

SERVICE QUALITY AND PATIENT SATISFACTION AS PREDICTORS OF LOYALTY AMONG PATIENTS IN PUBLIC HOSPITALS IN MAKURDI METROPOLIS

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Abstract

This study investigated service quality and patient satisfaction as predictors of loyalty among patients in public hospitals in Makurdi metropolis. The study adopted cross-sectional survey design where two hundred and fifty (250) patients consisting of 143 (57.2%) males and 107 (42.8%) females were selected. Their ages ranged from 19-43years with a mean age of 31.60years (SD=8.248). Accidental sampling was used to draw the participants for the study. The quality-of-care questionnaire, patient satisfaction scale and the patient loyalty questionnaire were used for data collection. Simple linear regression, multiple linear regression and hierarchical regression analysis were used for hypothesis one, two and three respectively. The result revealed that service quality significantly predicted loyalty among patients. The result also revealed that patient satisfaction significantly predicted loyalty among patients. The result also revealed that service quality and patient satisfaction are significant joint predictors of loyalty among patients when demographic variables were controlled. It was recommended that poor service quality associated with many public hospitals should be eradicated. This can be done if health workers of public hospitals such as doctors and nurses are re-sensitized by trained workplace (industrial and organizational) psychologists on the essence of service quality in customer retention and the need to adopt better strategies of providing medical services. The implication of the finding is that more patients will be willing to patronize public hospitals if the quality of service is improved and their threshold of satisfaction is met.

Keywords: Loyalty, Makurdi, Patient Satisfaction, Patients, Public Hospitals, Service quality

Background to the Study

Globalization has brought intensive competition in all sectors of the society today. This has led to unprecedented growth and development in the service industries such as the health sector. In many developed countries, service sectors are the largest contributor (more than 50 per cent) to Gross Domestic Product (GDP) (Segava, 2023). Developing countries are thus following in the same footsteps, by introducing initiatives to boost their services (Demirci & Kara, 2019). The healthcare sector is a key service sector that attracts significant revenue from local and international sources. As a unique service industry, patients demand high-service quality. The service provided by hospital staff affects patients, family and friends. Thus, researchers are showing increasing interest in examining the link between service quality, patient satisfaction, and patient loyalty (Shi *et al.*, 2018; Demirci & Kara, 2019).

Today, health services account for approximately 70% of all production and employment in the Organization for Economic Co-operation and Development (OECD) of nations and about 75% of the gross domestic product in the United States and parts of the world (Shi *et al.*, 2018). The competitiveness of service businesses solely rests on its customer's perception of the services to be of good quality. Dramatic changes in the healthcare industry have put great pressure on healthcare providers to survive and develop. During the last 25 years, competition in healthcare has been part of reform in many countries, such as UK, Australia, France and Germany (Brown, 2020). Besides, the private healthcare sector is growing rapidly in emerging market countries (Segava, 2023), which makes the healthcare industry competitive. The competitive environment is obliging healthcare providers to deal with the increased competition and compete with each other for a larger share of the market.

On the other hand, patients have freedom of choice in healthcare providers in many countries such as New Zealand, Sweden, UK and Australia (Toth, 2020; Rundle-Thiele & Russell-Bennett, 2020). Hence, the recognition of the right of patients to freedom of choice has encouraged fierce competition among healthcare service providers. In a competitive situation, healthcare success is not only the result of good technical skills and provision of high-service quality, but also from satisfying customers and encouraging them to return to the practice (Rundle-Thiele & Russell-Bennett, 2020). Patient loyalty is thus considered a key business success factor for healthcare providers.

