


Relationship Between Patient Satisfaction and Willingness to Comply With Physicians' Recommendation in Referral Surgical Outpatient Clinic in Nigeria

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Abstract

The relationship between patient satisfaction with surgical care and their willingness to comply with doctors' recommendations has not been studied in the country. This study determined the relationship between ambulatory patients' satisfaction with care and their willingness to adhere to the surgeons' recommendations in the surgical outpatient clinic (SOPC) of the University Teaching Hospital. This analytical cross-sectional study was conducted among 490 adult respondents at the SOPC selected through a systematic sampling method with a sample interval of 1:2. The short form of the Patient Satisfaction Questionnaire with 7 domains and tool developed for patient willingness to comply with surgeons' recommendations were used. Descriptive and inferential analyses were performed, and P values of $<.05$ were considered significant. A total of 466 respondents' data were analyzed, giving a response rate of 95.1%. About 52.8% were males and 47.2% were females. The associations between domains of patient satisfaction and willingness to surgical instructions were mostly weak and non-significant. Their satisfaction with communication with the surgeons was the most consistent predictor of patient willingness and showed significant relationships with their willingness to accept follow-up visits ($P = .002$), drug prescription ($P < .001$), and further investigation ($P < .001$). Access/convenience and general satisfaction were significantly associated with their willingness to recommend the surgery clinic to close friends and relatives. Patient satisfaction with care has a significant relationship with their willingness to adhere to surgical recommendations.

Keywords

patients' satisfaction, patients' willingness, quality of care, ambulatory care, surgery clinic, Nigeria

Introduction

The practice of surgery is constantly evolving because of better understanding of the art and the availability of equipment and facilities that will aid in the practice (1,2). This increasing sophistication in the practice of surgery is occurring in a consumerist era, with increased attention to patient-centeredness and accountability in health care delivery (3). The latter had resulted in increased patients' awareness of their rights to quality care and the ability of their encounter to meet or surpass their expectations (4).

While patient satisfaction is a function of their expectations before an encounter with health providers and subsequent experiences following such encounter (5), the patient willingness demonstrates their readiness to obey or comply with doctors' recommendations (6). Common recommendations offered by surgeons to ambulatory surgical

patients include admission to the ward for observation and preparatory to surgical operation, the request for a follow-up visit, the prescriptions of drugs, and the conduct of investigations (7–9). Patients are expected to adhere to these recommendations to achieve satisfactory clinical outcomes. The compliance of the patient is expected to increase when the patient is satisfied with previous services received (10–14). Getting patients to comply with these usual

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recommendations is not an easy task, and this often creates a great deal of challenges to the surgeon. Paying keen attention to the views of patients generally results in health services being more socially relevant and responsive to the current and changing needs of the patients and the public (15,16).

There has been no documented study on the relationship between patients' satisfaction with surgical care and their willingness to accept surgical recommendations in Nigeria. Since patient satisfaction is an important outcome in itself and can form the basis for enhancing the quality of care of the surgical patient, this study was designed to measure how patients' satisfaction influences their willingness to accept outcomes of consultations in a surgical outpatient clinic.

Method

Study Area

The study was conducted in the Department of Surgery at the University Teaching Hospital. The 550-bed hospital with a bed occupancy rate of 70% has 26 clinical departments per unit of which the surgery department is one of them. The surgical outpatient clinic (SOPCs) runs from 9.00 AM to 4.00 PM daily from Monday to Thursday of every week. The 6 subspecialties in the surgery department—cardiothoracic, burns/plastic, neurosurgery, orthopedic, urology, and general surgery units—have dedicated days for outpatient clinic. Both new and follow-up patients are seen at the different SOPC consulting rooms by consultants and resident doctors on each visit day in relation to when they arrive at the clinic. Both old and returning patients receive general health talks before the commencement of consultation and uninsured patients are required to pay consultation fees and subsequent service they receive in the hospital before they are given attention.

Study Design

This study is an analytical cross-sectional study.

Study Population

The study population included ambulatory adult surgical patients who gave their consent and were not too ill to participate, such as patients with loss of consciousness.

Sample Size Determination

The minimum sample size was calculated using the formula for cross-sectional survey with categorical variables; $n = Z_{1-\alpha/2}^2 pq/d^2$ (21), where $Z_{1-\alpha/2}$ is the standard normal variate (at 5% type I error [$P < .05$]) which is 1.96; p = proportion of patient who are satisfied; $q = 1 - p$; and d = allowable error. The assumption that 50% of the patients would be satisfied with the care received at the outpatient surgical clinic and making provision for a 10% allowance for nonresponse or inappropriately completed questionnaire gave a minimum sample size of 422 patients.

