

## Service Quality Domains Impelling Patient's Return Intentions in Nisa Premier Hospital Abuja

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### Abstract

Nisa Premier Hospital (Nisa) is a private for-profit hospital established in 1996 in the Federal Capital Territory of Abuja Nigeria. The main purpose of this work is to provide an efficient tool for determining the domains of SERVQUAL that influences patients return intentions in a typical privately owned hospital in Nigeria that is striving towards world class standard. The study adopted a cross-sectional and case study sample based survey design using a modified SERVQUAL structured questionnaire. A total of 205 questionnaires were analysed in this study, thereby yielding a valid response rate of about 46%. Results of the percentage distribution of items within each domain that influenced patients return intention were rated in the following order; Tangibles (83%), Assurance (77%), Empathy (72), Responsiveness (74%) and Reliability (66%). Binary logistics regression analysis following six-sigma quality improvement methodology enhanced the modelling approach and indicated two items within the five domains of SERVQUAL, i.e. reliability and empathy with p-values <.05 as responsible for the return intentions. The means by which patients finance their healthcare did not influence this. However, findings from the study indicated that the employees sympathetic, reassuring and putting patients' best interests at heart were the key factors influencing patient return intention at Nisa. Suggested improvement strategy entails improving areas of shortfalls, fostering the domain items noted as point of strength, developing new items within the SERVQUAL domains and revalidate findings periodically. It is anticipated that findings from this study can be adapted to other similar business concern in the healthcare industry.

**Key words:** Private hospital; For-profit; Service quality; Reliability; Empathy

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### INTRODUCTION

Patient satisfaction and return intention, patronage and loyalty, generally results from the healthcare provider's ability to meet and exceed the patients' perceived expectations of service quality (Parasuraman, Zeithaml, & Berry, 1988). Satisfaction derived from quality healthcare service usually leads to the willingness of a patient to revisit and possibly recommend the services of the hospital to others.

The original and popularly known service quality (SERVQUAL) model described by Parasuraman et al. (1988) which has five domains has been modified to suite the healthcare service industry (Anbori, Ghani, Yadav, Daher, & Su, 2010; Babakus & Mangold, 1992; Brady, Cronin, & Brand, 2002; Lee, Lee, & Yoo, 2000). It is to determine the level of patient satisfaction and return intention, patronage or loyalty which are, to the healthcare provider, strategically crucial to profit, cost saving and market share (Ramez, 2014). Thus marketing researchers found it pertinent to include elements of determining customer patronage to the SERVQUAL instrument and thereby studying its antecedents in the healthcare service industry (Blizzard, 2004; Anbori et al., 2010; Kessler & Mylod, 2011; Arab et al., 2012; Lee et al., 2012; Chang, 2013). For this reason also, diverse and trendy loyalty programs are initiated to promote and foster better understanding of customer patronage (Evanschitzky, Ramaseshan, Woisetschlger, Richelsen, Blut, & Backhaus, 2012; Uncles, Dowling, & Hammond, 2003). Also,

evaluation of patients' patronage is now being encouraged as a non-financial measure of the operational performance of business firms (Kumar, Batista, & Maull, 2011; Lee et al., 2012; Smith & Wright, 2004).

Globally, healthcare sector can be classified into two broad categories: the not-for profit and the profit oriented health care providers. Promoters of for-profits hospitals consider that it brings about elevated levels of responsiveness to patient demands with quality and efficiency. On the other hand, those not in favour of profit-oriented hospitals tend to argue that there would be restriction of access for those that are unable to pay, quality of care would be lowered, profitable services and patient care would be hampered by cherry-picking and unwarranted interference by management in the reserved clinical autonomy (Jeurissen, 2010; Olakunde, 2012).

However, results from a number of comparative studies suggests differences between the behaviour of not-for-profit hospitals and for-profit hospitals in terms of cost and profit efficiency (Herr, Hendrik, & Boris, 2011; Hoerger, 1991), effect of ownership type on hospital performance (Alexander & Lee, 2006), quality improvement practices (McClellan & Staiger, 2000; Miller, Yasin, & Zimmerer, 2006) and mortality rates (Devereaux et al., 2002). On the whole, profit oriented hospitals are more expensive but are much more efficient in terms of how they are managed and in a majority of cases offer better services (Jeurissen, 2010; Olakunde, 2012) knowing that a reduction in the patronage of patients will affect them more than a reduction in the level of patronage in a not for-profit-oriented hospital. Patronage of profit oriented hospitals is on the rise due to factors such as reduction in expenditure on public entitlements, pro-market reforms of the health care sector in the delivery of services that hinges on coverage, quality and efficiency of health care services delivered. These are indicated in studies around the world (Jeurissen, 2010; Liu, Li, Hou, Xu, & Hyslop, 2009; McClellan & Staiger, 2000) and in Nigeria (NOIPolls, 2013; Olakunde, 2012; SHOPS Project, 2012).

Nisa Premier Hospital (Nisa) is a private and for-profit hospital, therefore evaluating service quality domains impelling patient's return intentions is critical to its business.

The main purpose of this work is to provide easy and cost efficient tool for determining the domains of SERVQUAL that influences patients return intentions in a typical privately owned for-profit hospital in Nigeria that is striving towards world class standard.

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## 1. STATEMENT OF THE PROBLEM

There is a dearth of information regarding service quality perception and return intention behaviour of consumers of healthcare services in Nigeria, especially in private profit oriented hospitals. Available studies conducted in Nigeria mainly focused on government health facilities that are not-for-profit hospitals (Afolabi, Afolabi, &

Faleye, 2012; Ajayi, Olumide, & Oyediran, 2005; Ameh, Sabo, & Oyefabi, 2013; Chirdan et al., 2013; Gbadeyan, 2010; Mejabi & Olujide, 2008; Njilele, Ukwe, Okonta, & Ekwunife, 2012; Ofovwe & Ofili, 2005; Olawoye, Bekibele, Ashaye, & Ajuwon, 2012; Oluwadiya, Olatoke, Ariba, Omotosho, & Olakulehin, 2010; Onwujekwe et al., 2009). While these studies focused on evaluating patient satisfaction in specified areas of healthcare services such as eye care (Olawoye et al., 2012), maternity (Chirdan et al., 2013), pharmacy (Afolabi et al., 2012), emergency and outpatient services (Ajayi et al., 2005; Oluwadiya et al., 2010), they generally did not include the elements of evaluating patient return intention, i.e. willingness to revisit the same hospital and to recommend it to family and friends as applied in other studies abroad (Anbori et al., 2010; Blizzard, 2004).

