamlining the administrative process.

Patients' satisfaction with pharmacy service

This data is summarised in Table 4, which shows how satisfied patients are with the overall quality of care as well as how satisfied they are with specific aspects of it, such as the structure of the organisation, medication availability and supply, the pharmacist–patient relationship, and patient counselling (Aziz, *et al.* 2018). Using a five-point scale, the mean overall satisfaction of customers was 2.29 (SD 0.56, 95 percent confidence interval: 2.24, 2.35). 46.19 Percent of the population was satisfied with the entire experience (95 percent CI: 41.37, 51.07) (Jarab, *et al.* 2018). Patient counselling had a mean satisfaction level of 2.51 points, which was greater than the average for all other types of services (95 percent CI: 2.43, 2.58). Pharmacist–patient connection was rated the worst, with a score of 2.10, followed by the structure of the environment, at 2.12.

Table 4. The mean score of patient satisfaction toward specific Organizational aspects and the overall satisfaction, 2018 (n = 407).

Variables	Mean	SD	SE	95% CI
Structural aspect of the setting	2.12	0.56	0.03	2.08, 2.19
Medication availability and supply	2.43	1.37	0.68	2.30, 2.56
Pharmacist-patient relationship	2.10	0.63	0.03	2.03, 2.16
Patient counseling	2.51	0.73	0.04	2.43, 2.58
Overall satisfaction	2.29	0.56	0.03	2.24, 2.35

Determinants of patients’ level of satisfaction with pharmacy service

There was a 50% (AOR = 0.5, 95% CI 0.3–0.9) and 60% (AOR = 0.4, 95% CI 0.2–0.8) drop in satisfaction among patients aged 26–35 years and 36–50 years, respectively. However, rural patients were 3.0 times more happy than their urban counterparts (AOR = 3, 95 percent CI: 1.8, 5.2) For patients with only a secondary education, satisfaction was 60% lower than for those with a diploma or above (AOR = 0.40, 95% confidence interval: 0.20 to 0.8). Finally, it was shown that patient satisfaction was significantly associated with the quantity of drugs dispensed at the hospital pharmacy (Neale, Tompkins, & Strang, 2019). Patients who received all of their prescription meds reported higher levels of satisfaction, with an AOR of 2.2 and a 95 percent confidence interval of 1.4 to 3.5, than those who received some but not all of their medication (Table 5).

Table 5. Factors associated with patient level of satisfaction with pharmacy services in public hospitals in Eastern Ethiopia, 2018 (n=407).

Variables	Satisfaction		COR (95% CI)	AOR (95% CI)
	Yes n (%)	No n (%)		
Age (years)				
18-25	63 (33.5)	39 (18.8)	1	1
26-35	58 (30.9)	83 (37.9)	0.4 (0.3, 0.7)	0.5 (0.3, 0.9)*
36-50	39 (20.7)	73 (33.3)	0.3 (0.2, 0.6)	0.4 (0.2, 0.8)*
> 50	28 (14.9)	24 (11.0)	0.7 (0.4, 1.4)	0.9 (0.4, 2.2)
Residence				
Urban	94 (50.0)	148 (67.6)	1	1
Rural	94 (50.0)	71 (32.4)	2.1 (1.4, 3.1)	3.0 (1.8, 5.2)*
Educational status				
No formal education	71 (37.8)	81 (37.0)	0.9 (0.5, 1.4)	0.5 (0.3, 1.0)
Primary education	49 (26.1)	53 (24.2)	0.9 (0.5, 1.6)	0.6 (0.3, 1.1)
Secondary education	18 (9.5)	36 (16.4)	0.5 (0.2, 0.9)	0.4 (0.2, 0.8)*
Certificate and above	50 (26.6)	49 (22.4)	1	1
Medication dispensed				
All	82 (43.6)	61 (27.8)	2.0 (1.3, 3.0)	2.2 (1.4, 3.5)*
None or some	106 (56.4)	158 (72.2)	1	1

V. Discussion

Patient satisfaction with hospital pharmacy services, as well as the factors influencing that satisfaction, were the primary foci of this research. A whopping 46.19 percent of those polled were satisfied with their pharmacy's services, according to this research (95 percent CI: 41.37, 51.07). Out of five people, the mean satisfaction was 2.29 (SD 0.56, 95% CI: 2.24, 2.35). Significant relationships were found between patient satisfaction with pharmacy services and such independent factors as age, residence, education and drug accessibility.

More than half of the participants who participated in this study were dissatisfied with the care they received (46.19 percent). In agreement with other studies in India: (Paudyal, *et al.* 2021) (47.4%) and (Latif, *et al.* 2018) (48.4%). (48.1 percent, 27 2.48 mean satisfaction calculated out of five). 22 Similar results were found in a

different study. As a result, patients from rural areas reported higher levels of satisfaction than those from urban areas (AOR = 3, 95 percent confidence interval: 1.8 to 5.2). There has been a lack of attention paid to the importance of a person's location in earlier research (Katangwe, *et al.* 2019). For a variety of reasons, this may be the case. Our study was unique in that a large number of patients came from rural areas, whereas in other research, either no rural patients were serviced or the location of residence was not assessed and hence was not included in the results. There may be a correlation between rural residents' high level of contentment and their low expectations for the service provided.

Patient satisfaction appears to be higher among those with little or no formal education. Furthermore, patients who attended secondary school were shown to be more satisfied than those who had a college degree or above. Patients with a lesser level of education may have a poorer awareness of pharmacy services than their peers.

VI. Limitation of study

There are several reasons why this study's findings should be taken and extrapolated with caution regardless of how solid the idea, study design, methods, and data analysis used in this study were. Patients' satisfaction with pharmacy service may have been impacted by the quality of treatment they received elsewhere in the hospital (Madden, *et al.* 2020). It's possible that patient satisfaction was harmed since the hospital pharmacy didn't examine the specific sorts of services the patient received or their expectations. As a result, we were unable to establish a link between family income and patient happiness.

VII. Conclusion

Patients' satisfaction with pharmacy services was shown to be extremely poor in this survey. In order to enhance patient satisfaction, the stakeholders included in this study must work to improve the pharmacy unit's overall quality of service (Sabater-Hernández, *et al.* 2018). Many demographic variables were shown to have a significant impact on patient satisfaction. Medication accessibility was an independent variable that was substantially associated to patient satisfaction in addition to sociodemographic factors. Health care professionals and managers should thus seek to boost the availability of drugs in hospitals."

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