

Determinants of Customer Satisfaction in a Private Hospital: A SERVQUAL Approach

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Abstract

This study aimed to assess the level of patient satisfaction in a private hospital. Satisfaction is an important factor for hospitals to gain a competitive advantage, and continued measure of the extent of satisfaction among patients is imperative. The study drew on published work since it adapted the SERVQUAL model to assess service quality dimensions. Data was collected from patients in three wards chosen by the researchers based on certain criteria. A total of 126 questionnaires was collected and analysed, and seven hypothesis statements tested. Findings have shown that there is a positive relationship between all five dimensions of the SERVQUAL model and patient satisfaction. However, there was no relationship between socio-demographic variables and satisfaction. Since data was collected from one hospital in a big city, the results may not be generalised to other towns. The SERVQUAL instrument is suitable for use in the hospital environment, but only to measure the functional component of quality. Therefore, the findings of this study are important for managers in private hospitals to point out the factors that carry most weight in determining patient satisfaction.

Key Words: Private Health Care, Patient Satisfaction, SERVQUAL, South Africa.

Introduction

The South African private health care sector has grown to be one of the biggest sectors in the country, both in terms of revenue and employment. This growth is similar to the one experienced in other developing countries (Andaleeb, 2001). Owing to the growing number of middle income citizens, the cost of private healthcare has increased (Mkize, 2013). Thus, the growing competition in this sector necessitated the urgent need to provide above average quality service. Hence, it is imperative for hospital administrators and policy makers to understand patients' evaluation of the quality of healthcare their organisations provide. Such an understanding of patients' satisfaction could prove to be a differentiating factor and competitive advantage. Senić and Marinković (2013) add that patient satisfaction should not only be a matter for individual hospitals, but it should extend to the national level (Andaleeb, 1998).

In developing economies, there is an accelerated trend for research into patient satisfaction with the aim to formulate strategies to aid improved competitive advantage (Camgöz-Akdağ & Zineldin, 2010; Polska, Fuxiang, Sääksjärvi & Shuyuan, 2013). Also, hospitals have been closely looking for these kinds of research for their survival and to increase return on investment, retention of customers, and augmentation of their brands (Chakraborty & Majumdar, 2011). In addition, hospital managers want to precisely know

what constitutes patient satisfaction other than the change in physical health status and wellbeing of their patients. That is, they want to understand the overall service quality that should be afforded to their patients. Tucker (2002) refers to service quality as the degree to which care is humane and competent in a hospital. And this humane and competent care should be judged by expects, specifically patients and healthcare professionals (Taner & Antony, 2006). In this research, we chose to listen to patients.

In South Africa, the government has also been concerned about the quality of healthcare received by the poorer members of society, who mainly use public sector hospitals. Similar to other developing countries, the government responded by introducing the National Health Insurance (NHI) plan (Chakraborty & Majumdar, 2011). The initiative aimed at helping poorer communities to access quality health care. However, this paper will not dwell on the public sector health care and its quality levels. Sufficient to say some previous studies in which comparisons were made between service qualities in developed countries and underdeveloped countries showed vast differences (Patterson & Smith, 2001). Also, including both healthcare evaluations from the public and private sectors would raise problems since the sector is too vast and complex (Eiriz & Figueiredo, 2005).

Thus the objectives of this study could be summarised as: 1) Measuring the dimensions of hospital service quality using the SERVQUAL model, 2) To re-test the applicability of the SERVQUAL model in a different setting other than the developed world's using the Structural Equation Model (SEM). 3) Finding the factors that contributed most to patient dissatisfaction (if any). This was achieved by using Parasuraman, Zeithaml and Berry's (1988) model of assessing quality. All these objectives were reached so that the quality of healthcare in South Africa is appraised through the evaluation of patient satisfaction surveys (Morrow, Ross, Grocott & Bennett, 2010).

South African Healthcare and Service Quality

South African Healthcare

The South African healthcare system is characterised by huge inequalities in terms of access to good quality healthcare by its citizens. There is a huge difference between the quality received by poorer communities and those who can afford private medical facilities. Cure is a basic requirement if anyone visits a hospital (Conway & Willcocks, 1997) but unfortunately that is not what everyone receives after visiting public medical facilities. Also, most of the physical settings from which medical services are being offered in the public sector are not appealing to society. Furthermore, the healthcare outcome is often far from satisfactory. To that effect, the government has had to deal with issues of health workers-patient relationships that derailed and resulted in litigation in certain instances.

