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Patients' satisfaction with quality of care in general hospitals in Ebonyi State, Nigeria, using SERVQUAL theory

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Abstract

Background: Patient satisfaction is an essential parameter in the assessment of quality of care and healthcare facility performance.

Objective: To investigate patients' satisfaction with quality of care in general hospitals in Ebonyi State, South East, Nigeria, using the SERVQUAL.

Methods: A cross-sectional descriptive study design was employed on a sample of 400 patients using a 27-item structured open-ended patients' satisfaction questionnaire with a multi-stage cluster sampling technique. Patients included in the study were those who must have come for an outpatient clinic within the period, be 18 years and above, and those who gave consent to participate. Of 400 questionnaires administered, 396 (99%) were retrieved. SPSS version 20 was used for data analysis. Descriptive statistics, such as frequencies, percentages, mean score (x), and standard deviation, were employed for interpretation.

Results: Out of 396 patients, 156 (39.4%) were male and 240 (60.6%) were females. Most patients were 18–39 years (233 (58.8%)), had secondary education (139 (35.1%)), married (221 (55.8%)), earned $<$18,000 (170(42.9%)), and were traders (136 (34.3%)). Patients were satisfied with tangibility (2.57 ± 0.99) and reliability (2.84 ± 0.95) and very satisfied with responsiveness (3.06 ± 0.63), assurance (3.07 ± 0.63), and empathy (3.12 ± 0.57).

Conclusions: Patients were satisfied with the quality of care. However, satisfaction was highest with empathy and lowest with tangibility. Thus, managers should focus their quality improvement efforts on areas of the neat appearance of health workers, waiting facilities for attendants and patients, and hygienic conditions at the hospital. Also, biannual assessment of patients' satisfaction should be done and the results generated use judiciously to provide a platform for health sector reform.

Keywords

Patients, satisfaction, quality healthcare, SERVQUAL, hospital

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Introduction

Healthcare providers generally want their patients to be satisfied by attending to their healthcare problems.[1] Patients' satisfaction is an essential ingredient in measuring quality healthcare as it gives insight on the workers' progress toward patients' desire. It is a major factor in patients' expectations.[2] In the past years, patients have started to demand their right to be served better as a result of their becoming more knowledgeable and savvy to the type of care and treatment options they may receive.[3] It was observed that patient satisfaction is affected by the attitude of health workers toward patients, ability to offer immediate attention, waiting time, ability to

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send information, and the tolerance by physicians to plainly explain to the patient what was wrong before giving detailed message concerning their drugs and the environment.[4]

Aikins et al.[5] stated that the extent of one longed service as against persons' expectations is known as satisfaction. The extent of patients achieving fulfilled expectations when they visit the clinic to a greater extent will make them obey personnel of the hospital, thus, reducing patient complaints, high profitability, higher patients return, and more referrals.[6–8] Aigbavboa and Thwala[9] observed that patient satisfaction is a judgment, feeling, or response that patients received, provided a pleasurable level of fulfillment is achieved.[10] Contrastingly, patient satisfaction or dissatisfaction is not an emotion or feeling but the assessment of an emotion.[11,12] Zarei et al.[13] stated that charge for services, quality of procedure, and excellence of communication had the utmost effect on the general patients' happiness.

There are so many factors that affect the satisfaction and dissatisfaction of patients in hospital facilities. These factors include access, health personnel, financing, waste disposal, and government policy.[14,15] Others are admission procedure, diagnostic services, technical services, communication, and interpersonal manner of the physicians, accessibility, and convenience.[15] Lekidou et al.[16] opined that patients decide on the quality of health organization as it relates to compassion, consistency, reply, information, and care they receive.

