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Perceived Quality of Healthcare Services and Patients Satisfaction in Federal Medical Centre Yola, North-East Nigeria

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Abstract:

Purpose- The aim of the study is to examine the effect of perceived quality of healthcare service delivery on patient satisfaction in Federal Medical Centre Yola.

Design/Methodology- Data were obtained from a sample of one Hundred and Sixty Nine (169) respondents, a self-completion questionnaire was given to in-patients and the patient relatives in Federal Medical Centre Yola, (Descriptive Statistic and Inferential Statistics) was used in analyzing data collected.

Findings- Findings of the research revealed that two out of four hypotheses i.e. (Environmental quality and process quality) were supported signifying that quality of healthcare services have significant effects on the patient satisfaction and the remain two (Interaction quality and Cost) has no significant effect on patients satisfaction in Federal Medical Centre Yola, North-East Nigeria.

Practical Implications- The study joined perception of patient about hospital services and environment of the hospital toward patient satisfaction using different dimensions. It emphasized the need for Federal Medical Centre Yola administrators, healthcare services institutions, and the government to create a beautiful surrounding within the hospital setting and to provide them with recent facilities and equipment, which will in turn assist in making sure that, the wellbeing of patients will be achieved.

Keywords: Service quality, healthcare services, federal medical centers, patient satisfaction, environmental quality, process quality, interaction quality and cost

1. Introduction

Organizations, both public and private have long recognized service quality as one of the tools that can be used to attain operational competence and improved business performance (Mehta et al., 2000). This is because quality of services has direct connection with customers' satisfaction especially in the services industry (Parasuraman et al., 1985; and Gilbert et al., 2006). Furthermore, quality services encourage customers' continuous patronage and loyalty to services of the organization, which in turn reflects positively on revenue generation for the organization (Cronin et al., 1992). It is therefore not surprising that service marketers have paid great attention to studying customers' quality requirements, as a means to ensuring satisfaction of consumers' desires; and to gain an edge over their competitors.

The healthcare industry is a critical service sector in any economy, regardless of its level of development. The main objective of healthcare service is to diagnosis and treat the problem of the sick patients and to improve the quality of services rendered to them Cati and Yilmaz, (2002). Access to healthcare service is also a fundamental right of every citizen of any nation irrespective of his/her race, gender, ethnic inclination, philosophy, belief, economic or social status, political affiliation, physical or psychological conditions (Olani, 2004). To this end, there are concerted efforts towards provision of quality healthcare services, from both the private and public healthcare institutions in most nations. Though the public healthcare service organizations are relatively non-profit oriented, they are largely established to provide better and affordable healthcare services to citizens, as one of many fundamental obligations of government to its citizen. According to Swanson and Davis (2003), patient satisfaction can be influenced by patient's perception of quality healthcare delivery services, which is largely, determined by the patient's expectations. Healthcare managers are expected to assess the patient satisfaction and their impact on financial result of the healthcare organization (Raposo et al., 2009).

However, the quality of healthcare has been described as a consistent delivery of qualitative, affordable healthcare according to universally accepted standards. Quality in healthcare addresses both practical and non-practical dimensions (Pakdil and Harwood, 2005).

Patient's satisfaction play a major role in the success and long term existence in healthcare services and maintained competitive advantage (Laohasirichaikul *et al.*, 2010). The satisfaction of patient is examined as the most significant qualitative degree of achievement devices in regard to healthcare services (Pakdil and Harwood, 2005). Patient gladness during a healthcare services is associated with the connection on the opportunities the may partake and their experiences on the treatment they received from healthcare personnel and their facilities. The upgrading of patient pleasure can be achieved when the health personnel meet their desire expectation in facilities within the services window and also there is decline in time spend during consultation and also in accessing the facilities of the healthcare services. (Levesque *et al.*, 2000). In the hospital set-up, patients satisfaction is very important because patients greater satisfaction will motivate him to be more loyal, reduced the numbers of complain, increased higher rates of patients return and referral, and more profit to the hospital (Choi *et al.*, 2004; and Wu, 2011).