Consumer loyalty is a deeply held commitment to rebuy or repatronize a preferred product or service consistently in the future, causing repetitive same brand purchasing, despite the potential for situational influences and marketing efforts to cause switching behavior. It consists of four loyalty phases: cognitive, affective, conative and action. Healthcare providers have multiple types of customers (doctors, third-party payers, patients, families etc.), and patients are basic to the loyalty of these other constituencies. Loyal patients will very likely return to the same healthcare provider, spread positive words of mouth, and recommend the provider to others (Chia-Wen *et al.*, 2023). Healthcare providers who focus on patient loyalty gain benefits; these may be economic or noneconomic. Loyalty contributes to reducing patient defection and patronizing behavior among patients. It also saves the cost of attracting new customers and prevents the wasteful practice of offering ‘frills’ in desperate efforts to recruit sufficient patients. Customer loyalty is proved to be related to profitability. In addition, as patients spread positive word of mouth, loyalty can improve the brand image of healthcare providers. Developing and maintaining patient loyalty will also bring benefits for patients by enhancing health outcomes. Patients have essential participation roles in healthcare services (Rundle-Thiele & Russell-Bennett, 2020) and patient participation affects

health outcome. Loyalty promotes continuity of care, compliance with medical advice and greater use of preventive services. Loyal patients keep using medical services, follow prescribed treatment plans and maintain relationships with specific healthcare providers. Many factors are implicated in the prediction of loyalty among patients.

Quality of service is a comprehensive assessment of the superiority of service. The quality of service itself is formed by a comparison between ideal and perceptions of the quality dimension performance. According to Tjiptono (2018), service quality is the difference between reality and the expectations of patients for the service they receive. There are factors that influence service quality, namely, expected services and perceived services. Hidayat (2016) found that service quality affects patient loyalty to hospitals. Similarly, As'ad (2023), Wungow and Adarajad (2016) and Kusniati (2016) revealed that customer value influences loyalty through satisfaction variables. Despite these findings, the biggest challenge for public hospital is providing and maintaining customer/patient satisfaction. Consequently, Zafar *et al.* (2022) stated that service quality affect patient satisfaction. Having patients satisfied is not sufficient, they must be very satisfied because customer satisfaction leads to loyalty (Bowen & Chen, 2021). The linkage among service quality, patient satisfaction, and patient loyalty gives creative ideas to improve service and accordingly to reach a competitive excellence in health care businesses (Siddiqi, 2021).

Another variable that has bearing on patient loyalty is patient satisfaction. Patient satisfaction represents every organization's sole purpose, as it is at the heart of every mission statement, and ultimate goal of any strategy. Patient satisfaction is a feeling of pleasure or disappointment resulting from comparing product's perceived performance (or outcome) in relation to his or her expectations. In line with this Anbori *et al.* (2020) defined patient loyalty as a strategic service plan to retain customers in the long term by providing better service quality. To

achieve patient loyalty, providers must fulfill patients' needs and expectations (Aliman & Mohamad, 2016). Also, Anbori *et al.* (2020) mentioned that if providers know what service quality aspects are most important to patients and have mechanisms to prioritize and ensure that these are in place, then this will lead to patient satisfaction and willingness to reuse medical services. Furthermore, Mortazavi *et al.* (2019) conducted research on patient satisfaction and patient loyalty in four Iranian private hospitals using six dimensions: nursing care, operating room, admission and administration services, meals, expenses, and patient rooms. They found that patient satisfaction and loyalty are significantly correlated, and both factors have significant relationships with nursing care, operating room, admission and administration services, and patient room. Also, Hu *et al.* (2021) found that patient satisfaction did not have a considerable influence on patient loyalty in Taiwan. To achieve patient loyalty, providers need to communicate regularly with patients to understand their needs and expectations (Roberge *et al.*, 2021).

Perceived quality is considered the antecedent of patient satisfaction and loyalty. Therefore, patient loyalty stems primarily from perceived quality. Perceived quality directly influences patient loyalty and satisfaction. Therefore, patient satisfaction partially mediates the quality–loyalty relationship (Ball *et al.*, 2016; Chou *et al.*, 2015; Boshoff & Gray, 2014). Based on this approach, the process of achieving satisfaction has been described as follows; before buying, patients form expectations of a specific product or service. Then, consumption induces a perceived quality level that is influenced by the difference between actual quality perceptions and the expectations of quality. If perceived quality is confirmed, then patients are satisfied. The intensity of patient loyalty is then influenced by the degree of satisfaction, and perceived quality is considered to influence patient loyalty. This study thus seeks to investigate service quality, patient satisfaction, and loyalty among patients of public hospitals in Makurdi metropolis.

