

# Measuring service quality in a private hospital

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“Opportunities to find deeper powers within ourselves come when life seems most challenging” – Joseph Campbell

## Abstract

The South African health industry can be divided into public and private health institutions. The public health institutions are subsidised by the South African government, whereas the private institutions generate income from medical aids and out-of-pocket payments. Three major groups currently control the private health sector and include Medi-Clinic, Life Healthcare and Netcare. Due to the competitiveness of the private health sector with limited role players, institutions need to differentiate themselves on the service quality provided by these institutions.

The purpose of the study was to measure service quality in a private hospital. This was done by setting the following objectives: Determining the importance of service quality, determining the current standard of service quality, determining the gap between the importance and satisfaction of service quality dimensions as well as the influence of gender on the perception of service quality.

The literature consisted of two topics, which included the private healthcare sector and the standards of service quality. The private health care sector lightens the load on the current overburdened public sector, but in doing so utilises the majority of qualified personnel as well as half of the financial resources available. Medical schemes are the main contributor the private institutions and are only available to the individuals privileged enough to afford these schemes.

Service quality pertains to the ability of the service provider to meet or exceed the expectations of the customer. Thus, the importance of such ability lies in the fact that institutions can use this to differentiate them from other role players in this highly competitive market. Several models exist to evaluate service quality, but the SERVQUAL model has been utilised in various health institutions. Furthermore, gender could also have an effect on the manner in which customers perceive service quality.

The study made use of the SERVQUAL model, with a 38-item survey questionnaire forming the basis of the data collecting technique. The 38 items were divided into seven sections, which included premises/employees, doctors' medical services, diagnostics, nursing medical services, admissions, meals and wards. A response rate of 71% was obtained.

The demographic profile of the study resembled the current demographic of the town and 35.85% of the respondents were male with 64.15% being female. The validity and the reliability of the study were confirmed by means of an exploratory factor analysis and Chronbach alpha coefficients. The analysis of the difference in means of the various factors indicated that tangibles 2 and responsiveness 1 required attention from management to improve customer satisfaction. The analysis of data pertaining to gender indicated that no difference in satisfaction levels was evident.

In conclusion, management needs to focus on the factors highlighted during the study, with proper maintenance and improvement of the appearance of the facility and providing training to staff to promote patient relationships. Furthermore, the recommendations include that the model is used in all institutions to evaluate service quality levels to highlight possible shortfalls, thus providing management with ability to address these shortfalls, in an effort to improve the level of service quality across the whole health sector.

**List of key terms:** Service quality, private health care, SERVQUAL, gender differences

## Opsomming

Die Suid-Afrikaanse gesondheidssektor kan verdeel word in die openbare en private gesondheidsinstellings. Die openbare gesondheidsinstellings word gesubsidieer deur die Suid-Afrikaanse regering, terwyl die private instellings inkomste genereer van mediese fondse en uit-die-sak betalings. Drie groot groepe beheer tans die private gesondheidssektor en sluit Medi-Clinic, Life Healthcare en Netcare in. As gevolg van die mededingendheid van die private gesondheidssektor met 'n beperkte aantal rolspelers, is dit nodig vir instansies om hulself te onderskei deur die gehalte van die diens wat gelewer word.

Die doel van die studie was om die gehalte diens te meet in 'n privaat hospitaal. Dit is gedoen deur die volgende doelwitte daar te stel: Die bepaling van die belangrikheid van die gehalte van die diens, die bepaling van die huidige standaard van die gehalte van die diens, die bepaling van die gaping tussen die belangrikheid en die bevrediging van diensgehalte dimensies, sowel as die invloed van geslag op die persepsie van die gehalte van die diens.

Die literatuur bestaan uit twee onderwerpe wat die private gesondheidsorgsektor sowel as die standarde van die gehalte van diens insluit. Die private gesondheidsorgsektor verlig tans die las op die huidige oorlaaide openbare sektor, maar in die proses maak die sektor van die meerderheid van die gekwalifiseerde personeel sowel as die helfte van die finansiële hulpbronne wat beskikbaar is, gebruik. Mediese skemas is die grootste bydraer tot

private instellings en is slegs beskikbaar aan die individue bevoorreg genoeg om aan hierdie skemas te kan behoort.

Gehalte van die diens kan gedefinieer word deur die vermoë van die diensverskaffer om te voldoen aan die verwagtinge van die kliënt of dit te oortref. Dus, die vermoë van 'n instelling om gehalte diens aan kliënte te lewer kan instansies onderskei van ander rolspelers in hierdie hoogs mededingende mark. Verskeie modelle bestaan om gehalte diens te evalueer, maar die SERVQUAL model het 'n geskiedenis van gebruik in verskeie gesondheidsinstellings. Addisioneel tot die analise van gehalte diens kan geslag ook 'n invloed hê op die persepsie van diens gehalte.

Die studie het gebruik gemaak van die SERVQUAL model, met 'n 38-item opname vraelys vorm die basis van die data opname tegniek. Die 38 items is verdeel in sewe afdelings, wat insluit perseel / werknemers, dokters se mediese dienste, diagnose, verpleging mediese dienste, opnames, etes en kamers. 'n Reaksie tempo van 71% behaal is.

Die demografiese profiel van die studie was ooreenstemmend met die huidige demografiese profiel van die dorp en 35,85% van die respondente was manlike teenoor die 64,15% vroue. Die geldigheid en die betroubaarheid van die studie is bevestig deur middel van 'n ondersoekende faktorontleding en Chronbach alfa koëffisiënte. Die ontleding van die verskille in gemiddeldes tussen die verskillende faktore het aangedui dat Tasbaarheid 2 en Responsiwiteit 1 deur bestuur hanteer moet word om kliënte-tevredenheid te verbeter. Die ontleding van data wat verband hou met geslag het aangedui dat daar geen verskil in die mate van tevredenheid duidelik was nie.

Ten slotte, moet bestuur fokus op die faktore wat uitgelig is tydens die studie, deur behoorlike instandhouding en verbetering van die voorkoms van die fasiliteit asook die verskaffing van opleiding aan personeel om pasiënt verhoudings te bevorder. Verdere aanbevelings sluit in dat die model gebruik word in alle instansies om moontlike probleemareas uit te lig, sodat hierdie

areas deur bestuur verbeter kan word in 'n poging om die vlak van die gehalte van diens oor die hele gesondheidsektor te verbeter.

**Lys van sleuteltermes:** Dienskwaliteit, private gesondheidsorg, SERVQUAL, geslagsverskille



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## List of Abbreviations

ACSI - American Customer Satisfaction Index

GDP – Gross Domestic Product

GEMS – Government Employee Medical Scheme

HIV – Human Immunodeficiency Virus

IOM – Institute of Medicine

KMO - Kaiser-Meyer-Olkin

NHI – National Health Insurance

NSIT - The National Institute of Standards and Technology

SPSS - Statistical Package for Social Science.

# Introduction and problem statement

## Chapter

## 1

### **1.1. Introduction**

#### **1.1.1. Private health sector of South Africa**

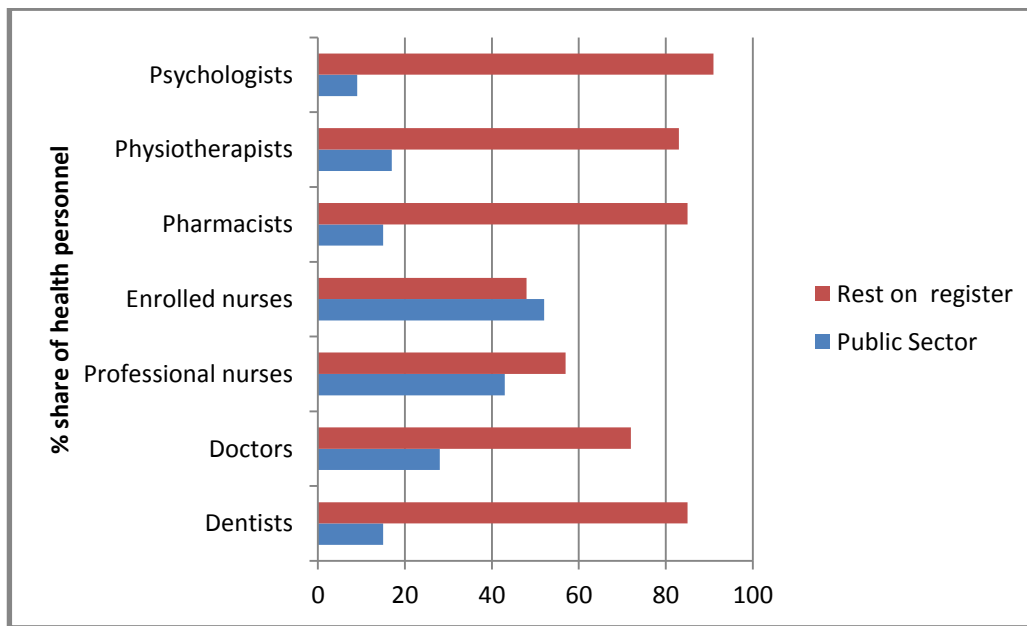
The South African health system is significantly influenced by the private health care available in the country, even though access to these facilities is very limited to beneficiaries of medical schemes. Private hospitals in South Africa are mainly classified as short-stay hospitals (less than 30 days) with these hospitals containing an average of 200 beds (Matsebula & Willie, 2007:159).

The National Treasury's Fiscal Review of 2011 indicated that the Gross Domestic Product (GDP) spent on private healthcare was R120.8 billion, which covered 16.2% (8.2 million people) of the population. Compared to the GDP spent on public healthcare of R122.4 billion to cover 84% (42 million people), this relates to a great inequity in the two sectors (Department of National Treasury, 2011). The private healthcare sector is primarily subsidised by the 110 registered medical schemes of South Africa, with 3.4 million principal members and 7.8 million beneficiaries (Department of National Treasury, 2011). The majority of health expenses are attributed to private hospitals and specialists (Rhodes University, 2008). Furthermore, the



private health sector employs the majority of health professionals (excluding enrolled nurses) as illustrated by Figure 1.1 (Day & Gray, 2008:357).

**Figure 1.1: Health professionals mix: Public versus Private.**



(Source: Adapted from Day & Gray, 2008:359)

The private hospitals control as much as 70% of doctors and 84% of pharmacists in the private sector with only 32% of the population able to afford the above expertise (Rhodes University, 2008). The private hospitals are concentrated mainly in the major metropolitan areas with the majority of hospitals situated in Gauteng, Kwazulu-Natal and the Western Cape. The three major private groups consist of Netcare, Medi-Clinic and Life Healthcare (Matsebula & Willie, 2007:159-160).

According to Matsebula and Willie (2007:162), the advancement in technology and biological medicines, the current high incidence of disease, shortage of skilled health professionals as well as the fact that the three largest providers

of private hospital care own 76% of private for-profit hospital beds (22 040), will continue to drive up costs of private health care in South Africa and put more focus on service quality for the price conscious South African.

### **1.1.2. Service quality**

The health sector deals directly with the health of the population, thus the quality of service in this industry is of great importance (Direktör, 2007:16). A very important component to measure a patient's satisfaction in the healthcare industry is service quality. It is also important to remember that the customers; and not the organisation judge service quality (Zeithaml *et al.*, 1990:7). Furthermore, the importance of quality assurance (the measure of service outcomes) is essential to determine the customer's satisfaction with service delivery (Van Heerden, 2010:2). A higher level of service quality can be used to differentiate service from competitors and make it harder for them to copy; this will serve as a competitive advantage (Lim & Tang, 2000:291).

Service quality is defined by Zeithaml *et al.* (1990:18) as a customer's perception of how well a service meets or exceeds their expectations, or a conformance to a customer's specifications – that means it is the customer's definition of quality that matters, and not that of management (Berry *et al.*, 1988:35). Pui-Mun (2004:96) ascertained that service quality consists of four characteristics namely: intangibility, inseparability, heterogeneity and perishability:

**Intangibility** – cannot be seen, tasted or felt and is not subjected to precise specifications.

**Inseparability and heterogeneity** – depends on the provider and cannot be separated from the provider; different service qualities are experienced when visiting different hospitals.

**Perishability** – cannot be stored for later and has excess capacity to deal with fluctuating demand (Pui-Mun, 2004:98).

Direktör (2007:ii) recommends that service organisations should thus, recognise the importance of determining the expectations of customers and develop service products that meet or exceed those expectations. It is therefore of great importance to the health care service industry, because customers evaluate the quality of the service immediately after the provision and performance of the service (Brown & Swartz, 1989:96; Barnes & Movatt, 1986:60).

The quality of service can furthermore be subdivided into technical and functional quality, which are both essential for the success of service organisations. Technical quality in the health industry refers to the technical expertise of the health professional or institution in the accuracy of the diagnosis and procedures required for treating the patient, and include several measures to ensure that the quality is sufficient. Functional quality in turn relates to the manner in which the service is provided to the patient (Grönroos, 1982:33). Customers tend to focus more on functional quality than technical quality. Customers evaluate the facilities, interactions with support staff and information leaflets (functional quality) rather than the technical quality of service provided, because this falls outside their scope of knowledge (Grönroos, 1984:37).

Camilleri and Callaghan (1998:127) maintain that the healthcare industry should focus on satisfying the needs, interests, and demands of three

important groups namely: service providers (healthcare professionals), those that manage the services (management), and those who make use of the service (patients). Patients are usually distressed about their health condition and expect the best possible service quality, thus this will influence their choice of healthcare provider and hospital (Al-Hamdan, 2009:3). Many factors influence patient satisfaction and include: patient expectations, service quality, health status and outcome, as well as health system characteristics. Ford *et al.* (1997:74) explain that is very important to understand what is important to a patient in such a stressful situation to ensure ultimate patient satisfaction, thus encouraging the patient to reuse the service.

Another important influence on service quality identified by De Man *et al.* (2004:14-15) is waiting time, and usually has a negative influence on the patient's experience the longer the patient will have to wait. Patients are usually distressed; the longer they wait to be seen by a doctor or treated by hospital staff; the more negative their evaluation of the service and their customer satisfaction will be (De Man *et al.*, 2004:14-15). Waiting for a service can lead to the customer sacrificing other more productive activities and can be physically painful and stressful (Midttun & Martinussen, 2005:439; 446). Several factors that may increase patient waiting time include: waiting for a phone to be answered to set an appointment, waiting to see the doctor, waiting for nurses, waiting for laboratory results or prescriptions to be filled.

## **1.2. Problem statement**

The private sector provides healthcare to those individuals that are members of medical aids, pay out of pocket, work for companies that own and fund healthcare facilities and government contract patients. The private healthcare

sector of South Africa is one of the best in the world winning tenders in countries like the United Kingdom and owning facilities in Switzerland and India (Biermann, 2006:4).

Quality healthcare in South Africa is captured in the missions and visions of the four biggest role players in providing quality healthcare to the population of South Africa. The mission of the Department of Health (2010:55) is to consistently improve the health care delivery system by focusing on access, equity, efficiency, quality and sustainability; the core purpose of Medi-Clinic (2000) is to enhance the quality of life of patients by providing comprehensive, high quality hospital services; the vision of Life Healthcare (2012) is to be a world class provider of quality healthcare for all and Netcare (2012) aspires to develop and implement successful solutions to provide quality and affordable healthcare to the people of South Africa.

The provision of service quality is of great importance to the management of all service organisations and hospitals should in addition to providing excellent clinical care, also focus on providing quality service to their patients (Biermann, 2006:16). Furthermore, several studies have indicated that a high level of service quality is related to an increase in profits, cost savings, and market share (Rust & Zahorik, 1993:193; Buttle, 1996:8). Friedenbergl (1997:31A-34A) stresses that it has become vitally important in the current competitive market that providers deliver patient satisfaction, quality service and effective medical treatment through the better understanding of service quality defined by the customer and how to deliver this type of service (Parasuraman *et al.*, 1985:41; Parasuraman *et al.*, 1988:15).

It is of the utmost importance to understand the experience provided to the patient in order to increase the market share of the institution in the current

economic climate. It has become more important than ever for companies to deliver a patient experience that differentiates it from competitors as the services can easily be copied, matched and duplicated. “When senior executives with the authority and responsibility for setting priorities do not fully understand customers’ service expectations, they may trigger a chain of bad decisions that result in perceptions of poor service quality” (Zeithaml *et al.*,1990:38). It is the responsibility of the service providers to differentiate them from competitors through the people they employ, the attitudes of these people and the way they treat their patients. In order to create a memorable experience for patients, employees need to react to patients based on their unique needs and engage them (Reichheld, 2008).

In order to determine whether the vision and mission of an institution in the private sector comply with their set standards, a study was needed to determine the current situation as displayed by that institution. In addition to the above set objective, the importance of a high level of service quality on customer satisfaction needed to be evaluated, as this is a necessity in the highly competitive private healthcare market.

According to Buttle (1996:8), service quality plays an important role in corporate marketing as well as financial performance of a private healthcare provider. The study established the variables that patients use to judge service quality and the gaps that private hospitals should address to improve service quality to their demographic of patients.

## **1.3. Objectives**

The primary objective of the study is to measure service quality at a private hospital. The study will aim to provide a better understanding of the current level of service quality being offered in the private healthcare facility as well as provide better insight into the connection between the perception and expectations of patients that visited the facility.

The study includes general and specific objectives:

### **1.3.1. General objective**

The general research objectives of this study were to:

- Determine the importance of service quality to patients in a private hospital.
- Determine the standard of service quality in a private hospital.
- Determine the link between the variables of the study.
- Determine the possible influence gender had on the perception of service quality in a private hospital.

### **1.3.2. Specific objectives**

Specific objectives of the study comprise:

- Factors influencing the quality of service provided by a private hospital.
- The influence, the level of service quality has on the perception of patient satisfaction.

- The required level of service quality to satisfy patients in the various sectors.

## **1.4. Research methodology**

The study consisted of two sections, the literature review and an empirical investigation.

### **1.4.1. Section one: Literature review**

The literature review was conducted to form the theoretical basis for the identification of the elements that influence a customer's experience in a private hospital. Various references were consulted in the form of research reports, textbooks, journals, the internet as well as dissertations. The following route was followed to provide the necessary background on the topic.

Firstly, the role played by the private sector in providing quality healthcare in South Africa was explored. Secondly, a definition of service quality was provided, whilst focusing on the current levels required by patients, as well as international standards in hospital healthcare. This was followed by a description of the various measuring tools used to assess service quality. This section consists of chapters 2 and 3. The interpretations drawn from the background provided were used to generate a questionnaire that was relevant to the problem statement. Literature was reviewed according to the procedure suggested by Guy *et al.* (1987:41) that the following pitfalls need to be taken into account during the literature study:



- out of date;
- too fundamental;
- too radical or practical; and
- could be treating facets of the topic not to be covered.

### **1.4.2. Section two: Empirical review**

The empirical review followed a survey strategy approach and was conducted in a private hospital institution, selecting patients that have been hospitalised. The surveys were handed out randomly to patients of the hospital and were handed out to the patients upon discharge. To improve the quality of feedback of the study, the aim of the study was explained to the participants. The information provided by the patients was kept confidential. The questionnaire was developed through reference to previous studies in this field and included current areas of concern in the particular hospital. This section consists of Chapter 4.

## **1.5. Limitations**

- The study was conducted in one private healthcare facility, which might not reflect the true nature of the quality of service provided throughout South Africa.
- The various sectors within the hospital might indicate varying results when referred to the different specialties.

## **1.6. Demarcation of study**

### **Chapter 1**

This chapter provided the objectives of the study and this section provides an introductory background on the current situation of the private health care in South Africa as well as service quality.

### **Chapter 2**

The background provided on the private health sector in South Africa highlighted the following:

- The sector is fiercely competitive with the major role players making up 76% of private healthcare.
- Differentiation is essential in this competitive sector, in order to increase customer base.
- Service quality plays an important role in differentiating private hospitals from one another.

### **Chapter 3**

The contents of Chapter 3 provided background on service, quality and service quality models with major conclusions, which include:

- Service is difficult to evaluate because it consists of characteristics that include intangibility, variability, perishability and lack of ownership.
- Various definitions of quality exist, and vary according to the industry that the product or service is provided and the features are unique to the industry, which provides the service or product.
- A clear definition of service quality is described with an application on the health care sector.

- The discussion of the most prevalent models used in evaluating service quality, which included the technical and functional quality model, SERVQUAL, SERVPERF and the Kano model.
- The influence of gender on perceived service quality satisfaction.

#### **Chapter 4**

Chapter 4 will highlight the research methodology and results of the study by referring to the following:

- Reference to why the SERVQUAL model was the ideal model to be utilized in this study.
- The design of the questionnaire was explained with a description of the subdivisions of the questionnaire.

#### **Chapter 5**

- The sample of the study consisted of a target population that included patients that visited the hospital over a two week period and the study population included the patients that completed the questionnaire.
- The validity and reliability of the study population was determined to ensure relevancy of the findings.
- The five dimensions of SERVQUAL were analysed according to the importance of the various constructs compared to the satisfaction the patient experienced.
- Lastly, the influence of gender on the outcome of satisfaction experienced was determined.