Customer experience is built on the services given to him by the organization, and customer satisfaction is expressed over an actual response in relation on the consistency concerning what he presumes and what he obtains from the organization (Lai, *et al.*, 2011). When the patient receiving services is not satisfied and inconsistent to his expectations, then he will be discouraged. However, when he received a good service and there is consistency then he will be satisfied (Laohasirichaikul *et al.*, 2010). Moreover, pleasure explained the magnitude on the customer consideration to the services render to him by the organization and also has positive impact on him (Cronin *et al.*, 2000). The challenges that patient receive in most of the open/public hospital in Nigeria are due to high cost, low motivation among working staff/health personnel, making it very difficult to be effective and efficient in giving 24 hours treatment. This has been very difficult with regard to patient care and cost of operations (Owino and Korir, 1997). This has prompt the customers to search for substitute measure and to broadcast bad information to other patient that are willing to patronized the hospital which will affects the development of the existing hospital. This condition is further declining of the patients' perception on the existing issues they perceived from other patient during the period when they are seeking treatment from the hospital, such as the facilities in the hospital and the treatment the patient receive from the health workers are not adequately enough for patient satisfaction (Boshoff and Gray, 2004).

Although, some effort has been taking in order improve the condition, it seems that enough has not been ascertained when it comes to development of the services quality in open/public healthcare services and this encompassed by different information that related to services quality delivery in most of the public healthcare facilities in Nigeria health sectors. Most of the research on services quality, center on tertiary institutions and hospitals in Nigeria (Umeano-Enemuoh, 2014; Ogunfowokan and Mora, 2012). These studies view the time frame of each patient when consulting a doctor in the outpatient department of the National Hospital Abuja, to find the reality on time spent by patient during consultation and to assess the stage of patient satisfaction and the services obtained. While Yahaya *et al.* (2015) commenced an evaluation of student's perception of quality and satisfaction with patient healthcare services, within the Nigerian Tertiary Institutions Social Health Insurance Programme (TISHIP); Umar *et al.* (2011) studied patient queuing time in some of the tertiary institution in Northern Nigeria. They perceived the duration (time) patients spend while waiting to seek the attention of healthcare provider has been a factor that affect the utilization of healthcare services.

The Nigerian governments have been making considerable expenditure on healthcare provision over the years. But, despite these substantial budgetary allocations spent on improving healthcare delivery services, the sector's goals are still largely unmet. According to Demirel *et al.* (2009), the impact of services quality render by the hospital to the patient as a customer has a positive and significant relationship and they are willing to recommend the hospitals to others. Patient satisfaction has gained prominence in assessing the quality of healthcare. The issue of patient's satisfaction in Nigeria has elicited several studies, however, the dimensions adopted in these studies are narrowed and failed to address the key dimensions of patients' satisfaction. Similarly, there is paucity of literature on perceived quality of healthcare service and patient's satisfaction in Nigerian Federal Medical Centers. Hence, the needs for healthcare aptitude performance which can best assess the level of patient's satisfaction. This study, therefore, sought to examine the influence of perceived quality of healthcare services and patient satisfaction in Nigerian Federal Medical Centers, with specific reference to the Federal Medical Centre, Yola North-East of Nigeria. This study provides assessment of patients' perception with respect to some components of satisfaction like environmental quality (EQ), process quality (PQ), interaction quality (IQ) and cost (C) in the study area. This is because there is the need to establish how the application of these dimensions can enhance success in healthcare services delivery as opined by Yilmaz (2010). Hence, the study provides the necessary, comprehensive and empirical bridge to fill the gap in knowledge with respect to relative influence of achieving good quality of healthcare service which would enhance a significant relationship with patient's satisfaction. Thus significance would enhance interdepartmental synergy, dependency and cooperation to create harmony in the service delivery.

2. Objectives

The aim of the study is to examine the impact of perceived quality of healthcare service delivery on patient satisfaction in Federal Medical Centre Yola. The specific objective is to;

- Find whether there is a relationship between environment quality (EQ) and patient satisfaction in Federal Medical Centre, Yola.
- Assess the influence of process quality (PQ) on patient satisfaction in Federal Medical Centre, Yola.
- Evaluate the effect of interaction quality (IQ) on patient satisfaction in Federal Medical Centre, Yola.
- Examine the extent to which costs affects patient satisfaction in Federal Medical Centre, Yola.

3. Literature Review

According to Zineldin (2006:P. 60-92), service quality can be seen as the act of being effective and efficient since it encompass on acting on the correct entity, at the accurate period, in the precise method, for the exact person and abstaining the greatest potential outcomes. Service value is generally accepted based on multiple dimensions it has on healthcare services (Gronroos, 1984; Naidu, 2009; Parasuraman, 1985).

