

Exploring the healthcare service quality in a provincial hospital

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ABSTRACT

Title: Exploring the healthcare services quality in a provincial hospital.

Key terms: Service quality, Public healthcare, healthcare industry in South Africa, SERVQUAL

Service quality has been said to be a determinant of customer satisfaction. The perceived quality of services received, influences consumption behaviours and patterns. With regards to healthcare services, the expectation is that services provided will be of the best quality, effective and efficient and that it will result in an increased utilisation of the services offered.

When patients however, experience poor quality service, it can result in them not being interested in using the service at a particular service provider. Service delivery and the state of health facilities in the public sector have been deteriorating over the last two decades. The perception of public hospitals include that they are being run-down by management, have poor maintenance, a tendency to be over-crowded and sometimes even lacking essential services such as piped water, proper electricity, medical equipment, telephones and accessibility by road. The purpose of this study was to determine the perceptions of patients and their immediate family members regarding the quality of healthcare services provided in a specific public hospital. The information obtained can add value to the public hospital to proactively address aspects that may have a detrimental impact on their service quality.

The study made use of the SERVQUAL model. An adapted questionnaire was compiled utilising the SERVQUAL model. The questionnaire was divided into several sections inclusive of tangibles, reliability, responsiveness, competence, courtesy, credibility, access, security, communication and understanding the customer.

A total study population of 200 participants with a 100% response rate were included in the research. Demographics noted of the sample were that they were predominantly females (68,50%), African (89,00%), day-visitors (68,50%), and patients to the public hospital (74,50%). The majority of the sample also noted having visited the hospital more than once.

Analysis of the data indicated a 9-Factor Model consisting of Responsiveness of hospital staff to patients' problems, Communication and Access within the hospital, Tangibles,

Competence of the hospital staff, Understanding the customer, Security, Credibility of the hospital, Reliability of the services performed and Effectiveness and Efficiency of the services received. Cronbach alpha coefficients varying from 0,77 to 0,89 were obtained. A second-order factor analysis indicated a 1-factor structure, namely Total Quality Service with a Cronbach alpha coefficient of 0,95.

More positive results regarding service quality were obtained for participants older than 50 years, pensioners, unemployed participants and participants with a lower educational level than matric, whilst employed participants within the age group 30 to 39 years and participants with a postgraduate qualification level had more negative perceptions towards the quality of health service. Care should be taken on how the perceptions of the quality services received can also be improved in the latter groups.

The limitations of the study were identified and recommendations for the hospital and future research were made.

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CHAPTER 1

INTRODUCTION AND PROBLEM STATEMENT

1.1 INTRODUCTION

1.1.1 Background of the Study

This chapter explores the concept of service quality along with the perceptions of what quality of services should entail, with specific reference to the public healthcare sector. The study discusses the different types of service models and in particular the SERVQUAL model which will be shadowed in this research.

For businesses to be effective, to increase their competitiveness and to ensure long term sustainability, the prominence of their focus should be on retaining customers through improved satisfaction levels. Research indicated that there is a direct relationship between service quality, profitability, customer retention, loyalty and the growth of an organisation (Wanjau, Muiruri, & Ayoda, 2012:114). Understanding patient's perceptions and expectations of the quality of care or service is crucial. The perceived quality of healthcare services often influences the consumption behaviour and patterns of health services (Baltussen, Haddad, & Sauerborn, 2002:42). This then has a direct impact on the sustainability of the health provider, being a hospital or related institution. The overall evaluation of organisational performance is, in many instances, based on achieving high operational efficiency (Correa, Gil, & Redin, 2005:3). In this regard, the public health sector has been notorious for not running its business processes to ensure profitability and organisational development. Despite the attempts of the South African Government to transform healthcare, the public healthcare system remains under-resourced and over-used (De Jager & Du Plooy, 2007:97). The shortage of staff, basic equipment and medication, necessary fundamentals such as water, telephone access and reliable electricity among others, and long patient waiting times, were often reported as obstacles in providing quality healthcare (Mahomed & Bachmann, 1998:123).

In their research amongst patients treated at a provincial hospital in Gauteng, De Jager and Du Plooy (2007:108) found that patients experienced a sense of dissatisfaction with regard to the overall services rendered. They noted that when a climate of dissatisfaction amongst patients (i.e. customers) is prevalent, that there is the perception that expectations have not been met, with specific concerns related to hygiene, state of the art equipment, safety and caring. De Jager and Du Plooy (2007:109) indicate that

the influence of external conditions is considered as fundamental constraints to the experience of quality health services. These conditions are mainly insufficient and ineffective government funding and ongoing socio-political transformational challenges in the public health service delivery. This research focused on the quality of functional services through the analysis of the patients and their family members' perception regarding the attitudes, behaviour and service mindedness of the services received in a public hospital and its influence on effective and efficient business processes.

1.1.2 Public healthcare

The African National Congress (ANC) post-apartheid government posed the highly desirable goal to provide access to basic healthcare for all South Africans. The focus of the goal was to correct the grossly unequal and ineffective health system entrenched during the apartheid era (Ruff, Mzimba, Hendrie, & Broomberg, 2011:1). The inequities in access to healthcare were largely due to distorted resource allocation, travelling costs to access healthcare facilities, and the provision of care to a population with insufficient human resources (Harris, *et al.*, 2011:103).

Although the primary healthcare package was to work for the people of South Africa, it was reported to have negative effects on healthcare providers, citing it as an additional burden on the nurses, with lack of support and a general morale of being overworked (Harrison, 2009:13). Public hospitals are also perceived as highly stressed institutions due to staff shortages, unmanageable workloads and management failures (Cullinan, 2006a). They bear the brunt of increased patient loads and as government institutions, are often described as uncaring.

Harrison (2009:18) reported on the disproportionate financing between the public and private health sector, with focus on the amount of beneficiaries in both systems as being another contributing factor. The other contentious issue is the availability of health personnel which is known to affect improving the efficiency and quality of healthcare service that is being provided in the public sector (Harrison, 2009:28).

1.1.3 Healthcare in Soweto

By the beginning of the 1930's the National Government saw the need to bring healthcare to Soweto (Bonner & Segal, 2014). The first clinic was opened in 1932 at Orlando, with the second clinic being constructed in 1947. In 1941 the Imperial Military Hospital was built for the treatment of British troops,

becoming then the largest hospital in South Africa, known today as the Chris Hani Baragwanath Academic Hospital (CHBAH) with over 200 beds (Bonner & Segal, 2014).

In the history of the Chris Hani Baragwanath Hospital (2011) it has been noted that the hospital has not only been providing healthcare services to approximately 3.5 million Sowetan citizens, but also serves as a referral hospital for a large part of the country, including surrounding African States. By early 2000, the Department of Health saw the need for another hospital in the area, with the aim of alleviating pressure on surrounding clinics as well as a way to create job opportunities for the locals (Bonner & Segal, 2014). This resulted in the inception of a 300 bed district hospital in Soweto to the cost of R730million and an estimated R49.7million worth of medical equipment (Naidoo, 2014). The construction of the hospital started in 2006 and stretched over eight years to complete with an overspent on the allocated budget. The hospital named Zola Jabulani Hospital was finally opened just a week before the 2014 South African general elections on 14 April 2014, and was as such perceived as an election campaign strategy for the ANC (SABC, 2014a).

Looking at all the expenses that went into realising this dream hospital, professional quality service and good attitudes from the staff was a high expectation from the public and patients (Naidoo, 2014). To ensure quality services at the hospital, Minister Motsoaledi (Minister of Health of South Africa) purported that inspectors “would visit the new hospital to check issues like infection control, the attitude of staff towards patients, cleanliness and waiting times for patients” (Naidoo, 2014). Another innovative service delivery strategy that was envisaged to be used in the hospital was the “*Just in time*” inventory management process focused on enhancing service, quality accountability, responsiveness and efficiency. The Department of Health further indicated that local citizens will be continuously educated and informed on the patient referral system and that the public will be encouraged to seek medical attention at the relevant levels (SABC, 2014b). All these were assumed to help ensure that good quality services are rendered and that the customers (public, patients) are satisfied (Naidoo, 2014).

With all the attempts noted to ensure that quality of services will be excellent there have been however, reports of patients not getting the full access as the Department of Health has promised. Mkhwanazi (2014) indicated that the hospital was turning patients away when they did not meet the set “emergency” criteria with little to no clarity on what the criteria actually entails. It has even been noted that the hospital, at one point, operated without doctors (Mkhwanazi, 2014, SABC, 2014a). These events all occur within less than a year from the hospital being operational. With the hospital still in its inception phase, it may already experience the common problems as traditionally reported in other public sector hospitals.

1.1.4 Quality of Service

Rahman, Khan, and Haque (2012:238) conceptualise customer satisfaction as an individual's feeling of pleasure or disappointment resulting from comparing a product's perceived performance (or outcome) in relation to his or her expectations. It is an evaluative or effective response, which is often an experience that is interpreted as 'post-purchase' (Yogesh & Satyanarayana, 2012:193). For an organisation to retain a customer and to have a positive word of mouth review it will depend on whether the customers are satisfied or not (Rahman, *et al.*, 2012:238). The overall customer attitude towards a service provider along with the emotional reaction to what is expected and what is received plays an integral part in customer satisfaction.

By definition, quality of service relates to the outcome of an evaluation process where the consumer compares expectations with the services received (Yogesh & Satyanarayana, 2012:192). Quality is defined as "the ability of a set of inherent product, system or process to fulfil requirements of customers" (Sivesan, 2012:1).

Buttell, Hendler, and Daley (2007:68) propose high quality healthcare to have the following components:

- Safety where patients are prevented from harm with the aim of helping them;
- Effectiveness where evidence based medicine is used to benefit and to avoid underuse or overuse of resources;
- Patient centeredness based on clinical decisions and provided care is respectful to the patient and the values, needs and preferences;
- Rendering services timely to avoid unnecessary delays and waiting times are reduced by those giving care;
- Efficiency by avoiding waste of resources; and
- Equitable care to all people irrespective of their gender, race, geographic location and/or socio-economic standing.

Punnakitikashem, Buavaraporn, Maluesri, and Leelartapin (2012) indicate that service quality is aimed at understanding how customers perceive the quality of the service rendered. Service quality can be categorised into two aspects which are the technical ability concentrating on what the customers get; and a functional aspect relating to how they get it (Rahman, *et al.*, 2012:201). Within the current research, the focus is predominantly on the quality of functional services which is related to behaviour, attitude, accessibility, customer contact, internal relationship, and services mindedness. An important aspect

taken into account in this research focusing on perception, is that though the functional services focused on is of high priority for patients and their immediate family members, they may not have knowledge to effectively and accurately evaluate the technical quality aspect thereof (Yesilada & Direktör, 2010:963).

Azam, Rahman, Talib, and Singh (2012:390) note that perceived service quality can be identified and measured through the following six dimensions:

- Ease of use, friendliness, easy navigation;
- Information matches the needs of the customer;
- Accuracy of content;
- Timeless response;
- Innovative of the site/place; and
- Privacy.

These dimensions are very important in the provision of healthcare as they are in line with the key priorities, mission and vision of the Department of Health. In addressing reports that the inefficiencies in the healthcare system stem from poor quality care (Harrison, 2009:30), the Department of Health has committed to improving quality of health services through the National Quality Accreditation Body (SARRAH, 2010). Commitments to improve the quality of health services include overhauling management systems and structures in the public health sector, proper planning and management of human resources for health, the strategic implementation of infrastructure development and maintenance initiatives and key stakeholders to promote better health outcomes for all.