Recent research has recommended that healthcare systems in developing countries need top management to increase their effectiveness since demand is much greater than the resources available (Kazemi, Ehsani, Abdi & Bighami, 2013). Resulting from these challenges, the South African government's new NHI is aimed at redressing the ills in the sectors by fostering much closer working relations between public and private hospitals. An almost similar approach was adopted by the Indian government (Padma, Rajendran & Lokachari, 2010; Mekoth, George, Dalvi, Rajanala, & Nizomadinov, 2012). It should also be mentioned that public healthcare is free of charge in public South African hospitals, which accommodate the greater majority of society. Some of these hospitals are world-class and are training grounds for some of the best doctors and healthcare professionals the country can produce.

However, many people make use of private hospitals. The greater use of these private facilities is owed to the poor quality of services experienced in the public sector. A similar pattern has been observed in countries such as Vietnam and Uganda (Guldner & Rifkin, 1993). However, in South Africa, the growth of black middle class contributed to success of the private medical centres (Mayosi & Benatar, 2014). The widening disparities in healthcare are so large that it is estimated that the public sector spends about ten

percent of the private sector per capita (Coovadia, Jewkes, Barron, Sanders & McIntyre, 2009). In the private sector there is a proportion of seventy percent of the country's doctors servicing only eight percent of the country's population, whereas the public sector employs thirty percent of the country's doctors who serve about eighty-four percent of the population (Coovadia et al., 2009). Inequalities persist despite government's efforts (Tanser, Gijsbertsen & Herbst, 2006). Exacerbating the problem is the geographical inaccessibility of healthcare facilities, especially in the rural areas. Among these, there have been strong policies that emphasise development of primary healthcare facilities and improvement of access by communities (Myburgh, Solanki, Smith & Lalloo, 2005). Recent research findings from both developed and developing countries have shown that geographical locations of healthcare services have a direct bearing on their utilisation (Arcury, Gesler, Preisser, Sherman, Spencer, & Perin, 2005; Gething, Noor, Zurovac, Atkinson, Hay, Nixon & Snow, 2004).

Healthcare Service Quality

According to Naidu (2009), healthcare is by its nature a credence purchase product. That is, because of the level of technical expertise required for one to be able to assess healthcare quality, many patients may be unable to do so. This may be true for rural communities where literacy levels are low. However, South Africa's growing middle class is more educated and they use technological advancements much better than the rural population which enables them to judge these services more accurately. Thus, the credence in both the public and private healthcare facilities can be compared and judged with much more precision. The main dimensions measured in healthcare are i) a technical dimension (which are actually the core services provided) and ii) a process or functional dimension (which is how the service is provided) (Chakraborty & Majumdar, 2011; Ramli & Sjahruddin, 2015). To gauge these dimensions, Parasuraman et al. (1988) suggests the use of a SERVQUAL model.

An earlier study by Turner and Pol (1995) found that the perception about the quality of service in healthcare comprises medical outcome, access to healthcare and personal characteristics. In the South African context, public hospitals, which are perceived provide low quality services, are primarily used by low income earners and poorer communities. Private hospitals, which are perceived to provide quality healthcare, are used primarily by high income earners. Thus, it has become apparent that private healthcare providers would design a strategic segmentation (Mortazavi, Kazemi, Shirazi & Aziz-Abadi, 2009) of their products in order to capture the attention of these growing South African high income earners. These private healthcare providers differentiate themselves by providing additional services such as room service, catering service, wellness and fitness centres, and childcare facilities. Currently there are more than 180 such hospitals around the country (Matsebula & Willie, 2007).

Patient Satisfaction and its Dimensions

The South African healthcare service providers largely rely on scientifically quantifiable standards, such as the correctness of diagnosis and procedures, in deciding the service excellence. However, those approaches do not gauge patients' opinions, without which a hospital could lose its competitive advantage. Thus, there is a need to constantly evaluate patients' satisfaction regarding the quality of service provided. As asserted by Jabnoun and Chaker (2003), private hospitals cannot only rely on their medical experts, because patients also need excellent customer service.

The dimensions used in this study were deduced from the widely used SERVQUAL model developed by Parasuraman et al. (1988), while Robinson (1999) submitted that there have been some disagreements about the way service quality is measured. Their SERVQUAL model have been widely used in different fields, including tourism (Tribe & Snaith, 1998), utilities (Babakus & Boller, 1992) and health (Raspollini, Pappalettera, Riccardi, Parravicini, Sestili, Rebulla, & Sirchia, 1997; Taner & Antony, 2006) and it is still being used successfully.