The major instrument designed in rating the level of patient satisfaction of services is the SERVQUAL scale that was developed by Parasuraman et al.,[17] which produced significant progress to the knowledge and measurement of assumed quality of service. It was further designed by Zacharias et al.[18] and Yen et al.[19,20] Initially, the SERVQUAL model was not intended to only rate healthcare services satisfaction, but was used in interpreting the level of attention on health services in facilities by several studies both in western and eastern countries.[21] SERVQUAL has five (5) major areas of measurement such as tangibility, reliability, responsiveness, assurance, and empathy.[17,22–27]

Tangibility is the physical evidence of the service, for instance, the appearance of the tools, equipment, and physical facilities used to provide the service.[28–30] These have a psychological effect on the recovery process of the individual and hence must be kept clean at all times.[30] Reliability is the ability to perform the promised service accurately.[17] Responsiveness is the readiness and willingness of employees to assist customers by providing prompt timely services.[31,32] Assurance is the knowledge of employees and their ability to have trust and confidence toward customers.[28,33,34] Hospitals should provide patients with proper diagnosis at first instance.[35] Empathy is the caring, individualized, and customized attention provided to patients by health workers due to the pains that there are passing through.[36,37] The use of the SERVQUAL as an instrument for getting patient satisfaction cuts across the original in the organization of service centers like offices, shops, and hospitals.[38,39] According to Offei et al.,[39] the SERVQUAL model is not only concerned from the view of consumers but also supportive in guiding employees to examining service lapses between what is expected and obtainable. Notwithstanding, Parasuraman et al.,[17] Kennedy et al.,[40] Jemmasi et al.,[41] and Ahuja et al.,[42] have substantially clarified it. SERVQUAL model has been widely used in the healthcare services by Aikins et al.,[5] Amole et al.,[12] Irfan et al.,[24] Szyca et al.,[43] Khamis and Njau,[44] and Yeboah et al.[45]

For most countries, research works of patients' satisfaction with hospitals are done most often and the feedbacks gotten are made available to the public together with other indicators of healthcare quality. The hospitals in the developed countries are aware of the consequence of delivering patient approval as a tactical variable and a vital determinant of long-term feasibility and success.[12] In Nigeria, there is no official policy on patient satisfaction that has been launched to the best of the researcher's knowledge. However, the Federal Government (FG) has done something close to proper service in any formal institution which is the SERVICOM.[46]

The main purpose of the study was to determine patients' satisfaction with the quality of care in general hospitals in Ebonyi State. Specifically, the study sought to determine the level of satisfaction of patients with tangibility, reliability, responsiveness, assurance, and empathy.

Methods

Study design and setting

A descriptive study design was conducted at the General hospitals in Ebonyi State from April to December 2016. A descriptive survey design was used to ascertain patient satisfaction with quality of care in general hospitals. The state runs a three-tier healthcare system which are primary, secondary, and tertiary levels. The FG is responsible for tertiary healthcare which is the apex of the healthcare delivery and provides specialized services through the Federal Teaching Hospital Abakaliki (FETHA, Vesico-Vaginal Fistula (VVF) Center). The state provides care through the 13 general hospitals and six rural mission hospitals, while the Local Government Council take care of primary healthcare services.[47] All the general hospitals are in rural area.

Study population

The population of the study was 1,363,633. All adults from 18 years and above in Ebonyi State. Projected from the 2006 census of 2,710,845 with a projected growth rate of 2.8% for the year 2016.[48]

Sample and sampling technique

The sample size of the study was 400 outpatients in six out of 13 general Hospitals in Ebonyi State determined using

Yaro Yamen formula (Appendix 1). According to Uzoagulu,[49] Yaro Yamane formula is used to determine a sample for a finite population. A multi-stage cluster sampling procedure was used for the study. First, clustering the state into three zones, namely, Abakaliki, Afikpo, and Onueke. In the second stage, we chose two general hospitals per zone totaling six. Third, the sample size for each hospital in the zone identified in stage one: Abakaliki zone (131), Onueke zone (119), and Afikpo zone (150) (Appendix 2). In the fourth stage, the respondents were selected using a simple random technique of balloting without replacement. This procedure yielded 400 outpatients used in the study.

