

Patients' Opinion on Cost of Drugs and Satisfaction with Services Provided in a State Teaching Hospital Eye Clinic, Southeast, Nigeria

Nkiruka N. Okoloagu

Department of Ophthalmology, College of Medicine,
Enugu State University of Science & Technology (ESUT)
and ESUT Teaching Hospital, Parklane, Enugu, Nigeria
and Esucom Health Care Delivery Research Initiative,
Enugu State University of Science and Technology,
College of Medicine, Enugu, Nigeria

Edmund O. Ndibuagu

Department of Community Medicine, College of Medicine,
Enugu State University of Science & Technology (ESUT)
and ESUT Teaching Hospital, Parklane, Enugu, Nigeria
and Esucom Health Care Delivery Research Initiative,
Enugu State University of Science and Technology,
College of Medicine, Enugu, Nigeria

Christian Eze

Department of Ophthalmology, College of Medicine,
Enugu State University of Science & Technology (ESUT)
and ESUT Teaching Hospital, Parklane, Enugu, Nigeria
and Esucom Health Care Delivery Research Initiative,
Enugu State University of Science and Technology,
College of Medicine, Enugu, Nigeria

ABSTRACT

Patients' opinion on the cost of drugs is usually an indication of how satisfied they are with the cost of drugs in the health facility; and ultimately could contribute to their continued usage of the facility, or discontinuing usage. The study aimed at assessing patients' opinion on cost of drugs in a tertiary health facility Eye clinic, and also finding out their overall satisfaction level with services provided at the health facility Eye clinic. The research was a cross-sectional study, using 348 respondents; and the study was conducted for a period of two months in 2022. Most of the respondents were females (63.5%), of Igbo tribe extraction (94.8%), Christians (96.6%), and married (63.2%). About half of the respondents perceived cost of drugs as affordable/very affordable (51.1%), while 75.5% were satisfied/very satisfied with services provided at the Eye clinic. Though both opinion on cost of drugs, and overall satisfaction with services provided at the health facility Eye clinic were good; it is still recommended that the management of the health facility should work towards improving on this. This ultimately will

contribute to improved eye health for people who are residing within the catchment area of the tertiary health facility.

Keywords: Eye, Patients, Opinion, Cost, Drugs, Satisfaction

INTRODUCTION

Patients' opinion on cost of drugs and quality of services provided in an eye clinic or any health facility is probably a reflection of their satisfaction with the cost of treatment and quality of services provided. Patients' satisfaction has been viewed from different perspectives such as their contentment, happiness, or the level to which their health status has been improved. This however can simply be said to be the degree to which their desired goals and expectations have been met [1,2,3]. Other indicators used in measuring patients' satisfaction generally include; attitude of health workers, waiting time in the health facility, technical quality of the providers, ease of accessibility of the health facility, amenities available in the facility, and the environment in which the health service is offered [4]. It is very likely that patients who are satisfied with situation and services in a health facility, including the cost of drugs and services provided; are the ones who will recommend the facility to other people. They are also the ones who will comply with the doctor's prescription, and also continue to access care from the same health facility [6].

In any health facility, high cost of medicines is a barrier that can prevent access to treatment [7], and consequently lead to patients' dissatisfaction. Even if medicines are available in a health facility, and the patients consider the prices high, then they will not be able to access the medicines [8]. Patients' opinion on eye care services is important in planning and implementing changes that will enhance patients' satisfaction [9]. This patient's opinion is an indication to the extent to which the goal of ensuring that the patients' eye health is improved; is being achieved.

Continued utilization of eye care services from a health facility usually depends on the quality of services delivered [10]. It has been suggested by some researchers in Nigeria, that patients find it difficult to access eye care services in Nigeria [11,12]. Among other factors that create difficulties in accessing eye care services, finding out the opinion of patients on the cost of drugs and the services provided at a teaching hospital eye clinic; will provide information that will be very useful in planning more accessible eye care services for Nigeria. The primary objective of this study was to assess patients' opinion on cost of drugs and satisfaction with services provided in a state teaching hospital Eye clinic, Southeast, Nigeria. The study attempted to provide reliable answers to how patients rate the cost of drugs that they procured after being seen by a doctor in an Eye clinic. Patients also provided answers to their overall satisfaction rating of the services provided at the Eye Clinic.

MATERIALS AND METHODS

Study Area

This study was conducted in a tertiary health facility in Enugu state, one of the five states in the Southeast geopolitical zone of Nigeria. Nigeria is made up of thirty-six states, and a capital territory. This study health facility owned by the state government, and the federal government-owned teaching hospital in the state are the only public health facilities that offer specialized eye care services to the people of the state and environ. As at the year 2016, the

state had a population of about 4.4million persons [13]. This figure is probably higher now, since population has been rising in Nigeria generally.