## **Chapter 6**

This chapter deals with the conclusions and recommendations pertaining to this study and included the following:

- The influence the findings of the study have on executive decision-making.
- The limitations that should be taken into account with the interpretation of the findings.
- Recommendations for the management team of the hospital.
- Lastly, suggestions for future research.

### **1.7. Reference technique**

Sources consulted throughout this study will be referenced to by making use of the Harvard referencing technique (as applied by the North-West University). A reference list with all sources used during this study will be listed at the end of this study.

### **1.8. Chapter summary**

The outcome of the study could improve the current level of service provided by the private healthcare institution through highlighting possible shortcomings in the current structure of service delivery. Furthermore, providing focus areas for improvement to ensure that current patients will utilise the service again and new patients will seek out this provider for future medical procedures.

The following chapter will deal with the private health care sector in South Africa.

# Literature review: Private hospital healthcare

**Chapter**

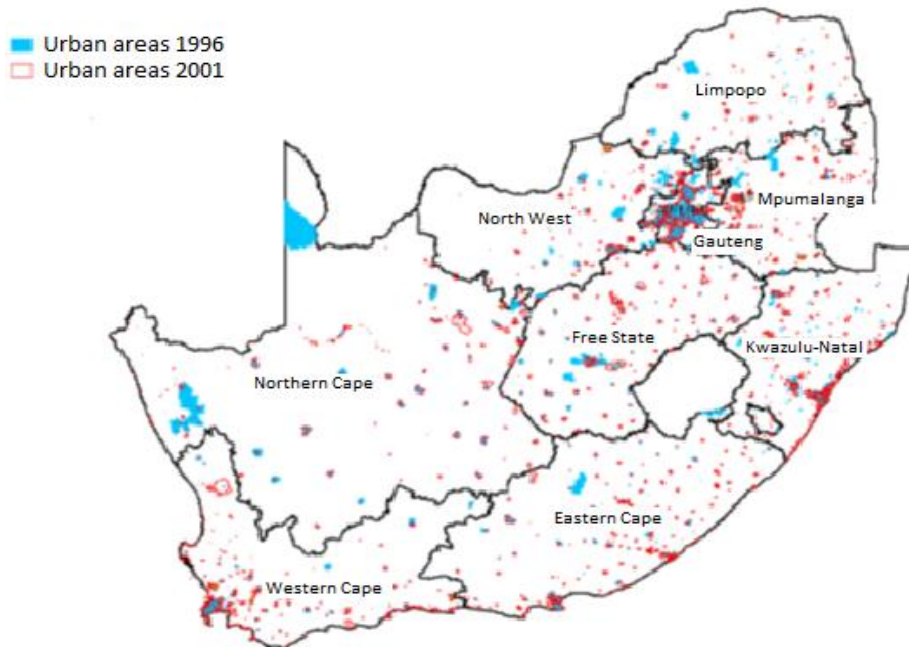
**2**

## **2.1 Introduction**

Private hospitals provide the highest quality care to millions of people in South Africa every day of the year. In addition to this primary focus, the private health sector also provides employment to thousands of South Africans and contributes to the overall economic growth of the country. Medical aid schemes and out-of-pocket spending is mainly responsible for the funding of the private healthcare sector in South Africa (Pui-Mun, 2004:96).

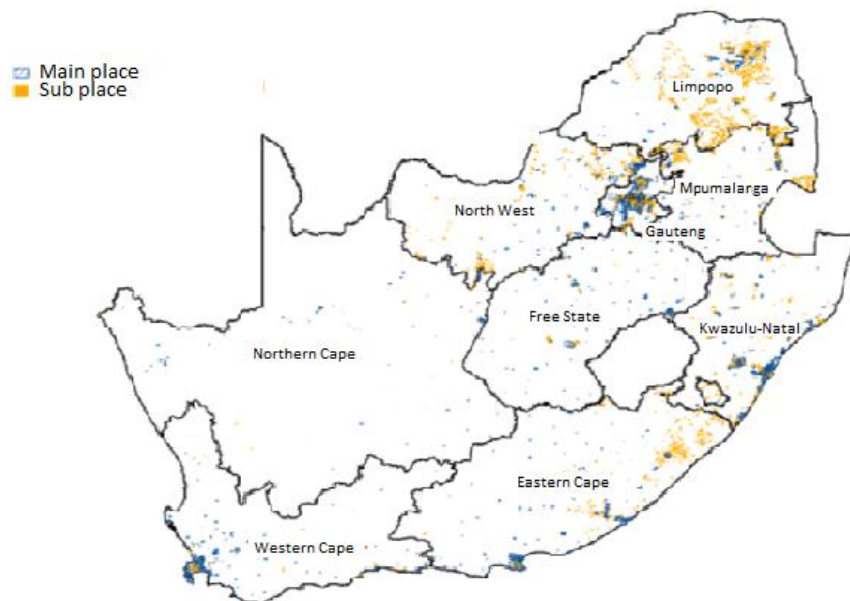
## 2.2 South African healthcare

Figure 2.1: South African map with urban areas in 1996 compared to 2001



(Source: Statistics South Africa, 2003:68).

Figure 2.2: South African map with population density (>500 people/km<sup>2</sup>)



(Source: Statistics South Africa, 2003:106)

**Table 2.1: Key indicators health: South Africa**

Indicator	South Africa
Total Population 2013	52 982 000
GDP per capita current US\$ 2012	7.508
Life Expectancy at Birth 2012	55
Unemployment 2012	32.9%
Out-of-pocket health expenditure (% of total expenditure on health) 2011	7.2%

(Source: Worldbank, 2012; Statistics South Africa, 2013:3)

According to Friderichs (2011:4), South African healthcare is currently facing increasing challenges regarding the inequalities between public and private healthcare, increasing costs and the serious lack of healthcare professionals. The healthcare system consists of two tiers, the private healthcare sector that serves the higher income minority and the public healthcare sector that need to service the remaining 86% of the population (Matsebula & Willie, 2007:159). The public sector focuses on the provision of preventative services as well as basic healthcare to the underprivileged urban and rural citizens, whereas private institutions focus on illness management and the provision of services to citizens in urban areas. The fact that private healthcare assumed a more active role has led to the movement of personnel from the public sector to the private for an opportunity of better wages (Elaine, 2003).



## **2.3 Health care defined**

Campbell *et al.* (2000:1611) defined health care as the improvement of the health or well-being of the patient through health care systems and actions taken within these systems. The Oxford American Dictionary (2010:336) describes the term health care to be the services that health care professionals such as doctors and nurses provide to people to make them well when they are sick or to keep them healthy.

## **2.4 Medical Schemes**

### **2.4.1 Historical overview**

Söderlund *et al.* (1998b:3) explain that the first medical scheme established in South Africa dates back to 1889 when the Consolidated Mines Limited Mines Benefit Society was started by De Beers. In 1910 seven such schemes existed and by the Second World War it grew to 48. These schemes were regulated as “Friendly Societies” and were generally employment based. The schemes provided cover to mainly employed whites in urban areas. In 1960, medical scheme cover was provided to 80% of white people in South Africa. During 1967 the Medical Schemes Act was passed, which resulted in these medical mutual insurers to become separate entities. The Council of Medical Schemes and the Registrar of Medical Schemes fulfilled the executive functions of the Act. The government controlled Medical Schemes from 1969 to the mid 1980s through the Act, rates of imbursement and law fixed models. This period was characterised by low contributions from pensioners who were mainly cared for by their former employers, who were responsible for their post retirement contribution cost. The medical schemes were prohibited from charging different fees for clients with a higher illness profile and were responsible for covering a certain percentage of all health care provided. Medical costs escalated and the movement of for profit commercial insurers

during this period resulted in the Act being amended during 1989. The amendments included the omission of minimum benefits and risk profiling of premiums, which led to the sick and elderly being more susceptible with regards to premium increases, loss of benefits and the loss of insurance altogether. In 1994 medical schemes and providers were allowed to vertically integrate which resulted in the medical schemes as known today (Söderlund *et al.*, 1998b:3).

### **2.4.2 Current situation**

The South African medical aid industry consists of 300 registered schemes with 37 of the medical aids having more than 30 000 members. There are currently 7 million medical aid members in South Africa. Medical schemes receive monthly payments for the purposes of covering its members in the event that they have to make use of private health care facilities and the monthly fees are calculated according to the package chosen by the member. The majority of these packages make room for hospital cover as part of the benefits (Matsebula & Willie, 2007:166).

According to Friderichs (2011:8), the membership of medical aids as a percentage of the total South African population has declined from 1992 (17%) to 2005 (15%). The introduction of the Government Employee Medical Scheme (GEMS) led to a slight increase from 2005 to 2010 of 1%. The reasons for the population of South Africa not joining a medical aid scheme include the high contribution percentage as part of average annual income, the middle class being unable or unwilling to join a medical aid as well as the possible implementation of the National Health Insurance Scheme (NHI) instigated by the government. The implementation of the NHI program will lead to a further decrease in medical aid membership, as members will be

unwilling to make contributions to both their medical aid scheme as well as the NHI scheme (Friderichs, 2011:8).

**Table 2.2: The South African Medical aid industry**

57%	Percentage of Total health expenditure that is funded privately
21	Private health expenditure equates to 21 times the total combined revenue of all South African mobile network operators
16%	Percentage of population serviced by private sector
\$172	Average gross monthly contribution by principal member (person responsible for medical insurance payment)
67%	Percentage of current members who would support National Health Insurance if monthly contributions were less than current expenses

(Source: Council for Medical Schemes, 2010; Friderichs, 2011:8)

Friderichs (2011:8) explained that the costs associated with medical aids are a combination of private hospital and clinical care. An increase in real terms of 109.3% between 2000 and 2009 characterised the private hospital expenditure. In 2009, private hospital expenditure accounted for 36.7% of all benefits paid by medical aid schemes. Admissions increased with 7.8% year on year during 2009 and remained high when compared to the global market (Friderichs, 2011:8).

In 2011, a total of R107.4 billion members' contributions were collected by medical schemes, representing an increase of 11.3% from R96.5 billion in 2010 (Council for Medical Schemes, 2012:35). According to the Council for Medical Schemes (2012:35), schemes spent R93.2 billion on healthcare benefits, an increase of 10% from R87.4 billion in 2010.

## 2.5 Private Hospitals

### 2.5.1 Health providers

The private hospital sector reduces the burden on the overstrained public health sector as well as the distance needed to travel to the nearest health facility. The services provided by private hospitals are more costly than the public sector and is thus only accessible to individuals with health insurance. Private hospitals resemble the largest component of expenditure of medical schemes and can be classified into short-stay hospitals where patients stay less than 30 days and on average houses 200 beds (Matsebula & Willie, 2007:160). According to Matsebula and Willie (2007:162), the private hospital sector has seen substantial growth in the number of beds available since 1998, with the amount increasing with 32% to the current 27 500 beds. The private hospital sector owns 21% of hospital beds in South Africa. Surgical beds account for the majority of beds due to the fact that surgical admissions are higher throughout South Africa when compared to medical patients (Matsebula & Willie, 2007:162). The three major role players in the sector as mentioned in Chapter 1 are Netcare, Medi-Clinic and Life Healthcare. Netcare owns the largest number of beds and has the highest presence in Gauteng when compared to the rest. This is of significance due to the fact that the highest concentration of people that are members of medical schemes is currently living in Gauteng. This is mimicked throughout South Africa with more private facilities as the membership of medical schemes increase (Matsebula & Willie, 2007:162).

The perception of quality in the public sector is responsible for the movement of medical scheme beneficiaries away from the free service provided by the public sector to the more costly private sector. This was also the reason for the increase of private facilities in South Africa from 161 in 1998 (Söderlund *et al.*, 1998a:148) to 227 facilities in 2013 (Hospital Association of South Africa,

2013). The private sector is highly competitive and regulated by industry bodies resulting in a well-established industry. The cost of patients either medical or surgical is identical in general and intensive care units, but the cost of surgical patients are higher due to the fact that these patients make use of theatre and surgical stock that include prostheses (Matsebula & Willie, 2007:160-161). The South African private sector is no different from the rest of the world as it strives to reduce costs and increase efficiencies. Compromising quality patient care in an effort to increase revenues generated from providing services, which include beds and theatre facilities, however can't be done (Friderichs, 2011:16).

**Table 2.3: The private healthcare industry in South Africa**

80%	Percentage of all private healthcare controlled by 3 hospital groups
\$6.4 billion	Financial year 2010 combined revenue between 3 hospital groups
19,872	Private hospital beds amongst 3 hospital groups
65%	Average bed occupancy rate
10,000	Estimated bed oversupply
6.6%	Re-admission rate
66,000	Health professionals in private practice (general practitioners, specialists, allied, etc.)

(Source: Council for Medical Schemes, 2010; Friderichs, 2011:16)

### 2.5.2 Historical overview

The information available prior to the 1990s on the private health sector is very limited and it was much disaggregated and no hospital groups existed on national level (cited by Matsebula & Willie, 2007:168). The 1990s saw the consolidations of smaller role players throughout the industry through mergers

and acquisition (Council for Medical Schemes, 2006:15). In 1999, the consolidation process led to the development of three major hospital groups, which controlled most of the acute beds in South Africa. The consolidation of the private health care sector was also associated with the rapid increase in costs associated with services delivered in 1997 (Matsebula & Willie, 2007:168). This was due to several factors, which included the collapse of the rand against foreign currencies causing the prices of drugs and surgicals to escalate. The changes in the Medical Schemes Act (131 of 1998) that led to the fact that patients cannot be risk profiled, thus developing a broader base of members that needed hospitalisation, as well as an increase in in-patient days (Matsebula & Willie, 2007:168).

The growth in the sector has been considerable during the 1990s with an increase of 33% during the period 1990 and 1998 from 108 hospitals to 161 hospitals and the amount of beds from 13 238 to 20 908. This is comparable to the increase of 35% from 1983 to 1989. The growth during the 1990s is related to the shift away from the public hospitals to private hospitals by insured patients (Söderlund *et al.*, 1998b:20). The growth occurred in rural areas (non-metropolitan) which led to the decrease in utilisation of public hospitals and a loss of income for public hospitals as patients that were insured preferred the higher levels of quality provided by the private hospitals (Söderlund *et al.*, 1998b:20).

### **2.5.3 Current situation**

#### **2.5.3.1 Challenges**

According to Matsebula and Willie (2007:168), the consolidation of the private health care industry in 1997 has led to the Council of Medical Schemes to take a stance in the fact that the escalation of health care costs will be associated with the ability of the three major role players in the market to manipulate prices for services and offer lower levels of quality without being affected by a decrease in demand, thus, leading to medical schemes paying more for services with a decrease in quality provided by the service provider (Matsebula & Willie, 2007:168). The increase in the size of the major role players has, however, led to competition through the delivery of quality service provided. Thus, leading us to believe that the quality of service provided increased from 1997. This is also evident from the current difference between the quality of service provided by the public sector when compared to the private sector (Söderlund *et al.*, 1998b:21).

The unified health system proposed to be implemented in South Africa as National Health Insurance (NHI) to provide quality health care to all South Africans, irrespective of the financial status of the individual, poses a challenge to the private sector in various ways including (Ramjee & McLeod, 2010:182-187):

- Transparency and information sharing: The government has not provided a clear document regarding the particulars of the NHI (Du Preez, 2010; Ramjee & McLeod, 2010:182).
- Time-lines: The time granted for implementation is unclear and the approach of implementing the program does not follow a stepwise approach as in other countries in the world (Ramjee & McLeod, 2010:183).

- Private sector stakeholder engagement: The private sector was involved in the initial drafting of the proposal and did not have the ability to provide any input to the successful implementation of the NHI (Ramjee & McLeod, 2010:183).
- Quality health care delivery: The increase in people that will be able to make use of the private facilities and practitioners would put extra pressure on human resources and cost (Ramjee & McLeod, 2010:186).
- Human resources and capacity constraints: NHI would put considerable more pressure on the human resources, which could lead to increased errors, patient injuries and increased infection due to increased occupancy (Ramjee & McLeod, 2010:187).

Furthermore, South Africa struggles with a quadruple burden of health, which includes: maternal, infant and child death, chronic conditions, injuries and violence as well as HIV and tuberculosis. South Africa is currently struggling with a 17% incidence of global HIV, and if compared to the fact that the population of South Africa only comprises 0.7% of the global population, this is a matter of concern (Economist Intelligence Unit, 2011).

The fact that the public health sector is currently struggling with underperforming health provision, inferior management, deteriorating infrastructure and under-funding this increases the inequality in health care provision between the public and private sector (Economist Intelligence Unit, 2011). This might lead to additional pressure being put on the private health care sector in the future.

An interview with Valter Adao, lead director at Monitor Deloitte, revealed that the public and private expenditure of funds is currently equal, which leads to another problem when it is taken into consideration that the public sector



caters for 40 million people compared to the private sector of 8 million people (Economist Intelligence Unit, 2011).

Thus, getting the public sector up to a standard to compete with current private institutions will be a necessity and will result in millions of rand spent in doing so, otherwise the private sector will get flooded due to its superior quality. The current private sector patient will have to pay an additional contribution to the public fund as well as their own medical scheme, which might lead to a decrease in patient base as patients would not want to, or cannot afford both contributions (Economist Intelligence Unit, 2011).

### **2.5.3.2 Future**

The World Health Organization (2011:2) describes South Africa as the most developed in the health sector when compared to the rest of the Sub-Saharan nations. The country boasts a well-developed private insurance sector, and the biggest and most well trained health care professionals on the continent (World Health Organization, 2011:2). Future challenges for South Africa will include the implementation of a universal National Health Insurance system. The fact that the private health care sector is well developed and provides high quality health care is both an asset as well as an obstacle for the implementation of the NHI in the future. This might lead to future issues between the government and the private health sector, as well as deterioration of the quality of care provided by the current private health sector. The implementation of the NHI program started in 2011 with the upgrading of public facilities and will continue for the next 14 years with incremental implementation steps (Economist Intelligence Unit, 2011).

## 2.6 Chapter summary

The health care sector in South Africa can be divided into the public and private health care sectors. The public health care sector caters for the majority of the population, while the private health care sector serves individuals that are privileged to be members of medical funds or have the ability to pay for services rendered out-of-pocket. The first medical scheme was established in 1889, which started the evolution of medical schemes to the funds that we know today. Currently, 300 medical schemes are registered for 7 million members in South Africa. The NHI proposed by government will attempt to increase the availability of quality health care to all individuals in South Africa. The private health care sector currently provides 21% of the hospital beds available in South Africa, with three major role players owning the majority of the beds. These role players include Medi-Clinic, Netcare and Life Healthcare. The growth in the sector has been considerable through the 1990s.

The major challenge currently facing the private health care sector today comes in the form of the NHI proposed by government. The proposed service could put more pressure on the current shortage of resources and cause a decrease in the membership of medical aids. This might lead to a decrease in the quality of service provided to patients in private institutions and cause professionals to leave South Africa as well as a collapse in the medical aid industry.

The following chapter will deal with the standards of service quality with a description of the various definitions of service and quality. This will be followed by the different models used to assess the current level of service quality.

# Literature review: Standards of service quality

**Chapter**

**3**

## **3.1 Introduction**

The service sector in the world economy is fast growing and plays an important part in the growth of health service organisations (Pakdil & Harwood, 2005:15; Dagger *et al.*, 2007:123). During the last decade the private health sector has been growing steadily leading to an increase in competitiveness between the major role players in the market. This has led to an increase in pressure to provide services with a higher quality, to differentiate from the rest of the competitors (Zarei *et al.*, 2012:1). A key factor in differentiation and service excellence is quality, and it has the potential to be developed into a sustainable competitive advantage. Thus, making it essential for private health care providers to understand, measure and improve the quality of service provided by them (Taner & Antony, 2006:147; Karassavidou *et al.*, 2009:34). Similar services are provided by hospitals with varying levels of quality. The level of service quality is evaluated immediately after the provision and performance thereof, thus the level of service provided by a facility can be used as a strategic differentiation for developing a competitive advantage, making it difficult for competitors to copy (Lim & Tang, 2000:290).