It is against this background that the researchers in this study proposed the following conceptual model for private hospitals in South Africa. The model shows all the dimensions that were taken into consideration by researchers in assessing patient satisfaction.

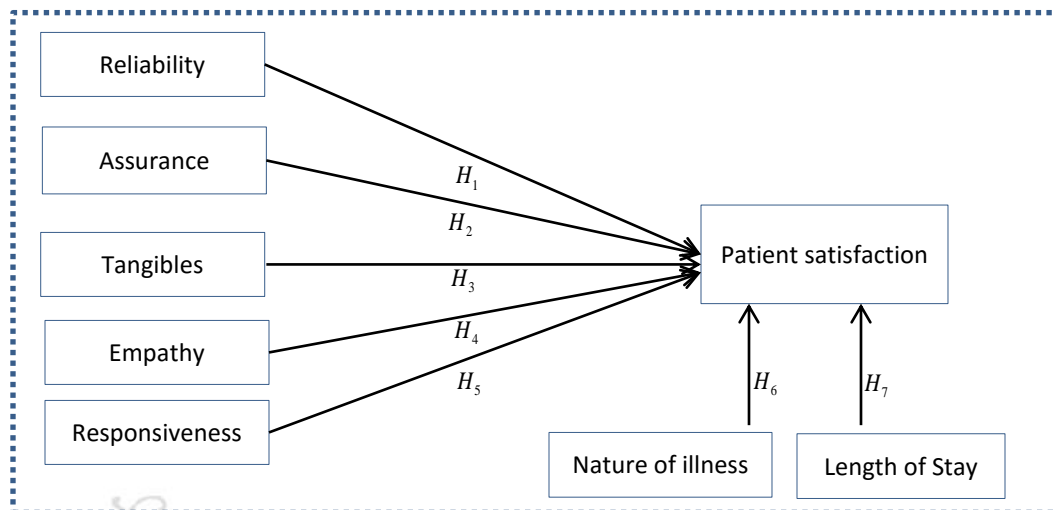


Figure 1: Conceptual model

To summarise, the model proposes the following hypothesis statements:

- H₁: Perceived reliability will have an influence on patient satisfaction
- H₂: Perceived assurance will have an influence patient satisfaction
- H₃: Perceived tangibles will have an influence patient satisfaction
- H₄: Perceived sense of empathy will have an influence patient satisfaction
- H₅: Perceived responsiveness will have an influence patient satisfaction
- H₆: Nature of illness will have an influence on overall patient satisfaction
- H₇: Length of stay will have an influence on the overall patient satisfaction

Methodology

Research Instrument

The first two sections in our questionnaire included patient information (gender, time spent in hospital, income bracket, length of stay in the studied hospital, the ward to which the patient was admitted and educational background); the third section addressed patient satisfaction with the hospital and the fourth section addressed the dimensions of service quality as outlined in the SERVQUAL model.

Drawing our hypothesis from earlier studies (Polsa, Fuxiang, Sääksjärvi & Shuyuan, 2013; Ramli & Sjahruddin, 2015; Taner & Antony, 2006), we opted to apply the SERVQUAL model in this study.

We employed a refined SERVQUAL scale developed by Parasuraman et al. (1988) and added a few questions we crafted to measure confounding variables, nature of illness and length of stay. Additionally, as previous studies (Ramli & Sjahruddin, 2015; Taner & Antony, 2006) and our reliability tests showed (see table 1), the scale was suitable to measure what we intended to measure in this study. Our study used a six-point Likert-scale from “completely agree” to “completely disagree”.

Data Collection and Sampling

A total of 300 questionnaires were distributed in three chosen hospital wards. Two hundred and thirty-one questionnaires were returned. However, after screening, 126 questionnaires (54.5 percent response rate) were sufficiently completed for statistical analysis.

There were 52.4 percent medical ward, 35.7 percent surgical ward and 11.9 percent rehabilitation ward patients in the sample. The sample selected for this study comprised patients at one private hospital in a South African city. The hospital chosen for this study was selected on the basis of convenience to the researchers and the hospital's reputation in the community. Respondents were first screened to ensure that they had used the hospital services before completing the questionnaire. The selection criteria were as follows. The patient should

- Be an in-patient at the participating hospital for more than one day
- Be above the age of 18
- Not have undergone induction of general anaesthesia 6 hours prior to discharge
- Not have received any form of narcotic analgesia 6 hours prior to discharge
- Not have suffered a head injury or undergone surgery to the head
- Be able to read and understand English

The researcher distributed questionnaires randomly to selected patients, which were the third patient on discharge from the Medical, Surgical and Rehabilitation wards. These wards accommodate 48, 48 and 57 beds respectively and have an average monthly bed occupancy of 85 percent. The patients receiving the questionnaires were determined by calculating the number of discharges per day and dividing by 3, to get an unbiased sample. Respondents first had to meet the qualifying criteria, as listed above, before questionnaires could be distributed to them. Completed questionnaires were to be dropped off in a specified box by outgoing patients as they leave the hospital for their homes.