These will happen with the government focus on the six areas:

- Cleanliness of health institutions;
- Safety and security of patients;
- Attitudes of healthcare worker;
- Waiting times;
- Infection control measures; and
- Prevention of drug stock outs (SARRAH, 2010).

1.1.5 Service Models

Seth, Deshmukh, and Vrat (2005:926) note that for the period 1984 to 2003, nineteen quality of service conceptual models were reported. Each model seeks to represent a different point of view regarding services.

A model is defined as a logical construct used in an effort to interpret a construct by breaking it down into a small number of variables and predicting a real phenomenon through simplification, unraveling and dismantling so its component parts are visible for examination (Baccarani, Ugolini, & Bonfanti, 2010:1).

Gronroos' (1984:40) study to assess service quality, proposes that expected service and perceived service should match in order for customer satisfaction to be achieved. Buttell, *et al.* (2007:62) however, holds that the first service quality model of Parasuraman, Zeithaml, and Berry (1988), paved the way for further research on this subject. The model measures discrepancies or gaps between services that are offered and the customer's perception of the services received (Abu Naser, Akter, & Ghosh, 2006; Gibson, 2009). The Parasuraman, *et al.* (1988:23) model seek to measure five components of service quality namely:

- Tangibles – physical facilities, equipment, staff appearance;
- Reliability – ability to perform services accurately;
- Responsiveness – willingness to help and respond to customer needs;
- Assurance – ability of staff to inspire confidence and trust; and
- Empathy – the extent to which caring individualised service is given.

This model will be adopted within the current study to assist in understanding how customers i.e. patients to a public hospital in Soweto and their immediate family members perceive the quality of hospital services. This model was selected for this study as the perceived service quality and satisfaction model is more significant in this study as it assists in finding the construct of service quality and customer satisfaction and it has a set of measurable attributes (Seth, *et al.*, 2005:925). It further highlights the effect of expectations, perceived performance desires, desired congruency and expectation disconfirmation on overall service quality and customer satisfaction (Rahman, *et al.*, 2012:238).

1.2 PROBLEM STATEMENT

In today's global competitive market, quality and customers' satisfaction is recognised to play an important role in business success and competitiveness. Although customer satisfaction can differ from person to person, it is important that service quality be determined and understood (Sivesan, 2012:2).

Punnakitikashem, *et al.* (2012) expounded that improving service quality can enhance business performance and this often is a greater challenge in achieving customer expectations and satisfaction. To

achieve increased performance which can ultimately lead to achieving organisational goals and greater satisfaction amongst its customers, i.e. patients, public servants need to understand the importance of being efficient and effective. The way the patient is treated helps building the corporate image of the hospital. Harrison (2009:31) proposed that improving quality care requires systems of accountability for better performance, and incentivised processes of training and development.

Patients evaluate healthcare experiences based on attitudes toward caregivers and the facility itself. It is therefore important to highlight that there is a strong connection between health service quality perceptions and customer satisfaction. The aim of this study was to assess how the service within a public hospital is perceived.

The following research questions guided the research study:

- a. How is quality of service conceptualised in the literature?
- b. What are the service quality dimensions within the health industry that will indicate good or bad quality of services in a hospital, as indicated in the literature?
- c. What are the experiences of the quality of services that a specific public hospital rendered?

1.3 RESEARCH OBJECTIVES

The study envisaged to investigate how patients and their immediate family members perceive the quality of services rendered in a public hospital and to make recommendations to the hospital on how to be proactive in improving the quality of their services.

1.3.1 Main Objective

The main object of this research was to investigate the perceptions of patients and their immediate family members with regard to the provided healthcare / services in a public hospital.

1.3.2 Secondary Objectives

The secondary objectives for the study are:

- To conceptualise service quality from the literature;

- To determine the service quality dimensions within the health industry that will indicate good or bad quality of services in a hospital, as indicated in the literature;
- To determine the experience of the quality of services rendered in a specific public hospital;
- To make suggestions to the hospital on how to increase patient satisfaction and service quality; and
- To make recommendations for future research.

1.4 RESEARCH METHODOLOGY

The research method consists of a literature review and an empirical study.

1.4.1 Literature review

A literature review was carried out to assist the researcher in gaining an understanding of the context of the subject in terms of relevant and current studies, as well as the available knowledge within the subject discipline. The review further aided in justifying the reason for the research. The literature review was specifically focused to obtain clarity and information regarding the public versus the private health sector, service quality and the related service models and the perception of the quality of services, specifically within the public health sector.

The sources that were consulted include:

- www.emeraldinsight.com
- Efundu electronic library
- Access to accredited journals.

1.4.2 Research design

A cross-sectional survey design was applied to collect the data and to attain the research objectives. Cross-sectional survey designs are used to examine groups of subjects in various stages of development simultaneously (Burns & Grove, 1993) in a short period of time, which can vary from one day to a few weeks (Du Plooy, 2001). The survey is a data-collection technique in which questionnaires are used to gather data about an identified population. This design is also used to assess inter-relationship among variables within a population (Shaughnessy & Zechmeister, 1997). The cross-sectional survey design is best suited to address the descriptive and predictive functions associated with the correlational design, whereby relationships between variables are examined.

1.4.3 Participants

Consent to do the study at the hospital was requested and confirmed. The population size included 200 participants being both males and females who were patients or family members visiting that have visited the public hospital. Inclusion criteria were patients or family members who have visited the hospital at least once from the date the hospital started operating. A patient should be above the consenting age (16 years and above) to participate in the study. The nature and requirement of the survey participation will be on a voluntary basis and all information provided would be kept private and confidential.

The simple random sampling method was applied to collect the data. The setting for data collection was for the out patients' department while the patients were waiting for appointment or consultation. While the questionnaire was distributed, the researcher gave cooperation and clarification to respondents.

1.4.4 Measuring battery

A biographical questionnaire with an adapted version of the SERVQUAL questionnaire were used to measure the participants' perceptions of the quality of service in a public hospital. These instruments are discussed in more detail in Chapter 3.

1.4.5 Statistical Analysis

The statistical analysis was done carried with the help of the SPSS-programme (SPSS Inc., 2009). Descriptive statistics (e.g. means, standard deviations, skewness and kurtosis) were used to analyse the data. Cronbach alpha coefficients were used to determine the internal consistency, homogeneity and unidimensionality of the measuring instruments (Clark & Watson, 1995). Coefficient alpha contains important information regarding the proportion of variance of the items of a scale in terms of the total variance the particular scale explained.

Pearson product-moment correlation coefficients were applied to specify the relationships between the variables. In terms of statistical significance, it is decided to set the value at a 95% confidence interval level ($p \leq 0,05$). Effect sizes (Steyn, 1999) were used to determine the practical significance of the findings. A cut-off point of 0,30 (medium effect, Cohen, 1988) was set for the practical significance of correlation coefficients.

Multivariate analysis of variance (MANOVA) was used to determine the significance of differences between the service quality factors of demographic groups. MANOVA tests whether or not mean differences among groups in a combination of dependent variables are likely to have occurred by chance (Tabachnick & Fidell, 2001). In MANOVA, a new dependent variable that maximises group differences was created from the set of dependent variables. Wilk's Lambda was used to test the likelihood of the data, on the assumption of equal population mean vectors for all groups, against the likelihood on the assumption that the population mean vectors are identical to those of the sample mean vectors for the different groups. When an effect is significant in MANOVA, one-way analysis of variance (ANOVA) was applied to discover which dependent variables have been affected. Seeing that multiple ANOVAs were used, a Bonferroni-type adjustment was made for inflated Type I error. Tukey tests were done to indicate which groups differed significantly when ANOVA's were performed.

1.5 ETHICAL CONSIDERATION

The purpose and aims of the study were explained to each participant and they were made aware that participation was voluntary. Each participant had to sign an informed consent before participating in the research. They were also informed on the privilege of withdrawing from participating in the study if they at any time wish to quit. The participants had been made aware that all their information, answers, data and actions will at all times be kept confidential and is only to be used for the current study.

1.6 CHAPTER DIVISION

The mini-dissertation is presented in the following chapters:

Chapter 1: Introduction and problem statement

Chapter 1 provided an introduction to the context and background of the proposed study. The chapter progressed from defining the problem statement, and laying out the research objectives, to concluding with a description of the research methodology to be utilised.

Chapter 2: Literature review

Chapter 2 explores the South African healthcare industry with specific reference to the public healthcare and services rendered. Further focus is on the definition and components of quality of service and various service models and indications on quality of service in the public healthcare sector. The literature is explored to provide understanding in the various theoretical aspects of the study.

Chapter 3: Research Methodology

Chapter 3 addresses the objectives of the study. It further details the research methodology utilised, the participant characteristics of the sample and the statistical analysis processes utilised.

Chapter 4: Empirical Study

Chapter 4 details the analysis of the collected data through statistical means and provides a subsequent discussion of the results.

Chapter 5: Conclusions and Recommendations

Chapter 5 draws conclusions based on the detailed results of the data analysis, and presents recommendations for future research as well as specific recommendations to the public hospital.

1.1.7 CHAPTER SUMMARY

Assessing the service satisfaction level of patients is of importance because it will help identify and diagnose service quality gaps that exist in the hospital. This will assist in identifying focused improvement initiatives. The results of this study can also be used to benchmark and provide a baseline measurement which the hospital can use for future performance improvements.

This chapter presented the context and background for the research. It covered the problem statement, research objectives, and research method implemented to execute this study. Finally, it presented a layout of the chapters contained in the document.

Chapter 2 deals with the relevant literature related to the study.

CHAPTER 2

LITERATURE REVIEW

2.1. INTRODUCTION

The literature review provides some insights into the discussion and reasons for the factors that might attribute to the deteriorating quality of services, particularly in the public healthcare sector. These factors may be blamed for the possible cause of instability in care, poor service delivery and reasons for shortage of healthcare professionals.

Service quality is a determinant of customer satisfaction. Organisations therefore have to plan and show that the services they provide are aligned with customers' expectations (Agbor, 2011:11). By continuously improving the overall performance of an organisation's customer satisfaction and service quality (Agbor, 2011:5), an organisation can ensure that it remains financially viable. The quality of healthcare services provided, is indicated through patients' satisfaction of received services and their response(s) to that service. O'Donnell (2007:2822) indicated that access to healthcare services holds two sides, being a supply side coupled by the expectation that healthcare services provided will be of good quality and effective, and a demand side referring to the utilisation of services offered. When patients experience poor quality service, it can result in them not being interested in using the service at a particular service provider. Harber, Ashkanasy, and Callan (1997:14) indicate that satisfaction can therefore not only be based on the quality of service that has been received without an explicit measure of what customers actually expected to receive or experience.

With prospective patients becoming more familiar with the quality of healthcare provided at particular health providers, there is an increased awareness of the competitive interchange between various healthcare providers. The human resources imbalance and skewed flow of resources seems to favour the private healthcare sector. This has a negative impact on the public healthcare sector (DPME, 2014). Further it could result in the public healthcare providers being at a competitive disadvantage. It appears that the provision of quality service is more prevalent in the private sector as a direct consequence of their competitive advantage (Agha & Do, 2009:89). Despite various efforts to increase quality service in the public healthcare sector, the quality of management services within the public healthcare has still deteriorated. Agha and Do (2009:89) indicate that this deterioration might be the result of the growing demand for quality care from users and patients, as well as the growing competition from the private sector, particularly for revenue.