Sampling Method

Participants were recruited at the exit point using a systematic sampling method with a sample interval of 1:2.

Study Instrument

Survey instruments commonly used to assess the quality of care from the perspective of the patient include the Hospital Consumer Assessment of Healthcare Providers and Systems Survey and the Patient Satisfaction Questionnaire (PSQ-18) (17,18). Although both survey tools have been widely validated in various clinical settings, the PSQ-18 has been validated in the local clinical setting (19). The PSQ-18 includes 18 questions in its 7 domains: general satisfaction (3,17), communication (items 1 and 13), the time patient spent with doctor (items 12 and 15), interpersonal manner (items 10 and 11), convenience and accessibility (items 8, 9, 16, and 18), financial aspects (items 5 and 7), and technical quality (items 2, 4, 6, and 14) (17). Measurements done with the PSQ-18 can provide insights into the structure, process, and outcome of care (20). The tool for patients' willingness to adhere to surgical instruction had the 5 usual recommendations a doctor will give to an ambulatory patient seen in the surgical outpatient clinic, including admission to the surgical ward, being booked for a follow-up visit, given a drug prescription, requesting for further investigations, and planning for a procedure/surgery.

Validity/Reliability of the Instrument

Although the PSQ-18 questionnaire was validated during a recent study in the teaching hospital (19), a face and content validation of the scale was conducted using subject experts and patients in order to improve appropriateness, comprehensibility, and the clarity of the contents for surgical patients. Further validity and reliability assessments of measurement tools used in this study were demonstrated by the findings of a series of converging statistical test—the internal consistency reliability of both tools was assessed using the Cronbach's α coefficient while the validity was demonstrated by the item-response characteristics, item-total, and domain-total partial correlation.

Data Analysis

Negatively worded statements in the PSQ-18 were reversed, such that a higher score reflects a higher level of satisfaction with an attribute. The ordinal ratings were transformed to percentage scores and treated as interval scale to allow for the application of robust parametric analysis. This is a common procedure where the sample size is large enough and data show normal distribution (21). Items scores in the multi-dimensional PSQ-18 scale were summed to compute for the domains and entire scale scores each ranging from 0 to 100. Descriptive analysis was performed using frequencies, percentages, and means and findings presented in tables and a

chart. A scatter plot showing the best-fit correlation line was presented. Statistical inferences were drawn based on the findings from the Pearson's correlation coefficient, and P values of $<.05$ were considered significant. The correlation coefficient was graded in line with established recommendations (22).

Ethical Considerations

Ethical approval was obtained from the University Research Ethics committee, and permission to carry out the study in the department of surgery patients was obtained from the head of the Department of Surgery of the institution and individual consents of participants.

Results

A total of 490 questionnaires were administered, with responses from 466 giving a responsive rate of 95.1%. The reliability test for the PSQ-18 and patients' willingness tools measured by the Cronbach's α coefficient were .8 and .7, respectively. The Cronbach's α for the willingness scale was .70; the item-item correlation coefficient ranged from 0.13 (between investigation and admission) to 0.62 (between prescription and follow-up). The corrected item-total correlation ranged from 0.24 (admission-total) to 0.59 (between follow-up and the total). For the PSQ-18, the Cronbach's α was .79 and the item-total partial correlation ranged from 0.15 (item 15 and the total) to 0.53 (between item 13 and the total).

From Table 1, 52.8% ($n = 246$) were males and 47.2% were females. Most of the patients were aged between 40 and 60 years (42.7%), married (53.6%), and paid for health care using the out-of-pocket payment mode (83%). There were also more repeat visitors to the clinic (60.9%) and a few rated their health status as poor-fair (27.7%).

Abbreviation: SOPC, surgical outpatient clinic.

From Table 2, the mean score for patients' willingness to adhere to recommendation following surgical consultation was highest for drug prescription (85.8%) and least for admission (65.5). The score along domains of patient satisfaction was highest for communication (70.3%) and least for financial aspects of care (52%). The score distribution showed a slight positive skewness for overall satisfaction and a more marked negative skewness for patient overall willingness (Figure 1).

There was a moderate positive correlation between patient overall satisfaction and their willingness with a 1% increase in satisfaction likely to influence a 0.57% increase in patients' overall willingness (Figure 2). This association was observed to be statistically significant ($P < .001$).