Again, these studies did not consider adapting any known standardized measuring instrument such as SERVQUAL (Babakus & Mangold, 1992; Lam, 1997; Parasuraman et al., 1988; Reidenbach & Sandifer-Smallwood, 1990) or the Hospital Consumer Assessment of Healthcare Providers and Systems (HCAHPS) (CAHPS, 2012), which would allow for easy comparability of results from other similar studies.

Another important variable that has not been assessed by previous studies is the influence of means by which patients finance their healthcare cost on return intention. These are aspects, which this study aims to provide insight and in some way contribute to existing literature.

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## 2. SIGNIFICANCE OF THE PRESENT STUDY

Private for-profit healthcare providers are usually faced with the challenge of undertaking and sustaining a periodic service quality satisfaction survey on their patients. This may be due to several concerns which include obtruding the smooth operations of the day-to-day healthcare processes by the survey, inadequate manpower to undertake such surveys in-house or funding of the surveys through third party consultants and the need to produce quick and easily applicable findings from such a survey that will be directly useful to business improvement rather than an academic exercise. Therefore to reduce the impact of these challenges, this study provides a simplistic model for determining item (s) and domains of SERVQUAL that influenced patients' return intention in a healthcare facility that can be applied on a periodic basis, in-house and for easy of interpretation, implementation and improvement of service quality in a hospital. This model adapts the SERVQUAL survey instrument with modifications in terms of design and analytical approaches.

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## 3. REVIEW OF RELATED LITERATURE

Studies (Blizzard 2004; Anbori et al., 2010; Arab et al., 2012; Lee et al., 2012; Chang, 2013) in the healthcare

industry, have been conducted to assess and understand the predictors of patient patronage of service providers, as much as in other business sectors, such as the computer industry (Smith & Wright, 2004), retail shops (Pan & Zinkhan, 2006), telecommunications industry (Kumar et al., 2011) and diverse business concerns (Uncles et al., 2003; Han et al., 2008; Pan et al., 2012). The overall aims of these studies are to attempt to determine some of the factors that positively influenced the level of customer satisfaction and ultimately enhance the level of return intention or patronage.

In the case of a hospital patient, patronage has been described as the expression or willingness to revisit the same hospital and or recommend its services to family and friends (Anbori et al., 2010; John, 1991; Kessler & Mylod, 2011). The quality of service given to a patient from entrance into the hospital until their exit plays a key role in the overall level of their satisfaction. In a retail environment, a customer may be satisfied with just the shop attendants to help them with their demands, whereas in the hospital, there are chains of events and individuals such as the specialist, nurses and receptionist who may have done an excellent job of offering quality service, still other factors e.g. physical hygiene would greatly influence what opinion the patient forms about the hospital.

### 3.1 Patient Perception of Service Quality

Of the two forms of quality (technical and functional) relevant to healthcare service delivery, it is the functional quality that is easily assessed by the patients. The technical quality comprises professional accuracy of procedures and diagnoses, health improvement and costing (CAHPS, 2012; Hsu, 2010; WHO, 2000), which patients are unlikely to assess. Accordingly, the third party method of assessment such as the Joint Commission for Accreditation of Health Care Organizations (JCI, 2013) have been utilised to assess technical quality. The SERVQUAL model has been adapted to the healthcare service industry as a tool to enable patients assess functional quality; the approach by which healthcare service provider delivers care to the patient (Anbori et al., 2010; Babakus & Mangold, 1992; Taner & Antony, 2006).

The five domains of SERVQUAL that can be assessed by patients include:

- 1) **Tangibles:** the physical condition of facilities, equipment and appearance of personnel;
- 2) **Reliability:** the ability to perform the assured service accurately and dependably;
- 3) **Responsiveness:** the inclination of personnel to help customers and provide speedy service;
- 4) **Assurance:** the courteousness and knowledge of personnel and their expertise to inspire confidence and trust; and
- 5) **Empathy:** the caring and individualized attention the service provider gives to its customers.

In line with the intention of the SERVQUAL developers (Parasuraman et al., 1988), the varying numbers of items under each dimension that culminated into 22 items can be modified to serve the purpose of assessing customer's perceived quality of service. Therefore, the application of SERVQUAL adapted to healthcare service setting that included variables to determine patronage or return intention by researchers (Anbori et al., 2010; Babakus & Mangold, 1992; Taner & Antony, 2006), revealed that high perception of service quality by patients influenced the level of satisfaction which in turn influence patronage.

The concept of service quality has been well described as the difference between customer's perceptions of services offered by a provider and their expectations of the service offerings by that provider (Grönroos, 2001; Irfan & Ijaz, 2011; Parasuraman et al., 1988). In other words, satisfaction is realized when the needs and expectations of the customer is met or exceeded (Parasuraman et al., 1988). Thus customer satisfaction becomes the fundamental determining factor of success in the service industry (Wong, Tong, & Wong, 2014).

### 3.2 Healthcare Service Delivery in Nigeria

The private for-profit oriented hospitals play a significant role in healthcare service delivery, especially in developing countries (Alubo, 2001; Anbori et al., 2010). A recent study in Nigeria revealed that 45% of the populace patronise Private Health Facilities and Hospitals (NOIPolls, 2013). This is followed by Federal Government Hospitals (25%), State Government hospitals (13%), Pharmacies/medicine stores (10%), other facilities such as Traditional Healthcare (3%), Local Government Hospitals/Health Centres (2%) and Faith based centres of healing (1%), (NOIPolls, 2013).