Statement of Problem

In today's sophisticated and rapidly revolutionized world, healthcare organizations such as hospitals are one of the fields in the service-based sector that provide healthcare services. With the growing demand on the healthcare services, issues such as patients' satisfaction and loyalty have become significant topics for both the management team and patients. Commonly among hospitals owned by the government, the quality of services offered is poor compared to private hospitals where the quality of service is the priority of health workers and managements (Shi *et al.*, 2018). Many people may not want to visit public hospitals because of their previous experiences in public hospitals where there may be no staff on duty at the cashing point, laboratory unit, or even the doctor on-call may not be picking his/her calls. Away from this, there are often issues of lack of electricity for scanning and lab services, and the drugs prescribed may not be readily available at the hospital pharmacy. Thus, many patients irrespective of the cost are craving for the services of private hospitals than public ones. More so, studies that have compared private and public hospitals in terms of patient satisfaction have inferred that irrespective of personal biases, patients are far more satisfied with services offered in private hospitals (Roberge *et al.*, 2021; Bowen & Chen, 2021). These include consistent attention and feedback, quality and availability of medical resources and apparatuses, mutual interaction, and proper guidance on the flow of treatment. These features are rare in public hospitals where one would expect that the government is at forefront and qualitative services should not be a problem.

Among patients, loyalty is nested via trust and confidence. In a state where trust is not embedded, loyalty is lost. This could be one of the reasons why patients are becoming more loyal to private than public hospitals. Researchers worldwide have thus raised suspicion on the role of service quality and patient satisfaction on loyalty (Toth, 2020; Rundle-Thiele & Russell-Bennett,

2020). The dwindling nature of patient loyalty to public hospitals is a grown concern because the future looks bleak for public hospital patronage in Makurdi metropolis. Thus, the government, psychologists and hospital managers are keen to know the determinants of patient loyalty. But there are few studies of this nature conducted among patients of public hospitals in Makurdi metropolis. This dearth of literature has led to the dearth of interventions to curb this cankerworm. Therefore, the present study seeks to investigate the influence of service quality and patient satisfaction on loyalty among patients of public hospitals in Makurdi metropolis.

Purpose of the Study

The purpose of this study is to examine service quality and patient satisfaction as predictors of loyalty among patients of public hospitals in Makurdi metropolis. The specific objectives are to:

- i. Ascertain the impact of service quality on loyalty among patients of public hospitals in Makurdi metropolis.
- ii. Investigate the impact of patient satisfaction on loyalty among patients of public hospitals in Makurdi metropolis.
- iii. Investigate the joint impact of service quality and patient satisfaction on loyalty among patients of public hospitals in Makurdi metropolis when demographic variables are controlled.

Literature Review

This section covers both the theoretical and empirical review of the study. Details are found in the following sections:

Theoretical Review

This study is anchored on the Simple discrepancy theory developed by Kravitz (1996) and is the most widely adopted theory of patient loyalty (Sitzia & Wood, 1997). According to this theory, loyalty is preceded by satisfaction which is the difference between what is desired or thought to be needed and what is perceived to occur. The theory states that, what clips a client to a particular brand or product is the result of the comparison between what they expect from the product and what they eventually get. As applied to patients, this theory explains that patients are more likely to patronize and pledge their allegiance to public hospitals if they observe that the services they get from them are more satisfying and of better quality relative to what is obtainable in private hospitals. However, there is mixed research support for an association between desires and satisfaction (Kravitz, 1996; Sitzia & Wood, 1997). More so, the simple discrepancy theory has not been found particularly successful in explaining absolute variations in loyalty. Irrespective of the type of expectation measured (desires, entitlements, or probabilities), the variation explained by discrepancies between expectations and satisfaction, controlling for socio-demographic differences, remains at or under 20% (Davis *et al.*, 1986). Hence, since the tenets of this theory are yet to be tested among patients of public hospitals in Makurdi metropolis, there was need for the present study.