Consensus on the true measure of service quality for healthcare is yet to be reached. However, it seems that aspects such as the increasing demands in competition for healthcare provision along with the ever increasing demand of patients are a clear indication of the importance of measuring and understanding quality service (Agha & Do, 2009:89).

This chapter investigates service quality concepts, the measurement thereof and the strategies that the National Department of Health (NDoH) apply to provide service quality. An overview of the different service models is also presented, with the focus of the discussion being on the SERVQUAL model of service quality.

2.2. THE SOUTH AFRICAN HEALTHCARE SYSTEM

The inherited South African National Healthcare System post the 1994 election was racially segregated, fragmented and predominantly adopted as a legacy of apartheid, that has been described as centralised and undemocratic (DPME, 2014). The National Health Plan (NDP) for South Africa envisaged an integrated, equitable and comprehensive Primary Healthcare (PHC) approach through the process of creating a single, non-discriminatory health-care system (ANC, 1994). This approach however, seemed more challenging than initially anticipated, especially when considering the two distinctive sectors within the South African healthcare system.

The current health system is known for its two parallel sectors, namely Private and Public sectors. The difference is mainly in administration, policy and revenue generation. The private health sector's hospital administration and policy making is the responsibility of a person or a group while in the public sector, administration, strategies and policy are the responsibility of government employees (Mukhtar, Saeed, & Ata, 2013:65). The finances of the two sectors are also generated and managed differently with, private hospitals being predominantly financed by its owner, and public hospitals being dependent on state funds (Mukhtar, *et al.*, 2013:65). Private healthcare is more profit oriented (Fadila, Ogujiuba, & Stiegler, 2013:601) and is managed as a strategic business model with the aim of continuous financial growth (Bhatta, 2001). The competitive advantage obtained from this model, results in the private healthcare sector having a competitive advantage to the public healthcare sector. Consequently, the private health sector is also able to provide excellent service quality. Bisschoff and Clapton (2014:43), through a study in a private hospital, confirm that although the levels of service quality in the private hospital were high, the need to ensure maintenance, the improvement of the appearance of the facility, along with the further training of staff is needed to increase the patient relationships.

The perception of public hospitals, on the other hand, is that they are run-down by their management, with poor maintenance and a tendency to be over-crowded (Cullinan, 2006b:13). Bateman (2012) indicates that in 2012 a number of South African public health facilities lacked essential services in order to run actively. These basic services included piped water, proper electricity, essential medical equipment, telephones and accessibility by road. Also, at the time, the overall staff vacancy rate was 46%. Contributing to the negative perceptions of public health facilities seems to be delays in awarding tenders, rolling over of budgets and poor performance of contractors (Bateman, 2012). Service delivery and the state of health facilities in the public sector have continually deteriorated over the last two

decades. This appears to be related to mismanagement, as well as a lack of accountability and monitoring (Health System Trust, 2013).

Despite negative perceptions, public hospitals often consist of centres of excellence such as the neurosurgery department at the Chris Hani Baragwanath Hospital and the Trauma Unit at Charlotte Maxeke Johannesburg Academic Hospital (Von Holdt & Murphy, 2006:1). These centres of excellence are based on providing quality care despite overcrowding, underpaid staff, lack of management, corruption, lack of resources and a need for more financial resources (Yesilada, & Direktör, 2010:968).

Although the NDoH is responsible for the provision of healthcare resources, the responsibility to provide quality clinical care and management remains the obligation of the healthcare professionals (Moyakhe, 2014:80). Still, due to some social class determinants in South Africa, health inequalities have been evident (Blecheri, Kolliparai, DeJagerii, & Zulu, 2011:39). A healthcare system has to ensure that health statuses continuously improve and that there are no inequalities when healthcare are provided (Ataguba, Akazili, & McIntyre, 2011:2). The successes in public healthcare for the past 20 years has been plagued with major challenges including persistent health inequities, increasing costs of healthcare, limitation in the implementation of programs e.g. the District Health System and more importantly, poor quality of care. It has also been exposed to persistent complaints and negative media reports (DPME, 2014).

In the National Health Act, 61 of 2003, legislation was passed in which a unified national health system was introduced to provide equitable services from both the private and public sector (Health Charter, 2011:13). As per the Department of Health (DoH, 2002), the National Healthcare System has over the past twenty years reformed and has strengthened through its focus on improving infrastructure, planning, developing and managing human resources, ensuring quality of care at PHC institutions, re-engineering PHC, and reducing the cost of healthcare.

To provide healthcare that is accessible, equitable and of good quality requires good stewardships, the development of human resources, the allocation of adequate finances, the accessibility of medicine, and the availability of important technologies (Schaay, Sanders, & Kruger, 2011:2). As political, cultural, social and institutional factors influence the South African healthcare system (Peabody, Taguiwalo, Robalino, & Frenk, 2004:1293), the National Development Plan (NDP) 2030 vision was adopted to ensure an accessible health system with positive health outcomes (DPME, 2014).

The health goals, indicators and action points towards the 2030 vision are for all South Africans, irrespective of their affordability and the frequency of their use of the service, to firstly have access to an equal standard of care that uses a mutual fund. Secondly, the vision envisages allowing equitable access to healthcare (NDP, 2012). To achieve these goals one of the priorities includes, strengthening the health system by establishing a coherent and vision-based executive decision-making process, promoting quality, and measuring and benchmarking actual performance against standards for quality (NDP, 2012).

The monetary value of healthcare assists in determining healthcare utilisation and its dispersion (Naidoo, 2012:150). In developing countries, where there is a higher dependency on out of pocket payments, there seems to be a strong relationship between income and the utilisation of healthcare services (O'Donnell, 2007:2829). In 2013, the South African Government committed for instance R133,6 billion of the National Budget to healthcare (McCoy, 1998). The current allocation accounted for the 8.3% of the GDP spent on healthcare is split between the public and private healthcare sector (Blecheri, *et al.*, 2011:30), with the private sector receiving 4.1% whilst catering for 16.2% of the South African population, with a portion of the population also being on medical aid schemes. This implies that the remaining 4.2% is allocated to the public healthcare sector which has to cater for 84% of the population (McIntyre, 2007:9). The South African Human Rights Commission (SAHRC) has done a study in 2009 which found that in 2007 88% of South Africans were dependent on public healthcare services. This inequity in the provision of primary healthcare continues to further paralyse the entire health system (Fadila, *et al.*, 2013:596).

The National Health Insurance (NHI) is considered to be an answer for health financing reforms across the world. Following the National Health Services Model (NDP, 2012), the NHI will for South Africa, be mainly based on public sector delivery that will be tax funded, through prepayment from the economy, employers and individuals (The NHI Green paper, 2011). Contribution will be mandatory for all South African citizens but will be based on an ability to pay (Nevondwe & Odeku, 2014:2726). The approach of the NHI to tailor make it for the South African context, will ensure progressive inclusion of private providers in the public funded system and will accommodate high levels of unemployment through cross-subsidising of healthcare (NDP, 2012).

Another driver of the NHI is human resources (Komape, 2013:4), with 79% of doctors in South Africa currently working in the private health sector. This is a further indication of the disparity in the number of people being served between the two sectors and has also been a major factor in the reported

contribution of the questionable service quality in public health (Ataguba & Akazili, 2010:75). The NDP (2012) include the following current challenges as related to human resources:

- Education, training and research;
- Supply of healthcare professionals and equity of access; and
- The working environment of the health workforce.

The objective of the NHI is to provide improved access to quality health services for all South Africans (Naidoo, 2012:149) and to ensure equitable distribution of resources (Nevondwe & Odeku, 2014:2729). In order to reach this goal, the NHI will have to address the skewed distribution of finances between the private and public health sector (Naidoo, 2012:150). Also, the NHI will have to ensure an increase in the capacity to train health professionals to counter the critical shortages of health professionals in a number of occupational categories. The 2030 vision foresees to improve quality through the use of evidence based research; as well as quality planning and implementation especially with the focus on human resources in the healthcare sector (NDP, 2012).

Moyakhe (2014:80) indicates the belief that the NHI will be the key for the improvement and sustainment of the quality of public healthcare. This will be accomplished through upgrading the health infrastructure by way of investment in buildings, equipment, and through ensuring agreement with the basic core standards of the Office of Health Standards Compliance. According to Nevondwe and Odeku (2014:2726) the NHI main objectives include:

- Improved access to quality care irrespective of employment status;
- The pooling of funds to create a single fund so that equity in healthcare is achieved;
- Strengthening the under-resourced and strained public sector with a focus on providing PHC's; and
- Ensuring the efficient control of financial resources.

As economies evolve, the NHI model suggests a good alternative to the current model, which has caused financial strain on the government (DoH, 2011:5). In its implementation, the diminutive budget must develop policies and also provide quality healthcare to all the provincial health departments. The NHI is envisioned to improve and strengthen the six priority areas of the National Department of Health which include: safety hygiene; queues; drugs stocks; staff ethics; motivation; and improved accountability (Nevondwe & Odeku, 2014:2728).

2.2.1 The South African public health sector

Until the first democratic elections in South Africa in 1994, the public health system was racially and structurally disjointed within each of the four former provinces (Cape, Orange Free State, Natal and Transvaal) as well as the ten former 'homelands' (Komape, 2013:4). According to the NDoH there are 4 200 public health facilities in South Africa, with the number of people per clinic utilisation exceeding the recommended 10 000 (HRH strategy, 2011). The public sector further caters for two types of customers, i.e. those who pay for the service, and those who do not pay for the service (The NHI Green paper, 2011). This adds pressure on the public health sector, specifically financially. Recently, universal coverage and access in the public sector has increased. Yet, quality of the services has remained poor, if not continuously a key barrier for achieving quality healthcare. Some of the other reasons included are critical shortage of trained health personnel; immigration of South African medical graduates each year; and the inability of the Department of Health to fill essential positions (HRH strategy, 2011).

Von Holdt and Murphy (2006:2) portray the South African public healthcare system as made up of three distinct levels. The first level (or level 1) refers to the primary health clinics at district level while level 2 is regional hospitals and level 3 is made up of central hospitals. Each of the levels offers more specialised and intensive clinical care than the level below it. The health system prescribes that each patient should first seek treatment at level 1, which is at the clinics and then the clinics will facilitate upward referral to the appropriate level, if necessary.

In line with the descriptions of Levels 1 to 3 above, the categories of hospitals within South Africa have been re-categorised to level 1, 2 and 3 hospitals being district, regional and tertiary hospitals (provincial tertiary and national central). Of the 388 public hospitals, 64% are district hospitals, with secondary and specialised hospitals being 16% and provincial and national hospitals comprising less than 4% of all hospitals in the public sector (Cullinan, 2006b:11).

a) Level 1 – District Health Services

The 'White Paper on the Transformation of the Health System' which Parliament has formally endorsed in 1997, presented the development of the district health system (Kautzky, & Tollman, 2009:23). The District Health Services, also known as Level 1, comprises of clinics and community healthcare centres. Over the past two decades, excellent legislation and policies have been established on a system of social support grants within the Level 1 health facilities specifically. This resulted in an increase in immunisation coverage and support in terms of HIV/AIDS programmes (Schaay, *et al.*, 2011:5).