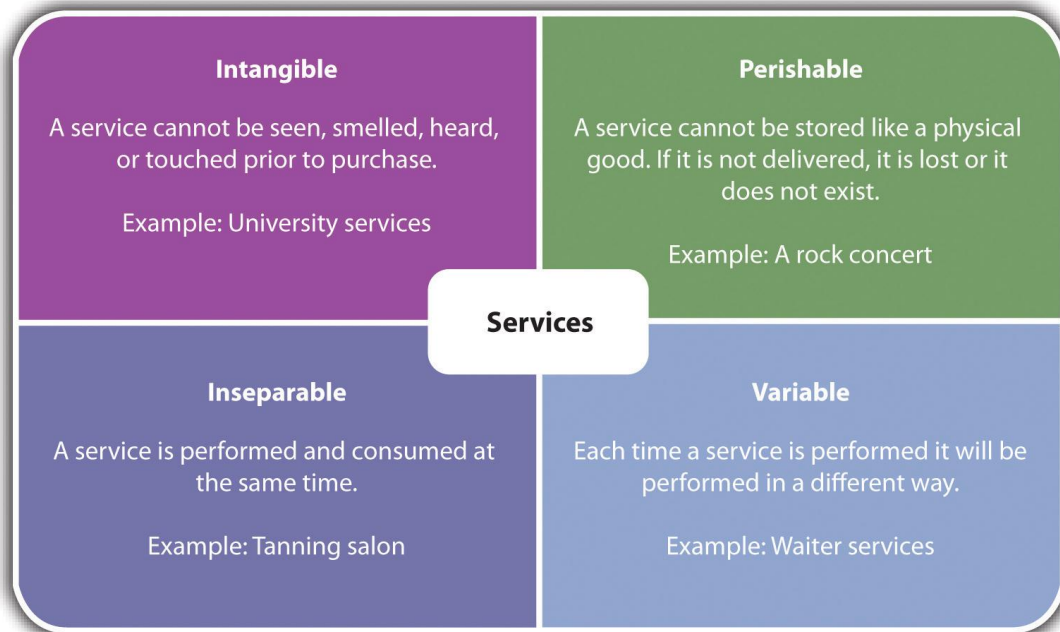
## **3.2 Major concepts**

### **3.2.1 Service**

Service can be classified into two subdivisions, which include consumer services; for example, retail services and professional services such as doctors and lawyers. Professional service can be classified as pure services, described as services that are produced and consumed at the same time by the provider and consumer, with the consumer an integral part of the process (Ross *et al.*, 1987:16; Joby, 1992:56; Paul, 2003:457).

Kotler and Armstrong (2004:299) described four distinguished characteristics of service quality namely: intangible, inseparable, heterogeneous and perishable. These qualities make service difficult to evaluate. The intangibility of a service relates to the fact that it cannot be subjected to exact specifications for constant quality and measurement of performance. The customer also experiences the service immediately and has an immediate effect on the customer. Inseparability and heterogeneity can be characterised by the fact that the service cannot be assessed and standardised before delivery to ensure quality and that the service varies between different companies in the same industry. Lastly, perishability relates to the fact that the service cannot be stored for a later stage and that the company needs excess capacity to satisfy fluctuating demand. The customer is involved during the production of the service (Pui-Mun, 2004:96). Figure 3.1 illustrates the four characteristics of service quality.

**Figure 3.1: Characteristics of service**



(Adapted from Kotler & Armstrong, 2004:299)

Furthermore, the customer experience can be defined as the internal and subjective responses of the customer after direct or indirect contact with the service provider. Direct contact usually occurs during voluntary purchase, use and service and is initiated by the customer. Indirect contact entails word of mouth recommendations, criticisms and the media and is usually unplanned encounters with the representatives of the provider's products and services (Meyer & Schwager, 2007). Customer experience can be divided into the following, according to Pool and Hollyoake (2006):

- pre-conceived beliefs and expectations;
- engagement;
- memories of engagement.

This is supported by Mascarenhas *et al.* (2006:399) that describe total customer experience as lasting, engaging, positive and socially fulfilling physical and emotional customer experience across the utilisation chain.

The customer experience is influenced by the views, lifestyle behaviours and interactions of the customer and therefore differs from person to person. Therefore, success or failure can be determined by the collection of touch points which affects the attraction, interaction and cultivation of the relationship between the provider and its customers (Meyer & Schwager, 2007).

Bateson and Hoffman (1999:12) described the nature of service through their servuction system model. The customer is offered a bundle of benefits by all products. The compilation that constitutes the bundle of benefits purchased by the customer is the centre point of marketing and exceeds the differences between goods and services. With the purchase of a service the customer also purchases the experience that comes with the delivery of the service with goods. The bundle of benefits is connected to the goods and will fade as the product is consumed. Thus, this results in the fact that a variety of services at once can constitute the bundle of benefits (Bateson & Hoffman, 1999:12).

The service can ultimately be broken down into two sections, the visible and the invisible. The visible section of the company is offered by the invisible section of the service. The visible section can then further be broken down into the physical environment where the service is delivered and the person that forms the face of the company and actually provides the service (Bateson & Hoffman, 1999:14).

According to Bateson and Hoffman (1999:14), the experience derives the benefits bundle and the visible section of the company is supported by the invisible workings that deliver the maintenance and administration of the facility. Experience is created by the whole system and this result in benefits for the customer.

The model as described by Bateson and Hoffman (1999:14) has led to the following deductions:

- services cannot be stored till later;
- services are dependent on time;
- services are dependent on the place;
- the customer plays an integral part in the service delivery process;
- everything and anyone that has contact with the customer influences the perception of service delivery.

### 3.2.2 Quality

Sower and Fair (2005:8) stated that every expert defines quality differently and that there is a variety of viewpoints that can be taken to defining quality. There are therefore various definitions of quality. Ennew *et al.* (1993:59) explained that quality is the ability of a service or product to perform the specific task that it was designed for. Lagrosen (2001:348) suggested that the definition of quality can be defined by the industry characteristics that create customer satisfaction for specific situations encountered by that industry. The contextual factors, customer base and organisation's purpose would clarify the definition of quality for that particular industry (cited by Wicks & Roethlein, 2009:86).

According to Campbell *et al.* (2000:1612) quality can be defined in various ways and can be classified as either generic or disaggregated. The generic definition of quality include: excellence (Samuel *et al.*, 1994:5), fulfilling goals or expectations (Steffen, 1988:56) and "zero defects", or fitness for use (cited by Campbell *et al.*, 2000:1614). A more complex generic definition is given by

the Institute of Medicine (IOM) and entails the “degree to which health services for individuals and populations increase the likelihood of desired health outcomes and are consistent with current professional knowledge” (Lohr & Schroeder, 1990:707). Furthermore, according to the Institute of Medicine (IOM), quality clinical care can be divided into six domains (Institute of Medicine, 2001:3). Figure 3.1 illustrates the six domains namely as set out by the IOM namely: safety, effectiveness, patient centeredness, timelines efficiency and equity together with a description of each.

**Table 3.1: The six domains as defined by the IOM**

<b>Safety</b>	Reducing possible medical errors and adverse events
<b>Effectiveness</b>	Increasing health outcomes intended
<b>Patient centeredness</b>	Making treatment decisions through focusing on patient and family comprehension, preferences, goals and priorities
<b>Timelines</b>	Decreasing the time taken between the onset of the illness and the commencement of treatment
<b>Efficiency</b>	Increased cost-effectiveness of care
<b>Equity</b>	Providing quality care to all irrespective of gender, ethnicity, region, socioeconomic status, or insurance cover

(Adapted from Institute of Medicine, 2001:3)

The disaggregated definition recognises that quality is multidimensional and complex. This definition puts emphasis on individual components or dimensions and includes: accessibility, effectiveness and efficiency, acceptability and equity, relevance, comprehensiveness and continuity (Maxwell, 1992:173; HSRG, 1992:2154). Each of the components offers a



fractional image of quality if viewed alone, but provide more detail when viewed in combination (Campbell *et al.*, 2000:1614).

The definition of quality has been described as the conformance to standards (Hall & Dornan, 1990:811) and requirements (Crosby, 1980:8), fitness for use (Juran, 1992:9) and as “what customers say it is” (New Zealand Organisation for Quality, 2013). Juran and Godfrey (1998:33.3) found that quality relates to goods and services in two divisions namely:

- Product/service features – what the customer wants.
- Freedom from deficits.

Chase *et al.* (1998:644) divided quality of products and services into eight dimensions namely:

- Performance – main product features.
- Features – secondary features.
- Conference – meeting industry standards or specifications.
- Reliability – constancy of performance over time.
- Durability – ability to endure, useful life.
- Service – resolution of complaints and problems.
- Response – interface between humans.
- Aesthesia – physical characteristics.
- Reputation – historical performance and other intangibilities.

Thus, to deal with constant changing demands of business; different definitions have been proposed at different times as stated by Reeves and Bednar (1994:419). According to Reeves and Bednar (1994:419) in relation to criteria such as consumer reliance, managerial usefulness, measurements

and generalisability the definitions all have strengths and weaknesses and resulted in the fact that no definition is best for every situation.

### **3.3 Service quality**

#### **3.3.1 Service quality defined**

An indispensable factor to retain and attract customers for a service provider is service quality (Crosby, 1980:70). The assessment of quality in the manufacturing segment has led to the development of the primary definition of service quality. Crosby (1980:8; 39) stated that the conformance of goods to requirements defined quality whilst Juran (1992:9) described it as “fitness for use”. In 1983 Garvin (1983:65) measured quality as the number of instances of “internal” failures and “external” failures.

Durability and the number of defects are an indication of quality of goods, but quality in service is difficult to measure and an elusive concept (Berry, 1987:7). A service cannot be physically possessed and is an intangible product involving an act, performance or an effort (Pride & Ferrell, 2010:247). A service does not result in ownership of anything, but is a form of a product that consists of actions, benefits or fulfilments offered for sale that are intangible and are bought on the basis of potential satisfaction (Kotler & Armstrong, 2004:276).

The fact that service quality is an intangible and abstract concept that is difficult to define and measure is unlike products, which can easily be judged (Lee *et al.*, 2000:233). Berry *et al.* (1988:35) defined service quality as “conformance to customer specification”. Parasuraman *et al.* (1985:42) defined service quality as the difference between predicted and expected service (customer expectations) and perceived service (customer

perceptions). Furthermore, service quality can be defined as the customers' perception of how well a service meets or exceeds their expectations and is judged by consumers and not organisations (Zeithaml *et al.*, 1990:15-16). Service quality is the engagement of the customer in memorable experience through the ability of the employees to respond to the unique needs of the customer (Reichheld, 2008). According to Øvretveit (2000:74) patients are expecting much more from healthcare.

Thus, by giving patients what they want and what they need with the fewest resources, without error, delays and waste and within higher-level regulations is defined as health care service quality (Øvretveit, 2000:74-75). Health service quality can be divided into two segments namely: technical quality, which focuses on the accurateness of medical diagnoses and procedures and functional quality that is related to the hospital process throughout the stay of the patient in the hospital (Lin *et al.*, 2004:437).

### **3.3.2 Importance of service quality**

The globalisation of the marketplace is at the forefront of the drive to improve quality services provided to the customer through the increase in applications and the introduction of new programs like the Balridge Quality Award Program (NSIT, 2010) and the recent alterations to the ISO 9000 standards (Katha, 2002:1). Deming (2000:10-13) whom established many of the principles of quality in 1986, suggested that quality can increase demand and price flexibility. This will lead to an increase in profits as well as productivity with a reduction in waste and rework (Deming, 2000:10-13). This is supported by Kaul (2005), who stated that in order to be recognised in a competitive market and retain the support of satisfied customers; service quality should be used

as a tool. Choi *et al.* (2006:925) found that service and e-service areas have benefited from the focus on the production of quality service.

Furthermore, the principles of Deming (2000:10-13), the Baldrige criteria (NSIT, 2010) and the ISO standards (Kartha, 2002:1) are the principles of decision-making that will result in sustainability (Rusinko, 2005:54). Quality service leads to customer satisfaction, which in turn relates to customer loyalty (Westlund *et al.*, 2001:873). Dick and Basu (1994:99) explained that customer loyalty is closely followed by customer retention, which in-turn lead to the financial well-being of any organisation and ultimate success as a business (Storbacka *et al.*, 1994:21). Moreover, satisfied customers provide word-of-mouth advertising (Wicks & Roethlein., 2009:83), are less costly to retain (Reichheld & Sasser, 1990:105) and are not as sensitive to change in price (Anderson & Sullivan, 1993:125). Consequently, organisations will enjoy greater profitability and higher levels of retention of customers if they constantly satisfy their customers (Wicks & Roethlein, 2009:83).

Furse *et al.* (1994:48) recommended that in the current competitive health market, facilities need to focus on the following factors to be successful:

- Financial results: Providing the high quality service at the lowest possible cost making the facility financially viable.
- Medical conclusions: Medical outcomes that is favourable for the patients visiting the facility.
- Service quality: delivering service that exceeds the expectations of the patients and meets the needs of the customer.

Several studies have indicated a link between satisfaction of the customer and profitability of the company. Anderson *et al.* (2004:172) indicated that

market share did not have any impact on shareholder value, but that an increase in ACSI (American Customer Satisfaction Index) of 1% caused an increase of 1.016% in shareholder value. If this was applied on 200 of the Fortune 500 companies, an increase of 1% will lead to an increase of \$275 million in shareholder value. This was similar to findings of Ittner and Larcker (1998:1-2) in 1998.

The increase in competition between providers of services in all industries as well as the private healthcare sector has led to more demanding patients with the main focus on service quality. The inability to effectively measure service quality in this highly competitive market has directly been linked to research being conducted to determine the level of patient satisfaction, perceived quality and the intention of patients to return to the products and services being offered by the facility (Ross et al., 1987:16; Joby, 1992:56; Paul, 2003:457).

### **3.3.3 Problems with service quality**

The reason for failure of quality initiatives include the focus on financial profits and gain rather than customer satisfaction (Hays & Hill, 2006:117). Currently there are numerous definitions of quality. Wicks and Roethlein (2009:82) stated that there is, however, no clear universal definition for quality.

### 3.3.4 Improvements

The purpose of a survey is to determine the current level of satisfaction as well as the strengths and weaknesses of customer satisfaction with regard to service quality. Thus, the organisation can implement corrective actions to address the identified shortcomings. This will lead to increased satisfaction with the service as well as increased profits (Yang, 2003:919).

According to Wicks and Roethlein (2009:87) organisations need to focus their definition of quality relating to the customer on the user and the process-based definition on the producer of the service. The customer needs to be at the centre of design and development of services conducted by the service provider (Wicks & Roethlein, 2009:87). Furthermore, organisations need to understand and recognise the needs, wants, and desires of the customer in order to design services that lead to satisfaction for the customer (Wicks & Roethlein, 2009:87), which in turn will lead to improved profits as mentioned previously.

Wicks and Roethlein (2009:89) recommended that the service design needs to be delivered in such a way that the service provides the customer with satisfaction, as originally intended by the design. The final step in the improvement process is the evaluation of the service provided, but also the most critical in the formation of satisfaction (Wicks & Roethlein, 2009:89). Since the customer is intimately involved in the service process, it is important for an organisation to develop and implement processes that address both the service process and the product outcome. This is due to the fact that the customer is a co-developer of the service delivery process (Field *et al.*, 2004:291).

### **3.3.5 The relationship between service quality and the private healthcare sector**

Quality service in the hospital setting can be provided by several departments including nursing, customer support, food and beverages, laboratory services, pharmaceutical services, information technology, doctors and hospital management. These departments are equally important in providing quality service to the patient, consequently insuring patient satisfaction (Pui-Mun, 2004:96).

Reasons for improving the service quality in a health care institution include:

- Health providers believe that improving the service quality in the private health care sector to be the right thing to do (Direktör, 2007:15).
- The involvement and satisfaction of the customer effect behaviour (Direktör, 2007:15).
- As the service quality of the provider improves, the expectations of the customer increases. Lee (2005:1-2) explained that as customers become more quality conscious, requirements for higher quality service increased.
- Shetty (1987:46) found that not only can service quality lead to a competitive advantage, but also increase profitability and reduce costs.

Several studies have shown that there is an important connection between service quality and customer satisfaction (Boulding *et al.*, 1993:7; Johns *et al.*, 2004:82), customer retention (Reichheld, 1993:65), loyalty (Boshoff & Gray, 2004:27), costs (Reichheld & Sasser, 1990:105), profitability (Rust & Zahorik, 1993:193), service guarantees (Kandampully & Butler, 2001:112) and financial performances (Buttle, 1996:8). Additionally, these researchers have emphasised the significance of understanding, measuring and improving the

quality of service provided by a private hospital. Parasuraman *et al.* (1988:16) also found that the customers are more likely to recommend a company if they experienced quality service than when they did not.

Ware and Snyder (1975:669) pointed out that most patients do not have sufficient knowledge regarding the technical quality of the service received; they rather judge facilities regarding the functional quality. Accordingly, patients rely on their attitudes regarding facilities and health professionals to assess their experience (Yeşilada & Direktör, 2010:963). Health professionals focus on providing their patients with the best possible treatment; believing that it is in actual fact the focus of the patient, whilst this is in fact contradictory to the focus of the patient. This causes dissatisfaction on the patient's part leading the patient to investigate other possibilities in health care provision (Brown & Swartz, 1989:92-93). It is therefore important to determine the needs and expectations of patients to deliver high quality service, hence improving the strategic advantage of the facility in the highly competitive private health care sector.

In order to meet the expectations of patients Kucukarslan and Nadkarni, (2008:12) indicated that hospitals need to understand the criteria which they are measured on; this criterion is derived from either previous experiences or from their views of the ideal care standards. Satisfaction is therefore related to whether expectations of the patients have been met, and dissatisfaction to expectations that have not been met (Dawn & Lee, 2004:513). Hospitals should also monitor how well the expectations of the patient were met after the delivery of the service (Zarei *et al.*, 2012:2). This correlates with findings of research that patient satisfaction increases purchase intentions (Cronin & Taylor, 1992:65-67), loyalty toward health providers (John, 1992:65) and compliance to treatment recommendations (Hall & Dornan, 1990:816).



### **3.4 Service quality models**

Various studies (Cronin & Taylor, 1992:55; Gurau, 2003:520; Gummesson, 1998:4) have pointed out that service quality has become a major focus point during the last decades for practitioners, managers, and researchers due to its impact on business performance, lower costs, customer satisfaction, customer loyalty and profitability.

Thus, to gain a competitive advantage in the private sector, companies must use technology to gather information on market demands and interchange the information gathered to ensure service quality provided has improved. Several models have been proposed over the years that vary in definitions and measurement technique (Direktör, 2007:21). Listed below are several of the most important models.

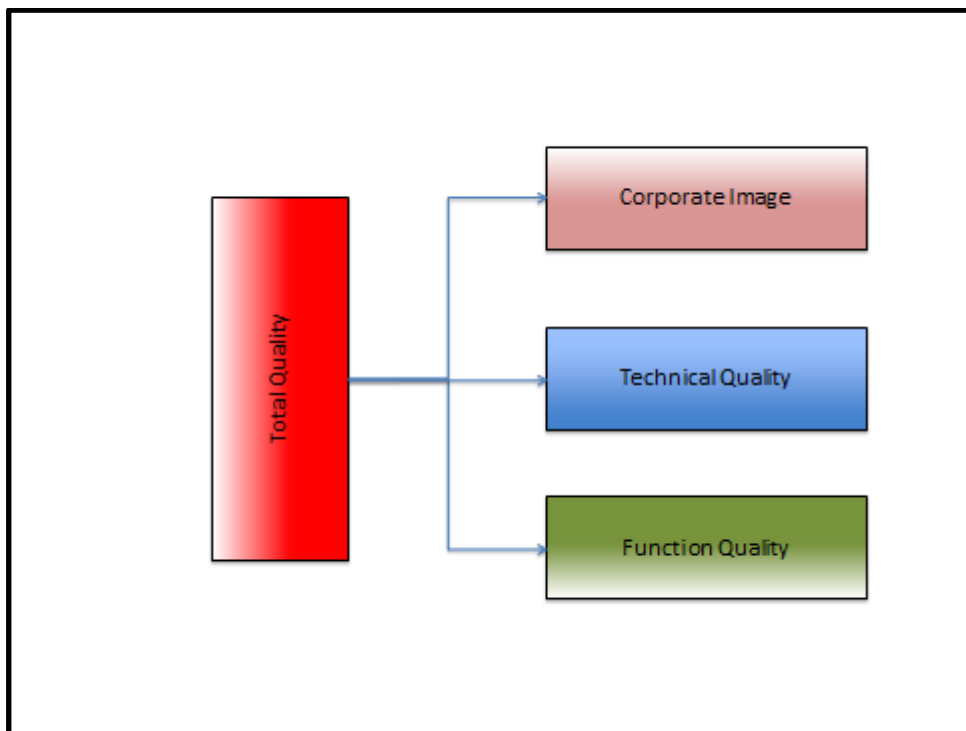
#### **3.4.1 Technical and functional quality model**

The notion that a company has to match the service quality expected by the customer to the service quality perceived by the customer to improve customer satisfaction (Grönroos, 1984:36; Seth *et al.*, 2005:913) has led to the technical and functional model as proposed by Grönroos (1984:36-40) and Seth *et al.* (2005:916).

- Technical quality: Is the quality service that the customer actually receives when he/she interacts with the service and is of importance for the evaluation of the service.
- Functional quality: How the customer gets the technical outcome. This is of importance to the view of the service received by the customer.

- Image: The image of the company is of great importance and is built up by technical and functional quality as well as other factors such as customs, ideology, word of mouth, pricing and public relationships (Grönroos, 1984:36-41).

**Figure 3.2: Technical and functional quality model**



(Source: Grönroos 1984:36-40)

The model illustrated that the customer is not only concerned with the technical side (instrumental performance) of the service, but also in the technique itself. The corporate image of the organisation is very important to the service firm as it sets itself apart from other entities (Pui-Mun, 2004:97).

Additionally, Lehtinen and Lehtinen (1991:287-290) identified two approaches in the exploration of service quality. Firstly, the three quality approaches are used and include: physical quality, interactive quality and corporate quality.

The second approach consisted of two dimensions which included process quality and output quality.

