Service Quality on Patients Satisfaction in Federal Medical Centre, Keffi, Nasarawa State

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Abstract
This study examines the relationship between service quality and patients' satisfaction in Federal Medical Centre, Keffi, Nasarawa state. Data was collected using an adapted instrument on past research related to hospital's service quality. Similarly, the sample size determined for analysis of this study is 265 patients and hypotheses were tested using multiple regression analysis. Besides, the Statistical Package for Social Science (SPSS) version 22.0 was used for the analysis of data. The findings provided support for some of the hypothesised relationship for this study. Specifically, assurance, corporate image and reliability showed a significant relationship with patients' satisfaction in the hospital. Additionally, empathy, responsiveness, and tangibility showed an insignificant relationship with patients' satisfaction for this study. This research could potentially provide a significant contribution and inputs which might be useful in the process of decision-making regarding service quality, patients' satisfaction, Medical Doctors and Nurses working in Federal Medical Centre, Keffi, Nasarawa State. It is recommended that management should channel more resources to those constructs such as assurance, corporate image and reliability that show a significant relationship with patients' satisfaction in the hospital. This would help to increase patients' satisfaction leading to improve service quality in the healthcare operator in the hospital.

Keywords: Service quality, patients' satisfaction, assurance, reliability, corporate image and empathy

JEL Classification Codes: L84, M10

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1.0 INTRODUCTION
The demand by customers, especially, in the healthcare sector; for high-quality services has created a competitive environment worldwide (Muhammad, Abdul Shukor, & Muhammad, 2014). Chao, Wu and Yen (2015) postulated that service quality is seen as the degree to which an organisation provides services that fit customers' (patients') expectations. Similarly, Abdul Aziz (2016) defined consumers' satisfaction as a measure of how services supplied by an organisation meets or surpasses consumers' needs or expectations. Consequently, Ibok and Etuk (2013) observed that there is a limited study on service quality and patients' satisfaction in the service industry concerning the healthcare sector in Nigeria. Even though the healthcare industry contributed to the healthcare needs of the citizens, the following challenge is facing the healthcare sector in Nigeria: important diagnostic equipment essential for providing diagnosis is either non-functional or not available. Furthermore, there is lack of availability of modern equipment in the hospitals; obsoleteness and lack of maintenance of facilities.

Study of Olawale and Kazeem (2017); Ndubus, Nyanwu and Nwankwo (2016); all adopted Parasuraman, Zithaml and Berry (1985) five dimensions of service quality: assurance, reliability, responsiveness, empathy, and tangibility. The rationale for modification of the model is predicated on the fact that the SERVQUAL scale with modification could be a better tool to implement than the other tools (Akababa, 2006). However, SERVQUAL model modification used in assessing patients' satisfaction in the healthcare sector in this study is in line with (Umie & Tantri, 2017). Seiw-peng and Sedigheh (2015) suggest the inclusion of corporate image and adopted from the study of (Rifyal & Basu, 2015). Consequently, six service quality dimensions; assurance, corporate image, empathy, responsiveness, reliability, and tangibility are designed to measure patients' satisfaction in the hospital. This serves as a gap to the study.

Essentially, the study examined six research questions that link service quality with patients' satisfaction in the hospital: To what extent does assurance affect Patients' satisfaction?; To what extent does Corporate image affect Patients' satisfaction?; To what extent does empathy affect Patients' satisfaction?; To what extent does responsiveness affect Patients' satisfaction?; To what extent does reliability affect Patients' satisfaction?; and To what extent does tangibility affect Patients' satisfaction.

2.0 LITERATURE REVIEW
This section discussed the literature related to the variables of this research.

Customer Satisfaction
Customer satisfaction was viewed as a person's feeling of accomplishment or dissatisfaction resulting from comparing a service's performance concerning its expectations (Cudjoe, Anin & Anyayofio, 2015). To some scholars, it might be seen as the company's key performance indicator. In
a competitive marketplace, where businesses compete for customers, customer satisfaction was viewed as a key differentiator and increasingly has become a key element of business strategy. It was a fact that satisfied customers were keys to long-term business success (Zeithaml, 2006).

However, securing and increasing customer satisfaction is pivot to many corporate strategies because obtaining new customers is costly, and customer satisfaction is linked to long-term service quality. Thus, Lim and Tang (2000) observed that service quality could be employed as a strategic instrument to build a distinctive advantage for organisations in the marketplace.