Usually the private health facilities and hospitals are profit oriented, with high level of patronage due to higher functional quality of service and technical efficiency especially when compared with the not-for profit hospitals in Nigeria. In addition to the fact that the public hospitals are underfunded, with low budgetary allocations that are far less than half of the 15% recommendation by the United Nations, several basic service requirements are not met (Alubo, 2001; Mejabi & Olujide, 2008). Other private not-for profit hospitals and health facilities exist, but some are owned by religious bodies or supported by individuals through non-governmental organizations.

### 3.3 Financing Healthcare Services in a Private Profit Oriented Hospital in Nigeria

There are three basic means by which consumers of healthcare finance the services received in a for-profit oriented hospital such as Nisa. These categories are similar to that obtained in a developing country like Turkey (Çaha, 2008). The categories include:

- **Out-Of-Pocket payment (OOP)** these group of patients

pay for the services they receive by themselves i.e. they pay out of their own pockets. Apart from some organisations that pay for health care services for their staff, this was predominantly the method of payment for health services in Nigeria until a few years ago when the National health insurance scheme was introduced.

- Insurance coverage can be through third party Health Maintenance Organisation (HMO) which may be private-Private Health Insurance Scheme or government-National Health Insurance Scheme and others-e.g. community based;
- Corporate organisations managed care system which may also be private or government.

The National Health Sector Reform (HSR) policy of 2005 promoted and encouraged diversified collaborations between healthcare providers and consumers. It entails public private partnership (PPP) programme of Federal Ministry of Health Nigeria (FMH, 2005), to ensure broad and fair coverage, accessibility and affordability of healthcare services, in addition to financial risk security (Olakunde, 2012; Riman & Akpan, 2012).

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#### **4. BACKGROUND OF NISA PREMIER HOSPITAL**

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Nisa Premier Hospital (Nisa) was established in 1996 in the small town of Gwagwalada, a suburb in the Federal Capital Territory (FCT). The Hospital moved from Gwagwalada to Jabi main city, its current location in year 2000. Nisa has grown tremendously over the years and now houses 60 in-patients beds and 40 baby cots. Nisa provides a wide range of healthcare services including general out-patient services, family medicine, obstetrics and gynaecology (O&G), surgery, paediatrics, pharmacy, diagnostics laboratory and radiological services as well as fertility and in-vitro fertilization (IVF) services.

The hospital is renowned for maternal and infertility treatments. However, since 1998 when Nisa's first in vitro fertilisation (IVF) baby (Baby Hannatu), authenticated by the Federal Government in Nigeria was born, more than 2000 IVF and intra cytoplasmic sperm injection (ICSI) live births have been recorded in the hospital.

Nisa has documented over 50,000 registered patient attendances, with healthcare financing proportions of 60% insurance, 30% corporate organisations and 10% Private (out-of-pocket, OOP) patients' transactions. This patients' mix by healthcare financing transactions reflects the proportions by patients' registration.

Nisa is one of the first hospitals in Nigeria to be selected for the Government's initiative of running its hospitals through a Public Private Partnership (PPP) and now manages Garki Hospital Abuja since 2007 to date. This partnership supports the less privileged patients

in the FCT as they receive treatment in the hospital through the Social Welfare Unit jointly set up by Nisa and the FCT Administration within the premises of Garki Hospital Abuja. Also, while low cost IVF services are also obtainable in both Nisa and Garki Hospitals to support needy couples, the "Baby Hannatu Foundation" set up by Nisa offers charity dedicated to subsidizing IVF and general education of fertility challenged patients.

Nisa is also involved in the clinical training of doctors and other healthcare professionals in Nigeria, especially in the areas of IVF, O&G and paediatrics with continue education of the general public through its monthly open day public enlightenment programs, as well as its medical research support programs.

Nisa is an award winning Hospital; having won the Nigeria National Productivity Order of Merit Award in August 2013, Nigeria entrepreneurs Award and FCT Advancement Award in 2015.

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#### **5. METHODOLOGY**

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##### **5.1 Study Design**

The study adopted a cross-sectional and a case study sample based survey design that was conducted between August and September of 2014 at NISA Premier Hospital Abuja, Nigeria. The study design consisted of a deductive approach using survey questionnaire, which due to time limitations adopted the cross-sectional case study strategy (Saunders, Lewis, & Thornhill, 2009).

##### **5.2 Survey Frame and Sampling Technique Inclusion Criteria and Sample Size**

Nisa has over 50000 registered patients in its record database as at 2014. This forms the survey frame of the study and guided the sample size estimation.

Only respondents above 18 years of age, mentally stable, with willingness to participate and registered patient records in the Hospital were included in the survey. Patients who were registered within the survey period were not included as it was thought that they would not have had sufficient experience of the Hospital environment and services to be able to comment on all aspects of the hospital covered in the questionnaire.

Both in-patients and outpatients were included. The in-patients were those who had, had at least one day's experience in the wards of the Hospital and depending on their length of stay and condition at discharge, provided responses during their stay before discharge or shortly after discharge.

The sample size of the study was estimated using Macorr® ([www.macorr.com](http://www.macorr.com)) survey sample size calculator at 95% confidence level. Thus an estimated minimum of 195 respondents was obtained from the calculation at 7% confidence interval (CI) from about 50000 Hospital patients' population.

The sample size calculation is presented by the formula:

$$\text{Sample size} = n/[1+ (n/\text{population})]$$

In which  $n = Z * Z [P (1-P)/(D*D)]$ , where

P = True proportion of factor in the population, or the expected frequency value

D = Maximum difference between the sample mean and the population mean,

Or Expected Frequency Value minus (-) Worst Acceptable Value

Z = Area under normal curve corresponding to the desired confidence level

The 7% CI suggests that between 43% and 57% of the study population would provide the answers that were obtained from this study.

A total design probability sampling technique; simple random sampling technique was used in this study. This technique have been found to be suitable for specified and easily accessible sampling frame (Saunders et al., 2009) as in this study. The patients were not randomly selected from the Hospital database using registration numbers, but were all requested to fill the questionnaires upon daily transaction basis, either while a patient is seated in the reception lounge, i.e. for out-patients, before or after consultation and or while awaiting diagnostic results. For in-patients, the survey questionnaires were placed in a folder in the rooms and patients' attentions were drawn to it. It can be assumed that in some cases relative or friends assisted the patients to fill in their responses. While in some instances questionnaires were given to the patients to return at their convenient time, other questionnaires were attached in the Hospital bills dispatched to the patients. This was the typical method for corporate patients who attended the Hospital within the study period. Patients were only allowed to respond to the questionnaire once within the study period even if the patient is revisiting the Hospital. Consequently responses were only received from patients who voluntarily decided to participate until the required sample size was obtained.