It is generally believed that quality is a multidimensional concept, with several aspects (Carmen, 2000; Choi, 2005; Cronin & Taylor, 1992). For many decades, determining factors has been a search for numerous factors that led to different model and theories being generated. Donabedian's (1988) model, has been the generally accepted concepts on many levels of studies that deal with care implemented by health workers and healthcare received by many societies. The following scholars have done a remarkable research on services quality: Andaleeb (2001); Brandy and Cronin (2001); Caruana et al., (2000); Dabholkar, et al (2000); Lim, et al.,(2000); Kara,et al.,(2003); Raju, Et al, (2002); Yavas et al.,(2001); and are of the opinion that patients receiving quality services from hospitals stimulate hospital incomes. Similarly, enterprise performance is related to services quality Zeithaml, 1998 and client satisfaction (Taylor and Baker, 1994) similarly (Güllülü, et al., 2000) the patients' satisfaction level is closely related to quality of services perceived by patients. Dabholkar, (1995) and Mc Alexander and Kaldenberg, (1994) affirmed that there is no constant and frequent significance relationship between service quality and patients satisfaction. Even though there is no adequate link between services quality and satisfaction, it is generally believed that, service quality initiated before satisfaction; in other to determine satisfaction level (Dursun, et al., 2004). It is a normal phenomenal that service quality which has highly significant impact in patient satisfaction is a vital aspect of hospital realization.

Noticeable service quality measurement is another feature that is allied on the quality; alleged and concrete, describing the return that the patient achieves from a healthcare facility that is taking a long duration of time. Moreover, measuring the results attained by the patient can sometimes be difficult and even incredible. Basics view outside the range of the technical dimension, like indirect measures such as doctor-patient association, nurse/patient relation and other health workers including the hospital situation, which continue further limiting the patients' service quality (Bowers, et al., 1994, Donabedian, 1996 and Ettinger, 1998).

The matter of discussion should be services quality measurement, when critical aspect has been reviewed in the literature, according to (Nadiri and Hussain, 2005) that are expected to consider two types of expectations, one being desired and the other adequate. Different expectation types cannot be distinguished by clients (Caruana, 2000); the four different types of expectations used by clients are: desired, anticipated, deserved, and adequate (Yoon and Ekinci, 2003). Based on the above literatures, the dimensions of healthcare services strategies are identified. These dimensions are therefore used in formulating the research hypotheses.

4. Theoretical Background and Conceptual Framework

The study relayed on the source based on view of theory of assimilation which is established on methods of Festinger's theory of dissonance (1957). According to theory of dissonance client marks a variety of rational assessment between the expectations concerning the healthcare provider and the Services the render to patient. The theory believes that the clients are well motivated in order to adjust both their expectations and their service views on healthcare workers performance. If the clients regulate their views on service act opinions, dissatisfaction would not be an outcome of the post-usage route. The services quality perceived by patient can be change if there is discrepancy between the expected result and the actual result and would virtually reduce the reputation and disconfirmation experienced in the patient (Olson and Dover, 1979). When there is positive linkage between Satisfaction and expectation it will lead to concrete services performance. According to (Anderson et. al, 1973) it is only undesirable expectation that lead to dissatisfaction when the assessment process initiated on patient is false. Best on the Peyton, (2003) it's revealed that Assimilation Theory has some deficiencies. First, there exist the linkage between expectations and satisfaction, but it maintains that there is no recognition of expectation and disconfirmation. Secondly, the theory further suggests that, there should be enough clients' motivation in other to change their expectations/perceptions towards the services rendered to them. Most of the scholars believed that, when actual service performance is guided it will lead to optimistic relationship between expectation and satisfaction. Hence, it seems that, displeasure might not arise except the evaluative routes were to arise with negative client expectations.

The conceptual framework for the research was developed for this study from literature reviewed. The framework indicates the relationship between independent variables which is Perceived Quality of Healthcare Service and the dependent variable Patient Satisfaction.

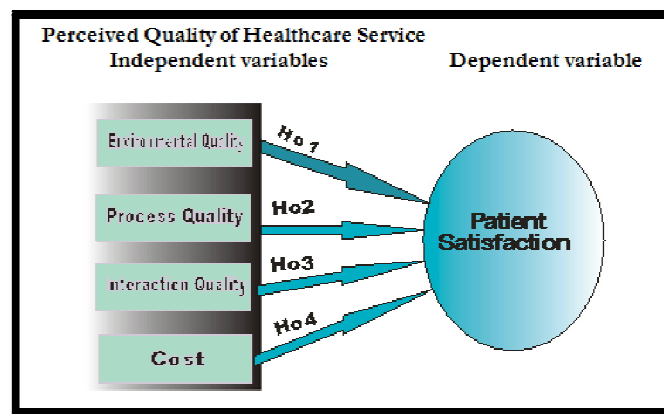


Figure 1 - Conceptual Framework

4.1. Hypotheses Development

Based on the conceptual model shown in the preceding section, this study proposes the following hypotheses, which are developed from the literature.