Service quality is a concept that has created considerable interest and debate in the literature because of the difficulties in both definitions and measuring with no complete consensus on either (Wisniewski, 2001). The definition of service quality often differs from scholar to scholar in accordance to the situation. It was defined as the difference between customer expectations and perceptions of service or as the customer's satisfaction or dissatisfaction with their experience of purchase and use of service (Gronroos, 2008). Service quality varied only in terms of word used (Cronin & Taylor, 1992). The past studies indicated that service quality was a vital indicator of satisfaction (Gronroos, 2008). Giving adequate attention to service quality could help the organisation to catch a competitive edge (Boshoff & Gray, 2004).

**Service Quality Dimensions**

The instrument that was used for measuring the perceived quality of service in this study consisted of six service quality dimensions which are: assurance; corporate image; empathy; responsiveness; reliability; and tangibility.

Assurance, as a service quality dimension, is conceived of as the employee's knowledge and courtesy; and the ability of the firm and its employees to inspire trust and confidence. The hospital was expected to balance consumers’ expectations and disconfirmation to have consumers' satisfaction. Without consumers' satisfaction, there is a tendency for hospitals to lose the consumers to others. This generated this hypothesis: H₀₁: There is no significant relationship between assurance and patients' satisfaction in Federal Medical Centre, Keffi, Nasarawa State.

Siew-Peng and *et al.* (2015) note that corporate image is the perception a customer has of an organisation as a result of his/her memory of that organisation. Nguyen and Leblanc (2011) define an image as the range of associations that come to minds when customer heard the name of the organisation. Thus, a well-known image is an asset because it influences the customers' perception of an organisation. Literature suggests that image is made up of two components: functional and emotional (Kennedy, 1997). Functional image means tangible dimensions that could be identified and measured, while, emotional image referred to the psychological aspects of an individual customer's experiences and attitude towards an organisation (Aminu, Isa, & Fontine, 2013). We, therefore, proposed that: H₀₂: There is no significant relationship between corporate image and patients' satisfaction in Federal Medical Centre, Keffi, Nasarawa State.

The other dimension of service quality is empathy. This is conceived of as the extent to which caring and individualised service
were given. In the view of Brink and Berndt (2005), the organisation and its employees must try to understand the customer's problems and strive to execute activities with the customers' best interests in mind. The hospitals should strive to meet the yearnings and the aspirations of the consumers through the provisions of service quality. To achieve this, the theory of expectancy-disconfirmation theory had become imperative. Therefore, hospitals should not allow consumers' expectations to be greater than service performance. If this happens, it will not lead to consumers' satisfaction. We, therefore, formulate this proposition that: H03: There is no significant relationship between empathy and patients' satisfaction in Federal Medical Centre, Keffi, Nasarawa State.

Similarly, responsiveness refers to the willingness of service providers to provide prompt service and help customers. This dimension emphasises attentiveness and promptness in dealing with customer questions, requests, problems and complaints (Zeithaml & Bitner, 2003). Responsiveness is communicated to customers by the length of time they have to wait for assistance, answers to questions, or attention to problems. That is to say, that service quality could be enhanced through responsiveness, for example, if the staff responds appropriately to a customer's request for prompt service (Zeithaml et al., 2003). This prompted this hypothesis formulation: H04: There is no significant relationship between responsiveness and patients' satisfaction in Federal Medical Centre, Keffi, Nasarawa State.

Reliability refers to the ability of an establishment to offer service dependably and accurately. In its broadest sense, reliability means that an organisation delivers on its promises – promises about service provision, pricing, delivery and problem solving (Jordaan & Prinsloo, 2001; Zeithaml et al., 2003). In hospital settings, reliability could be characterised by adherence to customer requests regarding the preparation of treatments, relationship with employees and accurate billing among others. We, therefore, hypothesised that: H05: There is no significant relationship between reliability and patients' satisfaction in Federal Medical Centre, Keffi, Nasarawa State.