### 5.3 Survey Instrument

A modified structured questionnaire was utilised as the survey instrument for data collection in this study. This consist items adopted from previous studies in the healthcare service industry that modified the original SERVQUAL instrument (Parasuraman et al., 1988). Sample of the instrument is presented on Appendix A.

In this study, similar to the study by Anbori et al (2010), only perception score and check options for return intention service quality was utilised. This study supports the argument of other studies (Anbori et al., 2010; Brady et al., 2002; Lee et al., 2000), that perception score is the central contributor to the gap model of Parasuraman et al.

(1988). Thus section A of the survey instrument assessed the service quality perceptions on a five point Likert scale ranging from 'Strongly Agree' to 'Strongly Disagree'. The 2 questions of overall satisfaction and return intention were adopted from Babakus & Mangold (1992).

However, a new modification to the assessment of patronage was introduced in this study in which respondents were expected to indicate their antecedents of patronage. This was assessed in section B as factors influencing patients' return intention which utilised 18 questions under the five dimensions: Tangibility (6), Reliability (3) Responsiveness (3), Assurance (4) and Empathy (2). This method was intended to directly answer the central question of this study: What factor (s) influence the patronage behaviour of patients in a profit oriented hospital? That is, from the perspective of item (s) and domains of SERVQUAL.

### Scoring and Recoding Technique

The five point Likert scale in this study was scored and recoded for binary logistic regression analysis as presented on Table 1. The scoring and coding was similar to that described in CAHPS (2012).

**Table 1**  
**Scoring and Recoding of Questionnaire Items**

Scale	Score	Coding for binary logistics regression analysis	
Strongly Agree	Very satisfied	4	1
Agree	Satisfied	3	1
Indifferent/ Don't know	Indifferent/ Don't know	0	0
Disagree	Not satisfied	2	0
Strongly Disagree	Very dissatisfied	1	0

The scale 'Indifferent / don't know' was added to allow for patients who had no idea, not sure, may have forgotten or actually indifferent to any item on the instrument and therefore was not assigned a score. This have been observed to be useful in improving quality of responses and response rates by reducing the cumbersomeness of a lengthy scale (Babakus & Mangold, 1992), but not necessarily to promote a mid-point bias (Anbori et al., 2010). This scale was therefore not included in the estimation of average mean and percentage scores of patient perception of service quality.

### 5.4 Ethical Considerations

The study was guided by standard ethical considerations for survey as described by the National Code of Health Research Ethics Nigerian (NHREC, 2007). Consent of both the Hospital administration and patients were sought during the study.

### 5.5 Data Collection and Analysis

A pilot survey was carried out to improve on legibility

issues arising from printing, clarity of questions, typographic and grammatical constructs of the questionnaire. This is usually the standard practice for quality and true representativeness of responses (Saunders et al., 2009). Following the pilot survey for this study that was conducted in July 2014, in which 32 questionnaires were collected, all necessary corrections were made on the final questionnaire before fresh administration. Questionnaires from the pilot study were not included in the final analysis of data.

Data collected from the questionnaires were collated on Microsoft Excel spread sheet and data analysis performed using XLSTAT (version 2013) statistical software. Validity and reliability of the survey instrument was determined; both descriptive and inferential statistics were utilised in presenting the results of the study. Statistical significance for inferential statistics was considered at  $P < .05$ .

Binary Logistic Regression (BLR) was used to determine the relationship between a binary dependent (Y) variable and several independent (X's) discrete (categorical) and or numeric variables. Relationships between the variables can be expressed by the BLR model equation as:

$$\ln(P_y/(1-P_y)) = b_0 + b_1 * X_1 + b_2 * X_2 + \dots + b_n * X_n$$

Where  $b = \text{constant}$ .

As a given change in X value occurs, the probability of Y can be predicted using this equation (Gortmaker, Hosmer, & Lemeshow, 1994). In this study, the maximum likelihood method of the BLR was used to solve for the model constant term and coefficients. Thus for example, response variable (Y) was 'Patronage' as coded and presented in Table 1 above.

## 6. RESULTS AND DISCUSSION

### 6.1 Survey Response Rate

A total of 450 survey questionnaires were administered to patients within the survey period (August-September 2014). A total of 242 questionnaires were returned, out of which 37 questionnaires were excluded from analysis due to lack of completeness of responses. Therefore 205 questionnaires were analysed in this study, thereby yielding a valid response rate of about 46%.

It was not possible to determine the individual response rates for each of the categories of patients by healthcare financing due to the random nature of administering the questionnaire. However, responses received, specifically from corporate patients; in which questionnaires were attached to their bills were determined as 56% (17 returned out of 30 questionnaires). This generally revealed a favourable responsiveness of corporate patients to the Hospital. In-patient response rate was similarly favourable with 51% (82 returned out of 161 questionnaires). The overall response rate of 46% attained in this study was

generally considered satisfactory (Baruch & Holtom, 2008) for the survey approach adopted in this study.

The response rate allows for the assessment of the influence of methodological approach on the responses, and in this study, the hand-to-hand delivery and collection of responses could be attributed to this favourable result recorded (Baruch & Holtom, 2008; Sitzia & Wood, 1998). However the overall sample size of 205 patient responses analysed in this study satisfies the minimum estimated requirement for representativeness of the Hospital population under study.

### 6.2 Characteristics of Respondents

The distribution of respondents in this study by category of healthcare financing (Table 2) generally revealed that both categories of insurance (89, 43.4%) and private (91, 44.4%) patients were almost similar in proportions and the lowest proportion was recorded in the corporate patients (25, 12.2%) category.