### 3.4.2 SERVQUAL

SERVQUAL serves as a model to measure service quality and begins with the assumption that service quality is determined by the difference between the perceptions of the customer and their expectation of the service (Cronin & Taylor, 1992:55). In 1985 Parasuraman *et al.* (1985:42) developed a three-dimensional model of service quality, which included the subsequent dimensions:

- Evaluative dimensions: tangibles, reliability, responsiveness assurance and empathy.
- Procedural dimensions: timing, flow logic, accommodation, anticipation, communication and feedback.
- Personal dimensions: appearance, attitude, attentiveness, tact, guidance, gracious problem solving.

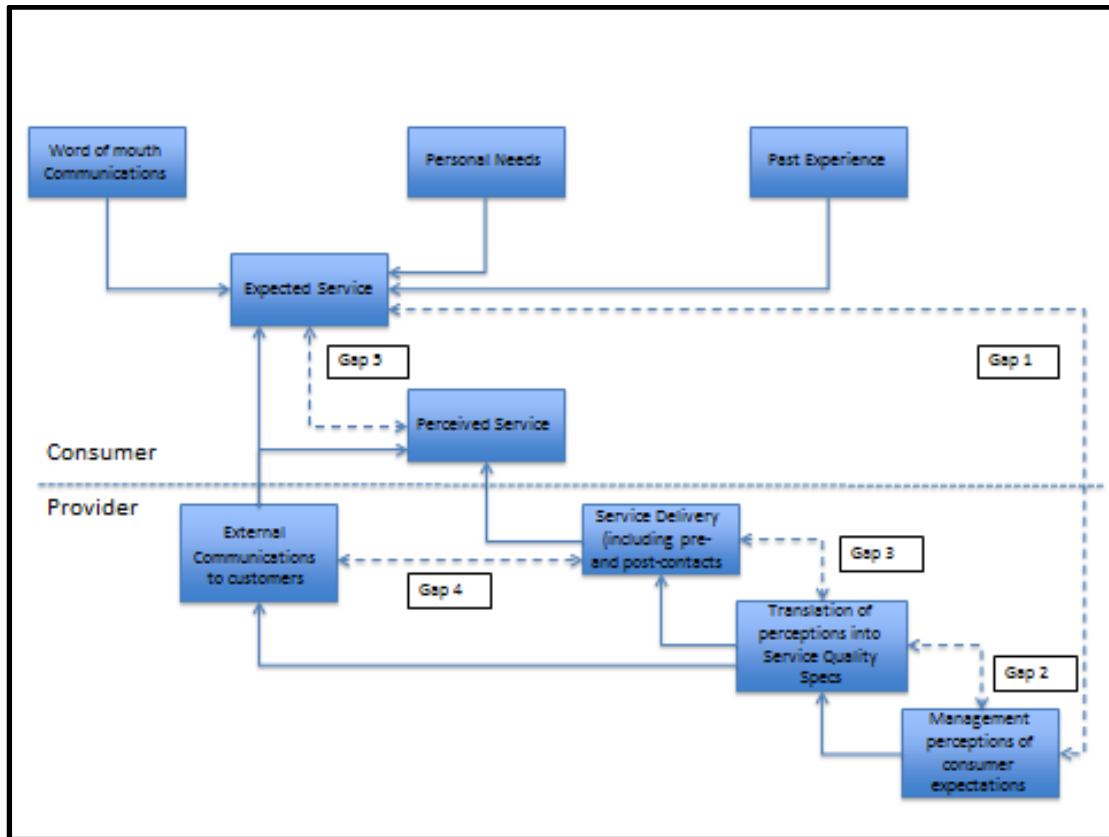
Parasuraman *et al.* (1985:41) stated that service quality is a function of the inequality of expectations and performance along with the above-mentioned dimensions. SERVQUAL hypothesised service quality as the gap between the customer's expectation (E) and the perception (P) of the service being delivered. Thus, subtracting the expectation scores from the perception scores of the customer will indicate the service quality provided ( $Q=P-E$ ). A higher positive difference between the perception and expectation will be an indication of a higher level of service quality and vice versa (Parasuraman *et al.*, 1985:42-43).

The gap analysis based service quality model was subsequently developed and consisted of the following gaps (Parasuraman *et al.*, 1985:44-46):

- **Gap 1:** The inequality between what the customer expects and management's perception of those expectations.
- **Gap 2:** The dissimilarity between management's perceptions of customers' expectations and service quality specifications.
- **Gap 3:** The variance between the service quality specifications and the service provided.
- **Gap 4:** The dissimilarity between what is promised to the consumer and what is actually delivered.
- **Gap 5:** The difference between the perceived service and the customer's expectations. Gap 5 is dependent on the size and the direction of the four gaps that is connected with the delivery of the service quality.

Figure 3.2 illustrates the SERVQUAL model as set out above.

Figure 3.3: The SERVQUAL model



(Adapted from Zeithalm *et al.*, 1993:8).

These dimensions were then used to formulate a survey instrument to evaluate the dimensions and the gaps that affect the customer. The instrument was called SERVQUAL (Pui-Mun, 2004:98). During 1988 Parasuraman *et al.* (1988:17) collapsed the original ten dimensions into five dimensions of service quality as described below:

- Assurance: the ability of the employees to convey trust and confidence through knowledge and courtesy.
- Empathy: provides customers with caring, individualised attention.
- Reliability: to be able to perform the promised service accurately and dependently.
- Responsiveness: to be willing to assist customers and to provide swift service.

- Tangibles: the physical appearance of equipment, facilities, personnel and communication material.

Later SERVQUAL was revised changing the word “should” with “would” and in 1994 the number of items was reduced to 21, while maintaining the five dimensional structures. This model illustrated that communication and control implemented in firms to manage employees are essential (Parasuraman *et al.*, 1994:121). However, in order to evaluate different services, modification to items might be required (Levy & Weitz, 1992:520).

In 1992, Cronin and Taylor (1992:55) found that the SERVQUAL model is an effective measure to determine service quality. This was corroborated by Zeithaml *et al.* (1993:1) in 1993.

### **3.4.3 SERVPERF**

During 1992 Cronin and Taylor (1992:67) investigated the measurement of service and the relationship it has on satisfaction and purchase intension. They concluded that perceptions are a better measure of service quality The model developed by them focussed on the service and performance legs of service quality and was called SERVPERF (Cronin & Taylor, 1992:67).

Service quality = Performance

The SERVPERF model differs from the SERVQUAL model in an effort to try and eliminate the expectation/perception problem. The model focuses on the service quality, consumer satisfaction and purchase intentions relationship. The model illustrated that consumer satisfaction influences purchase intentions, and not service quality. The reason for measuring customer satisfaction is because it has a direct relationship with the bottom line of the

firm. The model further illustrates that service quality is an attitude (Cronin & Taylor, 1994:125).

#### **3.4.4 Kano's model**

Professor Kano developed the Kano model and was utilised to identify and classify the different forms of customer needs. Kano *et al.* (1984:39-48) came to the conclusion that the association is not linear between the fulfilment of a need and the satisfaction or dissatisfaction experienced. Different classes were identified to categorise the requirements according to its relationship with satisfaction. Thus, a product induces satisfaction or dissatisfaction depending on its ability to meet the needs of the customer. According to Corbella and Maturana (2003:73-76), depending on how well these requirements are met, it can cause reactions ranging from dissatisfaction, through indifference, to satisfaction. This can be divided into six categories as listed below (Corbella & Maturana, 2003:73-76):

- **Attractive quality**

Includes attributes such as delight and surprise and produce satisfaction when achieved fully, but do not cause dissatisfaction when requirements are not met. These attributes are not usually expected by the customer, but causes unexpected delight and are often unspoken.

- **One-dimensional quality**

These attributes causes satisfaction when met and dissatisfaction when not met. There is a linear relation between customer satisfaction and the performance of the product attribute. High customer satisfaction is caused by high attribute performance.

- **Must-be quality**

These attributes causes dissatisfaction when not fulfilled, but are taken for granted when fulfilled. These attributes are considered as basic and the customer does not view these attributes as quality attributes even though these attributes are missing the customer will complain. Customers expect companies to understand that these attributes are fundamentals.

- **Indifferent quality**

The results of these attributes are neither good nor bad and thus results in neither satisfaction nor dissatisfaction for the customer.

- **Questionable**

Whether the attribute expected by the customer is not clear.

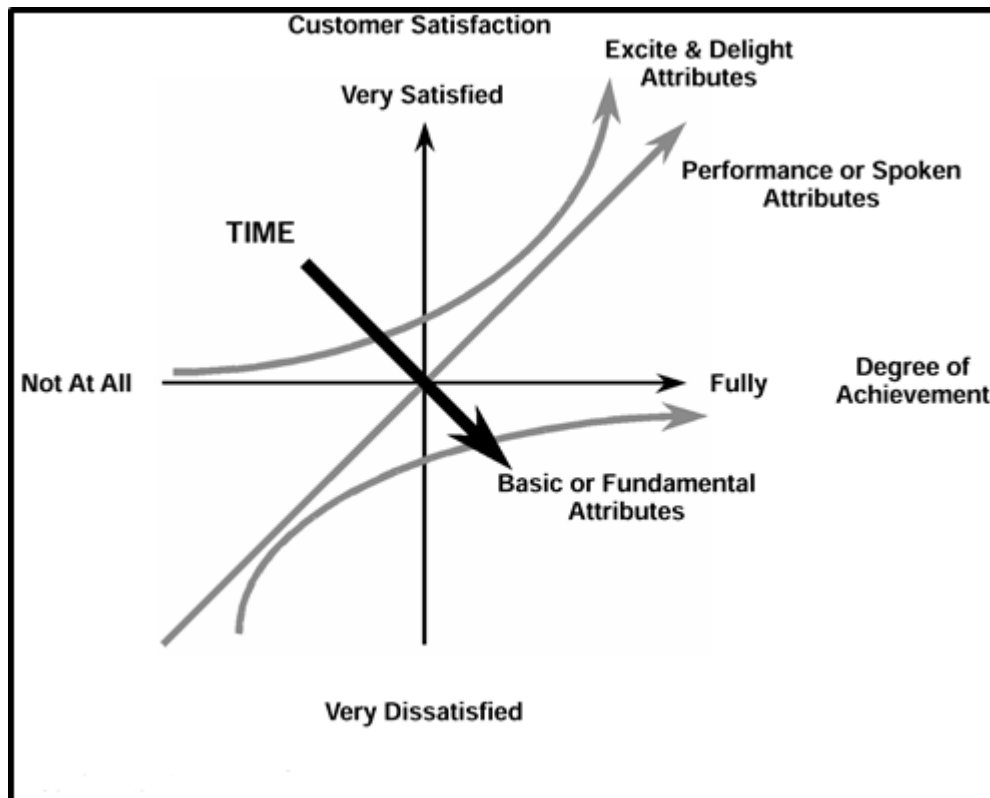
- **Reverse quality**

A high degree of achievement does not always result in satisfaction, but has dissatisfaction as an end result. This just emphasises the fact that not all customers are alike (Lee & Chen, 2006).

Thus, to ensure satisfied customers and retain current customers with the ability to attract new customers, it is of the utmost importance to manage the elements of quality as identified by the Kano model. Figure 3.3 illustrates the Kano model.



Figure 3.4: Kano Model



(Source: Kano *et al.*, 1984:39)

The **Horizontal axis** indicates the degree to which the aspect of the need is functional or present. The **Vertical axis indicates** the degree to which the customer is satisfied or dissatisfied. Then the **Line at 45° through origin** indicates the relation between the needs of the customer and the satisfaction of the customer which is directionally proportional to each other. This indicates performance (Kano *et al.*, 1984:39).

### 3.5 Monitoring quality in private health care

The National Health Act (61 of 2003) (SA, 2003) states that the following points are essential to evaluating the services in health institutions:

1. The standards and requirements as set out by the Minister after consultation with the National Health Council must form the basis for health care institutions.
2. The standards and requirements mentioned in 1, may relate to human resources, health technology, equipment, hygiene, premises, the delivery of health services, business practices, safety and the manner in which visitors are accommodated and treated.
3. The Office of Standards Compliance and the Inspectorate for Health Establishments will be responsible for monitoring the compliance to the standards and requirements as set out in 1 (Matsebula & Willie, 2007:170).

### **3.6 Influence of gender on the perceived service quality satisfaction**

Previous studies have indicated a difference in the perception of service quality between different genders due to factors such as gender role socialisation, differences in data handling, personalities, interpreting ability and importance placed on essential or peripheral services (Brody & Hall, 1993:447-459; Mattila *et al.*, 2003:136). Marketing research has indicated that males tend to rate service quality higher than their female counterparts (Lin *et al.*, 2001:57; Juwaheer, 2011:164). Furthermore, Mokhlis (2012:103) found a significant difference between the empathy, tangibles and reliability dimensions of the SERVQUAL model with males rating these dimensions more important than females. The analysis of gender data also provide several advantages to the improvement of service quality provided in that (Meyers-Levy & Sternthal, 1991):

- Meets basic requirements for successful application of segmentation strategies.

- Gender can easily be classified.
- Data pertaining to gender is easily accessible.
- Implementing the segmentations strategies could be profitable as the gender segments are large enough.

If these variables are unknown, managers can run the risk of making wrong decisions, because the necessary guidelines and evidence do not exist. This is due to the fact that if gender differences do exist, the different genders could experience the service delivered as unsatisfactory, while the opposite gender might be comfortable with the service. Furthermore, a gender sensitive approach could create problems if no differences exist between the different genders as this could be seen as preferential treatment of the opposite sex (Karatepe, 2011:278). Thus, if differences between genders do exist, the necessary resource allocation should be made to ensure that all parties affected are treated in the correct manner and the relevant importance that the genders place on the different dimensions are adhered to (Mokhlis, 2012:103).

### **3.7 Chapter summary**

Private hospitals are not subsidised by government and are more dependent on income from clients, hence the importance of meeting the needs of their patients, which in turn increases customer base as well as finance operations (Andaleeb, 2000:95). Customers evaluate the service process immediately after the provision thereof, which makes performance of quality service probably the most important competitive advantage of service businesses (Yeşilada & Direktör, 2010:963). Furthermore as stated earlier, service quality is related to customer satisfaction, customer retention, loyalty, costs, profitability, service guarantees, and financial performance forces businesses

to understand what service quality means to the customer and how it could be best achieved.

Quality from a clinical perspective has been covered by various research papers, but according to Sohail (2003:197) very little research has been conducted regarding the non-clinical characteristics of quality in a health care setting. Despite the importance of service quality in a health care environment, whether it is patient loyalty or financial gain, very little research has been conducted in the Mpumalanga province of South Africa.

Furthermore, the influence gender has on the perception of service quality in a private hospital setting have not been investigated in this facility.

The following chapter will provide the research methodology that was used during this study.

# Research methodology

## Chapter

## 4

### 4.1 Introduction

In this chapter the research methodology applied for investigating the service quality in a private hospital setting is described. The description includes the research tool (SERVQUAL) used, the sample, and also the method employed to gather the data.

The measuring of service quality in a private hospital is done on the assumption that the patients' satisfaction with the service provided will have an effect on the future use of the service as well as the possibility of recommending the service to others. This is, however, made more complicated by the fact that patients in private hospitals prefer a higher quality of service due to the premium paid by these patients for services rendered. The fact that the patients are also of ill health may cloud their judgment of the service, and not reflect a true perception of the quality of the service. Several models have been developed over the years to measure service quality; this study will make use of the SERVQUAL model. The SERVQUAL model is able to identify the most important points of what service quality entails and is a respectable forecaster of service quality needs (Morrison Coulthard, 2004:479-480).

This is supported by the strengths of SERVQUAL which include: taking into account the customers' perspective when assessing service quality; determining discrepancies between expectations and perceptions of customers; the ability to compare scores between competitors, the ability to compare the perceptions and expectations of different groups of customers and assessing expectations and perceptions of other divisions and services dealt with (Hand, 2004).

Secondly, SERVQUAL offers comprehensive information about: service perceptions of customers; customers' perceptions of performance levels; comments and suggestions of customers and illustrates the impressions of employees with regard to customers' expectations and satisfaction (Kleynhans, 2008:26).

Lastly, SERVQUAL is based on the assumption that there is a difference between the perceptions of the service actually delivered and the consumers' expectation of the service (Daniel & Berinyuy, 2010:2).

## **4.2 SERVQUAL Model**

The SERVQUAL model with several applications in health care (Babakus & Mangold, 1992:767; Lytle & Mokwa, 1992:4; Reidenbach & Sandifer-Smallwood, 1990:47) will provide the best possible model for measurement of service quality in a health care facility.

Even though several articles have raised criticism against the SERVQUAL model, a substantial amount of research have been conducted that utilised

the model successfully in determining current levels of service quality (Sekolanyane, 2004:193).

The conclusions formulated by Parasuraman *et al.* (1991:445) correspondingly provides the necessary evidence that the model could be effectively utilized to assess service quality when the following is taken into account:

- The limitations, scope and nature of the model should be fully understood.
- The model should be used to identify areas within the company where service quality shortfalls and strengths exist.

Furthermore, Parasuraman *et al.* (1991:445) provides the necessary guidelines when the model is adapted for various industries and this includes the following:

Firstly, the basic questionnaire should be used in its entirety as deleting some of the questions from the questionnaire may influence the integrity of the model. The wording of the questionnaire could, however, be adapted to make them applicable to the current industry being tested.

Secondly, additional items can be added to supplement the SERVQUAL model, however should be similar to the existing form of the model. The additional items should then be classified under the dimensions as set out earlier in order to calculate the average gap score for each dimension (Parasuraman *et al.*, 1991:445).

### 4.3 Questionnaire design

A survey questionnaire will be used during the quantitative phase of the study. The questionnaire was developed keeping the following in mind (DeVellis (1991:51):

1. Identify the objects that need to be measured.
2. Create a pool of items that can be included in the questionnaire.
  - a. Exclude redundant items.
  - b. Ensure that the number of items in the scale is sufficient, without having too many items so that the respondent loses interest.
  - c. Reduce the length of the items as longer items decreases clarity and increases complexity of the item.
  - d. Items should not be negatively worded as this can cause low-level responses.
3. Determine the scale that should be used.

The Likert scale was identified for utilisation in this study; this rating scale was introduced in 1932 by the psychologist Rensis Likert (1932:1). The Likert scale is used for multidimensional attitudes, unlike most other scales. Respondents indicate the degree to which they agree or disagree with a series of statements about an attitudinal object (Welman *et al.*, 2005:156).

The questionnaire was constructed from the experiences and research of previous researchers as the foundation with wording and phrases modified to be applicable to the current facility and situation.

The questionnaire was then divided into the different sections that encompassed the services delivered by the hospital and included from



admission to the rooms, as well as various other encounters as described by Farid (2008:55-56). The sections could influence the importance and satisfaction of the patient visiting the facility and has a significant relationship with the service quality provided by the hospital. The following sections also played an important role in the satisfaction the patients experienced with the level of service quality the patients experienced. The sections included the following (Farid, 2008:55-56):

### **1. Premises/Employees**

This section included items such as the appearance of the hospital and employees as well as whether sufficient communication material and advanced equipment was available at the facility. The dimension of premises/employees was measured by four indicators.

### **2. Doctors' medical service**

The services provided by the doctors at the facility are evaluated in this section and includes questions such as whether doctors are punctual and if doctors listen to what patients have to say. The dimension of doctors' medical service was measured by 12 indicators.

### **3. Diagnostics**

The skill and the necessity of support services are assessed through the section diagnostics. The dimension of diagnostics was measured by four indicators.

#### **4. Nursing medical services**

The care provided by the nursing personnel at the facility, which include factors such as empathy and communication. The dimension of nursing medical services was measured by eight indicators.

#### **5. Admissions**

The effectiveness of admission staff and the admission process and the importance and satisfaction of service quality at the facility are evaluated in this section. The dimension of admissions was measured by three indicators.

#### **6. Meals**

The quality of the meals served and the correctness of ordered meals are assessed through the questions in the meals section. The dimension of meals was measured by three indicators.

#### **7. Wards**

This section evaluates the cleanliness of the wards as well as the noise levels and the politeness of housekeeping staff. The dimension of wards was measured by four indicators.

Primary data for this empirical study was collected by means of a SERVQUAL model to measure the patient's expectation (importance) and perception (satisfaction). This means that data collection was done due to the proven use of the instrument in the measurement of service quality in hospital care. The questionnaire was adapted from the study done by Farid (2008:IV-XI). The reason for the revision of the questions is that Brown *et al.* (1993:138)

suggested that the SERVQUAL model be modified and adapted based on the industry, business and location of the facility. The questionnaire was also translated into Afrikaans to accommodate the broader range of patients and to improve the validity of the questionnaire and reliability of the data (Wright, 1996:63). The first section of the questionnaire captured the demographical information of the respondents and included gender, age, home language, race, reason for visit, duration of stay, highest level of education, rating of the facility and whether the facility would be referred to others.

The second section of the questionnaire consisted of 38 detailed statements divided according to seven subsections that measured the elements as described above.

The questionnaire consisted of two columns. The first measured the importance of the set quality for the patient and the second the satisfaction that the patient experienced with the service provided. A four-point Likert scale was used in the questionnaire in order to minimise the use of the neutral comment. This was supported by findings of Lewis (1993:10-12) which stated that customers did not understand the midpoint of the scale as well as the lack of verbal labelling of options 2-6 confused respondents.