Tangibility pertains to the appearance of the hospital's physical facilities, equipment, and personnel. Thus, tangibility is used by hospitals to communicate their image and signal quality to customers. It is agreed that services are intangible not only because customers cannot see, feel, smell, hear or taste, but it is also because they are difficult to conceptualise. The intangibility aspect makes services difficult to illustrate, describe and communicate (Kasapila, 2006). As a result, what a hospital intends to deliver might be quite different from what the customers receive (Lee & Hing, 1995). Besides, the intangibility of services makes it difficult for customers to evaluate or understand the exact nature of services offered (Zikmund & D'Amico, 2002). Despite the intangibility of services, customers are very much aware of its presence or absence (Payne-Palacio & Theis, 2001). For example, customers are quick to notice when there is a lack of friendliness or indifference on the part of the waiter or waitress (Payne-Palacio & Theis, 2001). This led to the following proposition: H06: There is no significant relationship between tangibility and patients' satisfaction in Federal Medical Centre, Keffi, Nasarawa State.
In this section, various previous works of some authors were reviewed as follows. Sabir, Ahmed, Noor, Qaisar, Kamil and Khurshid (2013) studied the impact of service quality on patients' satisfaction using SERVQUAL. It used the five dimensions of service quality: responsiveness, empathy, tangibility, reliability and assurance as important determinants applied in the study. The findings indicated that the private and the military hospitals were more interested in the quality of services; however, little attention was paid to service quality dimensions by public healthcare. Besides Berry (1989); Reichheld and Sassar (1990); Cronin, Brady and Hult (2000); Kang and James (2004); Yoon and Suh (2004) conducted researches on customer satisfaction respectively; the findings had shown that superior service quality leads to customer's satisfaction and improved corporate image. Furthermore, it resulted in positive word of mouth recommendation and enhanced customer's satisfaction. Sabir, Irfan, Sarwar and Akhtar (2013) evaluated the impact of service quality, customer satisfaction and loyalty programs on customer's loyalty. They employed a sample of 150 customers of the company as respondents to investigate their perceptions regarding the effectiveness of service quality as a marketing tool in the firm. The findings revealed that there was a highly positive correlation between service quality and customer loyalty as well as with customer satisfaction. Similarly, Loke, Taiwo, Slim and Downe (2011) examined service quality and customer satisfaction in a telecommunication service sector. A total of 200 respondents were selected for the study to obtain feelings concerning service quality and customer satisfaction in the firm. The results indicated that reliability, responsiveness, assurance and empathy significantly and positively influenced customer satisfaction and perceived satisfaction of the dimensions of service quality.
In a related study, Ojo (2010) investigated the relationship between service quality and customer satisfaction in the telecommunication industry. Descriptive statistics, simple percentage and frequency tables were employed to examine the relationship between service quality and customer satisfaction in (MTN) Nigeria. The study indicated that service quality had an effect on customer satisfaction. Also, there was a positive relationship between service quality and customer satisfaction. Kumar, Harirao and Vijayakanth (2014) studied customer satisfaction through service quality in public service. It used 1,500 questionnaires with a sample size of 25 hospitals drawn from private and government hospitals to source for data. The findings indicated that service quality had a significant positive relationship with customer satisfaction in the organisation.

ASSIMILATION THEORY
This theory was based on Festinger's (1957) dissonance theory. It posited that consumers make some kind of cognitive comparison between expectations about the service and the perceived service performance. This perspective of the consumer post-usage evaluation was introduced into the satisfaction literature in the form of assimilation theory. Anderson (1973) observed that consumers seek to avoid dissonance by adjusting perceptions about a given service to bring it more in line with expectations (Peyton, Pitts & Kamery, 2003). Also, consumers could equally reduce the tension resulting from a discrepancy between expectations and service performance either by distorting expectations so that they coincide with perceived service performance or by raising the level of satisfaction or by minimising the relative importance of the disconfirmation experienced (Olson & Dover, 1979).

From the above, the theory was concerned with consumers' expectations of service quality and the performance of service quality delivered by an organisational setting. It held that if the performance of service was higher than consumers' expectations, there was a certainty that consumers would be satisfied. If it proved otherwise, the consumers would be dissatisfied with the organisation's services. Consequently, how consumers perceive hospitals' offering deserved meticulous attention. Parasuraman, Zeithaml and Berry (1990) considered consumers as the sole judge of service quality. In terms of how consumers actually assess service quality, Parasuraman, et al. (1990) posited that consumers compare expectations prior to receiving the service with their actual experience of the service. Therefore, the organisation should try to balance-off-to ensure that consumers' needs were satisfied through the delivery of superior quality services. To achieve this, the organisation must relate the consumers' service quality to the five indicators of service quality propounded by (Parasuraman et al., 1985). These indicators were: reliability, responsiveness, tangibility, empathy and assurance.