4.2. Relationship between Environmental Quality and Patient Satisfaction

Many intellectuals are advocating that the physical environment where healthcare service is rendered in the hospitals has affected the behaviours of service providers since time immemorial, viewing the necessity of correct development and scheme of the physical environment in the healthcare services sector; Nelson, West, and Goodman (2005) acknowledge the basic way to decrease noise pollution, and also measures that can reduce the length of stay of the patient in the hospital. (e.g., natural lighting, sights of nature, access to music and automobiles sound and horns, care in new modified units etc). Conferring to their study, Ulrich, Quan, and Zimring (2004); they are of the opinion that, the design of a hospital can increase patient precaution by reducing healthcare infections and medical mistakes. They also believe that, facility plan can have positive effect on patient satisfaction a patient's tension involvement, and organization act metrics. Joseph A. (2006 and 2007) initiate three analyses in hospital design, mostly single bed rooms and build environments that are better for patients are provided, in order to have quality patient care to avoid injury from falls, infections from others patients and medical mistake and also to reduce environmental stressors related with noise, inefficient room ventilations, unit outline and consuming nature, colour of the environment, light and sound control possible stressors. It would be different for service diligence, since patient would stay where he would be attended to by the medical personnel. Hence, in an organization strategic planning and space design are more important than other area of activities. The indicator of environmental quality of health care is very important to be measured because they are research aims and practice in designing hospital activities like: current plans, renovations and transformation of the facilities in healthcare sectors. And also, to check the similarity between judgements of environmental quality provided (i.e. hospital management) by professionals with a theoretical background in architectural design issues and shown by residence users' (Patients) evaluative reactions with situation to healthcare environments.

The expected plan for provision of improving healthcare environment and its facilities and to ascertaining the patient satisfaction and hospital environment. After the above reports, this hypothesis is prepared to find the difference between the patients and the environmental quality.

- Hypothesis: 1 Environmental Quality (EQ) has no significant impact on patient satisfaction in Federal Medical Centre, Yola.

4.3. Relationship between Process Quality and Patient Satisfaction

The second proposed concept is Process quality; Process quality is critical use to measure how medical health workers and other staffs of the hospital render their services to patient in the hospital sector. In this development the researcher used the patient relative and in patient in various wards of Federal Medical Centre, Yola to acknowledge the services and quality of healthcare services render to patient in health sector. However, most of the link between the management of the healthcare services delivery scheme and its effects has no adequate plan, policy makers don't use basic procedures when making strong policy on process quality or measuring the outcomes McGlynn EA, Brook RH; (2001). Following due process in hospital are assumed to be more delicate actions of quality than influence others because it will provide a lowly result which would not certainly arise most of the time when healthcare provisions is inferior and would not be recognised because it would be difficult to tracked Brook RH, McGlynn EA, Cleary PD. (1996). This thought that, the outcomes of the process quality can be considered as the alternatives when established. This review would attempt to answer this question over its second hypothesis.

- Hypothesis: 2 Process qualities (PQ) have no significant impact on patient satisfaction in Federal Medical Centre, Yola.

4.4. Relationship between Interaction Quality and Patient Satisfaction

Staff and patient relationship is essential to clients, quality of care can be define as part of the extent of warmth, empathy and pleasantness that they experience as they intermingle with staff. Studies have found that patients' perceptions on service satisfaction have a direct impact on their perception of quality of healthcare (Mayer & Cates, 1999).

Perfectly that ample of the achievement of health-care delivery be contingent on the quality of interactions between health experts and patients. For example, it is broadly known that patients are usual likely to take drug successfully if they have been elaborate in discussions about treatment choices, and realise and care for the decision about what is prescribed (patient concordance). Therefore, patient opinion is significant for the success of medical effects. The vital is to discover how restrained choices made by health authorities influence on the quality of interactions in broad, and of patient involvement in particular. Individuals interactions play a crucial role in determining, for instance, the truthfulness of diagnosis, patients' assurance to treatment rules, and the level to which patients are gratified with the service they obtain. Best on the above discussion, the then hypotheses are formed:

- Hypothesis: 3 Interaction Quality (IQ) has no significant impact on patient satisfaction in Federal Medical Centre, Yola.