Study Design

This study was of observational, descriptive, and cross-sectional design

Study Population

This study was conducted among adults that presented for eye care services at the Eye clinic of Enugu State University Teaching Hospital, between October and November, 2022. All patients that were fit enough to respond to the questions in the questionnaire; were included in the study.

Sample Size Determination and Sample Selection

Estimated 1,300 (one thousand, three hundred) patients are seen at the Eye clinic every month. That means that, for the two months that the study was conducted, about 2,600 patients would have passed through the clinic. The formulae below were used to determine the sample size [14].

$$(A)n = \frac{z^2 pq}{d^2}$$

$$(B) \text{ nf} = \frac{n}{1 + \frac{(n)}{(N)}}$$

n = Desired sample size when population is greater than 10,000

z = Standard normal deviate, usually set at 1.96, which corresponds to 95 percent confidence level (0.05 accuracy)

p = Proportion in the target population estimated to have a particular characteristic. 50% (0.5) is usually used

q = 1.0-p

d = Degree of accuracy desired, usually set at 0.05.

nf = Desired sample size when population is less than 10,000

N = Estimate of the population size that is less than 10,000

Three hundred and thirty-four (334) was the estimated sample size. We added fourteen (14) more respondents to enhance the reliability of the study. We used a total of three hundred and forty-eight (348) respondents.

The respondents were selected through simple random sampling method, using balloting.

Sampling Instrument and Data Collection

We collected information from the respondents using interviewer-administered questionnaire. The Teaching hospital ran Eye clinic every work day (Monday to Friday). For two months, we interviewed nine patients every clinic day, but six patients were interviewed on the last day of data collection. Number of pieces of papers, corresponding to the number of patients present in the clinic, were folded and patients asked to pick one, before the commencement of doctors'

consultations. The word "YES" was written on nine of the pieces of papers. Those that picked "YES" were interviewed after leaving the Eye clinic pharmacy.

Data Analysis and Management

Statistical Package for Social Sciences (SPSS), version 23.0 for windows was used to analyze the information contained in the completed questionnaire. The results were prepared in frequencies and percentages. Scores that were 50% and above, were considered good; while those below 50% were considered poor.

RESULTS

A total of 348 respondents participated in this study that assessed the opinion of patients on the cost of drugs, and their satisfaction with services provided in a teaching hospital Eye clinic.

Socio-Demographic Characteristics

Half of the respondents (50.0%) are aged 50 years and above, while 50.0% are aged 49 years and below. Majority are females (63.5%), of Igbo tribe extraction (94.8%), married (63.2%), and Christians (96.6%). More people had tertiary education (28.4%), followed by secondary education (25.9%), and postgraduate education (24.1%). Few respondents had primary education (13.2%), and the least number had no formal education (8.3%). More respondents were businessmen/women (21.3%) than any other occupation. They were followed by civil servants, while the occupation that recorded the least number of respondents was farming (8.0%).

Table 1: Socio-Demographic Characteristics

S/N	VARIABLES	FREQUENCY (n = 348)	PERCENT (% = 100)
1.	Age (At Last Birthday)		
	19 years and less	41	11.8
	20 - 29	39	11.2
	30 - 39	44	12.6
	40 - 49	50	14.4
	50 - 59	72	20.7
	60 - 69	60	17.2
	70 and above	42	12.1
2.	Sex		
	Male	127	36.5
	Female	221	63.5
3.	Tribe		
	Igbo	330	94.8
	Yoruba	10	2.9
	Hausa	5	1.4
	Others	3	0.9
4.	Marital Status		
	Married	220	63.2
	Single	93	26.7
	Divorced/Separated	6	1.7
	Widowed	29	8.3
5.	Religion		

	Christian	336	96.6
	Muslim	4	1.1
	Traditional Religion	7	2.0
	Others	1	0.3
6.	Education		
	No formal education	29	8.3
	Primary level	46	13.2
	Secondary level	90	25.9
	Tertiary level	99	28.4
	Post-graduate level	84	24.1
7.	Occupation		
	Farmer	28	8.0
	Teacher/Lecturer	32	9.2
	Businessman/woman	74	21.3
	Petty Trader	33	9.5
	Civil Servant	66	19.0
	Artisan	15	4.3
	Retiree	42	12.1
	Student	48	13.8
	Unemployed	2	0.6
	Others	8	2.3

Opinion on Cost of Drugs

Highest number of respondents perceived the cost of drugs procured as being affordable (44.8%), while the least number perceived it as being very affordable (6.3%). About a quarter of the respondents perceived the cost as being exorbitant (25.9%), and 8.9% perceived the cost as being very exorbitant. Only 14.1% had no opinion on the cost of drugs.