Empirical Review

The following sections cover a review of empirical literature on the connection between service quality and patient loyalty, and patient satisfaction and patient loyalty.

Service quality and Patient Loyalty

Permana *et al.* (2019) examined service quality and value effect on patient satisfaction and its effect on loyalty of hospital patients in Hospital and Children of Pucuk Permata Hati. The researchers conveniently sampled 100 inpatients. The results showed that the quality of service had a significant positive effect on the satisfaction. Also, value had a significant positive influence on patient satisfaction. Service quality did not have a significant effect on loyalty. It was also found that value had a positive effect on loyalty. In addition, consumer power (patients) had a positive effect on loyalty. The results obtained from this study disagreed with the previous study reviewed. More so, the study employed a smaller sample size which may explain why the results were different. This indicates the need for further confirmatory studies.

Azman *et al.* (2019) assessed the relationship between service quality and patient loyalty in the Muslim-friendly healthcare sector in the developing country of Malaysia. The study applied the SERVQUAL model developed by Parasuraman in 1985, to measure service quality in Malaysian Islamic medical care particularly in Muslim friendly hospital. The respondents were selected from inpatients and outpatients by adopting multi-stage cluster sampling. The hypotheses were tested using multiple regressions. The four factors of service quality (tangible, empathy, reliability, and responsiveness) demonstrated strong links with loyalty. Therefore, the SERVQUAL model's compliance aspect proved its value by demonstrating the highest major

factor in the overall model. The study was however conducted in a Muslim-related context which contrasts drastically with the context in Africa and Makurdi metropolis in particular.

Haryeni and Yendra (2019) examined (i) the direct effect of service quality (Servqual) dimension on patient satisfaction in the public health industry in Padang City (ii) the direct influence of patient satisfaction on repurchase intentions in the public health care industry in Padang City. The sample used was 150 respondents. Results indicated that assurance had no significant effect on satisfaction. Empathy had a significant effect on satisfaction. Reliability had no significant effect on satisfaction. Responsibility had no significant effect on satisfaction. Tangibility had no significant effect on satisfaction while satisfaction significantly influenced repurchase intentions. The limitations of the study were also discussed.

Patient Satisfaction and Patient Loyalty

Meesala and Paul (2018) investigated service quality, patient satisfaction and patient loyalty in India. The study was conducted using the data from the consumers who received services from 40 different private hospitals in Hyderabad, India. A path analysis was carried out in order to compute path coefficients, direct and indirect effects of the variables on patient's satisfaction and also loyalty to the hospital. They found that reliability and responsiveness (not empathy, tangibility, and assurance) impact patients' satisfaction. Patient's satisfaction was directly related to patients' loyalty to the hospital. Marital status and age had no impact on the regression weights of the variables analyzed; however, it was found that to some extent gender does. This Indian based study was conducted in neglect of patients in Makurdi metropolis.

Lestariningsih *et al.* (2018) examined the relationship of service quality, patient satisfaction, trust, and loyalty directly and through mediation. The study population was 6,088

patients who had received inpatient services at the public hospital Batu, East Java, Indonesia while the sample was 100 respondents. Hypothesis testing with Structural Equation Modeling-Partial Least Square (SEM-PLS) model showed both significant and insignificant relationship between the variables. Service quality was not significantly related to loyalty, but trust moderated the relationship. Thus, trust strengthens the influence of service quality on loyalty. This study also suffers a similar weakness as that of the previously reviewed study.

Ahmed *et al.* (2017) investigated service quality, patient satisfaction, and loyalty in Bangladesh's healthcare sector. It identified healthcare quality conformance, patient satisfaction and loyalty based on demographics such as gender, age and marital status. Findings indicated that single patients perceive tangibles, reliability, empathy and loyalty higher compared to married patients. Young patients (≤ 20 years) have a higher tangibles, empathy and loyalty scores compared to other age groups. The authors observed that private hospital patients perceive healthcare service quality performance higher compared to patients in public hospitals. This study is criticized for focusing solely on the Bangladesh health sector, so the results might not be applicable to other countries.