However, the theory was not spared of some shortcomings. Peyton et al. (2003) argued that one of the critiques of the theory was that, the approach assumed that there was a relationship between expectation and satisfaction, but did not specify how disconfirmation of an expectation leads to either satisfaction or dissatisfaction. Secondly, the theory also assumed (Peyton et al. 2003) that consumers were motivated enough to adjust either their expectations or their perceptions about the performance of the
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service (Forman, 1986). Several researchers had found that (Olson et al. 1979) controlling for actual service performance could lead to a positive relationship between expectation and satisfaction. Conclusively, it would appear that dissatisfaction could never occur unless the evaluative processes were, to begin with, negative consumer expectations (Bitner, 1987).

3.0 METHODOLOGY
This research is quantitative and is involved in conducting some quantitative analyses with the aid of a statistical tool such as Statistical Package for Social Sciences (SPSS) version 22.0 to examine the postulated hypotheses in this study. Similarly, structured questionnaires were used to collect data for this study. Also, the primary source of data is applied to this study. Furthermore, Cronbach Alpha is used in this study. The sample size for this study is obtained through the method used by Krejeice and morgan (1970) and consisted of 265 sample size. However, out of 265 sample size, 65 were removed as unreturned questionnaires, and 200 were finally used for the study. Similarly, the random sampling technique was used in the selection of respondents for this study. Furthermore, SPSS version 22.0 was used to assess data for internal consistency reliability for this study.

Table 1: Internal Consistency Reliability
(Cronbach Alpha)

<table>
<thead>
<tr>
<th>Variables</th>
<th>No of Items</th>
<th>Values</th>
</tr>
</thead>
<tbody>
<tr>
<td>Assurance</td>
<td>4</td>
<td>0.817</td>
</tr>
<tr>
<td>Corporate image</td>
<td>3</td>
<td>0.805</td>
</tr>
<tr>
<td>Empathy</td>
<td>5</td>
<td>0.806</td>
</tr>
<tr>
<td>Responsiveness</td>
<td>4</td>
<td>0.825</td>
</tr>
<tr>
<td>Reliability</td>
<td>5</td>
<td>0.805</td>
</tr>
<tr>
<td>Tangibility</td>
<td>4</td>
<td>0.830</td>
</tr>
<tr>
<td>Customer satisfaction</td>
<td>5</td>
<td>0.811</td>
</tr>
</tbody>
</table>

Source: SPSS 22.0 Output, 2019

4.0 RESULTS AND DISCUSSIONS OF FINDINGS
This section presents the results and discussion of findings for this study. Thus, $R^2$ for this research model is found to be 0.682. Thus, in line with Hair, Ringle, and Sarsted (2011) criteria, it is moderate. Thus, the model's predictive accuracy is moderate. Based on $R^2$ showed with the value of 0.682 implied that the six exogenous variables such as assurance, corporate image, empathy, responsiveness, reliability, and tangibility moderately explained 68 per cent of the variance in customers' satisfaction. This implies that the remaining 32 per cent of the variance is accounted for by other factors not captured in the scope of this study.

In this study, the result of the first hypothesis test reveals that there is a significant relationship between assurance and patients' satisfaction in Federal Medical Centre, Keffi, Nasarawa State. The t-value of 2.318 is greater than 1.96 confidence and p-value of 0.021, which is less than 0.05 per cent level of significance. Thus, in this study assurance is found to significantly affect patients' satisfaction in the hospital ($\beta = 0.174$, $t = 2.318$, $p < 0.021$). The result is consistent with the prior finding of (Azman, Hafizah & Iliyan, 2016). They study the relationship between service quality, customer satisfaction and customer loyalty in Malaysia.

Similarly, the result of the second hypothesis test shows a significant relationship between corporate image and patients' satisfaction in Federal Medical Centre, Keffi, Nasarawa State. The t-value of 4.373 is greater than 1.96 confidence and p-value of 0.00, which is less than 0.05% level of significance. Thus, in this study, corporate image is found to affect patients'
satisfaction in the hospital significantly ($\beta=0.355$, $t=4.373$, $p<0.00$). The result is in line with the prior finding of Sarfraz, Ashraf, Iliyas, Imtiaz and Ahmad (2018) who evaluate the impact of service quality, corporate image, the perceived value on brand loyalty and customer satisfaction in Pakistan.

Furthermore, the result of the third hypothesis test disclosed that there is no significant relationship between empathy and patients' satisfaction in Federal Medical Centre, Keffi, Nasarawa State. The t-value of 0.281 is less than 1.96 confidence and p-value of 0.77, which is greater than 0.05% level of significance. In this study empathy is found not significantly affect patients' satisfaction in the private healthcare industry in Pakistan.