Table 2: Opinion on cost of drugs

VARIABLES	FREQUENCY (n = 348)	PERCENT (% = 100)
How do you perceive the cost of drugs that you procured after being seen by a doctor?		
Very Exorbitant	31	8.9
Exorbitant	90	25.9
Uncertain	49	14.1
Affordable	156	44.8
Very Affordable	22	6.3

Satisfaction with Overall Services Provided at the Eye Clinic

Most of the respondents were satisfied (64.9%) with services provided at the eye clinic. Only 8.9% were dissatisfied, with 1.1% being very dissatisfied. Some were very satisfied (10.6%), while 14.4% had no opinion on their level of satisfaction.

Table 3: Satisfaction with overall services provided at the Eye clinic

S/N	VARIABLES	FREQUENCY (n = 348)	PERCENT (% = 100)
	Overall, how satisfied are you with the services provided at this Eye Clinic?		
	Very Dissatisfied	4	1.1
	Dissatisfied	31	8.9
	Uncertain	50	14.4
	Satisfied	226	64.9
	Very Satisfied	37	10.6

DISCUSSION

This research was conducted in the same study population, alongside studies on other aspects of factors that affect patients' satisfaction with services provided in a tertiary hospital Eye clinic, and patients' satisfaction with attitude of health workers. In keeping with the known sickness behaviour pattern of males and females [15], a lot more females (63.5%) than males (36.5%) were available for the study. Slightly more than half of respondents had tertiary or postgraduate level of education (52.5%) (**Table 1**), since the study facility was located in an urban town where residents had access to part-time education programmes. This relatively high level of education among our respondents, probably contributed in ensuring good understanding of the issues raised in our questionnaire.

High cost of drugs in an Eye clinic is capable of adversely affecting patients' satisfaction with services provided in that health facility, and ultimately hindering access to health services from that facility. About half of our respondents (51.1%) perceiving cost of drugs provided in the Eye clinic, as affordable/very affordable is encouraging (**Table 2**), when compared to the finding in 2013, of 6.2% of respondents being fairly satisfied/well satisfied with cost of services in a tertiary hospital Eye clinic located in the same area as our study facility [16]. In that same study of 2013, as many as 93.8% of respondents were not satisfied with cost of services provided in that Eye clinic; while only 34.8% of respondents in our study perceived cost of drugs as being very exorbitant/exorbitant. However, many years ago in 2002, a study in a tertiary health institution in the Southwestern part of Nigeria revealed that as high as 77.2% of respondents felt that cost of treating their eye problem was affordable [17]. This apparent high level of satisfaction with cost of treatment in that Southwestern tertiary health facility, may not be what is currently obtainable. It is possible that the county's economy was better in 2002, and patients could better afford cost of treatment, than the situation in Nigeria now. A more recent study in Northwest Ethiopia revealed that 51.9% of respondents were satisfied with financial aspects of their treatment in a tertiary Eye care facility [18]. This is almost the same as our finding, and could imply that certain socio-economic variables, and cost of items in the Ethiopian facility and ours could be a bit similar. Further detailed research in these two Eye care facilities will help in proving or disproving this assertion. Another patients' satisfaction level with cost of drugs (49.8%), that was also not very different from our own finding; was found in another hospital's outpatient department in same Northwest Ethiopia in 2021 [19].

The finding of as high as 75.5% of respondents in this our study (**Table 3**), being satisfied/very satisfied with services provided in the studied Eye clinic is very encouraging. It implies that, in as much as, just about half of the respondents' perceived drugs and medical commodities as affordable/very affordable, there were probably other satisfactory aspects of health care

service delivery in the Eye clinic. It has been documented in the past, that patients who are satisfied with eye care services provided in any Eye care facility are the ones who would continue to use the facility, and even recommend it to relatives and friends [5]. Other documented benefits of patients being generally satisfied with services provided in any health facility include; enhanced adherence to prescriptions/healthcare provider's instructions, better health outcomes and generally improved health status [20]. A lower level of 57.1% overall satisfaction was recorded in a similar study at Northwest Ethiopia in 2020 [18]. It is possible that some other factors that enhance overall patients' satisfaction with services provided in an Eye care facility, are better provided in our study Eye clinic than the Ethiopian facility.

CONCLUSION

Cost of drugs in any Eye care facility, usually plays a role in determining patients' opinion and satisfaction with the services provided at the Eye care facility. Up to 51.1% of respondents in our study, perceiving cost of drugs as affordable/very affordable is good. Efforts however should be made to review prices of drugs in this study facility, with the aim of making drugs more affordable. Overall satisfaction level of 75.5% in this study is also good. In addition to cost of drugs, the management of our study Eye clinic, could also look at the other factors that influence patients' satisfaction; with the aim of improving on them. This would improve on the Eye clinic utilization, and better eye health for patients in the catchment area of the Eye clinic.