Contrary to the average expected proportions from monthly average transactions in which the insurance patients are in the majority (60%) followed by private patients (30%) and then by corporate patients (10%), the survey responses obtained in this study showed that more private patients responded to the survey questionnaire than the insurance patient category. Amongst the obvious factors that may be responsible for this is the rate of contact with private patients at the Hospital during the study period, which include the high proportion of private patients' utilisation of the Hospital ward as in-patients. Private in-patients (17.6%) recorded higher responses than insurance in-patients (11.2%) by about 6%. Although this corresponds to the general trend of utilisation of the Hospital wards, it also suggests a higher level of responsiveness towards the Hospital by private patients.

The background characteristics of respondents in this survey generally shows a higher proportion of female (139, 67.8%) respondents than male (66, 32.2%). While the insurance female (66, 32.2%) patient proportion contributed mostly to the entire study respondents, private male (36, 17.6%) patients mainly contributed to the responses recorded. Female majority in hospital survey responses have been recorded in other similar studies (Anbori et al., 2010; Peprah & Atarah, 2014). Apart from the fact that women consult their general practitioners regularly on average than men for almost all conditions and symptoms (Hunt, Adamson, Hewitt, & Nazareth, 2011), they are usually in attendance where their children are involved.

The age distribution revealed that the majority of respondents were in the 30-39 years old (156, 76.1%) age category, which is followed by the 40-49 years old (28, 13.7%). The lowest was patients that are 60 years and above age (2, 1%). Respondents in the age groups <29 (13, 6.3%) and 50-59 (6, 2.9%) years old were generally fewer in proportions respectively.

**Table 2**  
**Background Characteristics of Survey Respondents**

Characteristics	Healthcare Financing (Number, %)			Total
	Private (91, 44.4)	Insurance (89, 43.4)	Corporate (25, 12.2)	
<b>Gender</b>				
Female	55 (26.8)	66 (32.2)	18 (8.8)	<b>139 (67.8)</b>
Male	36 (17.6)	23 (11.2)	7 (3.4)	<b>66 (32.2)</b>
<b>Age (years)</b>				
<29	11 (5.4)	2 (1.0)	0 (0.0)	<b>13 (6.3)</b>
30-39	63 (30.7)	76 (37.1)	17 (8.3)	<b>156 (76.1)</b>
40-49	11 (5.4)	11 (5.4)	6 (2.9)	<b>28 (13.7)</b>
50-59	5 (2.4)	0 (0.0)	1 (0.5)	<b>6 (2.9)</b>
60>	1 (0.5)	0 (0.0)	1 (0.5)	<b>2 (1.0)</b>
<b>Occupation</b>				
Civil Servant	28 (13.7)	31 (15.1)	6 (2.9)	<b>65 (31.7)</b>
Housewife	12 (5.9)	8 (3.9)	7 (3.4)	<b>27 (13.2)</b>
Private Sector	21 (10.2)	31 (15.1)	10 (4.9)	<b>62 (30.2)</b>
Schooling	5 (2.4)	1 (0.5)	0 (0.0)	<b>6 (2.9)</b>
Self Employed	20 (9.8)	15 (7.3)	2 (1.0)	<b>37 (18.0)</b>
Unemployed	5 (2.4)	3 (1.5)	0 (0.0)	<b>8 (3.9)</b>

The occupational background characteristics of respondents revealed that there were high proportions of civil servants (65, 31.7%) and private sector employees (62, 30.2%) that were individually twice the proportion of the self-employed respondents (37, 18.0%). The proportion of respondents who were housewives (27, 13.2%) was higher than the unemployed (8, 3.9%) and those schooling (6, 2.9%). Being the Federal Capital city of Nigeria, Abuja is mainly populated by civil servants and multinational corporations that provide support services to the city. This perhaps reflected in the high proportions respondents that are civil servants and private sector employees recorded in this survey.

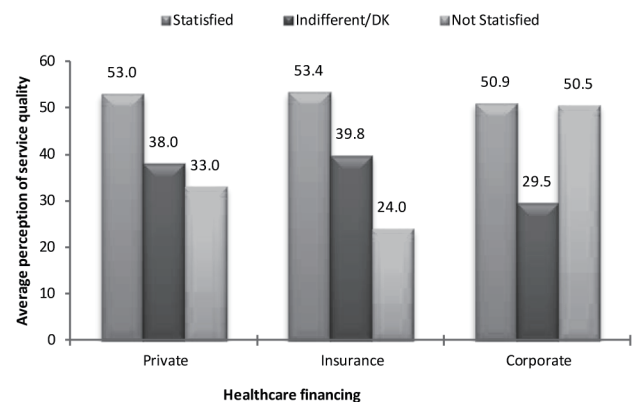
**6.3 Sampling Adequacy, Validity and Reliability of Survey Responses**

The measure of sampling adequacy is an important step to the tests of validity and reliability of responses collected from the survey data. Therefore the established Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy (Dziuban & Shirkey, 1974) as applied in patient satisfaction surveys (Ramez, 2014; Yogesh & Satyanarayana, 2013) was performed. The KMO value in this study was determined to be 0.893, indicating an acceptable dataset for conducting correlational and factor analysis in assessing the level of validity and reliability of the response data. KMO values < 0.5 was unacceptable (Dziuban & Shirkey, 1974).

The survey questionnaire or instrument of measuring perception of service quality utilised in this study would be considered valid as it has been utilised in an earlier study (Babakus & Mangold, 1992), i.e. it was useful in measuring what was intended. This was ascertained by the measure of the internal consistency of the response data by correlational factor analysis. However, the ability of the instrument to be consistent in measurement expresses its level of reliability; hence validity and reliability are closely connected (Tavakol & Dennick, 2011).