Primary level services are supposed to cover a comprehensive range of preventive, promotional, curative and rehabilitation services. Primary healthcare can include all services up to and including district hospitals (Kautzky & Tollman, 2009:20). The World Health Organisation defines primary healthcare as “essential healthcare; based on practical, scientifically sound, and socially acceptable method and technology; universally accessible to all in the community through their full participation; at an affordable cost; and geared toward self-reliance and self-determination” (Schaay, *et al.*, 2011:5).

The district health services as mentioned above also include hospitals, known as district hospitals, which is defined as a facility at which a range of outpatient and inpatient services are offered (DoH, 2002). It is open 24 hours a day, seven days a week. District hospitals would on average have between 30 and 200 beds, a 24-hour emergency service and an operating theatre (Cullinan, 2006b:15). This is the smallest type hospital which provides generalist medical services along with specialised services such as general surgery, paediatrics, gynaecology, obstetrics and family medicines. The package of care at these hospitals includes trauma, rehabilitation service, and outpatient visits (DoH, 2011:29). It therefore plays a pivotal role in supporting PHC by being a gateway to more specialised care (DoH, 2002). In this study, the focus was on a hospital at the district level of healthcare.

b) Level 2 – Regional health services

At this level there are secondary hospitals, with more specialised services available. Patients are referred from district healthcare services to the regional health services. In these instances, the Provincial Department of Health manages the hospitals (Cullinan, 2006b:18). The regional hospitals are often the most overburdened of all levels of hospitals, bearing the brunt of the many inadequacies in the district hospitals (McCoy, 1988:1). McCoy (1998:1) notes that a health provider within this level serves three critical roles in ensuring a well-functioning district health system, namely to:

- Provide support to health workers in clinics and community services, both in terms of clinical care and public health expertise;
- Provide first level hospital care for the district as a place of referral from clinics and/or community health centres; and
- Be responsible for referring patients to higher levels of care, when necessary.

c) Level 3 – Tertiary health services

Level 3 specialist hospitals are associated with tertiary institutions of higher education to provide areas of academic support and to conduct and encourage research. The services provided will generally be of high cost and low volume, and ones that require high technology and/or multi-disciplinary teams of people with scarce skills to provide sustained care of high quality (Cullinan, 2006b:18).

The weakness in the referral system between the three levels of healthcare has seen a rise in patients seeking healthcare at level 2 and 3 hospitals instead of level 1, i.e. clinic or district level. Some of these patients could have been successfully treated at the clinic level. The other weakness that the system present, is the unavailability of accessible hospitals in patient's catchment areas (Von Holdt, & Murphy, 2006:4). Rapid urbanisation has also contributed to an increased population resulting in an increased demand for healthcare.

The Department of Health further saw the importance of policies in the intervention to improve quality of care and health outcomes at all three levels of care (Peabody, *et al.*, 2004:1296). The challenge for policymakers is then to demonstrate rapid improvements in the quality of care and service delivery indicators such as waiting time and patient satisfaction, while at the same time addressing the intractable health management issues that negatively impacts efficiency and that consequently drives up costs (Harrison, 2009:2). Thus, the policies aim to improve the process of care, and to ensure that the process is continuous, especially in developing countries. The noted objectives were achieved through the implementation of two types of policies (Peabody, *et al.*, 2004:1296), namely:

- Policies that influence provider behaviour by altering the structural conditions of organisation and finance or that involve the design and redesign of healthcare systems; and
- Policies that directly target provider behaviour at the individual or the group level.

Achieving the goal of a quality healthcare system requires a national commitment to measure, improve and maintain high-quality healthcare for all citizens. Thus, quality in healthcare can be defined as the cooperation between the patient and the healthcare provider in a supportive environment (Mosadeghrad, 2014:77). However, there are certain factors that affect the healthcare service quality, like personal factors of the healthcare provider and the patient, as well as factors pertaining to the healthcare organisation and system, and the broader environment.

2.2.2. The implementation of quality care in the public health sector

There have been a number of developments in the area of quality, particularly in terms of the public sector with the attempt to improve the quality of healthcare. Mosedeghrad (2014:77) indicates that healthcare quality can be improved by supportive visionary leadership, proper planning, education and training, availability and effective management of resources, employees and processes, as well as collaboration and cooperation among providers. In 2010 the Department of Health introduced a Ten Point-plan focused on improving patient care and satisfaction (Whittakeri, Shawiii, Spiekerv, & Linegari, 2011:60). This plan included (HRH Strategy, 2011):

- Strategic leadership and creation of a social compact for better health outcomes;
- Implementation of the National Health Insurance;
- Improving the quality of health services;
- Overhauling the healthcare system;
- Improving human resources, planning, development and management;
- Revitalisation of the infrastructure;
- Accelerated implementation of HIV and AIDS, STI and TB and communicable diseases;
- Mass mobilisation for better health for the population;
- Review of drug policy; and
- Strengthening research and development.

The Council for Health Service Accreditation of Southern Africa (COHSASA) was formed to implement quality improvement and accreditation in South African hospitals. This body allows for gradual improvement of quality, with training of hospital staff on the importance and intention behind the process of setting standards (Whittakeri, *et al.*, 2011:62). Subsequent to this, the NDoH developed and piloted the National Core Standards (NCS) in 2008, with revision in 2010 (Whittakeri, *et al.*, 2011:65). These core standards formed the basic requirements for quality and safe care, and are defined as the "*expected level of performance*" (Whittakeri, *et al.*, 2011:65).

a) National Core Standards (NCS)

On 24 July 2013 the President of South Africa established the Office of Health Standards Compliance (OHSC) with the instruction to protect and promote the health and safety of the users of healthcare services. Health establishments had to enforce compliance through close monitoring as the Minister of Health in relation to the National Health System prescribed (Moyakhe, 2014:83). The National Health Act (No. 63 of 2003) states that when services are rendered they must have high regard for the standard

laid down by the Constitution of South Africa (Section 27 and 195), as well as quality, effectiveness and efficiency (Whittakeri, *et al.*, 2011:62).

The Office of Health Standards Compliance's duties included to report on the General Assessment of Quality to the Minister of Health, based on the set standard national indicators for each level of care. The OHSC also performs ad hoc surveys to obtain baseline information to determine progress on quality and core standards (DoH, 2007:20). Compliant facilities are rewarded with a system of accreditation, license and certification (DoH, 2007:20). The key to the success of the OHSC is the development of multidisciplinary organisational standards for healthcare facilities using evidence based principles and approaches (DoH, 2007:31).

The main purposes of the NCS are to (Whittakeri, *et al.*, 2011:62):

- Develop a common definition of quality of care;
- Establish a benchmark against which public health establishments can be assessed;
- Create a framework for gaps identification and appraisal of strengths in service providing; and
- Provide a framework for national certification of public health establishments

These core standards were structured on seven domains to reflect and define the scope of how quality care should be provided in a healthcare setting. The first three domains relate to the core business of the healthcare system, whilst the remaining domains refer to the support system which ensures that healthcare is provided (Moleko, Msibi, & Marshall, 2013:62). The perceptions and experiences of the services influence the willingness to choose and access public healthcare services at all levels of the chosen provider.

Whittakeri, *et al.*, (2011:62) explains that the NCS reflects expectations and requirements in order to deliver decent and safe quality care. Also, a set of measurement tools then complement these to assess compliance with these measures. Moleko, *et al.*, (2013:27) identify the first three domains related to the core business of the healthcare system as Patient Rights; Patient Safety, Clinical Governance and Care; and Clinical Support Services. The final four domains refer to the support system that ensures that the above mentioned are delivered, namely Public Health; Leadership and Governance; Operational Management; and Facilities and Infrastructure. The NCS provides a framework for quality assurance and a means of performance measure for the public sector institutions (Moleko, *et al.*, 2013:29). To fast track quality, the NDoH developed quality programme based on the results obtained from complaints and satisfaction surveys from patients. The programmes focus on critical areas for patient centred care (Whittakeri, *et al.*, (2011:63).

b) NDoH Quality Programmes

Whittakeri, *et al.* (2011:63) point out that the NDoH has prioritised six of the most critical areas for patient centricity based on the Constitution of South Africa, the Batho Pele principles, the Patients' Rights Charter and the NCS. These critical areas are:

- **Values and attitudes of staff** – where patients are treated with respect, and respect for patient privacy and choice (Domain: Patient Rights);
- **Reducing waiting times and queues** – for administration, assessment, diagnosis, pharmacy, surgery and referral and transfer time (Domain: Patient Rights);
- **Cleanliness of hospitals and clinics**, including buildings, grounds, amenities, equipment, and staff (Domain: Patient Rights);
- **Keeping patients safe** and providing reliable care by reducing adverse events through ignorance, inadequate inputs, system failures or negligence (Domain: Patient Safety, Clinical Governance and Care);
- **Preventing infections** – acquired and transferred in hospitals and clinics, specifically hospital-acquired infections (Domain: Patient Safety, Clinical Governance and Care); and
- **Ensure that medicines, supplies and equipment are available** and that patients receive their prescribed medicine on the same day (Domain: Clinical Support Services).

The Health Charter (2011:30) notes that ensuring these critical areas are implemented and contributing to quality healthcare services, strategies such as the implementation of quality assurance programmes that include a quality monitoring system and the measurement of health outcomes were established. The DoH also created mechanisms of complaints that are used to inform the planning and delivery of health services so as to be able to continually improve the quality of healthcare (Health Charter, 2011:30).

The establishment of a district health system is one other strategy that was set to assist in enforcing these National Standards. The reason for this was the positioning of the district health system at local level, being close to the community, and with an understanding of the type of quality they require (DoH, 2007:17). The NDoH has embarked on the following strategies to implement and enforce the NCS:

- **Audit of health facilities**

The use of a standardised tool to audit all public health facilities, through profiling the physical infrastructure, availability of medicines, functionality of equipment, degree of compliance to the NCS and utilisation of health services, including budget expenditure (Matsoso & Fyatt, 2013:24).

- **Facility improvement teams**

The formation of district healthcare teams that is responsible for quality assurance, in collaboration with the health inspectorate. This collaboration is responsible for empowering employees and continuous quality improvement activities (DoH, 2007:18). The teams will also direct self-referred patients to the correct level of care and create criteria for referrals between the levels of care.

- **SafeCare Initiative**

This initiative was established particularly for resource restrained countries, to provide good quality healthcare (Whittakeri, *et al.*, 2011:64). Three organisations have founded it. These organisations were those that have an interest in improving quality and patients' safety by addressing limitations. The programme assists facilities in the efficient use of resources by benchmarking and using data driven resource allocation (Whittakeri, *et al.*, 2011:64).

2.3 QUALITY HEALTHCARE

Good quality means that providers are able to manage an individual's or a population's healthcare through timely, skilled application of medical technology in a culturally sensitive manner within the available resource constraints (Peabody, *et al.*, 2004:1302). Devers, Pham, and Liu (2004:105) emphasise that to ensure quality healthcare, it is important to eliminate under provision of essential clinical services, stop overuse of some care and end the misuse of unneeded services. The Institute of Medicine postulated six elements of quality, namely (Powell, Rushmer, & Davies, 2009:53):

- Patient safety;
- Effectiveness;
- Patient centeredness;
- Timelessness;
- Efficiency; and
- Equity.

Quality is the optimisation of material inputs and practitioner skills to produce health and it comprises of three outcomes (Peabody, *et al.*, 2004:1295):

- Structure, where material characteristics, i.e. infrastructure, equipment, tools, technology and other resources of the organisation, provide care.
- Process, which is the interaction between caregivers and patients during which the structural inputs from the healthcare system are transformed into health outcomes.
- Outcomes, which can be used as measurement of health status, deaths or associated disabilities as and when it surfaces. The outcomes include patients' satisfaction and their responsiveness to the healthcare system.