4.5. Relationship between Cost and Patient Satisfaction

Cost determines the value of the services given whether exceed or constant to deliver the service. The emphasis of managed precaution on physicians' setting is probable to strengthen in the prospect, focused by two styles. First, technological developments will remain to get new and costly produces to market, and, second, the liberal mature of the population will initiative up medical-care consumption and costs (Burner and Waldo, 1995).

Healthcare provision is occasionally not cost effective due to either overutilization or underutilization. Overutilization, or misuse, arises when the cost of health care is diluted with misused funds. Therefore, depriving somebody besides of the impending benefits from obtaining the service. Costs or threats of treatment offset the benefits in corny health care. In disparity, underutilization, or underuse, arises when the aids of a treatment overshadow the threats or costs, and it is not used. There are possible adverse health products with underutilization. This study will seek to determine which cost of patient perceptions significantly influence the overall satisfaction rating through this hypothesis

- Hypothesis: 4 Costs have no significant impact on patient satisfaction in Federal Medical Centre, Yola.

The sign deliberated in the earlier sections offers evidence that enhanced service quality is vital to provide active care and plays a great role in certifying treatment faithfulness. By accepting the needs of patients, perceived services deficiency as well as the importance patients endorsed to experiences of satisfaction, administrators and organisational authorities can provide quality of care and sooner reach the defined managerial and government.

5. Methodology

This study is basically a descriptive survey research and therefore required the use of survey method of investigation. The reason for choosing descriptive research design is because it seeks to provide an accurate description of observations of the phenomena. Research framework is based on conceptual framework and includes two main variables and four dimensions: Perceived Quality of Healthcare Services (environmental quality, process quality, interaction quality and cost) and patients' satisfaction. This study used a questionnaire in order to collect relevant data needed for the study. The instrument used for data collection was a self-administered questionnaire developed from literature (Wesso 2014: Naidu, 2009). Questionnaire was administered to 169 focused in-patient of the study concerning information related to hospital service delivery and patient satisfaction.

6. Results

Cronbach alpha was adopted to test and measure the dependable coefficient in the study. This is done to increase the consistency of the survey instrument, the measurement was used to test internal consistency and the reliability of the selected items in the questionnaire, while ANOVA was used for testing research hypotheses.

6.1. Reliability Statistics

The result showing the coefficient Alpha for each of each dimension is presented in table: 1 below

S/N	Dimensions	No. of Items	Cronbach's Alpha
1.	Environmental Quality	10	0.891
2.	Process Quality	10	0.920
3.	Interaction Quality	10	0.894
4.	Cost	10	0.929
5.	Patient Satisfaction	10	0.751
6.	Grand Total	50	0.959

Table 1: Reliability statistics of each of the variables (Dimensions)

According to Grayson (2004) an instrument is believed to be internally consistent when all its items are measured with the same characteristics. The computed Cronbach Alpha coefficient results are expected to be at least 0.6 or 60% for it to be considered as an acceptable standards for content, internal reliability, and construct validity.

The internal reliability test results for each dimension of the variables which are 0.891, 0.920, 0.894, 0.929 and 0.751 and also the grand total of all is 0.959 for Environmental quality, process quality, interaction quality, cost and patient satisfaction respectively.

6.2. Model Specification

This study designed its proposed model based on the conceptual framework of the research. The model was to measure the influence of the independent variable (Perceived Quality of Healthcare services) on dependent variable (patient’s satisfaction).The model is given by:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + ET$$

Y = Dependent variable

α = Constant

β =Independent variable

x = Coefficient

ET = Error term

Y = Patient satisfaction

β₁X₁ = Environmental quality

β₂X₂ = Process quality

β₃X₃ = Interaction quality

β₄X₄ = Cost

ANOVA ^b						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6725.271	4	1681.318	39.279	.000 ^a
	Residual	6891.500	161	42.804		
	Total	13616.771	165			
a. Predictors: (Constant), CO_C, IQ_I, EQ_E, PQ_P						
b. Dependent Variable: PS_P						