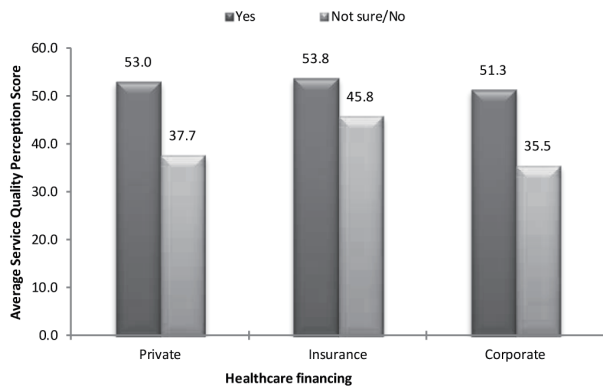
The overall validity of response data in this study, expressed by the Cronbach's Alpha coefficient ( $\alpha$ ) value is  $\alpha = 0.885$  suggesting an appropriate level of internal consistency. Cronbach's coefficient < 0.7 is generally considered not suitable (Tavakol & Dennick, 2011). In the earlier study (Babakus & Mangold, 1992), the overall value of  $\alpha = 0.897$ , the difference may perhaps be due to the three additional items introduced in this study.

The overall satisfaction rating was determined in section B of the study instrument with the question: "I feel \_\_\_\_\_ with the quality of care received in NISA Premier Hospital." However, in describing the overall level of satisfaction rating with the average levels of service quality perception scores by the different category of patients' healthcare financing (Figure 1), patients' responding "Very satisfied" and "Satisfied" were grouped as "Satisfied". Spectacularly, the result generally revealed that although some corporate patients do not feel satisfied, the average perception score of service quality was rated as high as those that felt satisfied; 50.5 and 50.9 respectively.



**Figure 1**  
**Overall Level of Satisfaction with the Average Levels of Service Quality Perception Scores by the Different Financing Category of Patient**

Figure 2 shows patients' return intention with the average levels of service quality perception scores by healthcare financing categories. It revealed that corporate patients were slightly less likely to indicate return intentions. Suggesting that, unlike private and insurance patients, corporate patients are more demanding in their quest for higher service quality satisfaction.



**Figure 2**  
**Patients’ Return Intention with the Average Levels of Service Quality Perception Scores by Healthcare Financing Categories**

**6.4 Does the Means by Which Healthcare is Financed Contributes Significantly to the Level of Patronage?**

Table 3 show that the means of healthcare financing by patient does not influence their return intention as the result shows no statistically significant ( $X^2 = 3.14$ ;  $P = 0.207$ ) difference. In a study, cost (Anbori et al., 2010), in another the income (Pan & Zinkhan, 2006) of the customer were considered. In these studies both cost and income were found to be significantly associated with return intentions. Cost and income seem to be closely related to the means of healthcare financing and is only lightly alluded to in this study since no known literature study compared the means of healthcare financing. However, the fact that there is no significant relationship between the means of healthcare financing and return intention of patients’ shows that all categories of patients received the same level of quality of care from the provider without discrimination. This is the expected benchmark in healthcare services as all lives are to be treated with equal attention, irrespective of the means of financing the services received. Moreover a responsive healthcare provider is expected to meet the obligation of signing up with the different forms of healthcare financing of the patient.

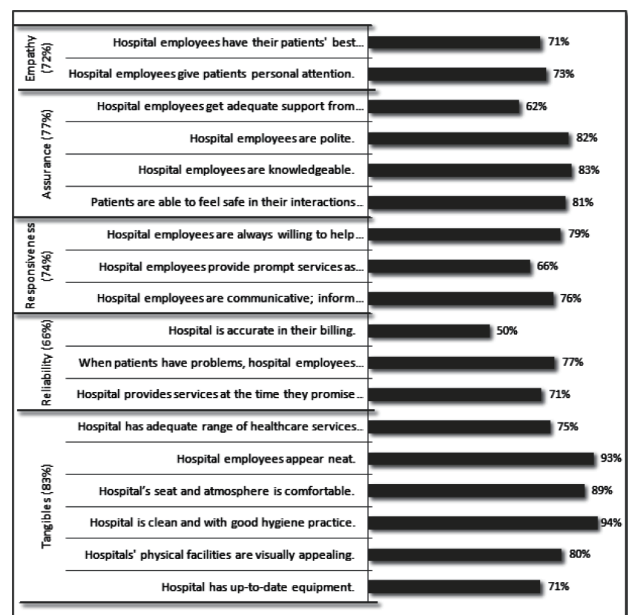
**Table 3**  
**Result of Pearson Chi-squared Tests of Healthcare Financing and Patients’ Return Intention (Patronage)**

Healthcare Financing	Patronage Number (%)		Total
	Yes	Not Sure/No	
Corporate	20 (22.3)	5(2.7)	25
Insurance	79 (79.4)	10 (9.6)	89
Private	84 (81.2)	7 (9.8)	91
<b>Total</b>	<b>183</b>	<b>22</b>	<b>205</b>
<b>Pearson’s X2 statistic</b>	<b>3.14</b>		
<b>DF</b>	<b>2</b>		
<b>p</b>	<b>0.2078</b>		

**6.5 Service Quality Attribute and Patient Patronage**

To directly answer the central question of this study, hence the leading statement in Section B of the survey instrument: “We believe one or more of our service quality attribute at NISA Premier Hospital are outstanding to you and makes you patronise us, and even recommend friends or family member to receive health care services at the Hospital. Indicate which attribute (s) are outstanding to you.”

Consequently the responses collected from this section were subjected to BLR analysis in which the return intention, Patronage (Y) was analysed against each item of service quality as independent (X) variables. However, Figure 3 presents a distribution (%) of patients that indicated a service quality item as influencing his/her patronage behaviour. The result shows that Reliability (66%) as a domain was rated lowest on average, while Tangibles (83%) was rated highest. The item ‘Hospital is accurate in their billing.’ (50%) in the Reliability domain was a major contributor to the low ratings of this domain. The highest rated item was ‘Hospital is clean and with good hygiene practice’ (94%) in the Tangibles domain.



**Figure 3**  
**Distribution (%) of Items Indicated as Factors Influencing Patronage and Average % of Service Quality Domain**

To enable corroborating observations between the two sections (A and B) of the survey instrument and indicate the possibility of assessing service quality perception by allowing patients to only indicate by ticking an item in the lists of each domain as an indicator influencing patronage, thereby reducing the laborious process of completing a bulky questionnaire consisting of expectations and perceptions items.