Structural measures of quality include shortage of medical staff, medications, facilities and other important related supplies. Peprah and Atarah (2014:135) find that although a facility with good technology may be conducive to offer better services, there is no direct link or little evidence of better health outcomes and structural elements. Good health outcomes are hard to measure as they cannot be equated to quality. This is due to the possibility of patients receiving poor quality care while they recover fully, and for example if the patient that receives full quality care for an illness (like malaria) does not recover fully or at all.

DPME (2014) reports a 2012 study by General Household Survey (GHS) comparing satisfaction with service and notes that 79.2% of the patients were satisfied with public healthcare facilities and 97.1% were satisfied with private facilities. It was also found that 57.3% of participants used the public healthcare sector.

There are two perspectives in the assessment of quality of healthcare, namely functional assessment (patients' perception) and technical assessment (quality in fact) (Babakus & Mangold, 1992:767). Functional quality refers to the manner in which the healthcare service is delivered to the patient. This also forms the primary determinant of patients' quality perceptions. Agha and Do (2009:88) indicate that patients are often unable to accurately assess the technical quality of a healthcare service, as technical performance depends on the knowledge and judgment of the provider and the provider's skill in implementing strategies that are appropriate.

Agha and Do (2009:87) and Moyakhe (2014:85) note that the evaluation of the quality of healthcare is based on healthcare systems, processes of care and outcomes resulting from healthcare. Information on infrastructure and equipment, management systems, availability of services, materials and structures for counselling, the training and experience of providers and the degree to which providers are motivated to

provide good care to patients, also play a vital role (Agha, & Do, 2009:87). This is a reflection of the structural aspects of quality. The patients' role in defining the quality of services becomes therefore more evident as service providers are trying to apply client-centred assessment tools (Moyakhe, 2014:85). However, to provide insight into the service quality in public hospitals in South Africa, it is important that the historical context of the South African health system be reviewed to set the scene for this research study.

In most instances, public healthcare fails to concentrate on the patients' social and clinical needs, where they have options in terms of health service options and choices. Previous research has also unsuccessfully tried to measure health outcomes due to the insufficient system feedback and the application of poor quality assurance measurement programs (Wanjau, *et al.*, 2012:128).

Not only are problems experienced within the South African public healthcare with regard to the continuous pressure on regional and central hospitals to accommodate patients that ought to be treated at clinic levels (whether above or below them as a result of the weaknesses of the referral system), but the lack of comprehensive hospital coverage also adds challenges in offering good quality services (Von Holdt & Murphy; 2006:2). Furthermore, the public healthcare sector's health workers in South Africa are frequently described as cruel, uncaring with no regard for patient confidentiality, having bad attitudes, and having a tendency to neglect the patients under their care and displaying a low morale (Von Holdt & Murphy; 2006:3). These attributes serve as vital motivating factors to attribute to the quality care that needs to be provided as well as to ensure the successful implementation of policies aimed on improving the service quality in general (Komape, 2013:56).

Mukhtar, *et al.*, (2013: 65) indicated the importance for organisations to continuously measure quality of service to be able to identify the areas that need to be improved. Furthermore, the measurement of the quality of service that is provided will assist organisations to plan for their aspired type and quality of services to be provided. Service quality is referred to as a strategic factor for healthcare organisations' productivity and is considered as a competitive advantage that should be continuously measured and improved (Bahadori, Raadabadi, Jamebozorgi, Salesi, & Ravangard, 2004). The measurement of the service quality that organisations provide can assist them in comparing their service quality to that of their competitors. Some of these aspects are: staffing levels; capital equipment; inventories of drugs and supplies; budgets; and expenditures.

Wanjau, *et al.* (2013:123) report on their study done in Kenya that employee's capacity should be enhanced to improve service quality as well as ensure compliance with performance and practice

standards to further enhance service quality. They conclude that public health sectors should improve the level of adoption of technology and willingness to invest and advance in modern technology, emphasise on the use of upward, horizontal and vertical communication channels and effective allocation of financial resources.

Shanin (2010) indicates that there is an increasing pressure for the service sector to demonstrate that their services are customer-focused irrespective of financial and resource constraints. Coupled with this is to ensure that continuous performance improvement is being delivered whilst identifying cost-effective ways of closing service quality gaps and of prioritising which gaps to focus on. Not only can understanding the service quality assist organisations to increase their competitive advantage, but the impact of increased service quality to the individual / customer utilising the service, specifically in terms of healthcare, can also be beneficial.

2.3.1. Benefits of quality care

Individuals benefit from quality of care as it leads to a quicker physical, emotional, and mental recovery. Peabody, *et al.* (2004:1301) explain that raising standards to achieve quality of care for the individual increases society's human capital. This is reached as the number of premature deaths are reduced thus increasing the labour force, and reducing the amount of temporary or permanent disability and improving worker productivity. Providers and insurers also benefit from lower costs by avoiding unnecessary or inappropriate care (Peabody, *et al.*, 2004:1299).

Continuous improvement in the organisational performance through service quality can be used as a strategic tool to gain operational efficiency. The service quality standards that customers demand can contribute to organisations' measurements on that which are demanded against if what were actually delivered satisfied their customers' needs (Mukhtar, *et al.*, 2013:65). According to Grubor, Salai, and Leković, (2008:277) service quality, if applied through strategic approach, can enable service providers to achieve the following positive effects amongst others:

- Sustainable competitive advantage;
- Building and improving service provider image;
- Affirmation of relation marketing;
- Building consumer loyalty;
- Optimum combination of service marketing mix instruments; and
- Enhancing service value.

Benefits of quality health can be seen as a cost containment strategy for the NDoH, because expected income, is dependent on risk of death (Harrison, 2009). Good quality healthcare can lead to an increase in an individual's future income, where mortality is lowered and education is attained. Quality improvement programmes are beneficial in that they have positive effects and reduce temporary and permanent disabilities (Peabody, *et al.*, 2014:1303).

The conceptual framework of service quality can also be applied to healthcare service. This is specifically relevant to this research study as healthcare service requires high consumer involvement in the consumption process. Hence, the attainment of quality healthcare service relies significantly on the co-contribution of the patient to the service delivery process. The next section conceptualises service quality. Also, measurements and models of service quality are discussed in detail. The benefit of service quality providing marketing competitiveness is also highlighted as it assists organisations to develop efficient and effective strategies for contemporary services marketing. In this regard, it adds a distinguishing factor and is a recognisable and relatively greater strength of one service provider compared to others (Grubor, *et al.*, 2008:277).

2.4. SERVICE QUALITY

Service quality has been defined for many study fields. Bitner (1990), as cited in Fen and Len (2007:59) define service quality as the overall customers' impression of an organisation and its relative inferior or superior service. Roester and Pieters (1985) believe that it is a realistic discrepancy between experience-based norms and performance related to service quality. Parasuraman, Ziethaml, and Berry (1985) describe it as the difference between expectation and performance measured against quality dimensions. Berry and Parasuraman (1991) explain that service quality is assessed by comparing what is wanted or expected to what is actually received. Gronross (2007) defines it within the health sector and points out that there is need to distinguish between accuracy of diagnosis, which is the technical quality and the manner in which that service is delivered, which is the functional aspect of quality.

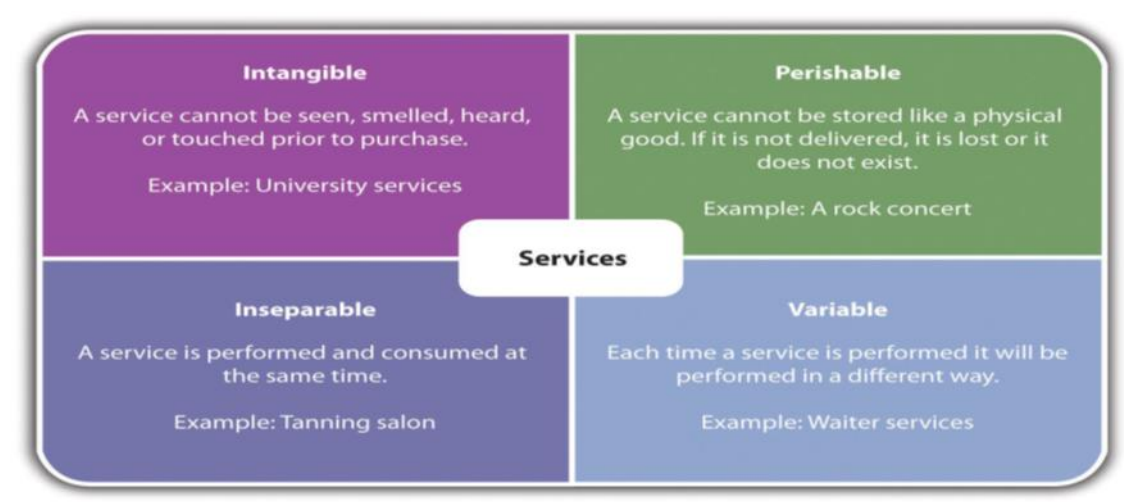
Thus, health service quality can be divided into two segments namely technical quality, which focuses on the accurateness of medical diagnoses and procedures and functional quality that is related to the hospital process throughout the stay of the patient in the hospital (Lin, Xirasagar, & Laditka, 2004:437).

Service quality is a determinant of how customers perceive the service they receive. Czepiel (1990:17) indicates that service quality, is the customer's perception on how well their expectations were met or exceeded. Gronross (2007) explains that it is important to understand how service is perceived and to

determine ways to influence service quality. It refers to the overall judgment that an individual make of any product or service offered to them. Asubonteng, McCleary, and Swan (1996:63) argue that valid and reliable measurement of service quality is critical to quality management, where valid measurement is a score generated by the measurement process that shows “true” value and is reliable when quality does not change but is consistent.

Grubor, *et al.* (2008:277) highlight five basic approaches to defining the notion of service quality namely the transcendent approach, production-based definition, service customer-based definition, process-based definition and value-based definition. According to Kotler and Armstrong (2004:299) service quality consists of four characteristics (see Figure 1), namely that it can be intangible (cannot be seen, tasted or felt), inseparable (depends on the provider and cannot be separated from the provider), heterogeneous (where different service qualities are experienced when visiting different hospital) and perishable (cannot be stored for later use). These four service quality characteristics usually make assessment of service difficult, because as patients receive a service the effect of it is immediate and services cannot be standardised before delivery to ensure quality.

Figure 1: Characteristics of services



(Adapted from Kotler & Armstrong, 2004:299)

2.4.1. Measurement of service quality

Kang and James (2004:270) emphasise that in order to assess quality there is need for the development and application of performance measures. Measurement of service quality is considered to be a challenging exercise especially as it is intangible. Grubor, *et al.* (2008:277) noted the importance to know service quality dimensions as these dimensions assist in facilitating meeting the needs, demands and expectations of patients’ in achieving patient satisfaction.