The scale was numbered from 1-4, with 1 indicating a strongly disagree and a 4 indicating a strongly agree.

The data collected by means of the SERVQUAL questionnaire was analysed through descriptive statistical analysis, which made the data easier to understand and draw conclusions from.

This will then serve as an indication of what the current gaps are and on what the particular institution needs to focus on to improve the service quality. A disconfirmation paradigm is used to evaluate the gap score. If the expectation of service quality is greater than the perception, it is considered to be a negative disconfirmation and if it is less than perception it is considered to be a positive disconfirmation (Morrison Coulthard, 2004:480).

#### **4.4 Sample**

The target population consisted of the patients' visiting the hospital over a two-week period and included patients in the surgical, medical and maternity wards. The study population included all the patients that completed the questionnaires throughout the two-week period. The sample consisted of patients at the point of discharge from the medical facility to give the patient the opportunity to evaluate the complete service provided, thus giving a better understanding of the shortcomings in service quality provided by the institution. The study made use of a convenience sampling technique with advantages such as, respondents are easily accessible and in close proximity of the researcher.

#### **4.5 Data collection**

The data was collected by distributing the questionnaires to patients at the point of discharge via physical handouts, as this provided the respondents with the best possible ability to evaluate the whole service provided to them during their stay in the hospital. Personnel of the hospital were asked to assist in the handout and collection of the questionnaires. The questionnaires

were completed by ensuring that all the relevant questions were answered and where respondents had difficulty in answering the questions the relevant terminology was explained to the respondents.

The deadline of the study was communicated to all role-players to ensure that the target response of a total of 50 completed questionnaires was received. The participation in the questionnaire was voluntary and confidentiality of the participants was guaranteed. Completion time ranged from 10-15 minutes. A total of 75 questionnaires were distributed over the two-week period and a total of 53 were received back, signifying a favourable response rate of 71%.

## **4.6 Assumptions**

The following assumptions were taken into account during this study:

1. The study applies to the private hospital evaluated in this study.
2. There is a relationship between the variables assessed in the study.
3. The dimensions of the service quality model are of importance to the patients taking part in the study as well as the industry in which it is carried out (Farid, 2008:66; Joby, 1992:56; Zeithaml *et al.*, 1990:29).
4. Patients possessed the ability to assess the service offering provided by the facility as a whole.

## **4.7 Chapter summary**

This chapter provided the research methodology of the empirical study. The research methodology covered the following topics including the SERVQUAL model, questionnaire design, the sample, data collection technique as well as the assumptions under which the study was conducted. The chapter concluded with a chapter summary.

The following chapter will present the results of the empirical study which will include demographical data, validity and reliability measures as well as the statistical analysis of the data retrieved.

# Results and discussion

**Chapter**

**5**

## **5.1 Introduction**

The results of the study are presented in this chapter. The chapter starts off by presenting a demographic profile of the respondents where after the validity of the SERVQUAL questionnaire (initially developed in 1998) is confirmed for the health industry. The chapter then proceeds to measure the actual service levels experienced by the patients, whilst also determining the reliability of the results obtained from the data analysis.

Statistical Package for Social Science (SPSS) V21 was used to conduct a factor analysis and the reliability of the collected data (SPSS Inc., 2012). Data was analysed by means of descriptive statistics, which included the following: means and standard deviations. The assistance of the Statistical Consultation Services of the North-West University was employed to ensure scientific and accurate data analysis.

## 5.2 Demographic profile

The demographics of patients forming part of the study is illustrated in table 5.1.

**Table 5.1: Demographic profile of the respondents (n-53)**

Item	Category	Frequency	Percentage
Gender	Male	19	35.85
	Female	34	64.15
Home language	English	7	13.73
	isiZulu	7	13.73
	Afrikaans	27	52.94
	Northern Sotho	4	7.84
	siSewati	5	1.96
	Other	5	9.80
Race	White	28	52.83
	Black	19	35.85
	Indian	6	11.32
Reason for Visit	Surgical	19	36.54
	Medical	31	59.62
	Maternity	2	3.85
Duration of stay	0-1	10	18.87



	2-3	18	33.96
	4-5	20	37.74
	6-	5	9.43
Highest level of education	Matric	23	43.40
	Diploma	13	24.53
	Degree	5	9.43
	Masters	5	9.43
	Doctorate	7	13.21

Female respondents comprised the largest part of the study when compared to males, with 34 females completing the questionnaire compared to 19 male respondents. The average age of the respondents were 43 years of age and ranged from 23 to 77 years.

The South African census of 2011 indicated that isiZulu is the most common language representing 20% of the population. This is followed by Afrikaans (13.5%) and English (9.6%) (Statistics South Africa, 2011). The sample consisted of Afrikaans (52%), isiZulu (13%), English (13%), Northern Sotho (7%) and siSeswati (2%) speaking respondents, which is contradictory to the national norm, but in keeping with the population of the town (Statistics South Africa, 2011).

Furthermore, the sample comprised 52% White, 35% Black and 11% Indian respondents. This represents the population of the town with the only

exception being the Indian population, which only represents 3.81% of the town population according to the census of 2011.

The sample consisted of 59% of patients visiting the medical wards with the surgical and maternity ward contributing 36% and 4% respectively. Some 37% of the respondents stayed in the hospital for 4-5 days followed by 33% for 2-3 days and 18% for 0-1 days, which is in keeping with the fact that the duration of stay of medical patients are longer than that of surgical patients. Surgical patients make use of the facility for minor surgeries including dentistry, biopsy and tonsillectomies, whereas medical patients are admitted to treat non-elective conditions where a timeline for treatment duration is not set.

## **5.3 Validity**

The SERVQUAL questionnaire was validated by Steenkamp and Baumgartner (1998:78) for cross-industry use in 1998. Bisschoff and Kade (2010) reconfirmed the validity of the instrument, however, that was for the consumer goods industry. The main aim of this section of the data analysis is to determine if the instrument is still valid for the health industry as applied in this study. That means that the instruments measure the constructs the way it is supposed to.

### **5.3.1 Construct validity**

Similar to previous studies, exploratory factor analysis was employed as a tool to determine the statistical validity of the constructs (Moolla, 2010:157,

Bisschoff & Kade, 2010). The factor analysis was performed to group items according to their correlation between variables. This is referred to as a data reduction technique that divides data into constructs that cluster variables with the highest correlation together. The aim of this is to either create a new set of variables according to the interrelationship of the original set of variables, or to confirm that the grouped variables really do cluster together (thus inadvertently validating the construct).

The following four factors can be identified from a factor analysis:

- Factor loading: This is the relation/correlation between individual variables and factors being analysed. A minimum factor loading of 0.40 was set as the cut-off point in this study (Field, 2009:631).
- Eigenvalue: This value is equal to the sum of the squared loading for all variables on a factor. The first factor has the highest Eigenvalue due to the fact that it was chosen to provide the highest sum of squared correlation without any limitations. Eigenvalues of one and higher were deemed suitable for identifying the factors (Field, 2009:600-602).
- Factor scores: This is a combination of the original variables that are grouped together with a factor analysis to create new variables. Thus, the factor scores are the result of the calculation of each new construct (Field, 2009:633).
- Variance explained: The variance, portrayed as a percentage, indicates what portion of the variance is explained by the specific factor. This means that if the variance explained amounts to 60% (which is regarded to be a good fit to the data), there are 40% which is not explained. Resultantly, this variance lies outside the measuring variables' range and is unknown (Bisschoff & Kade, 2010).

The following types of inferential analysis are conducted in factor analysis (Sudman & Blair, 1998:548):

- Determining whether the grouping objectives are achieved by means of testing whether the overall analysis is significant. If the retained factors exceed the present the overall analysis will be deemed effective.
- Determining whether a specific factor makes a significant contribution to the overall analysis. The factors that have a significant contribution should be retained for further analysis and interpretation. All factors with an Eigenvalue greater than one should be used to determine the number of significant factors.
- Determining the association of a specific variable to a particular factor, thus indicating whether it should be part of the group of variables defined by the factor.

An exploratory factor analysis technique using the above-mentioned aspects will be utilized in the study to verify whether the variable grouping technique provided by literature and previous studies are adequate for the grouping of the variables. An exploratory factor analysis makes no specification of the groups prior to the testing, but a computer package from the groups making use of mathematical criteria.

The exploratory factor analysis was conducted by means of an oblique rotation using direct Oblimin (an Oblique method rotation) on the main constructs of the study. This technique presumes a nominal correlation between factors and is utilised to determine the possible dimensions of the constructs. Different factors were identified through Kaiser's criterion and Eigenvalues greater than one was retained.

Furthermore, the adequateness of the sample per dimension was determined by means of a Kaiser-Meyer-Olkin (KMO) correlation matrix. In addition, the Bartlett's test of sphericity was also calculated. This test allows for the examining of the relationship between variables and signifies if the data is suitable to continue with a factor analysis (Field, 2009:647).

The KMO values are interpreted as indicated in the table below. For this study, a minimum KMO of 0.70 is set. Bartlett's test should return values which is smaller than 0.05.

**Table 5.2: Interpretation of KMO values**

≥ 0.80	Commendable
0.70	Average
0.60	Mediocre
0.50	Miserable
< 0.50	Undesirable

(Source: Hair *et al.*, 1998:99)

### 5.3.2 Validity of the different dimensions

The dimensions of the SERVQUAL model (tangibles, reliability, responsiveness, assurance, empathy) were represented by the following breakdown of the questions in the questionnaire according to literature and previous studies in the service quality field (Van Heerden, 2010:33; Farid, 2008:75).

**Table 5.3: The breakdown of questions into the SERVQUAL dimensions**

<b>SERVQUAL Dimensions</b>	<b>Questions in the questionnaire</b>
Tangibles	Q1, Q2, Q3, Q4, Q21, Q35, Q36
Reliability	Q5, Q17, Q19, Q20, Q23
Responsiveness	Q9, Q10, Q14, Q26, Q29, Q30, Q31
Assurance	Q6, Q7, Q15, Q16, Q18, Q22, Q24, Q37
Empathy	Q8, Q11, Q12, Q13, Q27, Q28, Q34

The following questions were omitted from the study due to the fact that no clear division for these questions according to the SERVQUAL dimensions could be found in literature to support inclusion: Q25, Q32, Q33 and Q38.

### 5.3.3 Tangibles

The analysis of the data by means of Oblimin oblique rotation on the main components of the exploratory factor analysis indicated that two factors are retained by the MINEIGEN criterion. Both factors have Eigenvalues greater than one. The two factors cumulatively explain 59.75% of the variations, and factor one explains 42% of the variation. Values greater than 0.35 according to the factor loading were considered as significant and all values loaded sufficiently to such an extent that no items were deleted (Nunnally, 1978:132). The KMO value is also favourable at 0.72 and the Bartlett's test of sphericity yielded a *p*-value of smaller than 0.0001.

The Oblimin rotated factor matrix pattern of tangibles is indicated in the following table:

**Table 5.4: Factor analysis on tangibles**

Question	Factor 1	Factor 2
Q1	0.84	
Q2	0.79	
Q3	0.76	
Q4	0.59	
Q35		0.83
Q21		0.82
Q36	0.40	0.44

The questions pertaining to the dimension tangibles split into two factors with 4 questions loading onto factor 1, whereas three of the seven questions loaded onto factor 2. Although Q36 loads onto both factors it will be allocated to the factor with the highest value, thus factor 2.

The analysis shows that the dimension of tangibility actually consists of two sub-factors and is labelled as:

- Tangibility 1: Materials, equipment, employees and facility.
- Tangibles 2: Condition of tangibles at the facility.

### 5.3.4 Reliability

The analysis of the data pertaining to reliability identified one factor only. The MINEIGEN criterion indicated that one factor should be retained, because the Eigenvalue exceeds one. In addition, the factor explains a favourable 65% of the variance. The sample is also adequate as the KMO value is well above the required 0.70 at 0.79 and the Bartlett's test of sphericity well below 0.05 at 0.0001. The factor loadings are shown in the table below.

**Table 5.5: Factor analysis on reliability**

Question	Factor 1
Q19	0.92
Q17	0.91
Q20	0.88
Q23	0.83
Q5	0.38

The original definition of reliability for this study will be retained as: to be able to perform the promised service accurately and dependently.

### 5.3.5 Responsiveness

The analysis of the data by means of Oblimin oblique rotation on the main components of the exploratory factor analysis indicated that two factors are identified. Both are retained by the MINEIGEN criterion, due to the fact that



their Eigenvalues are greater than one. The two factors explain a very favourable 71.45% of the variance cumulatively, while explaining 55.31% and 16.14% respectively. Values greater than 0.35 according to the factor loading were considered as significant and all values loaded sufficiently to such an extent that no items were deleted (Nunnally, 1978:132). The KMO value is favourable at 0.77 as well as the Bartlett's test of sphericity at < 0.0001.

The high factor loadings are shown in the rotated factor matrix table below:

**Table 5.6: Factor analysis on responsiveness**

Question	Factor 1	Factor 2
Q10	0.83	
Q29	0.81	
Q14	0.80	
Q9	0.76	
Q26		0.94
Q31		0.81
Q30		0.79

Four of the seven questions pertaining to responsiveness loaded on factor 1 with three of the seven questions loading on factor 2. Thus, the dimension of responsiveness will further be divided into two sub-factors according the definition of responsiveness as defined earlier and will include the following:

- Responsiveness 1: Service will be performed, not too busy to help.
- Responsiveness 2: Service performed promptly, willingness to help.

### 5.3.6 Assurance

The exploratory factor analysis of the data indicated that two factors are retained by the MINEIGEN criterion (two factors with Eigenvalues greater than one). Two factors cumulatively explain 62.92% of the variations, and factor one explains 46.20% of the variation. Values greater than 0.35 according to the factor loading were considered as significant and all values loaded sufficiently to such an extent that no items were deleted (Nunnally, 1978:132). The KMO value is also favourable at 0.75 with the Bartlett's test of sphericity at  $< 0.0001$ .

The Oblimin rotated factor matrix pattern of assurance is indicated in the following table:

**Table 5.7: Factor analysis on assurance**

Question	Factor 1	Factor 2
Q18	0.81	
Q24	0.79	
Q16	0.72	
Q15	0.63	
Q37	0.58	
Q7		0.92
Q6		0.86
Q22		0.75

According to the Oblimin rotated factor matrix five of the eight questions loaded onto factor 1 with three of the questions loaded onto factor 2. The dimension of assurance actually consists of two sub-factors. They are labelled as:

- Assurance 1: Instil confidence, consistently courteous.
- Assurance 2: Knowledge.

### **5.3.7 Empathy**

The analysis of the data pertaining to empathy identified one factor only. The MINEIGEN criterion indicated that one factor should be retained, because the Eigenvalue exceeds one. In addition, the factor explains a favourable 57% of the variance. The sample is also adequate as the KMO value is well above the required 0.70 at 0.87 with the Bartlett's test of sphericity yielding a  $p$ -value smaller than 0.0001.

The high factor loadings are shown in the rotated factor matrix table below:

**Table 5.8: Factor analysis on empathy**

Question	Factor 1
Q12	0.83
Q8	0.83
Q28	0.79
Q11	0.75
Q34	0.74
Q27	0.69
Q13	0.62

All the questions pertaining to empathy loaded onto one factor, thus for this study the definition of empathy is retained as: provides customers with caring, individualised attention.

Contradictory to the five factor model of Parasuraman *et al.* (1998), this study identified 8 factors that were divided into tangibles 1, tangibles 2, reliability, responsiveness 1, responsiveness 2, assurance 1, assurance 2 and empathy.

In conclusion regarding the validity of the different factors, the results obtained during this study was confirmed valid.

## 5.4 Reliability of the identified factors

Reliability refers to how the study should be measured, thus how consistent the variables are in relation to what it is supposed to measure (Welman *et al.*, 2005:145). Cronbach Alpha determines this consistency and is the most widely used technique to measure reliability. Thus, this measure will also be utilized in this study (Cronbach, 1951:297). The Cronbach Alpha for the data collected was determined to ensure that the responses of the respondents were reliable and that if the study was repeated the respondents would answer the questions in the same manner. The Cronbach Alpha for the Importance variable was determined with the assumption that the analogue for the reliability and validity for satisfaction was thus, also assured. The reliability of the individual dimensions was also determined by means of Chronbach Alpha coefficients which are also assisted as a measure of inner consistency between the items.

The Chronbach value can vary from 1, an indication of maximum reliability, to 0, an indication of no reliability (Kent, 2007:142).

As stated earlier coefficients of 0.70 or higher are satisfactory (Field, 2009:664), but due to attitudinal and social factors, a Chronbach Alpha of  $\geq 0.58$  can be acknowledged as adequate. This data can be used for analytical scrutiny (Field, 2009:664).

The following table illustrates the Chronbach Alpha coefficients of the factors as set out earlier and will include: tangibles 1, tangibles 2, reliability, responsiveness 1, responsiveness 2, assurance 1, assurance 2 and empathy.

**Table 5.9: Cronbach Alpha Coefficients**

	<i>N</i>	Cronbach Alpha
<b>Tangibles 1</b>	53	0.76
<b>Tangibles 2</b>	53	0.61
<b>Reliability</b>	51	0.84
<b>Responsiveness 1</b>	53	0.84
<b>Responsiveness 2</b>	53	0.82
<b>Assurance 1</b>	52	0.79
<b>Assurance 2</b>	53	0.79
<b>Empathy</b>	53	0.86

The Chronbach Alpha coefficients of the different factors comply with the minimum acceptable point of 0.70 as stated earlier by Field (2009:664), with the exception of tangibles 2. The factor tangibles 2 show lower margins of reliability. However, Field (2009:664) stated that a secondary lower margin of 0.58 is still acceptable if ratio and not interval data is used (such as a Likert scale in this study). The factor is, therefore, acceptable as it exceeds the lower margin of reliability.

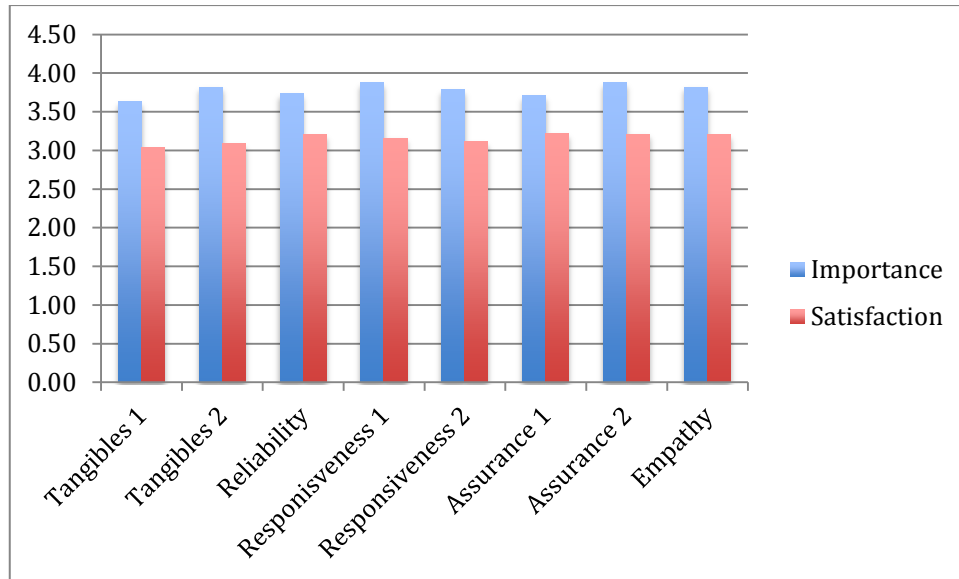
## 5.5 Data analysis

### 5.5.1 Mean value analysis

The following graph and table illustrates the means of importance and satisfaction of the different factors as described above. This will provide an indication of what patients perceived as the most important factor when

compared to other factors as well as with what factor the patients experienced the most satisfaction. The table will also highlight the factors that were least important and the factors that provided the least satisfaction as rated by the patients taking part in the study.

**Figure 5.1: The means of importance and satisfaction of the different factors**



**Table 5.10: The means and standard deviations of importance and satisfaction of the different factors**

<b>Importance</b>	Mean	Standard deviation	<b>Satisfaction</b>	Mean	Standard deviation
Tangibles 1	3.63	0.47	Tangibles 1	3.04	0.71
Tangibles 2	3.82	0.29	Tangibles 2	3.09	0.80
Reliability	3.74	0.41	Reliability	3.20	0.66
Responsiveness 1	3.88	0.32	Responsiveness 1	3.16	0.79
Responsiveness 2	3.79	0.39	Responsiveness 2	3.11	0.77
Assurance 1	3.71	0.38	Assurance 1	3.22	0.70
Assurance 2	3.88	0.31	Assurance 2	3.21	0.76
Empathy	3.82	0.32	Empathy	3.20	0.69

- **Importance**

The means of importance of the various dimensions of service quality ranged from 3.63 to 3.88. The table provides an indication that patients rated the responsiveness 1 (Service will be performed, not too busy to help) and assurance 2 (knowledge) at 3.88 as the most important factors of service quality of this study when the means of the different factors were compared. This is closely followed by tangibles 2 (Condition of tangibles at the facility) at 3.82. The factor rated the lowest of the various dimensions is tangibles 1 (Materials, equipment, employees and facility) at 3.63. This is still however high when taken into consideration that the Likert scale consisted of 4 options with a 1 indicating a strongly disagree and a 4 indicating a strongly agree. The means are all closer to 4 (strongly agree) when compared to the halfway mark (2.5), an indication that all the factors were important to the patient when



it comes to service quality. Thus, it can be concluded that all factors of service quality were important to the patients.