However a much more meaningful application of the foregoing descriptions of factors influencing patronage could be better appreciated with the results of BLR presented on Table 4. The BLR model goodness of-fit was first assessed and found suitable for the data by the Hosmer-Lemeshow test ( $X^2 = 0.614$ ;  $P = 0.996$ ) which indicated  $P > 0.05$  or not significant (Gortmaker et al., 1994).

The Likelihood Ratio, G ( $X^2 = 61.334$ ;  $P < 0.000$ ) suggests that the model is significant, which is confirmed by the Wald p-values for the coefficients in the service quality items estimates that ‘When patients have problems, hospital employees are sympathetic and reassuring.’ ( $X^2 = 4.301$ ;  $P = 0.038$ ) and ‘Hospital employees have their patients’ best interests at heart’ ( $X^2 = 4.168$ ;  $P = 0.041$ ) are significant.

The results suggest an influential relationship between return intention and these two items of service quality. Therefore, the result suggests that these two items are the actual determinants of patronage behaviour, in relation to the service quality-SERVQUAL-instrument utilised in this study. In other words, this result simply revealed that while patients’ indicated that they are willing to return to Nisa the same situation they found themselves, the service quality items that were found to be predictors of their return intention are these two items as indicated by the statistically significant p-values. The first item: ‘When patients have problems, hospital employees are sympathetic and reassuring’ is an item under Reliability domain, while the other item: ‘Hospital employees have their patients’ best interests at heart’ is an item under the Empathy domain.

Reliability was earlier defined as “the ability to perform the assured service accurately and dependably”, and Empathy as “the caring and individualized attention the service provider gives to its customers” (Parasuraman et al., 1988). Therefore these domains can be considered highly relevant in determining patronage behaviour of patients in a profit oriented hospital such as the one under study and perhaps every other healthcare service provider.

Although items under each of the 5 domains of SERVQUAL have been worded differently by different researchers, and in some cases with different number of items, for example in this study as well as Babakus and Mangold (1992) both Reliability and Empathy domains contain 3 and 2 items respectively to express the definition of the domains. But in the study by Anbori et al. (2010) and Brahmabhatt et al. (2011), Reliability domains contains 7 and 8 items respectively, while again Empathy domain contains 4 and 7 items respectively. The numbers of items in these 2 domains of these studies are more than the numbers in the respective domains of this study. Yet on closer consideration, it can be observed that all the studies placed items that correspond to the definition of the domain. In the Reliability domain, for instance Anbori et al. (2010) placed “Accurate billing” as an item which directly correspond with the item wording in this study, but Brahmabhatt et al. (2011) placed an item that is worded “... hospital ... error free records” which tend to be more comprehensive than the specificity in the use of the word ‘billing’. Nevertheless all the studies attempt to place items construct that enabled the determination of service quality in terms of the definition of the domain.

**Table 4**  
**Estimated Wald Predictors of Factors Influencing Patients’ Patronage Behaviour**

Item	Coefficient	Chi-Square	Wald-P	Odds Ratio
Hospital has up-to-date equipment.	1.360	3.125	0.077	3.896
Hospitals’ physical facilities are visually appealing.	0.786	0.703	0.402	2.194
Hospital is clean and with good hygiene practice.	10.832	0.007	0.935	37.801
Hospital’s seat and atmosphere is comfortable.	2.205	2.612	0.106	9.075
Hospital employees appear neat.	0.797	0.424	0.515	2.219
Hospital has adequate range of healthcare services befitting of its status	-0.101	0.025	0.874	0.904
Hospital provides services at the time they promise to do so.	0.631	0.814	0.367	1.879
When patients have problems, hospital employees are sympathetic and reassuring.	-1.976	4.301	0.038	0.139
Hospital is accurate in their billing.	0.454	1.124	0.289	1.574
Hospital employees are communicative; inform patients exactly when services will be performed.	0.071	0.008	0.928	1.073
Hospital employees provide prompt services as expected by patients.	0.330	0.164	0.686	1.391
Hospital employees are always willing to help patients.	0.446	0.278	0.598	1.562
Patients are able to feel safe in their interactions with hospital employees.	0.308	0.078	0.780	1.360
Hospital employees are knowledgeable.	1.255	0.786	0.375	3.509
Hospital employees are polite.	0.418	0.212	0.645	1.519
Hospital employees get adequate support from their employers to do their jobs well.	0.488	0.587	0.443	1.629
Hospital employees give patients personal attention.	-0.454	0.435	0.509	0.635
Hospital employees have their patients’ best interests at heart.	1.690	4.168	0.041	5.418

While it is unclear whether the number of items in a domain influences the nature of overall responses of the patients, the BLR model applied by Anbori et al. (2010) revealed that Reliability and Empathy are significant predictors of patronage as in this study. Considering the fact that their study focused on private Hospitals that are profit oriented, this strongly supports the findings of this study. Although in their study, only domain effect was reported but not the specific item within the domain as expressed in this study. The odds ratios (Table 4) for the significant items of patronage translates in real terms, for instance, that for every expression by the Hospital employee that depicts having the 'patients' best interests at heart' the Hospital is likely to have 5.41 times more return intentions by patients. Thus making Empathy the stronger item than Reliability in which for every expression of 'sympathy and reassurance' only about 0.14 times likelihood of return intention is to be expected.

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## CONCLUSION

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### General Conclusions

This study set out to answer a central question: "what factors influenced the return intention or patronage behaviour of patients in a profit oriented hospital? Therefore from the results of this study, it can be generally concluded that the questions raised were judiciously answered and in the course of which profound insight were gleaned. This for instance, includes the fact that utilising the SERVQUAL instrument is limited to assessing patronage in terms of service quality dimensions. Other perceived predictors of patronage can be assessed from independent variables as in the demographic characteristics of the respondents in the survey instrument if included and collected. This may have underscored the reason some studies (Blizzard, 2002, 2005; Kessler & Mylod, 2011; Lee, 2003; Pan & Zinkhan, 2006; Smith & Wright, 2004) assess determinants of patronage without recourse to the SERVQUAL model.