Table 3 explores the influence of the domains of satisfaction on the willingness of patients to accept the various recommendations following surgical consultation and recommend the clinic to their close friends and family members. The various models show that the ability of patient satisfaction to explain the variance of their willingness range

Table 1. Sociodemographic Characteristics of Patients.

Variables	Frequency, n = 466	Percentage (%)
Sex		
Male	246	52.8
Female	220	47.2
Age, years		
<40	191	41.0
40-60	199	42.7
>60	76	16.3
Marital status		
Single	177	38.0
Married	250	53.6
Divorced	17	3.6
Separated	15	3.2
Widowed	7	1.5
Religion		
Christian	458	98.3
Islam	8	1.7
Education		
None	15	3.2
Primary	45	9.7
Secondary	112	24.0
Tertiary	294	63.1
Monthly income		
<N30 000	211	45.3
> N30 000-< N150 000	170	36.5
≥ N150 000-< N300 000	62	13.3
≥ N300 000	23	4.9
Mode of payment		
Free	18	3.9
Insured	60	12.9
Out-of-pocket payment	388	83.0
Length of SOPC attendance		
First timer	182	39.1
Repeat visit	284	60.9
Self-rated health status		
Poor	22	4.7
Fair	107	23.0
Good	191	41.0
Very good	86	18.5
Excellent	60	12.9

from 1.5% (willingness to accept admission) to 11.3% willingness to accept the surgical procedure. Patients' satisfaction with their communication with the surgeons was the most consistent predictor of their willingness to accept recommendation following consultation with the surgeon, as this could predict their willingness to accept follow-up visits ($P = .002$), drug prescription ($P < .001$), and further investigation ($P < .001$). Their satisfaction with access and convenience predicts their willingness to accept admission ($P = .002$) and accept surgeries ($P = .016$).

Discussion

This study sought to determine the relationship between patient satisfaction and their willingness to accept the various outcomes that follows consultation at the surgical clinic and found that there was a weak but positive correlation

between some of the domains of patient satisfaction and their willingness to comply with surgical recommendations. This association was stronger between the satisfaction of patients with their communication with doctors and their willingness to accept follow-up visits, drug prescription, and further investigations.

The communication skill of the doctor is important in surgical practice as it demonstrates the extent the surgeon can be able to convey clinical decisions to patients seen in the clinics (23). Effective communication leads to the creation of a good interpersonal relationship between the doctor and the patient, and its potent influence on good clinical outcomes has been reported in previous studies (24,25). A previous study conducted in London about 2 decades ago

showed that good history-taking and discussion of the management plans with the patient improved health outcomes for the patient (26). Effective history-taking requires doctors to be adept in communication skills to be able to facilitate a coherent and comprehensive interview with patients.

Training on effective communication with patients should be included in the training curriculum for undergraduate medical students. It should also form part of the continuous medical education and continuous professional development for doctors and other health workers who have interactions with patients during their clinical assignments. The benefits of effective communication in facilitating patient interviews and conducting patient education cannot be overemphasized (24). Some critical underpinnings for effective communication between a doctor and the patient are maintaining good interpersonal manners (23), the encouragement of a role model in making doctors good communicators with patients (27), making doctors aware that their patients may have differences in the communicating abilities, and thus empower them to express their concerns and preferences (28).

It is not surprising that the patients' perception of the quality of the communication with the surgeon had the most significant influence on their willingness to adhere to the different surgical recommendations. This depicts that the quality of the communication between the doctor and the patient has an important role in ensuring patients' satisfaction. The quality of communication may also influence the physician's acceptance by the patients and is related to positive medical outcomes (24,29,30). Generally, patients who are satisfied with the surgical care they received are expected to comply with instructions on medication, request for a follow-up, or even give their consent for surgical procedure to be carried out on them (9,14,31).

Financing of surgical care remains a critical issue in achieving universal health coverage, especially in developing countries with limited insurance coverage and low public investment in health care (32). Patients are often concerned about the cost of health care as payments are often demanded from them at the point of access to such care. There are indications that the preponderant out-of-pocket mode of

Table 2. Summary Score for Willingness and Satisfaction (n = 466).