Table 2: ANOVA of Predictors and Dependent Variable

From Table 2 above represent ANOVA output details of four independent variable EQ_E, PQ_P, IQ_I and CO_C respectively. Initial null hypothesis of ANOVA said that X1 = X2 = X3 = X4, while alternate hypothesis shows that at least one of the value Xi’s(where I = 1, 2, 3, 4) is not equal to zero. Getting the (F) value as high as 39.279, shows that there are more chances of the null hypothesis being rejected and alternate hypothesis being accepted, which shows that at least none of the Xi’s is not equal to zero, this means that the independent variables are related. On the other hand, the significance of 0.000, means that (1 - 0.000 = 1) shows 100% confident of alternative hypothesis is accepted, therefore, independent variables (EQ_E, PQ_P, IQ_I and CO_C) are related and they affect the dependent variable (PS_P).

Coefficients ^a													
Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.	95% Confidence Interval for B		Correlations			Collinearity Statistics		
	B	Std. Error	Beta			Lower Bound	Upper Bound	Zero-order	Partial	Part	Tolerance	VIF	
1	(Constant)	6.781	2.769		2.449	.015	1.313	12.250					
	EQ_E	.291	.106	.264	2.757	.006	.083	.499	.644	.212	.155	.344	2.907
	PQ_P	.388	.120	.349	3.247	.001	.152	.624	.673	.248	.182	.272	3.679
	IQ_I	.104	.097	.090	1.078	.283	-.087	.295	.544	.085	.060	.451	2.220
	CO_C	.072	.073	.078	.993	.322	-.071	.216	.519	.078	.056	.515	1.943
a. Dependent Variable: PS_P													

Table 3: Coefficients Output of Hypothesis of Dependent Variable

Table 3 above contains the structure of the model. The constant PS_P and then X1 is EQ_E, X2 is PQ_P, X3 is IQ_I and X4 is CO_C so we write

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \dots + e_i$$

$$Y = 6.781 + 0.291X_1 + 0.388X_2 + 0.104X_3 + 0.072X_4$$

For every 1-unit increase in PS_P, there is a 0.291, 0.388, 0.104 and 0.072 increase in EQ_E, PQ_P, IQ_I and CO_C respectively with the increase in PS_P starting at 6.781 units.

Furthermore, in order to know the collinearity of the data, the variance inflation factor (VIF) and Tolerance (TOL) for each of the independent variables have to be determined. Therefore, variance inflation factor (VIF) measures the increase of the difference of the variables of regression measurement and it is expected to be less than ten (10) while Tolerances measures the proportion of the difference variables with smaller values that indicate stronger relationship or variables that are too closely related. In this case, variable inflation factor (VIF) and Tolerance (TOL) for the data used were predicted as shows in table 3 above. The result showed that Environmental Quality (EQ_E) Collinearity (VIF = 2.907, Tolerance = 0.344), Process Quality (PQ_P) Collinearity (VIF = 3.679, Tolerance = 0.272), interaction Quality (IQ_I) Collinearity (VIF = 2.220, Tolerance = 0.451), Cost (CO_C) Collinearity (VIF = 1.943, Tolerance = 0.515). This result shows that all the VIF obtained were less than ten (10), and also Tolerance for independent variable were also greater than 0.1. Therefore, the data for the regression analysis passed the collinearity test.

6.2. Test of Hypothesis

- Hypothesis 1: Environmental Quality (EQ) has no significant impact on patient satisfaction in Federal Medical Centre, Yola.
- The result of findings in Table 4.6 reveal that the coefficient value ($B = 0.291$, $t = 2.757$, $P < 0.05$), which implies that Environmental Quality (EQ_E) has significant effect on patient satisfaction, hence rejecting the null hypothesis that stated that there is no positive relationship between environmental quality and patient satisfaction in Federal Medical Centre, Yola. This signifies that environmental quality has positive relation on patient satisfaction in Federal Medical Centre, Yola.
- Hypothesis 2: Process quality (PQ) has no significant impact on patient satisfaction in Federal Medical Centre, Yola.

The result in Table 4.6 depicts $B = 0.388$, $t = 3.247$, $P < 0.05$, as a result of regression analysis revealed that there is significant influence of process quality (PQ_P) on patient satisfaction in Federal Medical Centre, Yola by that leading to the rejection of the null hypothesis which stated that there is no positive relationship between process quality and patient satisfaction in Federal Medical Centre, Yola.