The inclusion criteria included patients who must have come for an outpatient clinic in a general hospital within the period, 18 years and above and must have given consent to participate while exclusion criteria included patients below 18 years, inpatients, and those who refuse to give consent to participate in the study.

Ethical approval

Ethical approval for the study was obtained from the Department of Human Kinetics and Health Education, Faculty of Education, Ebonyi State University Review Board (EBSU/FOE/KHE/018). Informed consent was obtained from all respondents before the study.

Instrument for data collection

The instrument used in collecting data was a 27-item self-administered questionnaire titled patients' satisfaction with quality of care in general hospitals in Ebonyi State which consists of two sections: section A elicited socio-demographic characteristics of respondents, while section B elicited information on tangibility—3, reliability—6, responsiveness—4, assurance—3, and empathy—5. The items were measured on a four-point Likert-type scale through 1–4 which indicates 1—very dissatisfied, 2—dissatisfied, 3—satisfied, and 4—very satisfied. This type of scale is often assumed to be an equal-interval scale, where "very satisfied" is one unit better than "satisfied," "satisfied" is one unit better than "dissatisfied" and so forth. The questionnaire was developed in English and interpreted by the research assistants in Igbo-a local language in Nigeria. The questionnaire was then piloted with a convenient sample of n = 30 patients among the study population. However, we included the patients in the local government areas (LGAs) and hospitals but not sampled for the study for validity and reliability. Minor adjustments were made based on the pilot testing. The respondents were informed of the purpose of the study and assured of confidentiality and their right to withdraw from the study. The internal consistency of the instrument was computed using Cronbach's alpha. The process yielded an overall reliability of the coefficient of 0.795. Data were collected for 2 weeks with an average of 10 exit interviews per day by six trained research assistants.

Statistical analysis

Data generated were analyzed using Statistical Package for the Social Sciences (SPSS) version 20; descriptive statistics such as frequencies and percentages, mean score, and standard deviation were employed to analyze the data. Criterion means adopted from Likert-type's scaling using the upper and lower limits of each scale was applied to categorize the different constructs being studied for description, thus 0.1–1.0 was adjudged to be very dissatisfied, 1.1–2.0—dissatisfied, 2.1–3.0—satisfied, and 3.1–4.0—very satisfied. This was used by Uzoagulu[49] and Otani et al.[50]

Results

Of 400 questionnaires administered, 396 (99%) were retrieved. A total of 400 patients consented and filled the questionnaire; four questionnaire lacked sufficient demographic details and were discarded. Out of 396 patients' questionnaire analyzed, 156 (39.4%) were male and 240 (60.6%) were females. On age, patients within 18–39 years (233 (58.8%)) were more while the least were ≥61 years (43 (10.9%)). Based on education, the majority had secondary education (139 (35.1%)) and the least had tertiary education (71 (17.9%)). The majority of the respondents were married (221 (55.8%)), while a few (10 (2.5%)) were divorced. Those who earned <18,000 (170 (42.9%)) were more, while earners of 60,000–79,000 (13 (3.3%)) were the least, and traders (136 (34.3%)) were more to artisans (65 (16.4%)), as shown in Table 1.

Generally, patients were satisfied with tangibility (=2.57 ± 0.99) and reliability (=2.84 ± 0.95). While they were very satisfied with responsiveness (=3.06 ± 0.63), assurance (=3.07 ± 0.63), and empathy (=3.12 ± 0.57. In tangibility, waiting facilities for attendants and patients had the highest mean score (=2.70 ± 1.00), while the neat appearance of health workers scored the least (=2.49 ± 0.98). On the items of reliability, following treatment protocols (=3.01 ± 0.78) was highest, whereas maintaining error-free records scored the least (=2.74 ± 1.73). On responsiveness, willingness of the health workers to listen (=3.10 ± 0.92) was highest, while information about the condition of the patient by the health workers (=3.03 ± 0.71) had the lowest mean score. On the items of assurance, instructions on medications/follow up care (=3.07 ± 0.71) were highest, whereas thoroughness of medical examination scored the least (=3.06 ± 0.73). Finally, on empathy, patients' satisfaction was more on health workers' willingness to attend to them (=3.21 ± 0.69), but least was on concern shown to patients' family (=3.00 ± 0.76), as shown in Table 2.