Hypotheses

The following hypotheses were tested in the study:

- i. Service quality will significantly predict loyalty among patients of public hospitals in Makurdi.
- ii. Patient Satisfaction will significantly predict loyalty among patients of public hospitals in Makurdi.

- iii. Service quality and patient satisfaction will jointly predict loyalty among patients of public hospitals in Makurdi metropolis when demographic variables are controlled.

Method

This section covers the participants, instruments, procedure, design, statistics, discussion, limitations and recommendations of the study.

Participants

The participants for this study were two hundred and fifty (250) patients consisting of 143 (57.2%) males and 107 (42.8%) females. Their ages ranged from 19-43years with a mean age of 31.60years (SD=8.248). In terms of their religion, 179 (71.6%) were Christians while 71 (28.4%) were Muslims. Considering their marital status, 71 (28.4%) were single, 71 (28.4%) were Married, 72 (28.8%) were divorced while 36 (14.4%) were separated. The study adopted accidental sampling technique to draw the participants for the study. The participants were drawn from General Hospital Northbank, Federal Medical Centre Makurdi and Benue State University Teaching Hospital Makurdi because they are the most populous hospitals in Makurdi metropolis.

Instruments

The instruments used to collect data include the demographic variables, Quality of Care Questionnaire, Patient Satisfaction Scale, and the Patient Loyalty Questionnaire. The demographic variables assessed include the age, sex, ethnic group, religion and marital status.

Service quality was measured using the Quality-of-Care Questionnaire developed by Karaca and Durna (2019). The scale has 19 items measured on a 5-point Likert format of 1 (poor) to 5 (excellent). The unidimensional scale has a reliability coefficient of .98. Meanwhile the present

study obtained an alpha coefficient of .96, and the item total correlation ranged from .35 - .89. The range of scores for this scale is from 19-95 where a score of 19-40 indicates low quality of service, 41-60 indicates average quality of service while 61-95 indicates high quality of service. Sample of items include “How clear and complete the nurses’ explanations were about tests, treatments and what to expect?”, “How well things were done, like giving medicine and handling IVs?”

Patient satisfaction was measured using the Patient Satisfaction Scale developed by Suhonen *et al.* (2007). The scale has 10 items measured on 4 point Likert scale of 1 (very dissatisfied) to 4 (very satisfied). The scale has three dimensions; technical care needs (items 1, 2, 3), Informational care needs (items 4, 5, 6, 7) and interactional/support care needs (items 8, 9, 10). The scale has no reversed items and the overall reliability coefficient is .93. The present study obtained an alpha coefficient of .94 while that of the subscale were .94, .90 and .55 respectively. The item total correlation ranges from .41-.92 while the range of scores for the entire scale is from 10-40. Scores from 10-25 imply low satisfaction while scores from 26-40 imply high satisfaction with services. Sample of items include “how satisfied are you with the ways doctors approached and treated you?”, “how satisfied are you with the amount of care you received?”

Loyalty was measured using the Patient Loyal Questionnaire developed by Erdogmus and Cicek (2012). The 7-item scale is measured on a 5-point scale of 1 (strongly disagree) to 5 (strongly agree). There are no reversed items and the present study reported an alpha coefficient of .78. The item total correlation for this scale ranges from .37 - .88. The range of scores for the scale is from 7 - 35 where a score of 7-21 indicates low loyalty while a score of 22-35 indicate high loyalty. Sample of items include “I feel relieved after receiving service from this hospital”, “I recommend this hospital to all those who ask for advice”.

Procedure

This study was conducted among patients of General Hospital Northbank, Federal Medical Centre Makurdi and Benue State University Teaching Hospital Makurdi in Makurdi metropolis. The researcher obtained a letter of introduction duly prepared and signed by the Head of Psychology Department. This letter was presented to and approved by the chief medical directors of the hospitals considered for the study in order to carry out this study. Upon obtaining the approval, the researcher recruited two research assistants and scheduled a date for data collection across the sampled hospitals. Patients were assessed in their respective wards, they were assured of their anonymity and how confidential the information they will provide will be treated. Those who consented were exposed to the questionnaire copies. At the end, the collected responses were considered for statistical analysis.