- Hypothesis 3: Interaction Quality (IQ) has no significant impact on patient satisfaction in Federal Medical Centre, Yola.
- The findings in Table 4.6 reveal Interaction Quality (IQ_I) as $B = 0.104$, $t = 1.078$, $P < 0.05$ indicating a non-significant influence on patient satisfaction in Federal Medical Centre Yola, thus leading to the acceptance of the null hypothesis which state that interaction quality has no significant impact on patient satisfaction in Federal Medical Centre, Yola.
- Hypothesis 4: Costs have no significant impact on patient satisfaction in Federal Medical Centre, Yola.
- The consequence of findings in Table 4.6 show that the measurement value of cost (CO_C) reveals that $B = 0.072$, $t = 0.993$, $P < 0.05$. It implied that cost has no significant effect on Patient satisfaction in Federal Medical Centre, Yola, hence accepting the null hypothesis that stated that Costs have no significant impact on patient satisfaction in Federal Medical Centre, Yola. This implies that cost has no positive relation on patient satisfaction in Federal Medical Centre, Yola.

7. Discussion

The study carefully looked at the perceived quality of healthcare services provided by difference between actual experience of the patient in the hospital and his expectation of services to be rendered. The researcher addressed the important elements of patients view influence their total satisfaction with healthcare services provided at Federal Medical Centre, Yola. It also anticipated to test the link between quality of healthcare services provider and patient satisfaction. The study used four different dimensions in ascertaining quality of healthcare services: environmental quality, process quality, interaction quality and cost. The conclusion of this study provides a comprehension to both healthcare providers and hospital managers to upgrade service care quality and patient satisfaction in Federal Medical Centers in Nigeria. Although, previous studies in the field anticipated that there is high expectation of patients in public/open healthcare services sectorsee (Taner & Antony, 2006). Substantial explanation focuses on the difficulty of the finding, the adequate and desired level of anticipation on healthcare services quality due to the different features of the healthcare services provider and its complication.

The outcomes from the analysis show that, there is a positive relationship between environmental quality, process quality, interaction quality, cost and patient satisfaction. According to Boshoff & Gray (2004) when a hospital want to enhance the loyalty of patients to achieved there determined goal, they need to improve the services quality of their staff behaviors through training and retraining of their staff on the job. The healthcare provider should demonstrate their concern on their patients to gain confidence from the patients in the hospital environment and to ensure that patient fills comfortable during the period of admission in the hospital If patients is properly attained to, it would make the patients to recommend the hospital to others for patronage and even visit the same medical personnel. The patients would always like to visit the same hospital and see the same health personnel when there is cordial relationship between them. A highly skilled, cheerful, kind, caring and prompt in services personnel would attract more patients to the hospital when the need

arise. According to Andaleeb (2001) suggest that hygienic environment played a significant role in patient satisfaction. Other researchers indicated that, significant environmental quality has a sensitive pointer of contentment (Parasuraman et al., 1985: 1988; Carr-Hill 1992). Due to the neatness of internal environment of the hospital, decoration of buildings, the appearance of the healthcare workers would influence patients to patronize the hospital. Despite the high level of performance of Federal Medical Centre, Yola there is a need to increase its rate of patient's satisfaction, in order to improve standard relationship with its client at all level and to meet the desired expectation of the patient at its fullest level of satisfaction. Alternatively, the Federal Medical Centre, Yola should carry out quarterly survey on patients view on the services rendered to them by the healthcare personnel in the hospital. Other studies suggest that the link between healthcare services provider and patient/client could lead to a remarkable patient's satisfaction at all times (Zifko-Baliga, et al., 1997; Polluste et al., 2000; Ramsey, et al., 1997; Kim et al., 2001).

It essential for Government to regularly conduct a survey on the hospital management across the North-Eastern state to verify the relationship between the healthcare personnel and the patients, hospital management and the healthcare personnel on the hospital services. It is likely that observations of patients are not matched by the perceptions of hospital management, Healthcare personnel and patient's satisfaction. Also the Nigerian government should have a regularly confirmed quality model to guide hospital management, healthcare personnel and other supporting staffs in their constant quality development efforts.

8. Conclusion

The study would help the services quality of the hospital to identify healthcare service features that are very important to the patients and make them relevant. By this method, Hospitals management can expand the features of their healthcare services and its standard can be monitor over time. The study measured healthcare service quality to be a lively element of patient satisfaction and patient dependence, because the skills of the healthcare personnel are likely to affect patients' confidence in healthcare personnel.