Focus areas for the hospital should be responsiveness 1 and assurance 2 as patients perceived this as the most important factors in service quality in this hospital. Focus can be diverted from tangibles 1 as patients did not view this factor as the least important factor when it comes to service quality.

- **Satisfaction**

The means of the level of satisfaction that the patients experienced of the various factors of service quality ranged from 3.04 to 3.22. The satisfaction that the patients experienced at the facility relating to service quality rated high, with all the factors rating above 3. The patients perceived that assurance 1 (knowledge) at 3.22 provide the most satisfaction of the different factors of service quality. Tangibles 1 (Materials, equipment, employees and facility) rated the lowest at 3.04. This is in relation with the fact that patients rated this factor as the least important factor of service quality.

The fact that assurance 1 provided the most satisfaction can be used as a competitive advantage for promoting the hospital to patients.

### **5.5.2 Practical and statistical significance**

The following analysis was conducted following the SERVQUAL hypothesis that stated that service quality is the gap between the customer's expectation (E) and the perception (P) of the service being delivered. Thus, subtracting the expectation scores from the perception scores of the customer will

indicate the service quality provided ( $Q=P-E$ ). A higher positive difference between the perception and expectation will be an indication of a higher level of service quality and vice versa (Parasuraman *et al.*, 1985:42-43). The study was interested in the mean differences between satisfaction and importance for the different factors as this approach has been utilized in previous studies (Pallant, 2007:103; Abuosi & Atinga, 2013:486).

### 5.5.2.1 Effect sizes (Practical significance)

The time constraints applicable to the study led to the fact that no random sampling was done during the study. Thus, the interpretation of differences between importance and satisfaction constructs were done according to Cohen's effect sizes. Due to this fact no inferential statistics were interpreted, but p-values will be reported as if random sampling was assumed. The effect in practice that is caused by a large enough difference is indicated by effect sizes that have practical significance. Thus, the difference is independent of units and sample size, but relates to the spread of the data (Ellis & Steyn, 2003:52).

**Table 5.11: The guideline for the d-value (differences between means)**

Small effect	$d=0.1$	
Medium effect	$d=0.3$	
Large effect	$d=0.5$	Noticeable with naked eye
	$d \geq 0.5$	Practical significant

(Source: Cohen, 1998:24)

### 5.5.2.2 Statistical difference

The difference between two means will be used as an indication of statistical significance. An indication of statistical significance between means is

illustrated with the use of t-tests. The p-value will serve as a criterion for this with the assumption of the null hypothesis giving the probability of obtaining the value. Statistical significance will be illustrated by a small p-value (smaller than 0.05).

The following table will illustrate the mean of the difference between importance and satisfaction as well as statistical and practical significance.

**Table 5.12: Statistical and practical significance of the factors**

Construct	N	Mean	Standard deviation	p-value•	d-value
Tangibles 1	53	-0.59	0.79	0.05*	1.25▲
Tangibles 2	53	-0.73	0.82	0.05*	2.52▲
Reliability	53	-0.53	0.72	0.05*	1.29▲
Responsiveness 1	53	-0.72	0.82	0.05*	2.25▲
Responsiveness 2	53	-0.67	0.79	0.05*	1.72▲
Assurance 1	53	-0.49	0.73	0.05*	1.29▲
Assurance 2	53	-0.67	0.81	0.05*	2.16▲
Empathy	53	-0.61	0.73	0.05*	1.91▲
△	Medium effect				
▲	Large effect (practical significant)				
*	Statistical significant on a 0.05 level				
• p-value yielded by paired t-test for dependent groups					

The findings of this study indicated that patients visiting the facility had generally higher levels of importance compared to the satisfaction they experienced.

• **Tangibles 1**

The mean difference between importance and satisfaction for the sub-factor tangibles 1 pertaining to materials, equipment, employees and facilities was  $-0.59 \pm 0.79$ . Furthermore, an analysis of the data indicated a statistical significant difference with a p-value of 0.05. This was supported

by a practical significant difference between importance and satisfaction for the sub-factor tangibles 1 of  $d=1.25$ . Thus, the difference between the importance and satisfaction pertaining to Q1-Q4 was significant.

- **Tangibles 2**

The analysis of the data pertaining to the sub-factor tangibles 2 illustrated a mean difference between importance and satisfaction of  $-0.73 \pm 0.82$ . Statistical and practical significance was also proven with a p-value of 0.05 and a d-value of 2.52 respectively. Therefore there is significant difference between importance and satisfaction for questions 21, 35 and 36 pertaining to tangibles 2. Thus, a significant difference exists between the importance the patient placed on the condition of tangibles at the hospital compared to the satisfaction that the patient perceived.

- **Reliability**

The mean difference for reliability is  $-0.53 \pm 0.72$ . The difference was also statistical significant with a p-value of 0.05 and practical significant with a d-value of 1.29. This illustrates a significant difference for questions 5, 17, 19, 20 and 23 pertaining to reliability and how patients experienced the hospital's ability to perform the promised service accurately and dependently.

- **Responsiveness 1**

The analysis of the data presented a mean difference between importance and satisfaction for sub-factor responsiveness 1 of  $-0.72 \pm 0.82$ . A statistical ( $p=0.05$ ) and practical ( $d= 2.25$ ) significance was also proven for questions 9, 10, 14 and 29 pertaining to the responsiveness 1. Thus, a significant difference was illustrated between the level of importance the

patient rated the sub-factor and the satisfaction the patient experienced in relation to the fact that the service will be delivered and the employees not being too busy to help.

- **Responsiveness 2**

The mean difference illustrated in the table above relating to the sub-factor responsiveness 2 was  $-0.67 \pm 0.79$ . The significant difference between the importance and satisfaction levels pertaining to questions 26, 30 and 31 defined by whether the service was performed promptly and the willingness of the employees to help was illustrated through a statistical significance (p) value of 0.05 and practical significance (d) value of 1.72.

- **Assurance 1**

The mean difference between importance and satisfaction for the sub-factor assurance 1 pertaining to the ability to instil confidence and being consistently courteous was  $-0.49 \pm 0.73$ . Furthermore, an analysis of the data indicated a statistical significant difference with a p-value of 0.05. This was supported by a practical significant difference between importance and satisfaction for the sub-factor assurance 1 of  $d=1.29$ . Thus, the difference between the importance and satisfaction pertaining to Q15, Q16, Q18, Q24 and Q37 was significant.

- **Assurance 2**

The analysis of the data pertaining to the sub-factor assurance 2 illustrated a mean difference between importance and satisfaction of  $-0.67 \pm 0.81$ . Statistical and practical significance was also proven with a p-value of 0.05 and a d-value of 2.16 respectively. Therefore there is significant difference between importance and satisfaction for questions 6, 7 and 22 pertaining to assurance 2. Thus, a significant difference between the importance of

knowledge for hospital service quality exists, and the satisfaction that the patient received in the current setting.

- **Empathy**

The mean difference for empathy is  $-0.61 \pm 0.73$ . The difference was also statistical significant with a p-value of 0.05 and practical significant with a d-value of 1.91. This illustrates a significant difference for questions 8, 11, 12, 13, 27, 28 and 34 pertaining to empathy and how patients experienced the hospitals ability to provide customers with caring, individualised attention.

Further analysis of the data lead to the following:

- The mean of the difference between importance and satisfaction of service quality indicated that the largest mean difference was for tangibles 2 at 0.73. This was closely followed by responsiveness 1 at 0.72. This is of importance due to the fact that it highlights the biggest gap between the importance that the patients placed on the various factors of service quality and the satisfaction they experienced with the current level of service quality. Furthermore, this also corresponds with the fact that patients rated these factors to have the highest level of importance in service quality. This can form the base for future strategy development of the hospital to improve overall service quality.
- The mean difference with the smallest variation between importance and satisfaction of the various factors was assurance 1 at 0.49. This was followed by reliability at 0.53. The smaller variation between importance and satisfaction can serve as an indication to management that the level of service quality is satisfactory or that patients do not place as much emphasis on these factors, thus attention to improve service quality can be placed elsewhere.

## **5.6 Influence of gender on perceived service quality**

Managers should analyse the service currently provided to their customers from a customers' perspective and redesign the service offering and environment in such a manner that their services provide the best possible fit for expectations (Rust & Oliver, 1994:). Gender provides one of the demographic variables that are the easiest to determine and implement corrective strategies to fulfil customers' expectations (Meyers-Levy & Sternthal, 1991).

The study analysed whether gender could have an effect on the satisfaction levels patients experienced during their evaluation of service quality. Demographic data was used to differentiate between the different genders as indicated on the questionnaire (males 35.85% versus females 64.13%). The level of satisfaction the patients perceived during their stay at the hospital was divided according to their gender and the satisfaction levels according to the different factors.

Statistical analysis was performed on the data to identify possible differences between gender and satisfaction levels of the different SERVQUAL factors. The analysis included the calculation of the differences between men and women when analysing the means, standard deviation, t-test (statistical significance) and effect size (practical significance).

The results of the analysis indicated that no evident difference between satisfaction levels of men and women on all service quality factors existed. This is contradictory with findings of Mokhils (2012:110) that stated that males rated empathy, reliability and tangibles higher than their female counterparts.

## **5.7 Chapter summary**

The chapter provided the results obtained during the study on measuring service quality in a private hospital. A demographical analysis of the participants in the study was provided to establish the current patient mix of the hospital. This was followed by the validation of the SERVQUAL dimensions of the measuring tool and lead to the identification of the 8 factors including: tangibles 1, tangibles 2, reliability, responsiveness 1, responsiveness 2, assurance 1, assurance 2 and empathy. The reliability of the different factors was confirmed by means of Chronbach Alpha coefficients.

The data analysis was conducted on the means of the different factors with comparisons being made between the level of importance to the patients and the satisfaction they experienced with the service quality provided by the hospital. Furthermore, the practical and statistical significance between the differences in means for importance and satisfaction were evaluated. The study concluded with an analysis of the differences in satisfaction perceived by different genders.

The following chapter will provide conclusions on the results obtained during the study. This will be followed by the implications these results will have on the management of the hospital. The limitations of the study will be highlighted and criticisms against the SERVQUAL model stated. Recommendations will be provided as well as suggestions for future research.



# Conclusion and Recommendations

**Chapter**

**6**

## 6.1 Introduction

The primary objective as set out in chapter one of this study was to determine service quality in a private hospital according to the service quality dimensions described by the SERVQUAL model.

The study was conducted in two sections:

- Section 1 included a literature review on private hospitals in South Africa as well as service, quality, service quality models and monitoring the levels of service quality in private hospitals.
- Section 2 provided the empirical research conducted in a private hospital, making use of the SERVQUAL model.

This chapter provides a summary of the most important points discussed in earlier chapters. This is followed by relevant conclusions for this study as well as possible recommendations that are applicable.

The main focus of this study was on service quality, the current level of patient satisfaction and the intentions of patients to return to the hospital or refer the

facility. The study provided a background view of existing literature on service quality and the private hospital sector of South Africa, which was followed by the problem being reviewed, the objectives of the study, and an overview of the current private healthcare environment in South Africa, service quality and established models being used to assess levels of service. The design of the research with the analysis of the data collected followed. Finally, the study concluded with deductions and recommendations, as well as implications on the management of the study.

## **6.2 Conclusion on results**

The factors identified through the analysis of the data had a direct descriptive effect on the perceived service quality that the hospital provided. The fact that assurance 2 had the highest level of perceived satisfaction followed by assurance 1 provided the hospital with the current points of strengths that can be focused on to ensure continued support from patients. Gaur *et al.* (2011:67) stated that the satisfaction had a definite influence on the intention of patients to stay loyal to the institution. Thus, the hospital was able to instil confidence with the services provided as well as provide a service that is consistently courteous with a high level of knowledge.

Patients rated responsiveness 1 as the factor with the highest importance. Thus patients were expecting that the service will be provided and that the hospital will not be too busy to help as the most important factor pertaining to service quality. The hospital should therefore focus on its ability to provide the required services to the patients as well as assist patients with all their requirements within a reasonable time.

The main discrepancy between the factors that patients rated the most important and their satisfaction levels were with tangibles 2 and responsiveness 1. Thus the condition of tangibles within the facility was not up to standard and need to be addressed to improve the perceived satisfaction of patients with service quality. Furthermore the fact that patients rated responsiveness 1 as the most important and that the discrepancy between importance and satisfaction was the second highest is an indication that the hospital must make this their primary focus area for improving service quality at the facility. The results show that the patients were unsatisfied with the way that the hospital handled problems. Thus, the hospital was not aware of the problems of the patients and not able to provide the best possible solution to the identified problems. The hospital staff could also convey their respect to the patients via their enthusiasm to provide help and support.

The findings of this study is supported by findings of Nekoei-Moghadam and Amiresmaili (2011:63) who identified tangibles and responsiveness as contributing to the main discrepancy between the expectation and perception of the patients. This was followed by reliability, assurance and empathy.

The factors with the smallest difference between importance and satisfaction included assurance 1 and reliability. This is thus an indication that the hospital is currently able to instil confidence, are consistently courteous and able to perform the promised service accurately and dependently. These benefits could be used to the hospital's advantage as a competitive advantage even though there is still room for improvement. The hospital could also transfer its focus to other factors that are currently not up to standard.

The analysis of the influences of gender on the perception of service quality at the hospital indicated that no such difference existed and that both male and female respondents evaluated the services in a similar manner. Thus, no action is required in this regard from management and no unnecessary resource allocation should be made. Focus should rather be diverted elsewhere.

### **6.3 Executive implications**

Organisations will only be able to sustain and maintain their position if they are able to enhance quality in their end product, and this can only be done if they understand their shortcomings.

The private institution needs to focus on the biggest gaps identified and employ an improvement strategy to rectify the quality flaws (Brown *et al.*, 2013:442-443).

The study generated various implications for the effective management of service quality and highlighted areas where improvement is required. The fact that the infrastructure is out dated greatly hindered the perception of service quality for the patient as most patients expected modern looking facilities. Regular maintenance of the facility is required to maintain the appearance of the facility and the layout and furniture need to be updated to ensure these items represent a modern looking facility, which are comparable similar facilities. Office space could also be improved by adding décor that is visually appealing (Yousapronpaiboon & Johnson, 2013:350). This is supported by findings of Fottler *et al.* (2009:43) that the physical look of the facility helps improve the mood and morale of patients.

Additionally, patients also expected that the doctors treating them were consistent, confident and professional at all times. The lack of these factors can harm the reputation of the medical practitioner as well as the facility. The services provided by the hospital could also increase reliability through providing the services timeously and staff being willing to resolve problems.

The responsiveness of the hospital can be improved through the provision of detailed and truthful information about service condition expectations, and by providing fast and well-organised services to the patients visiting the hospital. Staff needs to focus on the needs of the patients and act on these needs in a prompt and keen manner.

The contact of the patient with the service quality of the facility also extends to other personnel, and includes receptionists, nurses, laboratory staff and technicians. The patients expected well trained personnel that were knowledgeable and efficient. A further dimension to this is that staff treats patients in a friendly and polite manner. Employees also need to improve the relationship between patients and staff through improving their own communication skills, improving information sharing between the different parties.

Thus, it is of the utmost importance for management to provide the necessary training to further the performance of its employees in these fields. Employees also need to be constantly trained through training programs and patient relationship management courses to improve the handling of patients and their problems.

This can be enhanced by allocating more resources for recruiting and selecting qualified staff. Personnel also need to provide the patient with empathy during their stay, as it creates a feeling of understanding in tough times, and could improve the outcome of a patient's treatment (Hamid *et al.*, 2008:119). The empathy factor can be further enhanced by providing the patients with personal attention as well as understanding the needs of the patients. Furthermore, a follow-up procedure on patients could also enhance the overall feeling of empathy. Arasli *et al.* (2008:8) proposed that the feeling of empathy could be enhanced through improving the relationship between employees and the patients, conducting responsibilities professionally as well as looking after the patients best interests.

The hospital should also ensure that all employees are aware of what is promised in the mission and vision statement of the facility to ensure that the services provided are in line with what is offered. This can be done through constantly communicating the vision and mission statements to employees and that they understand what the vision and mission entails (Abuosi & Atinga, 2013:489).

Hospitals need to constantly analyse the level of satisfaction their patients experience with the service quality and implement corrective actions to address concerns. This will improve patient satisfaction as well as the intention of the patient to refer the institution to others. Hospitals should also pay more attention to the overall service quality provided by the institution. This can only be achieved if the hospital is aware of the possible shortcomings in the current level of service quality offering. If these concerns were addressed adequately it will improve the intention of patients to return to the hospital.

The focus on a strategy to improve the service quality of the institution will add value to the current relationship of the hospital with its patients as well as prospective future clients (Bala, 2011:182).

- The study provided a platform for marketers to base their efforts on.
- The hospital can use the data collected to form new strategies to improve the current level of service quality, thus increasing the return of patients to the facility and increase revenues collected. These strategies could include the effective allocations of funds in an effort to improve service quality and patient retention.
- The study could also be used as a base for future studies to determine whether current strategies were effective in improving service quality.

## **6.4 Limitations**

The following limitations should be taken into account when drawing conclusions from the findings of the study.

The study was conducted in a single private healthcare institution, thus the results may not be prevalent in all private institutions. The study can however be carried out in other hospitals to verify the results.

The various sectors within the hospital might indicate varying results when referred to the different specialties.

The theoretical and method limitations of the study need to be taken into account when performing future research. Customers seldom score their

expectation lower than that of their perception of the service, thus the expectation scores may consistently outscore the perception scores, for no other reason than this type of response inclination (Sekolanyane, 2004:184).

Furthermore, gender is not the only demographic variable that could influence the perception of service quality satisfaction and other variables including: age, education level and race should be investigated.

## **6.5 Further criticisms of the SERVQUAL model**

The effectiveness of this model for measuring service quality has been criticised by researchers in the past. Morrison Coulthard (2004:481) stated that this model is inadequate and inappropriate due to its conceptual basis. The SERVQUAL model fails to draw on statistical, psychological and economic theory and is based on the disconfirmation paradigm rather than an attitudinal paradigm (Buttle, 1996:9). Furthermore, the SERVQUAL model is based on the difference between the perception of the service by the customer and the level of expectation, which according to Buttle (1996:9) little evidence exists that customers assess quality in these terms.

Furthermore, Buttle (1996:10) stated that the criticisms against the SERVQUAL model can be divided into operational and theoretical criticisms.



### 6.5.1 Operational criticisms relevant to this study include:

- **Expectations:** SERVQUAL does not measure absolute service quality expectations due to the fact that customers use other standards to determine service quality.
- **Item composition:** the items per dimension are insufficient for measuring the respective dimensions.
- **Moments of truth:** the service quality will vary at any particular moment.
- **Two administrators:** data quality was impaired by the confusion of the administration of expectation (importance) and perception (satisfaction) columns as well as boredom of the customers.

### 6.5.2 Theoretical criticisms include:

- **Gaps model:** Buttle (1996:10) mentioned that little evidence exists that customers perceive quality in terms of perceptions (satisfaction) minus expectations (importance).
- **Process orientation:** Rather than focusing on the quality of service delivered, SERVQUAL focuses on the process (Cronin & Taylor, 1992:64).

## 6.6 Recommendations

In view of the above-mentioned conclusions the following recommendations can be highlighted with respect to service quality in private healthcare.

- The model should be used in an effort to determine the current shortcomings in the hospital so that an effective action plan can be developed to improve the level of service quality. This in turn will

reduce patient complaints and have a positive effect on the turnover of the business.

- The data collected should also be shared with personnel to ensure that all personnel are collectively working together on the current weaknesses of service quality.
- Constant evaluation should also become a part of the culture of the personnel, second nature as it were. This will ensure that future changes in patient demands are documented immediately and the necessary action can be taken in this regard.

The hospital should instil a patient focused culture throughout the hospital in order to improve service quality. Zeithaml *et al.* (1990:143-155) and Berry *et al.* (1988:42) have proposed the following guidelines for getting an initiative for improving service quality off the ground in any company.

1. **Hard work:** Management should be directly involved in the strategy and make sure that all the personnel responsible for the initiative are committed throughout all levels of the organisation. To implement this strategy will take hard work for all involved (Zeithaml *et al.*, 1990:143-144).
2. **Data collection:** Data should be collected for the purpose of providing management with all the information required to make the right decisions. The information should then be used to develop a new strategy for the business and the strategy should be communicated to all the employees of the business (Zeithaml *et al.*, 1990:144-146).
3. **Establish change:** The right people to effect the change should be selected and the necessary responsibility should be assigned to them. The commitment for change should be secured as well as the direction for the change should be decided at this stage (Zeithaml *et al.*, 1990:147).