Discussion

Patients' satisfaction with quality of care using the five service quality dimension (SERVQUAL)

Tangibility. Tangibility focuses on infrastructural facilities like labs, equipment, hygienic conditions of toilets, healthy hospital

Table 1. Socio-demographic characteristics of respondents.

Demographic variable	Frequency	Percentage (%)
Sex		
Male	156	39.4
Female	240	60.6
Age in years		
18–39	233	58.8
40–60	120	30.3
61 and above	43	10.9
Educational level		
None	86	21.7
Primary education	100	25.3
Secondary education	139	35.1
Tertiary education	71	17.9
Marital status		
Single	100	25.3
Married	221	55.8
Widowed	65	16.4
Divorced	10	2.5
Income Level		
<18,000	170	42.9
18,000–39,000	112	28.3
40,000–59,000	80	20.2
60,000–79,000	13	3.3
>80,000	21	5.3
Occupation		
Trading	136	34.3
Artisan	65	16.4
Farming	127	32.1
Civil servant	68	17.2

environments, health conditions, proper seating facilities for visitors, cleanliness of toilets, cleanliness of the patient room, facilities of hospital's research, pharmacy facilities, overall tangible infrastructure, and so on. The result showed that the respondents were satisfied ($x = 2.57 \pm 0.99$). In the same vein, Iloh et al.,[51] Odetola,[52] Ibraheem et al.,[53] Rehaman and Husnain[54] similarly stated that tangibility has a significant correlation with patient satisfaction level. Contrarily, Irfan et al.[24] reported dissatisfaction of patients for tangibility.

Reliability. Reliability is the ability to execute the promised services consistently and accurately, that is, when something is promised, it is done and provision of services at the time promised. This study found that, for reliability, most patients were satisfied ($x = 2.84 \pm 0.68$). This is in line with the findings of Mendoza Aldana et al.,[55] who reported that reduction in waiting time and consulting time improves clients' satisfaction. Amole et al.[12] reported that the least preference was waiting time. Ogunfowokan and Mora[56] reported that short waiting time and meeting patients' previsit expectations may significantly improve patients' satisfaction. However, Odetola[52] argued that affordability and quality had a significant effect on patients' satisfaction. Zarei et al.[13] and Khamis and Njau[44] also reported overall dissatisfaction with the quality of care. At variance, Ghosh[57] indicated that respondents were dissatisfied if more than 20-min elapse between admission and institution of treatment, and 69% of respondents affirmed that they were provided medication timely. Umeano-Enemuoh et al.[58] stated that dissatisfaction was on waiting time, despite good overall quality of care. Wonters et al.[59] indicated that high overall satisfaction though less satisfied with waiting time and a strong negative correlation (rf—0.438, $p < 0.00$) between nurse vacancy rates and mean satisfaction level with services performed by nurses. Ogunfowokan and Mora,[56] Imam et al.,[60] Iliyasu et al.,[61] and Opara et al.[62] reported a significant relationship between a short waiting time and overall patients' satisfaction with the clinic visit encounter. This assertion was supported by Rehaman and Husnain,[54] Uchendu et al.,[63] Naz et al.,[64] El-Nassir and Mohammed,[65] and Chirdan et al.,[66] who stated that reliability is insignificant with patient satisfaction. Adekanye et al.[67] stated that the cost of service delivery had a negative but relatively weak correlation with satisfaction. Iliyasu et al.,[59] Li et al.,[68] Megbelayin et al.,[69] and Zarei et al.[13] observed that cost of service had the greatest effects on the overall patients' satisfaction.