Variables	Domain	Mean	SD	Skewness	Kurtosis
Willingness	Accept admission	65.6	29.7	-0.60	-0.63
	Accept follow-up visit	80.7	18.7	-1.24	2.67
	Accept drug prescription	85.8	17.3	-1.37	2.90
	Accept further investigations	80.8	20.7	-1.00	-1.09
	Accept procedure/surgery	80.3	21.0	-1.09	1.39
	Overall willingness	78.5	14.2	-0.87	2.19
Satisfaction	Communication	70.3	18.6	-0.34	-0.29
	Time spent with doctors	56.4	20.3	-0.13	-0.21
	Interpersonal manner	67.1	21.0	-0.57	-0.03
	Access and convenience	56.9	16.8	0.10	0.06
	General satisfaction	62.3	18.7	-0.41	0.18
	Technical quality	63.2	15.4	-0.23	0.37
	Financial aspect of care	52.0	21.0	0.12	0.09
Overall satisfaction	60.9	12.4	0.14	0.57	

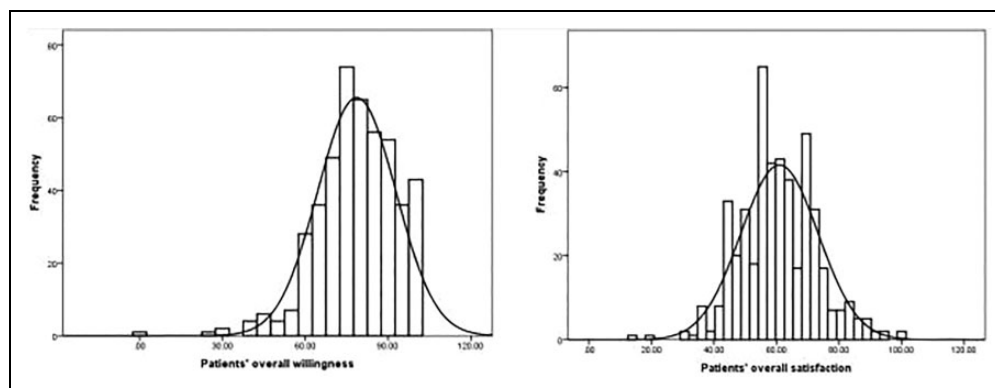


Figure 1. Score distribution in scales measuring patient overall satisfaction and willingness.

payment for health care in this setting not only limit access to essential health services but also causes significant dissatisfaction among patients (19). Curiously, the relationship between patient satisfaction with the financial aspects of their care and their willingness to accept the various instructions and recommend the surgery clinic to close family and friends was insignificant. This may have arisen because of the limited choices available to their patients visiting the apex referral facility in the area. It is also intriguing that institutional innovations aimed at improving patients' satisfaction with the financial aspects of their care in the United States did not have any an effect on the patient overall satisfaction scores (33), unlike the positive effect on patient satisfaction reported with appropriate resource mobilization and utilization during the management of patient (34).

Spending sufficient time with the doctor may give the patient enough time to achieve effective contact and communication with the doctor, unlike the time spent waiting for a doctor which may be a source of distress to patients (35). It is pertinent to differentiate the overall time spent by the patient when visiting surgical clinics when attempting to

improve promptness in receiving care and patient satisfaction (36). Where hospital's bureaucracies prolong waiting time for the patient, caregivers or patients support mechanisms can be established to assure timely and good quality care for patients. The time a patient spends in a health care facility includes time spent at various service stations, time spent waiting for the doctor, and the time spent with the doctor during consultations. An indication of improvement in the standard of surgical practices is the extent patients are satisfied with the time spent waiting for the doctor (37). Innovative approaches of improving patient waiting time in a complex multispecialty hospital like this setting involve deploying patient advocacy strategies to ensure access to timely and good quality care or improving the experiences of the patients while waiting through the provision of audio-visual or print entertainment systems (37,38).

Assessing the quality of surgical care from the patients' perspectives should form an integral part of the quality management plan of any tertiary hospital. This is a critical requirement in the evolution of a patient-focused surgical practice. The direct positive relationship between patients' overall satisfaction and their overall willingness to accept the various recommendations following surgical consultation corroborates findings from an earlier study that patients who were satisfied during surgical consultation were more likely to accept the offer of admission, follow prescribed medications, and return for treatment (14,39).

There are still divergent opinions about the relationship between patient satisfaction and other objective measures for quality of care and compliance with surgical care (40). However, there are greater convergences that adherence to the doctor's recommendations following surgical consultation is an important factor predicting the effectiveness of surgical care. Previous studies have demonstrated a relationship between the reduced rate of readmission following a high level of adherence to surgical recommendations (8,10,30).