2.4.2. The Perceived Service Quality Model

The Perceived Service Quality Model includes the outcome of a service, the service process and the service provider's image. This model was developed as the concept framework for understanding the features of a service. However, it is important to note that is not a model for measuring service quality, but a basis for developing service supply of a certain quality (Grubor, *et al.*, 2008:277)

2.4.3. Service Quality Models

The focus to monitor the impact of service quality on performance, customer satisfaction, and profitability can be encouraged as a variety of tools are available to gather information on customer demands and recommendations to ensure that service quality is provided (Cronin & Taylor, 1992:5). This research study reviews different service models for service quality measurement.

a) Nordic Model

Service quality measurement was first attempted by Gronross in 1984. In this model quality was defined by technical or outcome (what consumer receive) and functional or process related (how consumer receive the service) dimensions and did not offer any outline of the technical and functional quality. In 1994, the Nordic model was extended with the adding of service environment as a new dimension (Ghotbabadi, Baharun, & Feiz, 2012:3).

b) SERVQUAL

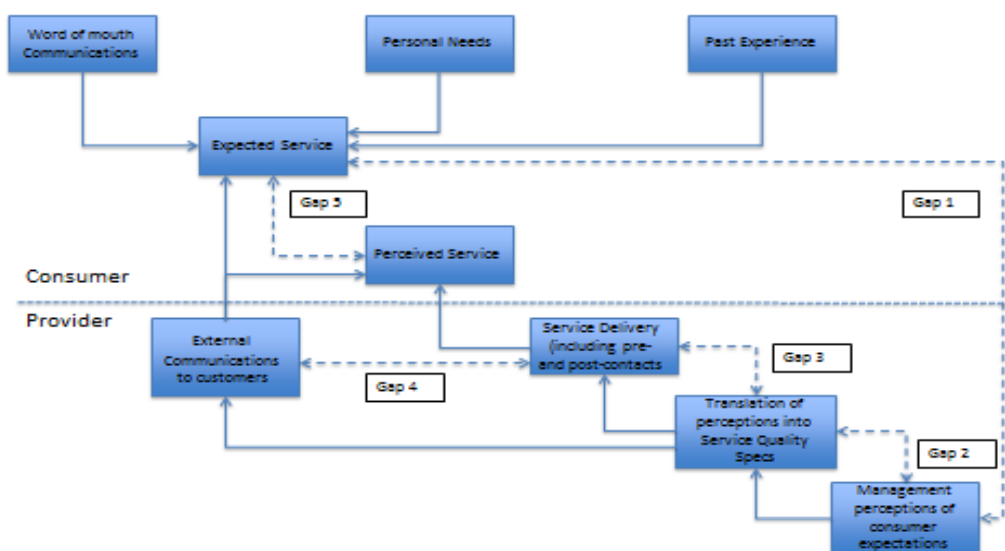
SERVQUAL is the abbreviation of service quality based on the ten requisites of quality service in "Conceptual Model of Service Quality" (Parasuraman, *et al.*, 1985). This model was developed as a disconfirmation paradigm to improve on the weakness identified in the Nordic model (Ghotbabadi, *et al.*, 2012:3). The SERVQUAL model offers new ways of measuring service quality, by identifying a gap between the expected level of service and the delivered level of service (Ghotbabadi, *et al.*, 2012:3).

Parasuraman, *et al.* (1985) developed the SERVQUAL instrument and identified distinct gaps of service that is affected by the perception of the service. These gaps were identified as seen in Figure 2:

- Gap 1-consumer expectation-management perception gap;
- Gap 2- Service quality specification gap;

- Gap 3- service delivery gap;
- Gap 4-external communication gap; and
- Gap 5-service quality gap which is the difference between expectation and perception of service quality received (Kulasin & Fortuny-Santos, 2005:134).

Figure 2: The SERVQUAL model



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

Parasuraman *et al.* (1993) describe ten dimensions for different services that customers' use to create expectation and perception of the service they received (Agus, Barker, & Kandampully, 2007:181; Kulasin, & Fortuny-Santos, 2005:135). These dimensions are:

- (1) Tangibles – physical characteristics of the service, such as the decor, ambience, technology, and equipment that are viewed as contributing to a public servant’s ability to provide a desired level of service;
- (2) Reliability – a public servant’s ability to perform promised services in a dependable and accurate manner;
- (3) Responsiveness – a public servant’s willingness to assist customers and provide prompt service while being aware of the need for flexibility in customising services to the needs of individual customers;
- (4) Competence – possession of the required skills and knowledge to perform services in the public sector;
- (5) Courtesy – politeness, respect, consideration, and friendliness of a public servant;
- (6) Credibility – trustworthiness, believability, and honesty of a public servant;

- (7) Access – a public servant’s approachability and ease of contact;
- (8) Communication – listening to customers and acknowledging their comments, and keeping customers informed in a language they understand; and
- (9) Understanding the customer – making an effort to understand customers and identify their needs.
- (10) Security- freedom from danger, risk or doubt.

In 1988, the very extensive list of items and dimensions were narrowed down. The 97 items to measure ten dimensions were refined to 22 items to measure five dimensions. These five dimensions were categorised into: Tangibles; Reliability; Responsiveness; Assurance; and Empathy as the SERVQUAL scale (Wang, Luor, Luarn, & Lu, 2015:34). The dimensions can be grouped together as core services and augmented services (Butt & De Run, 2008:661) to measure the same basic dimension (Kulasin, & Fortuny-Santos, 2005:135).

The model can be used to measure the service quality of any organisation and was, according to Mukhtar, *et al.* (2013:60), initially used to examine service quality in the marketing sector and later in other sectors like hospitals, libraries and other communication divisions. An interest in service quality has seen this tool as the most widely used especially in the service management and marketing literature (Stodnick, & Rogers, 2008). Parasuraman, *et al.* (1985) advise that SERVQUAL is valuable when it is used to track service quality trends, particularly when applied with other service quality measurements. It can further be applied to assess and compare the organisations’ service to that of their competitors (Kulasin & Fortuny-Santos, 2005:137). The SERVQUAL is the most used tool for measuring service quality as it measures key aspects of service quality and combines it with ease of application and flexibility (Kitchroen, 2004:14). The model serves to measure service quality and starts off with the assumption the difference between the perceptions of the customer and their expectation of the service determines service quality (Cronin & Taylor, 1992:55).

There are numerous healthcare applications of the SERVQUAL (Asubonteng, *et al.*, 1996:64). Mukhtar, *et al.* (2013: 67) also refer to a study that included evaluation of service quality in a hospital in Singapore, assessing the service quality of health services by private and public sector facilities.

Criticism on SERVQUAL is evident in that, although thought to be a highly reliable tool, when it is used in different industries it fails to produce a clear delineation of the five basic dimensions. By mainly focusing on the service delivery process, the use of difference scores, dimensionality, applicability and the lack of validity of the model, especially with respect to the dependence or independence of the five main variables (Kang & James, 2004:267). There is, however, no consensus about the reliability and

validity of this scale in different contexts as Kulasin & Fortuny-Santos (2005:138) highlight. On the other hand, other studies found the inability to load items to their "related" factors is an indication of the SERVQUAL's validity problems.

Jayasundara, Ngulube, and Minishi-Majanja (2009:189) accentuate this reliability fact of SERVQUAL by comparing the studies of Filiz (2007) where they used five service reliability-related domains: quality of library services; quality of information and library environment; reliability; quality of online catalogue system; and confidence. In the study service quality was examined, which is reliability, responsiveness, assurance, access, communications and empathy.

c) **SERVPERF**

According to Jayasundara, *et al.* (2009:190) SERVPERF is merely a subset of SERVQUAL. The SERVPERF is an acronym for service performance (see Figure 3). Cronin and Taylor (1994) developed the model where they used performance approach to measure service quality based on the customers overall feeling towards service (Jain & Gupta, 2004:36). The model focuses on the service quality, consumer satisfaction and purchase intentions relationship, showing that consumer satisfaction influences purchase intentions, and not service quality (Cronin & Taylor, 1994:125).

Figure 3.SERVPERF



The purpose of creating this model was to mainly apply in four service industries, namely, pest control, banks, dry-cleaning and fast food. The downside of this model is that although it measures service quality, it does not provide information on the kind of services customers prefer in order for the service providers to make the necessary improvements (Chingang & Lukong, 2010:8).

d) **Multilevel model**

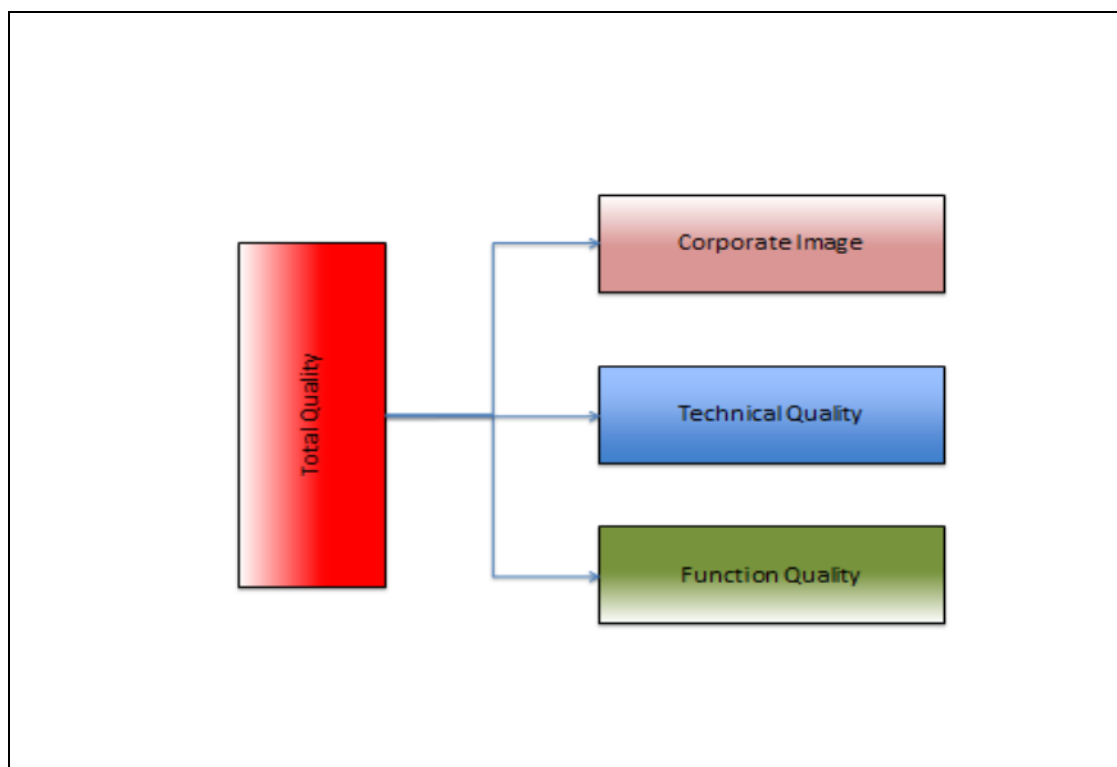
This three stage model was proposed by Dabholkar, Thorpe, and Rentzin (1996:4) to evaluate service quality in retail stores. The structure of the model includes the overall perceptions of service quality, primary dimensions, and sub dimensions, but its shortfall proved to be lacking the identification attribute that define the sub dimensions.

e) Technical and functional quality model

The model demonstrated in Figure 4, explains that there are two service quality dimensions, namely of the type of service a consumer accepts and the way in which a consumer accepts that service. The technical or resulting dimensions of service quality are related to the service received during interaction with a service provider. Therefore, quality will be assessed based on the benefits received from the service. The functional quality dimension is procedural in nature where the customer receives, uses, pays for and perceives a certain service; therefore, this dimension essentially includes all aspects of the service delivery process (Grubor, *et al.*, 2008: 277).

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 (Gronroos, 1984:36-41).