Responsiveness. The degree of willingness to help patients and provide prompt service by the hospital's personnel is responsiveness. The findings of this study showed that most patients were very satisfied with some of the indices of responsiveness which are information by the health provider, explanation of test and diagnosis, treatment received, and willingness of the health worker to listen to them ($x = 3.06 \pm 0.63$). This is in agreement with Zarei et al.,[13] Megbelayin et al.,[69] Ugwu et al.,[70] and Kroneman et al.[71] and in opposite with Imam et al.,[60] Clever et al.,[72] and Adekanye et al.,[67] whose study revealed negative responsiveness bringing low satisfaction for patients. Contrastingly, Irfan et al.[24] reported that public hospitals are not making visible efforts to deliver quality services to their patients and/or meeting the needs and wants of the patients. In addition to that, Peprah and Atarah[73] in their study reported negative responsiveness of health workers in the public sector. Furthermore, Rehaman and Husnain[54] stated that responsiveness is insignificant with patient satisfaction

Assurance. Assurance is about knowledge, skills, and expertise of the health workers involved in delivering services and the ability to create trust and confidence among their patients. The result revealed that most patients were satisfied with the thoroughness of the medical examination, instruction on medication/follow-up care, medical advice received, and competence of health workers ($x = 3.07 \pm 0.63$). Similarly, this was reported by Ghosh,[56] Babić-Banaszak et al.,[74] Sudip,[56] and Zamil et al.,[75] who observed high level of satisfaction with services of doctors. Furthermore, Zarei et al.,[13] Umeano-Enemuoh et al.,[58] Adekanye et al.,[67] Megbelayin et al.,[69] Abodunrin et al.,[76] Ndambuki,[77] Otani et al.,[51] Eke et al.,[78] Somayeh et al.,[79] Assefa et al.,[80] and Adebayo et al.[81]

Table 2. Mean and standard deviation scores of respondents on items of five service quality dimension (n = 396).

S. No.	Variables	$\bar{x}$	SD	Dec.
	Tangibility			
1.	Neat appearance of health workers	2.53	1.00	S
2.	Waiting facilities for attendants and patients	2.70	1.00	S
3.	Hygienic condition at hospital	2.49	0.98	S
	Grand mean	**2.57**	**0.99**	S
	Reliability			
4.	Maintaining error-free records	2.74	1.73	S
5.	Health workers interest in solving problems	2.82	0.85	S
6.	Charges for services received	2.85	0.78	S
7.	Providing services as promised	2.76	0.83	S
8.	Following treatment protocols	3.01	0.78	S
9.	Time spent with the health worker	2.83	0.73	S
	Grand mean	**2.84**	**0.95**	**S**
	Responsiveness			
10.	Responding quickly to patients	3.03	0.72	S
11.	Explanation of tests, diagnosis, and treatment	3.08	0.74	VS
12.	Information about the condition by health worker	3.03	0.70	S
13.	Willingness of the health worker to listen	3.10	0.92	VS
	Grand mean	**3.06**	**0.63**	**VS**
	Assurance			
14.	Thoroughness of medical examination	3.06	0.73	VS
15.	Instructions on medications/follow-up care	3.07	0.70	VS
16.	Competence of health workers	3.07	0.71	VS
	Grand mean	**3.07**	**0.63**	**VS**
	Empathy			
17.	Health workers willingness to attend to them	3.21	0.69	VS
18.	Given individual attention	3.11	0.75	VS
19.	Individualize patients specific need	3.11	0.71	VS
20.	Concern to patients family	3.00	0.76	S
21.	Referral to the higher level of care when need arise	3.15	0.74	VS
	Grand mean	**3.12**	**0.57**	**VS**

VS: very satisfied; S: satisfied.