Besides, the result of the fourth hypothesis test presents that there is no significant relationship between responsiveness and patients' satisfaction in Federal Medical Centre, Keffi, Nasarawa State. The t-value of 1.948 is less than 1.96 confidence and p-value of 0.052, which is greater than 0.05% level of significance. Responsiveness is not found to significantly affect patients’ satisfaction in the hospital ($\beta=0.157$, $t=1.948$, $p>0.052$). The result does not agree with the prior finding of Ehsan, Abbas, Behrouz, Sima, and Mohammad (2015) who examine the impact of service quality on patient satisfaction in a private hospital in Iran.

Nonetheless, the result of the fifth hypothesis test shows that there is a significant relationship between reliability and patients' satisfaction in Federal Medical Centre, Keffi, Nasarawa State. The t-value of 2.372 is greater than 1.96 confidence and p-value of 0.018, which is less than 0.05% level of significance. Thus, in this study reliability is found to significantly affect patients’ satisfaction in the hospital ($\beta=0.177$, $t=2.372$, $p<0.018$). The result is, therefore, in consonant with the prior finding of Cudjoe et al, (2015) who evaluate the effect of customers’ satisfaction of service delivery on customers’ retention of Tigo telecommunication network in Ghana.

More so, the result of the sixth hypothesis test reveals that there is no significant between tangibility and patients' satisfaction in Federal Medical Centre, Keffi, Nasarawa State. The t-value of 1.384 is less than 1.96 confidence and p-value of 0.178, which is greater than 0.05% level of significance. Thus, in this study tangibility is found to insignificantly affect patients’ satisfaction in the hospital ($\beta=0.095$, $t=1.384$, $p>0.178$). The result is not in agreement with the finding of Nguyen, Nguyen (n d) who studies service quality and its impact on patient satisfaction in Vietnamese private hospitals.

5.0 CONCLUSION AND RECOMMENDATIONS

CONCLUSION
This study sought to evaluate the relationship between service quality and patients' satisfaction in Federal Medical Centre, Keffi, Nasarawa State. This study could be considered as a basis for identifying service quality dimensions which could be used to create a high level of patients' satisfaction in the hospital. Thus, identifying service quality factors for the patients are essential for maximising patients' satisfaction in the healthcare sector. It was concluded that the research could
potentially provide a significant contribution and inputs which might be useful in the process of decision making within the management, Doctors and Nurses working in Federal Medical Centre, Keffi, Nasarawa State.

It was observed that three service quality dimensions: assurance, corporate image and reliability were significant determinants for patients’ satisfaction in the hospital. However, three other variables, such as empathy, responsiveness, and tangibility, showed an insignificant relationship with patients’ satisfaction in the hospital.

It could be concluded that the amount of priority committed into the above service quality indicators resulted in increased patients' satisfaction for the patients of the hospital. This, by implication, implied patients' satisfaction in the hospital over the period studied. It could be taken into consideration that patients' satisfaction of assurance as service dimension in the hospital could be attributed to reliable and competent at reassuring patients via the service operator's skills, knowledge, and other abilities. This facility is something that should be developed, and the hospital's staff should use simple words to explain instructions and communicate with patients, avoiding technical words which might not be understood by the patients. Corporate image means the range of associations that comes to minds when customer heard the name of the organisation. Thus, a well-known image is an asset because it influenced the customers' perception of an organisation. The image of the hospital had drawn customers' satisfaction. Thus, the hospital was encouraged further to stimulate patients' satisfaction through their corporate image dimension so that more patients would recommend the hospital to others and continue to enjoy the patronage of the patients.

Similarly, patients' satisfaction was realised through reliability service indicator by the staff to the patients' of the hospital. However, a suggestion for further improvement was that quicker services should be based on queue cards and services should be based on queues with a notice board showing waiting time. If there is any problem during the working period, such a problem should be solved immediately to avoid delay in service delivery.

**RECOMMENDATIONS**

Based on the findings and the conclusion reached in this study, the following recommendations were made:

The management should emphasise on service quality as an essential and strategic policy aimed at increasing patients' satisfaction of the service operator while formulating marketing strategies relating to patients’ satisfaction policy. Thus, the service quality should be started from the needs of patients and ended on patients' perception. Management should use the right service quality dimensions so that the patients with the right indicators would felt the impact. By doing so, a large number of patients would be satisfied. This could help to increase patients' satisfaction leading to improving the service quality of the healthcare operator in Nigeria.

**REFERENCES**