Figure 4: Technical and functional quality model



(Source: Gronroos 1984:36-40)

2.5. CHAPTER SUMMARY

Unifying public and private healthcare services aims to create an integrated national health system. Furthermore, and more importantly, this unified system will empower patients (users) to influence the

quality of care they receive (DoH, 2007:9). This can be achieved by mobilising and using resources efficiently, by addressing financing inequalities, training and employing more health personnel, improving the physical infrastructure in health facilities, effective supply chain and inventory management practices to ensure health facilities do not run out of essential drugs, better management of patient records and strengthening the delegation of powers to those closest to ground (NDP, 2012). This proves that the implementation of quality healthcare rests upon multi-disciplinary teams, where ideas and feedback from the customers can be used to develop and execute, and communicate and establish quality improvement processes (Powell, *et al.*, 2009:53).

Quality care data in public healthcare is often patchy and at times reflects lack of uniformity (Econex, 2013:22). The continuous evaluation of NCS programmes is essential. Also, it is to be fast tracked as the country is preparing for the implementation of the NHI. Tools and technologies need to be shared to build capacity and they need to be periodically reviewed as health trends change.

The following chapter sets out the research methodology applied and the statistical analysis utilised.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 INTRODUCTION

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

3.2 RESEARCH APPROACH

The research was conducted following a quantitative research approach. By quantitative methods, researchers refer to techniques of randomised experiments, sample surveys, and such (Cook & Reichardt, 1979:9) and these techniques allow for the quantifying of an outcome in numbers thus providing an approach for measurement that allows for a more exact form (Zikmund, 2003:111).

The current research called for the need to generalise from the sample to the patients and immediate family members, receiving healthcare at a public hospital, as well as the need to address both the main

and secondary objectives, as noted in Chapter 1, of the study. Data was collected through administering an adapted SERVQUAL questionnaire based on the SERVQUAL theory (Parasuraman, *et al.*, 1988).

3.3 RESEARCH DESIGN

Research design may be defined as the general strategy to be employed in order to solve a research problem (Creswell, 2003:247), or alternatively, as defined by Blumberg, Cooper, and Schindler (2008:94), it can be viewed as the planned and structured investigation embarked upon to answer a particular research question. According to Leedy (1997:94), once the problem has been correctly defined, the design is developed and becomes the format of the steps to be taken in the study.

A cross-sectional survey design was applied to collect the data and to attain the research objectives. Cross-sectional survey designs are used to examine groups of subjects in various stages of development simultaneously (Burns & Grove, 1993) in a short period of time, which can vary from one day to a few weeks (Du Plooy, 2001). The survey is a data-collection technique in which questionnaires are used to gather data about an identified population. This design is also used to assess inter-relationship among variables within a population (Shaughnessy & Zechmeister, 1997). The cross-sectional survey design is best suited to address the descriptive and predictive functions associated with the correlational design, whereby relationships between variables are examined.

3.4. PARTICIPANTS

A research population may be described as a group from which the researcher would like to make generalisations, and the sample as the group within the population, that is selected to participate in the research study.

Consent to do the study at a public hospital was requested and confirmed. The targeted population for this study was comprised of patients or family members that have visited the public hospital. Inclusion criteria included whether the patient or family members have visited the hospital at least once since it officially opened in 2014 and participants also had to be above the consenting age (16 years and above) to partake in the study. The nature and requirement of the survey participation was on a voluntary basis and all information provided were kept private and confidential.

The simple random sampling method was applied to collect the data. The setting for data collection was for the out patients' department while the patients were waiting for appointment or consultation. While the questionnaire was distributed, the researcher gave cooperation and clarification to respondents.

It was envisaged to obtain a participant size of approximately 200. All patients and their family members in the out patient's department were presented with an opportunity to complete the questionnaire, however participation was voluntary and there was therefore no element of control over the number of responses.

3.5. MEASURING BATTERY

One questionnaire was administered to measure the perceptions of service quality. A biographical questionnaire was included in order to describe the population.

Many tools have been developed to measure patients' perceptions and expectations with the SERVQUAL instrument developed by Parasuraman, *et al.* (1988) as the most widely used tool. The tool however was concluded to have shortfalls as it excluded the dimensions for "care service", "service customisation" and "knowledge of the professional" (Sower, Duffy, Kilbourne, Kohers, & Jones, 2001:50).

The SERVQUAL is according to Punnakitikashem, *et al.* (2012) able to assist in understating the perceptions of the targeted population. Though it can provide a measurement of the service quality in an organisation through the determinants of service process quality, the critiques of the SERVQUAL believed that measurement of the dimensionality of service quality may depend on the type of services under study (Lee, Lee, & Yoo, 2000:218). A five point Likert-scale was used for scoring that ranged from 1=strongly disagree to 5=strongly agree for this questionnaire. The Likert scale was chosen because of the three basic properties which according to Cummins and Gullone (2000:3) are reliability, validity, and sensitivity. Van Schalkwyk (2011:190) confirms that a Cronbach alpha coefficients ranging between 0,84 and 0,93 for SERVQUAL factors to be valid and reliable. In a study by Bisschoff and Clapton (2014:47-48) measuring service quality in a private hospital in Gauteng, they found in an adapted version of the SERVQUAL that the factors identified comprised Tangibles, Reliability, Responsiveness, Assurance and Empathy. They also found Cronbach alpha coefficients ranging from 0,61 (Tangibles 2: Conditions of Tangibles) to 0,84 (Reliability and Responsiveness 2: Service performed promptly) and 0,86 for Empathy.

The questionnaire used in the current research, was adapted from the SERVQUAL questionnaire to make it more suitable for the measurement of service quality in a public hospital. The reason for the revision of the questions is that Brown, Churchill, and Peter (1993:138) suggested that the SERVQUAL model be modified and adapted based on the industry, business and location of the facility. Parasuraman, *et al.* (1991:445) also indicated that additional items can be added to supplement the SERVQUAL model, however these items should be similar to the existing form of the model.

A biographical questionnaire was developed to gather information concerning the demographical characteristics of the participants. Information gathered included age, gender, race, home language, education, marital status and employed status, if the participant is a patient or family member, and also determined the number of visits to the hospital since it started to be operational.

3.6. STATISTICAL ANALYSIS

The statistical analysis was carried out with the help of the SPSS-programme (SPSS Inc., 2009). Exploratory factor analysis was conducted by means of an oblique rotation using direct Oblimen (an Opblique 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. The purpose of factor analysis is to reduce the initial number of variables into a smaller and therefore more manageable (easier to analyse and interpret) set of underlying dimensions (Yong & Pearce, 2013:79), called factors.

The adequateness of the sample was determined by means of the Kaiser-Meyer-Olkin (KMO) correlation matrix and the diagonal element of the Anti-Image Correlation. 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 (Hair, Anderson, Thatham, & Black, 1998:99). For this study, a minimum KMO of 0.70 is set. Bartlett’s test should return values which is smaller than 0.05.

Table 1: *Interpretation of KMO values*

KMO Value	Interpretation
≥ 0.80	Commendable
0.70	Average
0.60	Mediocre
0.50	Miserable
< 0.50	Undesirable

The Anti-image correlation matrix contains the negative partial covariances and correlations. Diagonals are used as a measure of sampling adequacy. The Anti-image correlation matrix has a cut-off of above 0.50. If this required is not met, this means that distinct and reliable factors cannot be produced. Items causing diffused correlation patterns as indicated by the diagonal value in the Anti-Image Correlation matrix, is removed (Yong & Pearce, 2013:88).

Descriptive statistics (e.g. means, standard deviations, skewness and kurtosis) were used to analyse the data. Cronbach alpha coefficients were used to determine the internal consistency, homogeneity and un-dimensionality of the measuring instruments (Clark & Watson, 1995). Coefficient alpha contains important information regarding the proportion of variance of the items of a scale in terms of the total variance explained by that particular scale.

Pearson product-moment correlation coefficients were used to specify the relationships between the variables. In terms of statistical significance, it is decided to set the value at a 95% confidence interval level ($p \leq 0, 05$). Effect sizes (Steyn, 1999) were used to determine the practical significance of the findings. A cut-off point of 0, 30 (medium effect, Cohen, 1988) was set for the practical significance of correlation coefficients.

Multivariate analysis of variance (MANOVA) was used to determine the significance of differences of demographic groups. MANOVA tests whether or not mean differences among groups in a combination of dependent variables are likely to have occurred by chance (Tabachnick & Fidell, 2001). In MANOVA, a new dependent variable that maximises group differences was created from the set of dependent variables. Wilk's Lambda is used to test the likelihood of the data, on the assumption of equal population mean vectors for all groups, against the likelihood on the assumption that the population mean vectors are identical to those of the sample mean vectors for the different groups. When an effect is significant in MANOVA, one-way analysis of variance (ANOVA) will be used to discover which dependent variables have been affected. Seeing that multiple ANOVAs will be used, a Bonferroni-type adjustment is made for inflated Type I error. Tukey tests will be done to indicate which groups differed significantly when ANOVA's were performed.

3.7. RESEARCH OBJECTIVES

The following research objectives were formulated for the purposes of this study:

The main object of this research was to investigate the perceptions and expectations of patients and their immediate family members with regard to the provided healthcare / services in a public hospital.

The secondary objectives for the study were:

- To conceptualise quality of service from the literature;
- To determine the service quality dimensions within the health industry that will indicate good or bad quality of services in a hospital, as indicated in the literature;
- To determine the experience of the quality of services rendered in a specific public hospital;
- To make suggestions to the hospital on how to increase patient satisfaction and service quality;
and
- To make recommendations for future research.

3.8. CHAPTER SUMMARY

This chapter dealt with the methodology utilised, as it pertained to the research study. The selection of the participants was discussed, and the instruments included in the questionnaire were detailed. The chosen statistical methods for the analysis of the data were provided, along with a discussion around each method.

CHAPTER 4

EMPIRICAL STUDY

4.1 INTRODUCTION

Chapter 3 provided an outline of the research methodology and the research techniques applied. Chapter 4 details the results of the empirical study.

4.2 PARTICIPANTS

The participants of this research study are mapped out through an availability sample of patients and their family members that visit a public hospital in Soweto, South Africa. A total population of 200 (patients together with family members) were targeted. A response rate of 100% was achieved, of which all responses could be utilised.

Table 2 presents the descriptive information of the sample.

Table 2: *Characteristics of the participants*

Item	Category	Frequency	Percentage
Gender	Male	63	31,50
	Female	137	68,50
Patient Type	Day Visitor	137	68,50
	Hospitalised	63	31,50
Status	Family member	51	25,50
	Patient	149	74,50
Age	29 years and younger	48	24,00
	30 to 39 years	73	36,50
	40 to 49 years	44	22,00
	50 to 59 years	17	8,50
	60 years and older	18	9,00

Table 2 (continued): *Characteristics of the participants*

Item	Category	Frequency	Percentage
Ethnicity	African	178	89,00
	White	0	0,00
	Indian	6	3,00
	Coloured	16	8,00
	Other	0	0,00
Employment Status	Student	17	8,50
	Employed	98	49,00
	Unemployed	66	33,00
	Pensioner	19	9,50
Marital Status	Single	107	53,50
	Married	77	38,50
	Divorce	6	3,00
	Widow(er)	10	5,00
Education levels	Uo to Grade 12	46	23,00
	Grade 12	89	44,50
	Certificate / Diploma	42	21,00
	Degree	20	10,00
	Postgraduate Degree	3	1,50
No of visits to the hospital	Once	39	19,50
	Twice	58	29,00
	Third	54	27,00
	3 times and more	49	24,50

The study population consisted mainly of female (68,50%) African (89,00%), day-visitor (68,50%) patients (74,50%). The majority of the participants are single (53,50%), employed (49,00%), between the ages of 30 and 39 (36,50%), with a Grade 12 qualification level (44,50%). The majority of the sample noted having visited the hospital more than once.