Design

This study employed cross-sectional survey design to investigate service quality, patient satisfaction, and loyalty among patients in public hospitals in Makurdi metropolis. This design was adopted because the researcher sampled respondents across different parameters at a single point in time for the purpose of making non-causal inferences. In this study, the independent variables were service quality and patient satisfaction while the dependent variable is loyalty.

Statistics

The data collected in this study were analyzed using descriptive and inferential statistics. Mean, standard deviation, frequencies and percentages were used to describe the respondents while Simple Linear Regression was used to test hypothesis one, Multiple Linear Regression for hypothesis two and Hierarchical Regression for hypothesis three.

Results

The hypotheses raised in this study were tested using Simple Linear Regression, Multiple Linear Regression and Hierarchical Regression. The results are as presented in the tables below:

Table 1: Simple Linear Regression showing the influence of service quality on loyalty among patients of public hospitals in Makurdi metropolis.

Variable	R	R ²	F	df	β	t	p
Constant	.662	.438	9.968	1,248		16.451	.000
Service quality					.662	11.984	.026

The result as shown in table 1 revealed that there is a significant influence of service quality on loyalty among patients of public hospitals $R^2=.438$, $F(1,248)=9.968$, $p<.05$. The result further indicated that service quality explained 43.8% of the variance in patient loyalty. Thus, hypothesis one was supported.

Table 2: Multiple Linear Regression showing the influence of patient satisfaction on loyalty among patients of public hospitals in Makurdi metropolis.

Variable	R	R ²	F	df	β	t	p
Constant	.559	.312	11.285	3,246		10.341	.000
Technical Care					.193	9.474	.036
Information Care					.229	8.130	.017
Interactional Care					.122	7.235	.015

The result as shown in table 2 reveals that there is a significant influence of patient satisfaction on loyalty among patients of public hospitals $R^2=.312$, $F(3,246)=11.285$, $p<.05$. The finding also shows that all the dimensions of patient satisfaction; technical care ($\beta=.193$, $t=9.474$, $p<.05$), informational care ($\beta=.229$, $t=8.130$, $p<.05$) and interactional care ($\beta=.122$, $t=7.235$, $p<.05$) significantly predicted patient loyalty. The result further indicated that patient satisfaction explained 31.2% of the variance in patient loyalty. Thus, hypothesis two was also supported.

Table 3: Hierarchical Regression showing the joint influence of service quality and patient satisfaction on patient loyalty among patients of public hospitals in Makurdi metropolis when demographic variables are controlled.

Predictors	Criterion Variable		
	Patient Loyalty		
	Model 1 (β)	Model 2 (β)	Model 3 (β)
Sex	-.113**	-.005	.071
Age	.125**	.019	-.029
Religion	-.128**	-.130	-.144
Ethnic Group	.018	.023	.072
Marital Status	.067	.061	-.029
Service quality		.206*	.257
Patient Satisfaction			.311**
R ²	.014	.140**	.227**
Adj. R ²	.012	.144	.223
F	.990	45.822**	61.099**
ΔR ²	.121	.174	.211
ΔF	2.990	41.401**	52.730**

The result presented in table 3 shows that there was a significant joint influence of service quality and patient satisfaction on loyalty among patients of public hospitals when demographic variables were controlled $R^2=.227$, $F(7,242)=61.099$, $p<.001$. This shows that service quality and patient satisfaction jointly accounted for 22.7% of the variance in patient loyalty after demographic variables were controlled. Thus, hypothesis three was also supported.

Discussion

Hypothesis one was tested to find out if service quality will significantly influence loyalty among patients of public hospitals in Makurdi metropolis. Results indicated that service quality significantly influenced loyalty among patients of public hospitals. Service quality refers to patients' comparison of the expected and actual performance of a hospital. Thus, it is expected that if patients receive high quality of service offered, they should be more likely to request the services of such hospital at a sooner or later moment if the need arises. Therefore, the finding obtained from this study tallies with that of Kesuma *et al.* (2023) who revealed that service quality positively and significantly influenced customer loyalty. Similarly, Permana *et al.* (2019) found that service quality has a positive but not significant effect on loyalty. Furthermore, Afridi and Haider (2018) revealed that healthcare quality has a substantial influence on patients' loyalty. More so, studies (Sibarani & Riani, 2017; Azman *et al.*, 2019) have shown that four factors of service quality (tangible, empathy, reliability and responsiveness) have demonstrated strong links with loyalty. Still in support of the present finding, Hashem and Ali (2018) revealed that the quality level of Jordanian dental clinics services has a statistically significant positive impact on customer loyalty.