This study elucidated that the Hospital maintained a balanced level of service quality delivery to all types and categories of patients irrespective of the fact that they accessed healthcare services by different mean of financing; whether as an out-patient or in-patient as there was no influence by this on patronage. This could be monitored as an essential indicator or benchmark for balanced quality of service delivery.

It can also be generally concluded that since the findings of this study showed significant similarity with other study (Anbori et al., 2010) regarding service quality domains: reliability and empathy as determinants of patronage, this items can be regarded as the actual determinants of patronage in any comparable private profit oriented Hospital in Nigeria, West Africa and any other part of the world, especially in developing countries where there is similarity in healthcare financing.

### Theoretical Insight

The modified approach utilised in this study to assessing patronage behaviour through items of service quality sheds a new light to the fact that assessing perceptions score of domains with return intention is insufficient but detailed evaluation can further reveal the specific item that drives that domain irrespective of the number of items that are collected to express the definition of the domain. It is anticipated that this modified approach of determining factors influencing patronage behaviour of patients through items of the SERVQUAL model can be used by other researchers and healthcare managers to determine their point of strength, not only as satisfaction gap, but as actual drivers of patronage; to improve on the way they provide services to patients, and to also validate the findings of this research.

### Managerial Implications

Administrators and business development managers of Hospitals can utilise the findings from this study that signalled the need for operational improvements in the aspect of billing and sustainability strategy in the service quality domains of Reliability and Empathy that potentiate return intention. Developing patronage from the perspective of this current study, two items in the service quality assessment tool was found to significantly drive the patronage behaviour of patient attending Nisa as enumerated earlier. Thus this suggests statements that are likely to be heard from word of mouth publicity of the Hospital from patients. Healthcare administrator and managers in Nisa and elsewhere will realise that one of SERVQUAL's major contributions to the healthcare industry is its ability to recognize symptoms and to provide a starting point for the examination of causal problems that prevent the provision of quality services. Therefore healthcare business managers can utilise this as its main anchor for publicity and seek to determine other points of strength. It is also a very important tool that the Hospital management could utilise to harness further in developing and improving on it brand loyalty as well.

### Limitations of the Study

This study focused on perception of service quality without consideration for patients' expectation of service quality, thus the satisfaction gaps score was not assessed and direct comparison with studies that utilised the gap model could not be made.

A key event that may have influenced the nature of responses received in the entire study: the strike action embarked upon by the doctors in Nigeria during the period of this study may have influenced the nature of responses gained as many public hospitals were closed and as a result may have influenced the number of new patient registration. However, the direction of these influences on responses is unclear, whether negative or positive. Converse to the earlier anticipation of a sufficient duration for the study, the estimated period of data collection was insufficient

for a broad exploration of other variables relevant in the determination of patient patronage behaviour.

The study was done on a broad basis looking at the whole hospital rather than focusing on specific units as some of these units may function better than others. Further studies are needed to elucidate other antecedents of patients' patronage that were not determined in this study, such as the level of service quality perceptions at the different units and department of the Hospital. A new technique for assessing patronage behaviour through items of service quality ratings was tested in this study, however there is the need to validate and calibrate this technique by reassessment study.

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## APPENDIX

### A. Sample questionnaire

#### SECTION -A: OVERALL SATISFACTION AND RETURN INTENTION

Overall Perception of Level of Satisfaction		Very Satisfied	Satisfied	Indifferent/ Don't know	Not Satisfied	Very Dissatisfied
1.	"I feel _____ with the quality of care received in NISA Premier Hospital."	[ ]	[ ]	[ ]	[ ]	[ ]
<b>Patronage</b>		<b>Strongly Agree</b>	<b>Agree</b>	<b>Indifferent/ Don't know</b>	<b>Disagree</b>	<b>Strongly Disagree</b>
2.	"If I were to find myself in the same situation I was in when I was in NISA Premier Hospital, I would want to receive my treatment there again."	[ ]	[ ]	[ ]	[ ]	[ ]

#### SECTION -B: FACTORS INFLUENCING YOUR RETURN INTENTION

We believe one or more of our service quality attribute at NISA Premier Hospital are outstanding to you and makes you patronise us, and ever recommend friends or family member to receive health care services at the Hospital. Indicate which attribute (s) are outstanding to you.

Tangibles		Please Tick All that Applies [√]
3.	Hospital has up-to-date equipment.	[ ]
4.	Hospitals' physical facilities are visually appealing.	[ ]
5.	Hospital is clean and with good hygiene practice.	[ ]
6.	Hospital's seat and atmosphere is comfortable.	[ ]
7.	Hospital employees appear neat.	[ ]
8.	Hospital has adequate range of healthcare services befitting of its status	[ ]
Reliability		
9.	Hospital provides services at the time they promise to do so.	[ ]
10.	When patients have problems, hospital employees are sympathetic and reassuring.	[ ]
11.	Hospital is accurate in their billing.	[ ]
Responsiveness		
12.	Hospital employees are communicative; inform patients exactly when services will be performed.	[ ]
13.	Hospital employees provide prompt services as expected by patients.	[ ]
14.	Hospital employees are always willing to help patients.	[ ]
Assurance		
15.	Patients are able to feel safe in their interactions with hospital employees.	[ ]
16.	Hospital employees are knowledgeable.	[ ]
17.	Hospital employees are polite.	[ ]
18.	Hospital employees get adequate support from their employers to do their jobs well.	[ ]
Empathy		
19.	Hospital employees give patients personalised attention.	[ ]
20.	Hospital employees have their patients' best interests at heart.	[ ]

#### SECTION -C: BACKGROUND OF RESPONDENT

Please Tick [√] the option that corresponds with your personality

##### C1. Gender:

- Male [ ]  
Female [ ]

##### C2. Age (years):

- < 29 [ ]  
30-39 [ ]  
40-49 [ ]  
50 > [ ]

##### C3. Health Care Financing:

- Private (out-of-pocket payment) [ ]  
Insurance [ ]  
Corporate [ ]

##### C4. Occupation:

- Civil servant [ ] Private sector [ ]  
Self Employed [ ] Schooling [ ]  
Housewife [ ] Unemployed [ ]

Note. Adapted from Parasuraman et al. (1988) and Babakus & Mangold (1992)