The study revealed that, two out of the four dimensions of healthcare services were vital in clarifying patient satisfaction. Importantly, patient satisfaction is influenced by environmental quality and process quality, however, interaction quality and cost were not significant in clarifying patient satisfaction. Therefore, healthcare services would improve patient satisfaction and has confidence on healthcare provider. According to the results, the greater gains in patient satisfaction have been realized by the presence of environmental quality and process quality.

This study further emphasized the need for hospital administrators, healthcare services institutions and the government to improve the standard of interaction quality and the cost, which will in turn assist in making sure that healthcare service quality render will be significant to the patient A patient driven concept will be made to be the major focus in policy formulation and implementation in the hospitals. Thus this can also provide a different approach in overcoming health challenges and better-improved healthcare delivery system in Adamawa State and Nigeria at large.

9. Recommendations

The following recommendations are made based on the findings of this study:

- Federal Medical Centre and the government should make efforts in maximize the need of patients and to also improve the working environment of healthcare personnel. Patient satisfaction is vital in other to achieve healthcare services and competitive advantage. And Healthcare services quality has clearly established a relationship with patient satisfaction; therefore, healthcare service quality should be enhanced to maximize patient satisfaction in Federal Medical Centre's across Nigeria.
- The study recommends that quick action should be taking in attending to patient differently of their illness and should be further improved. Workers should be stimulated to be more sympathetic and cooperative to patients; staffs should be given incentives to enable them demonstrate their required knowledge, competence and professionalism.
- Staff gratification is important, because it provide more feelings of healthcare personnel to patients. It is recommended that hospitals' management and government to increase incentives on the healthcare personnel to boost their moral and change their attitude towards patient, especially those personnel whose behaviour and attitude were not complained about by the patients or patient's relatives.
- Feedback from patients or patient relative that have experienced on the hospital facilities and treatment the received from the same healthcare system can be successfully evaluate and monitor through them in order to bring perfections in activities revealed on the healthcare personnel and their mixture in the hospital environment.
- Federal Medical Centers and other public hospital should have modern facilities in various department e.g. in theatre, laboratory, dentist, radiology and others; because expectations of the patients are found to be higher in all departments. It is important for the government and the management to take necessary actions to improve all the facilities for the patient satisfactions. Since all Federal Medical Centers are under government control, the government has to make an initiative that would give the management and there healthcare personnel zeal in achieving their patient's objectives.
- Concerning the internal environment of the hospital the management should try and build a suitable place were patient relative will halt for some time before the discharge of his relative in admission and also to provide a canteen that can prepare suitable food for patients and patients relative to buy at lower price, since it is very expensive to go outside the hospital environment in order to look food that is required for a patients.

- Federal Medical Centre should put more emphasis on all the dimensions of healthcare services and make crucial amendments in act that is concern with healthcare services in order to improve the performance of the working personnel and the environment in order to attract more patients from different location in the country and foreign country at large which will in turn lead to greater service quality and patients' satisfaction.

10. Contribution to Knowledge

In this study, perceived quality of healthcare service and patient satisfaction has been proven to be having a significant impact on the healthcare services delivery in Federal Medical Centre, Yola despite the fact that patient satisfaction in the healthcare sectors has not received extensive studies. Nevertheless, the results of other studies conducted on the same variables, same methodology but using different dimensions which were introduced and different demographic locations also provide the same results with significant and positive relationships.

This study has provided insights into conducting or replicating same study in other part of the world using these factors (environmental quality, process quality, interaction quality and cost) which are different from previous studies to determine its finding and thus, provided solutions that can assist public healthcare services, management and the government to develop ways to overcome deleterious institutional challenges thus to adopt quality of healthcare services as a strategic solution towards services delivery in Federal Medical Centre, Yola.

11. Suggestion for Further Studies

For further research the study suggest that the researcher should incorporate other healthcare measures and build on them or they could do interviews on the same dimension use here to find out new facts and on the process it is possible to find out new solution to the problems.

In addition, repetition and modification of the theories used in this study is suggested. Decided with identification of additional differences in variable, it is visible to introduce patient driven quality standard to enable healthcare provider to best solved patients' desire expectation. Although, the mind of patients and their beliefs, expectation and perceptions cannot not be all capture in a questionnaire. Therefore, both qualitative and quantitative research should be used in futures studies which will would offer a better understanding of the difficult issue on services quality in the healthcare sector in Nigeria.

Potential researchers can increase the scope of the research, this will aid in finding more research activities and benefits that will help healthcare management.

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