in their study reported that patients were satisfied with the competences of health workers who attended to them. In contrast, Khamis and Njau[44] reported patients' dissatisfaction with assurance, and this was supported by Opara et al.[62]

Empathy. Empathy is about the individual attention and care provided to the customers by the service provider and its human resource. The result of the study showed that most respondents were satisfied with the attitude of the entire health workers ($x = 3.12 \pm 0.57$). Similarly, Babić-Banaszak et al.,[74] Hojat et al.,[82] and Mead and Bower[83] reported the same. Amole et al.[12] and Doris et al.[84] stated that empathy was very significant. This is supported by Iliyasu et al.,[61] Ross and Venkatesti,[85] and Derksen et al.[86] In contrast, Ghosh,[57] Imam et al.,[60] and Hutchinson et al.[87] reported dissatisfaction.

Furthermore, in the five service quality dimensions of SERVQUAL, patients in this study were more satisfied with the empathy ($x = 3.12 \pm 0.57$) and showed the lowest satisfaction in the tangibility ($x = 2.57 \pm 0.99$). In the same vein, Otani et al.[50] study revealed that staff care is the most influential attribute to patients in rating their overall hospital experience. Despite the above findings discussed, the study also had some limitations: first, data did not provide information on patients' health status before seeking medical attention; The study did not evaluate patients' satisfaction in a public hospital when compared to private health facilities in the state.

Conclusion

Conclusively, study of service quality as a multidimensional construct makes clear the effective areas of service quality in establishing patient satisfaction. This study indicated that patients showed the highest satisfaction with empathy and lowest satisfaction in the tangibility. Thus, managers can focus their quality improvement efforts on areas of neat appearance of health workers, waiting facilities for attendants and patients, and hygienic conditions at the hospital. Also, patients' satisfaction data should be used judiciously to provide a platform for health sector reform

because a significant portion of the data is attributed to factors peculiar to the patients though may or may not imply excellence of services generally.

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Informed consent

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Supplemental material

Supplemental material for this article is available online ('Questionnaire on patients' satisfaction with quality of care using SERVQUAL-docx').

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Appendix I

Yaro Yamane formula for determining sample size

The formula is stated thus

$$n = N/\ 1 + N\ (e)^2$$

where n is sample size; N is the estimated population size which is 1,363,633; e is the allowable error of five percent (0.05); and 1 is the constant, our sample size (n) can be computed; thus

$$n = 1,363,633/1 + 1,363,633\ (0.05)^2$$
$$= 399.9 == 400$$

For each zone, each proportion is worked out from respective population as thus

$$N \times n/\underline{N}$$

where N is the estimated population size, n is the sample size, and $\underline{N}$ is the zones population.

Abakaliki education zone: 448,538

$$= \frac{448538 \times 399.9}{1,363,633}$$

$$= 131.539$$

Onueke education zone: 407,737

$$= \frac{407,737 \times 399.9}{1,363,633}$$

$$= 119.573$$

Afikpo education zone: 518,818

$$= \frac{518,818 \times 399.9}{1,363,633}$$

$$= 151.149$$

Appendix 2

Total Ebonyi state population for each zone.

	Zones/LGA	No. of respondents above 18	Total population
1	**ABAKALIKI**		
A	Abakaliki	95,989	199,978
B	Ebonyi	80,245	167,177
C	Izzi	148,089	308,518
D	Ohaukwu	124,215	258,782
		448,538	**934,455**
2	**ONUEKE**		
A	Ezza North	92,128	191,933
B	Ezza South	84,274	175,570
C	Ishielu	95,563	199,089
D	Ikwo	135,772	282,858
		407,737	**849,450**
3	**AFIKPO**		
A	Afikpo North	99,082	206,420
B	Afikpo South	99,373	207,028
C	Ivo	76,501	159,377
D	Ohaozara	94,030	195,896
E	Onicha	149,832	312,150
		518,818	**1,080,871**
		1,363,633	**2,864,776**

LGA: local government areas.