The implications of being a dissatisfied patient are that such patients may refuse to comply with the recommendations

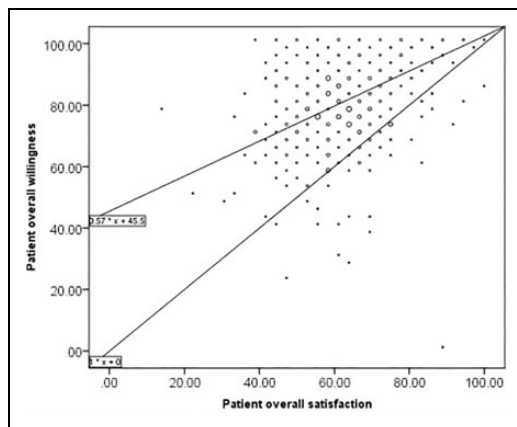


Figure 2. Scatterplot of the association of patients' overall willingness and their overall satisfaction.

Table 3. Linear Regression Showing the Association of Patient Satisfaction With Their Willingness.

Domains of patient's satisfaction	Patient's willingness to				
	Accept admission B coeff (P value)	Accept follow-up visit B coeff (P value)	Accept drug prescription B coeff (P value)	Accept further investigation B coeff (P value)	Recommend clinic B coeff (P value)
Adjusted R ²	1.5%	3.3%	3.4%	6.5%	11.3%
Communication	-0.103 (.279)	0.189 (.002) ^a	0.221 (<.001) ^a	0.318 (<.001) ^a	0.096 (.135)
Time spent with doctor	0.094 (.217)	0.019 (.690)	0.029 (.502)	0.003 (.954)	-0.005 (.924)
Interpersonal manner	-0.045 (.560)	0.004 (.926)	0.001 (.988)	-0.069 (.182)	0.012 (.808)
Access and convenience	0.329 (.002) ^a	0.014 (.830)	-0.011 (.848)	0.084 (.233)	0.168 (.016) ^a
General satisfaction	-0.026 (.772)	0.080 (.159)	0.011 (.831)	0.052 (.397)	0.146 (.017) ^a
Technical quality	-0.050 (.699)	-0.033 (.651)	-0.074 (.276)	-0.104 (.192)	0.063 (.422)
Financial aspects of care	-0.018 (.810)	-0.036 (.438)	-0.002 (.964)	-0.011 (.825)	0.079 (.118)

^aP < 0.001.

of the doctors, experience poor treatment outcomes, and fail to recommend the health facility to friends or relatives. Additionally, having lots of dissatisfied patients in a practice may also result in higher rates of litigations and loss of funds from the hospital as they may be fined for suboptimal care to patients (8,9,41).

Although this study focused on the extent patients' satisfaction influence their willingness to accept the various recommendations following surgical consultation, the weak relationships and low attribution of the various domains of satisfaction to the variance of the patients' willingness observed in this study give an indication that other factors are responsible for patients' adherence to further surgical recommendation in a health system (9,30).

Conclusion

This association between the domains of patient satisfaction and willingness to accept the various recommendations following surgery outpatient consultation is stronger with their satisfaction with the doctors' communication. There is a need to institutionalize the conduct of periodic practice-based feedback from surgical patients and findings used to improve the quality of surgical care. Future research should consider how each of these domains of patient satisfaction influences the patients' willingness to comply with the recommendations of the surgeons.

Authors' Note

All authors were involved in the conceptualization, planning, and implementation of the study. The data collection team was headed by KEO. All authors contributed to the interpretation of the results and also read and approved the final manuscript.

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Declaration of Conflicting Interests

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Ethical Considerations

Ethical approval was obtained from the University of Port-Harcourt Research Ethics Committee, and permission to carry out the study in the department of surgery patients was obtained from the head of the Department of Surgery, University of Port Harcourt Teaching Hospital, and individual consents of participants.

Study Area

The study was conducted in the Department of Surgery at the University of Port-Harcourt Teaching hospital, Rivers State. The hospital is located in Rivers State along East-West road with coordinates of 44°53'58"N and 6°55'43"E. This tertiary hospital is located in Rivers State and receives referrals from neighboring states such as Bayelsa, Abia, Imo, Akwa-Ibom, Delta, Cross River, and other states in Nigeria.

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Author Biographies

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DS Ogaji is a public health physician with the University of Port Harcourt Teaching Hospital and a Senior lecturer with the University of Port Harcourt, Port Harcourt, Rivers State, Nigeria. His research interests are healthcare services research with focus in quality improvement, improving access to healthcare, improving stakeholders' experiences and improving outcomes in the management of long-term conditions. His methodological competences are in quantitative research, evidence synthesis, health systems/programme evaluation, psychometric and field trials.