Discussion of Findings

Although the survey questionnaire included questions about the social status, race, education status and income, the researchers in this paper chose not to test hypotheses statements about the influence of these confounding variables since the results were very inconclusive and thus did not include them in the paper.

These findings attest to Tucker's (2002) finding that contrary relationships exist between these variables. Table 1 below shows that the reliability measures for the instrument used were reasonable within the required level of 0.70 (Nunnally, 1978) and thus acceptable for scientific use. Further, confirmatory factor analysis was performed and the results for the intercorrelations between latent variables were acceptable.

Table 1: Cronbach Alpha

| | Assurance | Reliability | Responsiveness | Empathy | Tangibles |
|-------------------------|-----------|-------------|----------------|---------|-----------|
| Cronbach's Alpha | 0.683 | 0.753 | 0.647 | 0.729 | 0.746 |

In addition, Table 2 below shows the correlation analysis between independent variables and their significance. From the table it is clear that the independent variables are positively correlated and significant at $\alpha = 0.01$. Also, the results in Table 2 attest to the validity of the instrument since the direction and strength of the correlations are positive.

Table 2: Correlation Analysis

| | | AS | RE | RS | EM | TA |
|------------------------|---------------------|---------|---------|---------|---------|-----|
| Assurance (AS) | Pearson Correlation | 1 | | | | |
| | Sig. (2-tailed) | | | | | |
| | N | 126 | | | | |
| Reliability (RE) | Pearson Correlation | 0.572** | 1 | | | |
| | Sig. (2-tailed) | 0.000 | | | | |
| | N | 126 | 126 | | | |
| Responsiveness (RS) | Pearson Correlation | 0.760** | 0.569** | 1 | | |
| | Sig. (2-tailed) | 0.000 | 0.000 | | | |
| | N | 126 | 126 | 126 | | |
| Empathy (EM) | Pearson Correlation | 0.753** | 0.671** | 0.696** | 1 | |
| | Sig. (2-tailed) | 0.000 | 0.000 | 0.000 | | |
| | N | 126 | 126 | 126 | 126 | |
| Tangibles (TA) | Pearson Correlation | 0.545** | 0.657** | 0.568** | 0.637** | 1 |
| | Sig. (2-tailed) | 0.000 | 0.000 | 0.000 | 0.000 | |
| | N | 126 | 126 | 126 | 126 | 126 |

**. Correlation is significant at the 0.01 level (2-tailed)

Since the dependent variable, patient satisfaction, was a categorical variable, logistic regression was also applied to analyse the data. Patient satisfaction was coded by (1) yes (willingness to return to the hospital and to refer the hospital to family and friends) and (0) denoting no (unwillingness to return to the hospital and to refer the hospital to family and friends). The model applied for this study had eight independent variables and three dependent variables. Table 3 below depicts the results of the logistic regression ran for the model hypothesised for this study. R^2 is the coefficient of determination and B denotes the alpha and regression coefficient and p -value the level of significance with alpha = 0.05.

Table 3: Logistic Regression Analysis

| Dependent Variable | Independent Variable | R^2 | B | p -value | Odds Ratio |
|-----------------------|----------------------|-------|-------|------------|------------|
| Patient Satisfaction | Assurance | 0.654 | 3.360 | 0.004 | 28.786 |
| Patient Satisfaction | Reliability | 0.465 | 1.913 | 0.001 | 6.774 |
| Patient Satisfaction | Responsiveness | 0.487 | 2.346 | 0.001 | 10.440 |
| Patient Satisfaction | Empathy | 0.528 | 2.321 | 0.000 | 10.184 |
| Patient Satisfaction | Tangibles | 0.314 | 1.555 | 0.002 | 4.733 |
| Patient Satisfaction | Servqual dimensions | 0.624 | 3.200 | 0.002 | 24.540 |
| Willingness to Return | Servqual dimensions | 0.624 | 3.200 | 0.002 | 24.540 |
| Willingness to Refer | Servqual dimensions | 0.624 | 3.200 | 0.002 | 24.540 |
| Patient Satisfaction | Length of stay | * | 1.025 | 0.368 | 2.786 |
| Patient Satisfaction | Nature of illness | * | 1.043 | 0.358 | 2.839 |