4. **Influence the freedom factor:** Employees should be empowered to make sure the initiative succeeds. The necessary education should be provided to the relevant personnel to ensure that all involved understand the new direction of the facility (Zeithaml *et al.*, 1990:151-153).
5. **Represent service quality:** Management should lead through example in their commitment to quality (Berry *et al.*, 1988:42).
6. **Endorse the right people:** The right people should be promoted to make sure that the initiative succeeds (Zeithaml *et al.*, 1990:154-155).

## 6.7 Suggestions and future research

- Service quality should be determined in all private hospitals in an effort to improve quality throughout the sector.
- Actions to improve quality should be determined in a generic manner, which can be duplicated throughout the sector.

## 6.8 Summary

In the current highly competitive private health care sector the level of service quality is of the utmost importance when it comes to differentiating one facility from its competitors. Thus, institutions need to focus on the complete service provided to the patient from admission to discharge. To improve the level of service quality provided to patients, hospitals need to determine what the current level of service quality is and what their focus areas should be for the improvement thereof.

The study made use of the SERVQUAL model to evaluate service quality and highlighted the strengths and weaknesses of the current level of service

quality. The weaknesses include qualities pertaining to tangibles 2 (condition of tangibles at the facility) and responsiveness 1 (service will be provided and not too busy to help). These weaknesses will serve as the basis for future improvement strategies at the facility with various executive implications. The strengths of service quality at the facility included Assurance 1 (instil confidence and consistently courteous) and reliability (to be able to perform the promised service accurately and dependently). These strengths could be used as a competitive advantage to differentiate the facility from others and increase market share.

Furthermore, the study could form the basis of future research in other facilities in an effort to improve service quality over the entire industry, as well as providing a basis of comparison between health facilities. The end result of this will be a better patient experience to all patients.

## Reference list

Acts **see** South Africa.

Abuosi, A.A. & Atinga, R.A. 2013. Service quality in healthcare institutions: establishing the gaps for policy action. *International journal of healthcare quality assurance*, 26(5):481-492.

Africa, N. 2010. Measuring the controllable variables in the customer experience in convenience stores at filling stations. Potchefstroom: North-West University. Potchefstroom Campus. (Mini-dissertation - MBA.)

Al-Hamdan, H.H. 2009. The impact of waiting time and service quality delivery on outpatient satisfaction in Kuwaiti public general hospitals. Netherlands: MSM. (Dissertation - MBA.)

Andaleeb, S.S. 2000. Public and private hospitals in Bangladesh: service quality and predictors of hospital choice. *Health policy and planning*, 15(1):95-102.

Anderson, E.W., Fornell, C. & Lehmann, D.R. 1994. Customer satisfaction, market share and profitability: findings from Sweden. *Marketing*, 58(3):53-66.

Anderson, E.W., Fornell, C. & Mazvancheryl, S. 2004. Customer satisfaction and shareholder value. *Marketing*, 68(4):172-185.

Anderson, E.W. & Sullivan, M. 1993. The antecedents and consequences of customer satisfaction. *Marketing science*, 12(2):125-143.

Arasli, H., Ekiz, E.H. & Katircioglu, S.T. 2008. Gearing service quality into public and private hospitals in small islands. *International journal of health care quality assurance*, 21(11):8-23.

Babakus, E. & Mangold, G.W. 1992. Adapting the SERVQUAL scale to hospital services: an empirical investigation. *Health services research*, 26(6):767-786.

Bala, N. 2011. Measuring life insurance service quality: an empirical assessment of SERVQUAL instrument. *International business research*, 4(4):176-190.

Barnes, N.G. & Movatt, D. 1986. An examination of patient attitudes and their implications for dental services marketing. *Journal of health care marketing*, 6(3):60-63.

Bateson, J.E.G. & Hoffman, D.K. 1999. Managing services marketing: text and readings. New York, NY: Dryden.

Berry, L. 1987. Big ideas in services marketing. *Journal of services marketing*, 1(1):5-9.

Berry, L.L., Parasuraman, A. & Zeithaml, V.A. 1988. The service quality puzzle. *Business horizons*, 31(5):35-43.

Biermann, J. 2006. South Africa's health care under threat. Johannesburg: Free Market Foundation.

Bisschoff, C.A. & Kade, A. 2010. Validation of a customer service measuring instrument for the ophthalmology industry. (Paper presented at the South

African Institute of Management Scientists, Mpekweni, East London, 24-26 September.)

Bopp, K.D. 1990. How patients evaluate the quality of ambulatory medical encounters: a marketing perspective. *Journal of health care marketing*, 10(1):6-15.

Boshoff, C. & Gray, B. 2004. The relationship between service quality, customer satisfaction and buying intentions in the private hospital industry. *South African journal of business management*, 35(4):27-37.

Boulding, W., Karla, A., Staelin, R. & Zeithaml, V. 1993. A dynamic process model of service quality: from expectations to behavioural intentions. *Journal of marketing research*, 30(1):7-27.

Brody, L. & Hall, J.A. 1993. Gender and emotion. (In Lewis, M. Haviland, J., eds. *Handbook of emotions*. New York, NY: Guilford. p. 447-460.)

Brooks, R. 2005. Measuring university quality. *Review of higher education*, 29(1):1-21.

Brown, S., Bessant, J. & Lamming, R. 2013. *Strategic operations management*. 3<sup>rd</sup> ed. New York, NY: Routledge.

Brown, S.W. & Swartz, T.A. 1989. A gap analysis of professional service quality. *Journal of marketing*, 53(2):92-98.

Brown, T.J., Churchill, G.A. & Peter, T.J. 1993. Research note: improving the measurement of service quality. *Journal of retailing*, 69(1):127-139.

Buttle, F. 1996. SERVQUAL: review, critique, research agenda. *European journal of marketing*, 30(1):8-32.

Camilleri, D. & Callaghan, M.O. 1998. Comparing public and private hospital care service quality. *International journal of health care quality*, 11(4):127-133.

Campbell, S.M., Roland, M.O. & Buetow, S.A. 2000. Defining quality of care. *Social science & medicine*, 51(11):1611-1625.

Chase, R.B., Aquilano, N.J. & Jacobs, F.R. 1998. Production and operations management: manufacturing and services. 8<sup>th</sup> ed. New York, NY: McGraw-Hill.

Chingang Nde, D. & Lukong, P. 2010. Using the SERVQUAL model to assess service quality and customer satisfaction: an empirical study on grocery stores in Umeå. Umeå: Umeå School of Business. (Dissertation - Masters.)

Choi, D.H., Kim, C.M., Kim, S. & Kim, S.H. 2006. Customer loyalty and disloyalty in internet retail stores: its antecedents and its effect on customer price sensitivity. *International journal of management*, 23(4):925-942.

Cohen, J. 1998. Statistical power analysis for behavioral science. 2<sup>nd</sup> ed. Hillsdale, NJ: Erlbaum.

Corbella, J.A. & Maturana, D.S. 2003. Citizens' role in health services: satisfaction behaviour: Kano's model, part 2. *Quality management in health care*, 12(1):72-80.

Council for Medical Schemes. 2006. Annual report, 2005-2006. Pretoria: Council for Medical Schemes.

Council for Medical Schemes. 2010. Annual report, 2009-2010. Pretoria: Council for Medical Schemes.



Council for Medical Schemes. 2012. Annual report, 2011-2012. Pretoria: Council for Medical Schemes.

Cronbach, L.J. 1951. Coefficient alpha and the internal structure of tests. *Psychometrika*, 16(3):297-334.

Cronin, J.J. & Taylor, S.A. 1992. Measuring service quality: a re-examination and extension. *Journal of marketing*, 56(3):55-68.

Cronin, J.J. & Taylor, S.A. 1994. SERVPERF versus SERVQUAL: reconciling performance-based and perceptions-minus-expectations measurement of service quality. *Journal of marketing*, 58(1):125-131.

Crosby, P.B. 1980. Quality is free: the art of making quality certain. New York, NY: Mentor.

Dagger, T.S., Sweeney, J.C. & Johnson, L.W. 2007. A hierarchical model of health service quality. *Journal of service research*, 10(2):123-142.

Dawn, A.G. & Lee, P.P. 2004. Patient expectations for medical and surgical care: a review of literature and applications to ophthalmology. *Survey of ophthalmology*, 49(5):513-524.

Day, C. & Gray, A. 2008. Health and related indicators. (In Barron, P. & Roma-Reardon, J., eds. South African Health Review 2008. Durban: Health Systems Trust. p. 239-396.)

De Man, S., Vandaele, D. & Gmmel, P. 2004. The waiting experience and consumer perception of service quality in outpatient clinics. Ghent: Ghent University. (Working paper 04/229.)

Deming, W. 1986. Out of crisis. Boston, MA: MIT.

Department of Health **see** South Africa. Department of Health

Department of National Treasury **see** South Africa. Department of National Treasury

DeVellis, R.F. 1991. Scale development: theory and applications. Newbury Park, CA: Sage.

Dick, A. & Basu, K. 1994. Customer loyalty: towards an integrated framework. *Journal of the academy of marketing sciences*, 22(2):99-113.

Direktör, E. 2007. Perceived service quality and patient satisfaction in TRNC: comparison of public and private hospitals. Nicosia: Near East University. (Dissertation - MBA.)

Du Preez, L. 2010. New health plan still veiled - but get ready for big changes. <http://www.bhfglobal.com/new-health-plan-still-veiled-get-ready-big-changes-28-august-2010> Date of access: 1 June 2013.

Economist Intelligence Unit. 2011. The future of healthcare in Africa. <http://www.janssen-emea.com/sites/default/files/The%20Future%20of%20Healthcare%20in%20Africa.pdf> Date of access: 1 June 2013.

Elaine, Y. 2003. Tapping into the healthcare services sector in Malaysia. [http://www.ambcwa.org/articles/Article\\_Health\\_Care\\_services.pdf](http://www.ambcwa.org/articles/Article_Health_Care_services.pdf) Date of access: 1 October 2013.

Ellis, S.M. & Steyn, H.S. 2003. Practical significance (effect sizes) versus or in combination with statistical significance (p-values). *Management dynamics*, 12(4):51-53.

- Ennew, C.T., Reed, G.V. & Binks, M.R. 1993. Importance-performance analysis and the measurement of service quality. *European journal of marketing*, 27(2):59-70.
- Evans, J.R. & Lindsay, W.M. 1999. The management and control of quality. Mason, OH: South Western College.
- Farid, I.M.F. 2008. Development of a model for healthcare service quality: an application to the private healthcare sector in Egypt. Maastricht: Maastricht School of Management. (Thesis - PhD.)
- Field, A. 2009. Discovering statistics using SPSS. 3<sup>rd</sup> ed. London: Sage.
- Field, J., Heim, G. & Sinha, K. 2004. Managing quality in the e-service system: development and application of a process model. *Production and operations management*, 13(4):291-307.
- Ford, R.C., Bach, S.A. & Fottler, M.D. 1997. Methods of measuring patient satisfaction in healthcare organizations. *Healthcare manage review*, 22(2):74-89.
- Fottler, M.D., Ford, R.C. & Heaton, C.P. 2009. Achieving service excellence: strategies for health. Chicago, Ill: Health Administration.
- Friderichs, C. 2011. South Africa mobile health market opportunity analysis. London: Group Special Mobile Association.
- Friedenberg, R.M. 1997. The next medical revolution should be quality. *Radiology*, 204(1):31A-34A.
- Furse, D.H., Burcham, M.R., Rose, R.L. & Oliver, R.W. 1994. Leveraging the value of customer satisfaction information. *Journal of healthcare marketing*, 53(2):48-52.

Garvin, D.A. 1983. Quality on the line. *Harvard business review*, 61(5):65-75.

Gaur, S.S., Xu, Y., Quazi, A. & Nandi, S. 2011. Relational impact of service providers' interaction behavior in health care. *Managing service quality*, 21(1):67-87.

Grönroos, C. 1982. An applied service marketing theory. *European journal of marketing*, 16(7):30-41.

Grönroos, C. 1984. A service quality model and its marketing implications. *European journal of marketing*, 18(4):37-44.

Gummesson, E. 1998. Productivity, quality and relationship marketing in service operations. *International journal of contemporary hospitality management*, 10(1):4-15.

Gurau, C. 2003. Tailoring e-service quality through CRM. *Managing service quality*, 13(6):520-531.

Guy, R.F., Edgley, C.E., Arafat, I. & Allen, D.E. 1987. Social research methods: puzzles and solutions. Boston, MA: Allyn & Bacon.

Hair, J.R., Anderson, R.E., Tatham, R.L. & Black, W.C. 1998. Multivariate data analysis. Upper Saddle River, NJ: Prentice Hall.

Hall, J.A. & Dornan, M.C. 1990. Patient socio-demographic characteristics as predictors of satisfaction with medical care: a meta-analysis. *Social science and medicine*, 30(7):811-818.

Hamid, A.B., Hashim, N.H. & Shamsuddin, A.S. (Eds.). 2008. Customer satisfaction and service quality: challenges and issues in Malaysia. Malaysia: Univision.

Hand, P. 2004. Applying the Kano Model to user experience design. (UPA Boston Mini-Conference.)

[http://www.handaweb.com/anthony/portfolio/kano/A-Hand\\_Kano-Model\\_Boston\\_UPA\\_May-12-2004.pdf](http://www.handaweb.com/anthony/portfolio/kano/A-Hand_Kano-Model_Boston_UPA_May-12-2004.pdf) Date of access: 1 October 2013.  
[PowerPoint presentation.]

HASA **see** Hospital Association of South Africa (HASA)

Hays, J. & Hill, A. 2006. An extended longitudinal study of the effects of a service guarantee. *Production and operations management*, 15(1):117-132.

Hospital Association of South Africa (HASA). 2013. HASA members.  
<http://www.hasa.co.za/member-hospitals/all/1/> Date of access: 20 May. 2013.

HSRG **see** Health Services Research Group (HSRG)

Health Services Research Group (HSRG). 1992. Quality of care: What is quality and how can it be measured? *Canadian medical association journal*, 146:2153-2158.

Institute of Medicine. 2001. Crossing the quality chasm: a new health system for the 21<sup>st</sup> century. Consensus report.

<http://www.iom.edu/Reports/2001/Crossing-the-Quality-Chasm-A-New-Health-System-for-the-21st-Century.aspx> Date of access: 1 June 2013.

Ittner, C. & Larcker, D. 1998. Are non-financial measures leading indicators of financial performance? An analysis of customer satisfaction. *Journal of accounting research*, 36(3):1-35.

Joby, J. 1992. Patient satisfaction: the impact of past experience. *Journal of health care marketing*, 12(3):56-64.

John, J. 1992. Patient satisfaction: the impact of past experience. *Journal of health care marketing*, 12(3):56-64.

Johns, N., Avci, T. & Karatepe, O.M. 2004. Measuring service quality in travel agents: evidence from Northern Cyprus. *Service industries journal*, 24(3):82-100.

Juran, J.M. 1992. *Juran on quality by design: the new steps for planning quality into goods and services*. New York, NY: Free Press.

Juran, J.M. & Godfrey, A.B., eds. 1998. *Juran's quality handbook*. 5<sup>th</sup> ed. New York, NY: McGraw-Hill.

Juwaheer, T.D. 2011. Gender bias in hotel guests' perceptions of service quality: an empirical investigation of hotels in Mauritius. *e-Review of tourism research*, 9(5):164-189.

Kade, A. 2009. *Customer service of an ophthalmology practice*. Potchefstroom: North-West University. Potchefstroom Campus. (Mini-dissertation - MBA.)

Kandampully, J. & Butler, L. 2001. Service guarantees: a strategic mechanism to minimize customers' perceived risk in service organizations. *Managing service quality*, 11(1):112-121.

Kano, N., Seraku, N., Takahashi, F. & Shinichi Tsuji, S. 1984. Attractive quality and must-be quality. *Journal of the Japanese society for quality control*, 14(2):39-48.

Karassavidou, E., Glaveli, N. & Papadopoulos, C.I. 2009. Quality in NHS hospitals: no one knows better than patients. *Measuring business excellence*, 13(1):34-46.

Karatepe, O.M. 2011. Service quality, customer satisfaction and loyalty: the moderating role of gender. *Journal of business economics & management*, 12(2):278-300.

Kartha, C. 2002. ISO9000: 2000 Quality management systems standards: TQM focus in a new revision. *Journal of American academy of business Cambridge*, 2(1):1-1-6.

Kaul, S. 2005. Measuring retail service quality. Measuring retail service quality: examining applicability of international research perspectives in India. Ahmadabad: Indian Institute of Management. (Working paper WP no 2005-10-2.)

Kautzky, K. & Tollman, S.M. 2008. A perspective on primary healthcare in South Africa. (In Barron, P. & Roma-Reardon, J., ed. *South African health review*. Durban: Health Systems Trust. p. 17-30.)

Kent, R. 2007. Marketing research; approaches, methods and implications. London: Thomson Learning.

Kleynhans, K. 2008. Customer service of convenience stores. Potchefstroom: North-West University. Potchefstroom Campus. (Dissertation - MBA.)

Korwar, A. 1997. The made in India hurdle: creating market across the globe-strategies for business excellence. New Delhi: Tata McGraw-Hill.

Kotler, P. & Armstrong, G. 2004. Principles of marketing. 10<sup>th</sup> ed. Upper Saddle River, NJ: Pearson Education.

Kucukarslan, S.N. & Nadkarni, A. 2008. Evaluating medication-related services in a hospital setting using the disconfirmation of expectations model of satisfaction. *Research in social and administrative pharmacy*, 4(1):12-22.

Lagrosen, S. 2001. Strengthening the weakest link of TQM: from customer focus to understanding. *Total quality management*, 13(5):348-354.

Lee, H., Delene, L.M., Bunda, M.A. & Kim, C. 2000. Methods of measuring health-care service quality. *Journal of business research*, 48(3):233-246.

Lee, J. 2005. Measuring service quality in a medical setting in a developing country. *Services marketing quarterly*, 27(2):1-14.

Lee, Y. & Chen, J. 2006. Revised two dimension quality model and it's dynamic variation. (Chinese Society for Quality 42nd Annual Meeting and the 12th National Quality Management Seminar.)  
[http://bm.nsysu.edu.tw/tutorial/iylu\\_conference%20 paper/D002.pdf](http://bm.nsysu.edu.tw/tutorial/iylu_conference%20paper/D002.pdf) Date of access: 15 September 2013.

Lehtinen, U. & Lehtinen, J.R. 1991. Two approaches to service quality dimensions. *Service industries journal*, 11(3):287-303.

Levy, M. & Weitz, B.A. 1992. Retailing management. New York, NY: Irwin.

Lewis, B.R. 1993. Service quality measurement. *Marketing intelligence and planning*, 11(4):4-12.

Life Healthcare. 2012. Quality and clinical governance.  
<http://www.lifehealthcare.co.za/Quality/Default.aspx> Date of access: 16 January 2013.

Likert, R. 1932. A technique for the measurement of attitudes. *Archives of psychology*, 22(140):1-55.

Lim, P.C. & Tang, N.K.H. 2000. A study of patients' expectations and satisfaction in Singapore hospitals. *International journal of health care quality assurance*, 13(7):290-299.



Lin, H-C., Xirasagar, S. & Laditka, J.N. 2004. Patient perceptions of service quality in group versus solo practice clinics. *International journal of quality in health care*, 16(6):437-445.

Lin, N.P. & Chiu, H.C. & Hsieh, Y.C. 2001. Investigating the relationship between service providers' personality and customers' perceptions of service quality across gender. *Total quality management*, 12(1):57-67.

Lohr, K.N. & Schroeder, S.A. 1990. A strategy for quality assurance in Medicare. *New England journal of medicine*, 322(10):707-712.

Lytle, R. & Mokwa, M. 1992. Evaluating health care service quality: the moderating role of outcomes. *Journal of health care*, 12(1):4-14.

Matsebula, T. & Willie, M. 2007. Private hospitals. (In Harrison, S., Bhana, R., Ntuli, A., Roma-Rearden, J., Day, J. & Barron, P., eds. South African health review 2007. Durban: Health Systems Trust. p. 159-174.)

Mattila. A.S., Gradey, A.A. & Fisk, G.M. 2003. The interplay of gender and affective tone in service encounter satisfaction. *Journal of service research*, 6(2):136-143.

Mascarenhas, O.A., Kesavan, R. & Bernacci, M. 2006. Lasting customer loyalty: a total customer experience approach. *Journal of consumer marketing*, 23(7):397-405.

Maxwell, R.J. 1992. Dimensions of quality revisited: from thought to action. *Quality health care*, 1(3):171-177.

Medi-Clinic. 2000. Vision and values.

<http://www.mediclinic.co.za/about/pages/overview.aspx> Date of access: 10 January 2013.