Hypothesis two was tested to find out if patient satisfaction will significantly influence loyalty among patients of public hospitals in Makurdi metropolis. Results indicated that patient

satisfaction significantly influenced loyalty among patients of public hospitals. Patient satisfaction entails patients' happiness with the amount and quality of care they receive. Thus, such satisfaction is likely to get such patient attached to the hospital. This finding agrees with Kitapci *et al.* (2014) who found that customer satisfaction has a significant effect on repurchase intention. Also in concordance, Meesala and Paul (2018) revealed that patient's satisfaction is directly related to patients' loyalty to the hospital. Still in consonance with the present finding, Qomariah (2016) and Astuti and Nagase (2014) found that patient satisfaction is also influenced by the loyalty of patients.

Hypothesis three was tested to find out if service quality and patient satisfaction will jointly influence loyalty among patients of public hospitals in Makurdi metropolis when demographic variables are controlled. Results indicated that service quality and patient satisfaction significantly influenced loyalty among patients of public hospitals when demographic variables were controlled. This finding tallies with Taqdees *et al.* (2018) who revealed that healthcare service quality aspects (i.e., physical environment, customer-friendly environment, responsiveness, communication, privacy, and safety) are positively related with patient loyalty which is mediated through patient satisfaction. In a similar manner, Jamaluddin and Ruswanti (2017) found a direct impact of service quality on customer loyalty without mediation of customer satisfaction. Also, Nazir-Ullah (2019) revealed that service quality has a significant impact on patients' loyalty through patients' satisfaction.

Implications of the Study

The implications of these findings include that:

- i. More patients will be willing to patronize public hospitals if the quality of service is improved and their threshold of satisfaction is met.
- ii. The managements of these hospital may need to empower their business development units to strategize ways to improve loyalty and revisit intention among patients, using the quality of services they are offering and patients need assessment outcomes as major factors to be considered.

Limitations of the Study

Some of the major limitations observed in the present study areas highlighted below:

- i. The common problem associated with survey studies have been noticed in this study. Since the study was cross-sectional in nature, it has the weakness that results obtained from such study cannot be used to make causal inferences. It thus can only be used to explain how the independent variables predicted the outcome variable.
- ii. Secondly, the use of self-reported measures of data collection in this study also indicated that since such measures are open to respondent bias, some of the response may have been framed without the notice of the researcher, thus affecting the ideal expectations of this study.

Conclusion

Based on the findings obtained from the study, it was concluded that service quality has significant influence on loyalty among patients of public hospitals in Makurdi

metropolis. It was also inferred that patient satisfaction has significant influence on loyalty among patients of public hospitals in Makurdi metropolis. Also, service quality and patient satisfaction have significant joint influence on loyalty among patients of public hospitals in Makurdi metropolis when demographic variables are controlled.

Recommendations of the Study

In line with the findings obtained from the present study, it was recommended that the dogma of poor service quality associated with many public hospitals should be eradicated. This can be done if health workers of public hospitals such as doctors and nurses are re-sensitized by trained workplace psychologists on the essence of service quality and customer retention by adopting better strategies of providing medical services.

Also, the attention of public hospital managements especially the business development section should constantly carryout patient satisfaction surveys to ascertain the perception of patients on the services they render and use such data to make decisions aimed at increasing the quality of their services and medical care. This will in the long run enhance patients' satisfaction.

In addition, the welfare of health workers should be addressed on consistent basis. This has been one of the factors affecting the quality of service offered in public hospitals and a major determinant of patients' loyalty to the hospital.

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