*categorical variables

As Table 3 above depicts, there is a statistically significant relationship in all (i.e. AS; RE; RS; EM & TA) five service quality dimensions and patient satisfaction. Among them, the strongest predictor of overall patient satisfaction was assurance (AS), with an odds ratio of 28.786, thus signifying that respondents who perceived the service rendered at the private hospital as satisfactory was 28.8 times more likely to return to

the hospital in future and also refer the hospital to family and friends. However, the p -value(s) of 0.368 and 0.358 show that there was statistical significance between the length of stay and nature of illness with patient satisfaction. These results were similar to the conclusions by Mpinganjira (2011:3694), who found that there was no significant relationship between severity of illness and patients' overall satisfaction.

The results of hypothesis statements tested using logistic regression we found to be:

H₁: Perceived reliability will have an influence on patient satisfaction – the p -value of 0.001 indicates that the hypothesis statement is accepted. Thus, there is a positive relationship between reliability and patient satisfaction. Also, the R^2 of 0.465 indicate that 46.5% of the variation in patient satisfaction can be explained by the measured dimension, reliability.

H₂: Perceived assurance will have an influence patient satisfaction – the p -value of 0.004 indicates that the hypothesis statement is accepted. Also, the R^2 of 0.654 indicate that 65.4% of the variation in patient satisfaction can be explained by the measured dimension, assurance.

H₃: Perceived tangibles will have an influence patient satisfaction – the p -value of 0.002 indicates that the hypothesis statement is accepted. Also, the R^2 of 0.314 indicate that 31.4% of the variation in patient satisfaction can be explained by the measured dimension, tangibles.

H₄: Perceived sense of empathy will have an influence patient satisfaction – the p -value of 0.000 indicates that the hypothesis statement is accepted. Also, the R^2 of 0.528 indicate that 52.8% of the variation in patient satisfaction can be explained by the measured dimension, empathy.

H₅: Perceived responsiveness will have an influence patient satisfaction – the p -value of 0.001 indicates that the hypothesis statement is accepted. Also, the R^2 of 0.487 indicate that 48.7% of the variation in patient satisfaction can be explained by the measured dimension, empathy.

H₆: Nature of illness will have an influence overall patient satisfaction – the p -value of 0.368 indicates that the hypothesis statement is not accepted. These results were consistent with those of Mpinganjira (2011), who found that severity of illness was not statistically related to patient satisfaction.

H₇: Length of stay will have an influence on the overall patient satisfaction – the p -value of 0.0358 indicates that the hypothesis statement is not accepted. Thus, the time the patient stayed in hospital would not influence the patient's level of satisfaction.

Limitations

This study was conducted in a hospital in one of the major cities in South Africa; therefore the findings of this research may not necessarily be indicative of the entire South African private hospital industry or the health sector. Possibly, results from other less populated cities could bring different findings.

- The data was collected over a period of three months; a longitudinal study might provide possible trends evolving in health care service delivery since there is seasonality of disease profiles and the pressure this causes on private hospitals in terms of service delivery differs.
- Only a quantitative design was adopted for this study; it is possible that a qualitative design could provide richer data with researchers using languages other than English.

Conclusions

The study aimed to answer the question, “*To what extent does perceived service quality influence patient satisfaction in a private hospital in Pretoria?*” The perspective of the researchers was that service quality refers to a situation in which both the expectations of patients and service providers (nurses, doctors etc.) are accommodated. In this study, researchers found evidence that suggests that service quality attributes, as measured by the SERVQUAL instrument, are positively associated with patient satisfaction. Patient satisfaction was contextualised as the patients' willingness to use the hospital services in future as well as refer the hospital to others.

Since the medical field is technically specialised in nature, most patients are unable to measure the technical aspect of the service. However, they could measure the functional part, which is about the manner in which the service was rendered. Thus, the SERVQUAL model measured only the functional aspect of quality as Babakus and Mangold (1992) attested. This functional component is what leads the hospital to have a better competitive advantage and from the marketing perspective, build customer loyalty. Also, the positive relationship between all the service quality dimensions and patient satisfaction signal to managers that emphasis should be placed on all the five quality dimensions to maintain and improve quality in the hospital. Most importantly, is the personnel that come in direct contact with the patients. Therefore, this study suggests that doctors and nurses play a critical role in generating patient satisfaction because they have the capacity to bring comfort to patients.

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