- Meyer, C. & Schwager, A. 2007. Understanding customer experience. *Harvard business review*, 85(2):117-126.
- Meyers-Levy, J. & Sternthal, B. 1991. Gender differences in the use of message cues and judgements. *Journal of marketing research*, 28(1):84-96.
- Midttun, L. & Martinussen, P.E. 2005. Hospital waiting time in Norway: what is the role of organizational change? *Scandinavian journal of public health*, 33(6):349-369.
- Mokhlis, S. 2012. The influence of service quality on satisfaction: a gender comparison. *Public administration research*, 1(1):103-112.
- Moolla, A.I. 2010. A conceptual framework to measure brand loyalty. Potchefstroom: North-West University. Potchefstroom Campus. (Thesis - PhD.)
- Morrison Coulthard, L.J. 2004. Measuring service quality: a review and critique of research using SERVQUAL. *International journal of market research*, 46(4):479-497.
- Nekoei-Moghadam, M. & Amiresmaili, M. 2011. Hospital services quality assessment: hospitals of Kerman University of medical sciences, as a tangible example of a developing country. *International journal of health care quality assurance*, 24(1):57-66.
- Netcare. 2012. Vision and values. <http://www.netcare.co.za/content/5383/home/> Date of access: 10 January 2013.
- New Zealand Organisation for Quality. 2013. About the New Zealand Organisation for Quality. [http://www.nzoq.org.nz/about-nzoq\\_about-nzoq.php](http://www.nzoq.org.nz/about-nzoq_about-nzoq.php) Date of access: 15 August 2013.

NSIT **see** National Institute of Standards and Technology (NSIT)

National Institute of Standards and Technology (NSIT). 2010. Baldrige performance excellence program. <http://www.nist.gov/baldrige/> Date of access: 1 June 2013.

Nunnally, J.C. 1978. Psychometric theory. New York, NY: McGraw-Hill.

Øvretveit, J. 1992. Health service quality. Oxford: Blackwell Scientific.

Øvretveit, J. 2000. Total quality management in European healthcare. *International journal of health care quality assurance*, 13(2):74-79.

Oxford American Dictionary. 2010. 3rd ed. Oxford: Oxford University.

Pakdil, F. & Harwood, T.N. 2005. Patient satisfaction in a preoperative assessment clinic: an analysis using SERVQUAL dimensions. *Total quality management*, 16(1):15-30.

Pallant, J. 2007. Step by step guide to data analysis using SPSS for Windows. 3<sup>rd</sup> ed. Houndsmills: McGraw Hill Education.

Parasuraman, A., Berry, L.L. & Zeithaml, V.A. 1988. SERVQUAL a multiple-item scale for measuring consumer perceptions of service quality. *Journal of retailing*, 64(1):12-40.

Parasuraman, A., Berry, L.L. & Zeithaml, V.A. 1991. Refinement and reassessment of the SERVQUAL scale. *Journal of retailing*, 67(4):420-450.

Parasuraman, A., Zeithaml, V.A. & Berry, L.L. 1985. A conceptual model of service quality and its implications for future research. *Journal of marketing*, 49(4):41-50.

- Parasuraman, A., Zeithaml, V.A. & Berry, L.L. 1994. Reassessment of expectations as a comparison standard in measuring service quality: implications for further research. *Journal of marketing*, 58(1):111-124.
- Paul, P.D. 2003. What is the best approach for measuring service quality of periodontists? *Clinical research and regulatory affairs*, 20(4):457-468.
- Pefile, S., Li, Z., Ke, W., Guang, C., Chamas, C. & Bhojwani, H. 2005. Innovation in developing countries to meet health needs: experiences of China, Brazil, South Africa and India. *Harvard business review*, 85(2):116-126.
- Pool, A. & Hollyoake, M. 2006. Customer experience: the next battleground. [http://www.google.co.za/url?sa=t&rct=j&q=&esrc=s&frm=1&source=web&cd=1&ved=0CCsQFjAA&url=http%3A%2F%2Fwww.springboardcs.com%2Farticles%2Fuploads%2Fcustomerexperience.doc&ei=vOJeUrCdO4nNhAf5sAE&usg=AFQjCNGnpKol75\\_vUqoKPjjagcTyWE\\_4-A&sig2=7oPBuMDwEaJ7vaF5ctjRJA](http://www.google.co.za/url?sa=t&rct=j&q=&esrc=s&frm=1&source=web&cd=1&ved=0CCsQFjAA&url=http%3A%2F%2Fwww.springboardcs.com%2Farticles%2Fuploads%2Fcustomerexperience.doc&ei=vOJeUrCdO4nNhAf5sAE&usg=AFQjCNGnpKol75_vUqoKPjjagcTyWE_4-A&sig2=7oPBuMDwEaJ7vaF5ctjRJA) Date of access: 5 October 2013.
- Pride, W.M. & Ferrell, O.C. 2010. Foundations of marketing. 4<sup>th</sup> ed. Mason, OH: Cengage Learning.
- Pui-Mun, L. 2004. IT-enhanced service quality in the healthcare industry. *International journal of the computer, the internet and management*, 12(3):96-103.
- Ramjee, S. & McLeod, H. 2010. Private sector perspectives on national health insurance. (In: Padarath, A. & Fonn, S., eds. South African health review 2010. Durban: Health Systems Trust. p. 179-191.)
- Reeves, C.A. & Bednar, D.A. 1994. Defining quality: alternatives and implications. *Academy of management review*, 19(3):419-445.

Reichheld, F.F. 1993. Loyalty-based management. *Harvard business review*, 71(2):64-72.

Reichheld, F.F. 2008. The customer experience: people make the difference. [www.forum.com/\\_assets/download/1ef9cf47-1886-4c47-aa26-0598f838a7e5.pdf](http://www.forum.com/_assets/download/1ef9cf47-1886-4c47-aa26-0598f838a7e5.pdf) Date of access: 13 August 2013.

Reichheld, F.F. & Sasser, W. 1990. Zero defections: quality comes to service. *Harvard business review*, 68(5):105-111.

Reidenbach, E. & Sandifier-Smallwood, B. 1990. Exploring perceptions of hospital operations by a modified SERVQUAL approach. *Journal of health care marketing*, 10(4):47-55.

Rhodes University. 2008. Policy brief: The private health sector: learning from South African experience.

<http://www.google.co.za/url?sa=t&rct=j&q=&esrc=s&frm=1&source=web&cd=1&ved=0CDcQFjAA&url=http%3A%2F%2Fwww.ru.ac.za%2Fmedia%2Frhodesuniversity%2Fcontent%2Fiser%2Fdocuments%2Fdocs%2FThe%2520private%2520health%2520sector..doc&ei=IHBIUor3NcPPhAffpIEg&usg=AFQjCNFPaQ33JgOBzSpTToZIDt0qA7-YEW&sig2=92t5qnG64lsfGzZezOsmCA> Date of access: 20 July 2013.

Ross, C.K., Frommelt, G., Hazelwood, L. & Chang, R.W. 1987. The role of expectations in patient satisfaction with medical care. *Journal of health care marketing*, 7(4):16-26.

Rusinko, C. 2005. Using quality management as a bridge to environmental sustainability in organisations. *Society for advanced management journal*, 70(4):54-61.

Rust, R. & Zahorik, A. 1993. Customer satisfaction, customer retention and market share. *Journal of retailing*, 69(2):193-215.

Rust, R.T. & Oliver, R.L. 1994. Insights and managerial implications from the frontier. (*In Rust, R.L. & Oliver, R.L. eds. Service quality: new directions in theory and practice. Thousand Oaks, CA: Sage. p. 1-19.*)

Samuel, O., Grant, J. & Irvine, D. eds. 1994. Quality and audit in general practice: meanings and definitions. London: Royal College of General Practitioners.

Sekolanyane, J.E.M. 2004. Measurement of service quality of small business in the Vaal area. Potchefstroom: North-West University. Potchefstroom Campus. (Thesis - PhD.)

Seth, N., Deshmukh, S.G. & Vrat, P. 2005. Service quality models: a review. *International journal of quality and reliability management*, 22(9):913-949.

Shetty, Y.K. 1987. Product quality and competitive strategy. *Business horizon*, 30(5):46-52.

Söderlund, N., Schierhout, G. & Van den Heever, A. 1998a. Private health sector care. (*In Ntuli, A., ed. South African health review 1998. Durban: Health Systems Trust. p. 141-156.*)

Söderlund, N., Schierhout, G. & Van den Heever, A. 1998b. Private health care in South Africa. Durban: Health Systems Trust. (Technical report to chapter 13 of the South African health review.)

Sohail, S.M. 2003. Service quality in hospitals: more favorable than you might think. *Managing service quality*, 13(3):197-206.

South Africa. 1998. Medical Schemes Act No. 131 of 1998. Pretoria: Government Printers.

South Africa. 2003. National Health Act No. 61 of 2003. Pretoria: Government Printers.

South Africa. Department of Health. 2010. Annual performance plan, 2012/13-2014/15. Pretoria: Department of Health.

South Africa. Department of National Treasury. 2011. Intergovernmental fiscal review 2011.

<http://www.treasury.gov.za/publications/igfr/2011/default.aspx> Date of access: 1 August 2013.

Sower, V. & Fair, F. 2005. There is more to quality than continuous improvement: listening to Plato. *Quality management journal*, 12(1):8-20.

Statistical Package for Social Science V21. 2012. SPSS Inc.

Statistics South Africa. 2003. Investigation into appropriate definitions of urban and rural areas for South Africa. Discussion document, Report no. 03-02-20 (2001). Pretoria: Statistics South Africa.

Statistics South Africa. 2011. Census 2011. Pretoria: Statistics South Africa.

Statistics South Africa. 2013. Statistical release P0302: mid-year population estimates. Pretoria: Statistics South Africa.

Steenkamp, J.E.M. & Baumgartner, H. 1998. Assessing measurement invariance in cross-national consumer research. *Journal of consumer research*, 25(1):78-90.

Steffen, G.E. 1988. Quality medical care: a definition. *Journal of the American medical association*, 260(1):56-61.

Storbacka, K., Strandvik, T. & Grönroos, C. 1994. Managing customer relationships for profit: the dynamics of relationship quality. *International journal of service industry Management*, 5(5):21-38.

Sudman, S. & Blair, E. 1998. Marketing research: a problem-solving approach. Boston, MA: McGraw Hill.

Taner, T. & Antony, J. 2006. Comparing public and private hospital care service quality in Turkey. *Leadership in health service*, 19(2):146-157.

Van Heerden, J. 2010. Customer service at a private hospital in the North-West province. Potchefstroom: North-West University. Potchefstroom Campus. (Dissertation - MBA.)

Ware, J.E. & Snyder, M.K. 1975. Dimensions of patient attitudes regarding doctors and medical services. *Medical care*, 26(8):669-673.

Welman, C., Kruger, F. & Mitchell, B. 2005. Research methodology. 3<sup>rd</sup> ed. Cape Town: Oxford University.

Westlund, A., Cassel, C., Eklof, J. & Hackle, P. 2001. Structural analysis and measurement of customer perceptions, assuming measurement and specification errors. *Total quality management*, 12(7/8):873-881.

WHO **see** World Health Organization

Wicks, A.M. & Roethlein, C.J. 2009. A satisfaction-based definition of quality. *Journal of business and economic studies*, 15(1):82-97.

World Bank. 2012. Data indicators. <http://data.worldbank.org/indicator> Date of access: 12 August 2013.

World Health Organization. 2011. The Abuja Declaration: ten years on.



Geneva: World Health Organization.

Wright, 1996. Quality international research. (*In Punnett, B.J. & Shenkar, O. eds. Handbook for international management research. Oxford: BlackWell p. 63-83.*)

Yang, C.C. 2003. Improvement actions based on the customers' satisfaction survey. *Total quality management & business excellence*, 14(8):919-930.

Yeşilada, F. & Direktör, E. 2010. Health care service quality: a comparison of public and private hospitals. *African journal of business management*, 4(6):962-971.

Yousapronpaiboon, K. & Johnson, W.C. 2013. Measuring hospital out-patient service quality in Thailand. *Leadership in health services*, 26(4):338-355.

Zarei, A., Arab, M., Froushani, A.R. & Tabatabaei, S.M.G. 2012. Service quality if private hospitals: the Iranian patients' perspective. *Biomed central health services research*, 12(31):1-7.

Zeithaml, V.A., Berry, L.L. & Parasuraman, A. 1993. The nature and determinants of customer expectations of service. *Journal of the academy Of marketing science*, 21(1):1-12.

Zeithaml, V.A., Parasuraman, A. & Berry, L.L. 1990. Delivering quality service: balancing customer perceptions and expectations. New York, NY: Free Press.

## Appendices

### **Appendix A: Questionnaire**

#### **Purpose**

The data collected by this questionnaire will serve as a basis for the establishment of the importance of service quality in a private hospital setting as well as the satisfaction the patient experienced with the service provided.

#### **Confidentiality**

The questionnaire is for research purposes only and participation is voluntary. The questionnaires are confidential and anonymity is guaranteed.

#### **Expected Benefits**

Identifying the factors that are most valued by patients in this private health care hospital. This study will highlight possible short comings that health providers can focus on for future improvement, thus providing a better experience to the patient.

#### **Completion time**

Completion time for the questionnaire is estimated to be between 10-15 minutes.

#### **Ethical aspects**

The questionnaire should be filled in free will and completion of the questionnaire will indicate willing consent that the data can be used during the study. You may withdraw at any time without reason or fear of retribution.

**Researcher**

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**Supervisor**

Christoff Bisschoff

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**Section A: Demographics**

1	Gender/Geslag	1. Male	
		2. Female	

2	Age/Ouderdom		Years (at last birthday)
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3	Home Language/Taal	1. English		2. isiZulu	
		3. Afrikaans		4. Northern Sotho	
		5. siSeswati		6. XiTsonga	
	Other (please specify)				

4	Race/Ras	1. Asian		2. White	
		3. Black		4. Indian	
	Other (please specify)				

5	Reason for visit/Rede vir besoek	1. Surgical	
		2. Medical	
		3. Maternity	

6	Duration of stay (days)/Duur van verblyf (dae)	a) 0-1		b) 2-3	
		c) 4-5		d) 6-	





7	Highest level of education/Hoogste vlak van opvoeding	1. Matric		2. Diploma	
		3. Degree		4. Masters	
		5. Doctorate		6. Other (specify)	

8	How do you rate our facility/Hoe het u ons fasiliteit ondervind	Rating	Poor			Excellent	
			1	2	3	4	

9	How likely would you refer this facility to others/Sal u ons fasiliteit aanbeveel aan ander	Rating	Not likely	Very likely		
			1	2	3	4

### Section B: Perception/Satisfaction

Regarding the variables listed below in the middle column, how do you rate the **importance** of each variable for hospital service quality and to which extent was this to your **satisfaction**. Thus, by marking a 4, will indicate a rating of excellent/strongly agree and a 1 will indicate a rating of poor/disagree. If you feel that the service provided was either between excellent and poor mark 2-4.

No		Importance				Question	Satisfaction			
										
1	Premises/Employees	1	2	3	4	The hospital has state of the art technological equipment/Die hospitaal het tegnologies gevorderde toerusting	1	2	3	4
2		1	2	3	4	The buildings, landscape and physical layout is visually appealing/Die geboue, landskap en fisiese uitleg is visueel aantreklik	1	2	3	4
3		1	2	3	4	The employees of the hospital are professionally dressed/Die werknemers by die hospitaal het n professionele voorkoms	1	2	3	4
4		1	2	3	4	The booklets, pamphlets and statements contain all necessary information and is in keeping with the type of service that is	1	2	3	4

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						provided/Die inligting stukke bevat die nodige informasie wat benodig word in so 'n instansie				
5	Doctors' Medical Service	1	2	3	4	Doctors are punctual at all times/Dokters is stiptelik ten alle tye	1	2	3	4
6		1	2	3	4	The care provided by the doctors creates a safe environment/Die sorg wat deur die dokters verskaf word laat my veilig voel	1	2	3	4
7		1	2	3	4	Doctors in the hospital are very knowledgeable and able to answer questions satisfactory/Die dokters in die hospitaal is kundig en kan alle vrae bevredigend beantwoord	1	2	3	4
8		1	2	3	4	A skilled doctor is available at all times during my hospital stay and is aware of my specific case/'n Bekwame dokter is ten alle tye beskikbaar en bewus van my spesifieke geval	1	2	3	4
9		1	2	3	4	Doctors in the hospital listen to what I have to say/Dokters in die hospitaal luister na wat ek te se het	1	2	3	4
10		1	2	3	4	Doctors explains carefully what is required of me/Dokters verduidelik sorgvuldig wat van my verwag word	1	2	3	4
11		1	2	3	4	Enough time is spent on me as a patient by the doctor/ Genoegsame tyd word aan my spandeer deur die dokter	1	2	3	4
12		1	2	3	4	I am examined very carefully by doctors before my condition is determined/Ek word sorgvuldig ondersoek deur die dokter voordat my kondisie bepaal word	1	2	3	4
13		1	2	3	4	Doctors treat me with respect/Dokters hanteer my met respek	1	2	3	4
14		1	2	3	4	All decisions regarding my medical care is discussed with me by my doctor/Alle besluite aangaande my medisie sorg word verduidelik deur my dokter	1	2	3	4
15		1	2	3	4	The excellent reputation of the doctors proceeds them/Die uitstekende reputasie van die dokters gaan hulle vooruit	1	2	3	4
16		1	2	3	4	Doctors in the hospital are accredited with the highest degrees/Dokters in die hospitaal is geakkrediteer met die hoogste grade	1	2	3	4
17		1	2	3	4	Unnecessary diagnostical medical procedures are never ordered by the doctors in the hospital/Onnodige diagnostiese mediese prosedures word	1	2	3	4

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						nooit deur die dokter aangevra nie				
18		1	2	3	4	The laboratory and x-ray technicians in the hospital are highly skilled/Laboratories en x-straal tegnikuste in die hospitaal besit die nodige vaardighede	1	2	3	4
19	Diagnostics	1	2	3	4	Laboratory tests as well as x-rays are done correctly the first time/Laboratoriese toetse en x-strale word reg gedoen die eerste keer	1	2	3	4
20		1	2	3	4	Lab tests and x-rays are delivered punctually/Labaoriese toetse en x-strale word stiptelik afgelewer	1	2	3	4
21	Nursing Medical Service	1	2	3	4	The personal hygiene of nursing personnel are exceptional/Die persoonlike hiegiene van die verpleegpersoneel is van hoogstaande gehalte	1	2	3	4
22		1	2	3	4	The service provided by nursing personnel are skilful and knowledgeable at all times/Die diens wat deur die verpleegpersoneel verskaf word is ervare en kundig ten alle tye	1	2	3	4
23		1	2	3	4	Services (tests, procedures and medication) provided by nursing personnel are always on time/Dienste (toetse, prosedures en medikasie) wat deur verpleegpersoneel verskaf word is altyd stiptelik	1	2	3	4
24		1	2	3	4	Nurses are empathetic/Verpleegpersoneel is altyd empateties	1	2	3	4
25	Nursing Medical Service	1	2	3	4	Nurses communicate clearly in an acceptable language/ Verpleegpersoneel kommunikeer in n duidelike aanvaarbare taal	1	2	3	4
26		1	2	3	4	Response of nursing personnel is done in an acceptable time-span/Die reaksie tyd van die verpleegpersoneel is binne n aanvaarbare tydsbestek	1	2	3	4
27		1	2	3	4	I am provided with personal attention by the nurses in the hospital/Ek ontvang persoonlike aandag van die verpleegpersoneel	1	2	3	4
28		1	2	3	4	My specific needs are understood by nursing personnel/My persoonlike behoeftes word verstaan deur die verpleegpersoneel	1	2	3	4

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29	Admissions	1	2	3	4	The admission process is quick and efficient/Die opname proses is vining en doeltreffend	1	2	3	4
30		1	2	3	4	Directions and schedules are provided by admission personnel/Aanwysings en skedules word deur opname personeel aan my verleen	1	2	3	4
31		1	2	3	4	Admission personnel are friendly and helpful/Opname personeel is vriendelik en behulpsaam	1	2	3	4
32	Meals	1	2	3	4	Meals are served at correct temperatures/Kos word teen die regte temperatuur aan my verskaf	1	2	3	4
33		1	2	3	4	Meals are of a very high quality/Kos is van hoogstaande gehalte	1	2	3	4
34		1	2	3	4	Meals are prepared according to each individual's specific needs/Kos word voorberei volgens die behoeftes van elke individu	1	2	3	4
35	Wards	1	2	3	4	Rooms are attractive/Kamers is aantreklik	1	2	3	4
36		1	2	3	4	Cleanliness of rooms and bathrooms are maintained/Die netheid van kamers en badkamers word gehandhaaf	1	2	3	4
37		1	2	3	4	Housekeeping staff is pleasant/Skoonmakers is aangenaam	1	2	3	4
38		1	2	3	4	Noise levels are acceptable/Geraas vlakke is aanvaarbaar	1	2	3	4

## Appendix B: Letter from language editor

November 7, 2013



TO WHOM IT MAY CONCERN

### Re: Letter of confirmation of language editing

The dissertation "Measuring service quality in a private hospital" by JD Clapton (12299081) was language, technically and typographically edited. The sources and referencing technique applied was checked to comply with the specific Harvard technique as per North-West University prescriptions. Final corrections as suggested remain the responsibility of the student.

A handwritten signature in black ink, appearing to read 'Antoinette Bisschoff'.

**Antoinette Bisschoff**

Officially approved language editor of the NWU since 1998  
Member of SA Translators Institute (no. 100181)