References

- [1] Debono D, Travaglia J. Complaints and patient satisfaction: a comprehensive review of the literature. Report. Sydney Australia: Centre for Clinical Governance Research in Health. 2009.
- [2] Boquiren VM, Hack TF, Beaver K, Williamson S. What do measures of patient satisfaction with the doctor tell us? *Patient Educ and Couns*. 2015;98(12):1465-73. <https://doi.org/10.1016/j.pec.2015.05.020>
- [3] Al-Abri R, Al-Balushi A. Patient satisfaction survey as a tool towards quality improvement. *Oman Med Jour*. 2014;29(1):3 - 7. <https://doi.org/10.5001/omj.2014.02>
- [4] Affi OP, Oppong DK, Oppong I. Assessing patient satisfaction and some related factors in the kasena nankana district- Ghana. *Int J Scientific Technol Res*. 2018;7(12):116-20.
- [5] Zaky H. Assessing the quality of reproductive health services in Egypt via exit interviews. *Maternal and Child Health J.*, 2007; 11(3): 301-6.
- [6] Hooker, R.S., Moloney-Johns, A.J. and McFarland, M.M. Patient Satisfaction with Physician Assistant/Associate Care: An International Scoping Review. *Human Resources for Health* , 17, Article No. 104. <https://doi.org/10.1186/s12960-019-0428-7>
- [7] Kemp A, Preen DB, Glover J, Semens J, Roughead EE. Impact of cost of medicines for chronic conditions on low-income households in Australia. *J Health Serv Res Policy*. 2013; 18:21-27.
- [8] Quadri SS, Pathak R, Singh M, Ahluwalia SK, Saini S, Garg PK. An Assessment of patients' satisfaction with services obtained from a tertiary care hospital in Rural Haryana. *Int J Collab Res Internal Med*. 2012; 4(8):1524-1537.
- [9] Alahmari M, Aljasser I, Sasidhar B. Patient Satisfaction and Perception of Quality of Care in Outpatient Clinic in an Eye Specialist Hospital in Saudi Arabia. *Br J Econ Manag Trade*. 2015;10(4):1-8.

- [10] Ziaei H, Katibeh M, Eskandari A, Mirzadeh M, Rabbanikhah Z, Javadi MA. Determinants of patient satisfaction with ophthalmic services. *BMC research notes*. 2011;4(1):1-4.
- [11] Nwosu S, Obidiozor JU. Incidence and risk factors for traditional eye medicine use among patients at a tertiary eye hospital in Nigeria. *Nigeria J Clin Practice*. 2011;14(4):405-73.
- [12] Okoye RS, Bell L, Papadopoulos I. Barriers to Accessing Good Eye Care Services in Nigeria A Focus on Anambra State. *Journal of the Nigerian Optometric Association*. 2018;20(1):30-7.
- [13] Wikipedia. https://en.wikipedia.org/wiki/Enugu_State (Accessed, 25/03/2023).
- [14] Araoye MO. *Research Methodology with Statistics for Health and Social Sciences*. NATHADEX PUBLISHERS, Ilorin, 2003.
- [15] Aniebue N. *Introduction to Medical Sociology*. Institute for Development Studies, University of Nigeria, Enugu Campus, Nigeria. 2008.
- [16] Ezegwui IR, Aghaji AE, Okoye O, Oguego N. Patient's satisfaction with eye care services in a Nigerian Teaching hospital. *Nigerian Jour Clin Pract*. 2014;17(5):585-8. <http://dx.doi.org/10.4103/1119-3077.141423>
- [17] Ademola-Popoola DS, Akande TM, Idris A. Patients' Assessment of Quality of Eye Care in a Nigerian Teaching Hospital. *Niger Postgrad Med J*. 2005;12(3):145-148.
- [18] Lorato M, Hussen M, Tegegne M. Patient Satisfaction and Associated Factors Among Adult Outpatient Ophthalmic Service Users at University of Gondar Comprehensive Specialized Hospital Tertiary Eye Care and Training Center, Northwest Ethiopia, 2020: An Institution-Based Cross-Sectional Study. *Research Square*; 2020. DOI: 10.21203/rs.3.rs-114801/v1.
- [19] Molla M, Sisay W, Andargie Y, Kefale B, Singh P. Patients' satisfaction with outpatient pharmacy services and associated factors in Debre Tabor comprehensive specialized hospital, Northwest Ethiopia: A cross-sectional study. *PLoS ONE*, 2022 17(1): e0262300. <https://doi.org/10.1371/journal.pone.0262300>
- [20] Ibang AA, Nkanga DG, Asana UE, Duke RE, Etim BA, Nkanga ED et al. Patients satisfaction with eye care services in University of Calabar Teaching Hospital. *Int Arch Integrated Med*. 2017;4(9):110-18