4.3 RESULTS

A principal component factor analysis was performed on the adapted SERVQUAL for the sample of patients and their family members that have received healthcare at a public hospital. Results indicated that an acceptable KMO correlation matrix of 0,86 was obtained, which is described as per Table 1 as commendable. An investigation in the Anti-image correlation matrix noted two problematic items, with a score below the noted 0,50 ($p < 0,05$). The items Q26 – “*The hospital staff are rude when clients ask questions*” and Q37 – “*It is easy to talk to knowledgeable staff members when patients have a problem*” were removed for further analysis, increasing the KMO correlation matrix to 0,88 ($p < 0,05$).

Analysis of the Eigenvalues (larger than 1) and the Scree plot indicated that nine factors could be extracted, explaining 68,85% of the total variance. Next a simple principle axis factoring analysis was performed on the items of the revised SERVQUAL. Further analysis proved another three items, to be problematic, with loadings lower than 0,30 namely Q5 – “*The hospital is very often the first to introduce new products / services / processes*”; Q8 – “*The exact requirements of a patient are followed*”; and Q26 – “*The hospital staff are rude when clients ask questions*”. These items were also removed from the data set.

The results of the factor analysis on the adjusted SERVQUAL are set out in Table 3. Also indicated in Table 3, are the loading of variables on factors, as well as communalities and the percentage of variance. Variables are ordered and grouped by size of loading to facilitate interpretation, while the labels for each factor are suggested in a footnote.

Table 3: *Factor Loadings, Communalities (h²), Percentage Variance for Principal Factors Extraction and Direct Oblimin Rotation on SERVQUAL Items*

Item	F ₁	F ₂	F ₃	F ₄	F ₅	F ₆	F ₇	F ₈	F ₉	h ²
Q7. The staff responds as promised in a certain time.	0,59	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,69
Q15. The specific times for when service will be given is told to patients.	0,56	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,60
Q13. When there is a problem, the hospital responds to it quickly.	0,43	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,71
Q19. The staff provides service without wasting time.	0,38	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,67
Q14. The staff is willing to answer patients questions.	0,37	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,70
Q42. The hospital staff explains clearly the various options available to a particular query.	0,00	0,77	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,79
Q39. The service access points are conveniently located.	0,00	0,74	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,73
Q43. The hospital staff explains clearly the various options available to a particular query.	0,00	0,68	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,77
Q38. It is easy to reach the appropriate staff person when lodging complaints.	0,00	0,68	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,70
Q44. The staff avoids using technical language when speaking with patients'.	0,00	0,67	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,65
Q41. The hospital administration point listens to patients' problems.	0,00	0,66	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,67
Q40. The hospital is wheel chair and other disability friendly.	0,00	0,58	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,59
Q3. The written materials (pamphlets, posters) are easy to understand.	0,00	0,00	0,72	0,00	0,00	0,00	0,00	0,00	0,00	0,66
Q2. The hospital staff dressed appropriately.	0,00	0,00	0,71	0,00	0,00	0,00	0,00	0,00	0,00	0,65
Q4. The technology used in the hospital look modern.	0,00	0,00	0,63	0,00	0,00	0,00	0,00	0,00	0,00	0,62
Q1. The hospital facilities are attractive.	0,00	0,00	0,60	0,00	0,00	0,00	0,00	0,00	0,00	0,66
Q6. The hospital continuously sees out new products / processes / services.	0,00	0,00	0,34	0,00	0,00	0,00	0,00	0,00	0,00	0,54
Q21. The staff uses the technology quickly and skilfully.	0,00	0,00	0,00	0,84	0,00	0,00	0,00	0,00	0,00	0,76
Q22. The staff appears to know what they are doing.	0,00	0,00	0,00	0,81	0,00	0,00	0,00	0,00	0,00	0,77
Q20. The medical service and materials provided look appropriate and up to date.	0,00	0,00	0,00	0,81	0,00	0,00	0,00	0,00	0,00	0,68
Q23. The staff is able to make decisions.	0,00	0,00	0,00	0,67	0,00	0,00	0,00	0,00	0,00	0,65
Q29. The hospital staff gets along with each other.	0,00	0,00	0,00	0,46	0,00	0,00	0,00	0,00	0,00	0,66
Q9. The service is performed right the first time.	0,00	0,00	0,00	0,43	0,00	0,00	0,00	0,00	0,00	0,61
Q24. The hospital staff has a pleasant behaviour.	0,00	0,00	0,00	0,39	0,00	0,00	0,00	0,00	0,00	0,57
Q47. The level of service and cost of service are consistent.	0,00	0,00	0,00	0,00	0,84	0,00	0,00	0,00	0,00	0,76
Q46. The staff tries to determine what client's specific problems are.	0,00	0,00	0,00	0,00	0,71	0,00	0,00	0,00	0,00	0,67

Table 3 (continued): *Factor Loadings, Communalities (h²), Percentage Variance for Principal Factors*

Extraction and Direct Oblimin Rotation on SERVQUAL Items

Item	F ₁	F ₂	F ₃	F ₄	F ₅	F ₆	F ₇	F ₈	F ₉	<i>h</i> ²
Q45. The hospital staff recognises each patient.	0,00	0,00	0,00	0,00	0,70	0,00	0,00	0,00	0,00	0,59
Q33. It is safe to enter the premises.	0,00	0,00	0,00	0,00	0,00	0,66	0,00	0,00	0,00	0,70
Q34. The documents and other information of patients are held securely.	0,00	0,00	0,00	0,00	0,00	0,64	0,00	0,00	0,00	0,70
Q35. The use records of patients are safe from unauthorised use.	0,00	0,00	0,00	0,00	0,00	0,59	0,00	0,00	0,00	0,65
Q36. The patients' can be confident that service provided was done correctly.	0,00	0,00	0,00	0,00	0,00	0,58	0,00	0,00	0,00	0,71
Q32. The hospital guarantees its services.	0,00	0,00	0,00	0,00	0,00	0,00	0,79	0,00	0,00	0,78
Q31. The responses given are accurate and consistent with other reliable sources.	0,00	0,00	0,00	0,00	0,00	0,00	0,70	0,00	0,00	0,73
Q30. The hospital service has a good reputation.	0,00	0,00	0,00	0,00	0,00	0,00	0,62	0,00	0,00	0,71
Q28. The hospital staffs are considerate of the property and values of clients.	0,00	0,00	0,00	0,00	0,00	0,00	0,44	0,00	0,00	0,68
Q10. The level of service is same at all times of say and from all members of staff.	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,75	0,00	0,74
Q11. The staff is highly committed to the hospital.	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,68	0,00	0,76
Q12. The moral (job satisfaction) of the employees has improved over the past year.	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,60	0,00	0,70
Q17. The effectiveness (doing the right things) of the hospital has improved over the past year.	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,75	0,80
Q18. The efficiency (doing things right) of the hospital has improved over the past year.	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,72	0,77
Q16. The patients' complains are treated with care and seriousness.	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,66	0,67
Q25. The hospital staff refrains from acting busy.	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,00	0,52	0,72
Percentage Variance Explained	34,88	6,14	5,69	4,91	4,32	3,85	3,36	2,91	2,79	

Factor labels: F₁ Responsiveness, F₂ Communication & Access, F₃ Tangibles, F₄ Competence, F₅ Understanding the Customer, F₆ Security, F₇ Credibility, F₈ Reliability, F₉ Effective & Efficient Services

Table 3 indicates that the principal analysis resulted in a nine-factor structure. The factors were labelled as follows as per the items-loading on these factors:

- Factor 1 was related to the Responsiveness of hospital staff to patients' problems.
- Factor 2 was related to the Communication and Access within the Hospital.
- Factor 3 was related to the Tangibles.
- Factor 4 was related to the Competence of the hospital staff.
- Factor 5 was related to Understanding the Customer.
- Factor 6 was related to Security.
- Factor 7 was e related to Credibility of the hospital.
- Factor 8 was related to the Reliability of the service performed.

- Factor 9 was related to the Effectiveness and Efficiency of the Service received.

A second-order factor analysis was done on the nine factors noted in the adapted SERVQUAL. Analysis of the Eigenvalues (larger than 1) and the Scree plot indicated that one factor could be extracted, explaining 54,24% of the total variance. This factor was labelled Service Quality.

The descriptive statistics and alpha coefficients of the nine factors of the adapted SERVQUAL and the total factor as noted in the second-order factor analysis are indicated in Table 4.

Table 4: *Descriptive Statistics and Alpha Coefficients of the SERVQUAL*

Item	Mean	SD	Skewness	Kurtosis	α
9 Factor Model					
Responsiveness	18,11	3,99	-0,55	0,28	0,83
Communication & Access	26,17	5,66	-0,47	-0,04	0,89
Tangibles	19,33	3,77	-0,50	-0,08	0,79
Competence	26,02	5,37	-0,48	-0,30	0,87
Understanding the Customer	11,15	2,27	-0,30	-0,24	0,77
Security	15,87	3,08	-0,75	0,92	0,83
Credibility	14,75	3,11	-0,64	0,56	0,78
Reliability	10,87	2,61	-0,50	0,13	0,81
Effectiveness & Efficiency of Service received	13,96	3,16	-0,08	-0,29	0,79
1 Factor Model					
Service Quality	156,09	24,90	-0,34	0,40	0,95

Table 4 indicates that acceptable Cronbach alpha coefficients varying from 0,77 to 0,89 were obtained for the 9-Factor Model and 0,95 for the 1-Factor Model. These alpha coefficients compare reasonably well with the guideline of 0,70 (0,55 in basic research). This demonstrates that the dimensions (internal consistency of the dimensions) explain a large part of the variance (Nunnally & Bernstein, 1994). It is evident from Table 4 that the scales of the measuring instrument have relatively normal distributions, with low skewness and kurtosis.

The product-moment correlation coefficients between Responsiveness, Communication & Access, Tangibles, Competence of Hospital Staff, Understanding the Customer, Security, Credibility, Reliability and Effectiveness & Efficiency of Service Received are given in Table 5.

Table 5: *Product-Moment Correlation Coefficients between the SERVQUAL factors*

Item	1	2	3	4	5	6	7	8
1. Responsiveness	.	.	.	.	.	.	.	.
2. Communication & Access	0,55^{***}	.	.	.	.	.	.	.
3. Tangibles	0,50 ^{**}	0,46^{**}	.	.	.	.	.	.
4. Competence	0,61 ^{***}	0,50 ^{**}	0,49^{**}	.	.	.	.	.
5. Understanding the Customer	0,45 ^{**}	0,42 ^{**}	0,45 ^{**}	0,42^{**}	.	.	.	.
6. Security	0,49 ^{**}	0,55 ^{***}	0,43 ^{**}	0,51 ^{***}	0,40 ^{**}	.	.	.
7. Credibility	0,54 ^{***}	0,51 ^{***}	0,52 ^{***}	0,62 ^{***}	0,46 ^{**}	0,43 ^{**}	.	.
8. Reliability	0,62 ^{***}	0,45 ^{**}	0,47 ^{**}	0,54 ^{***}	0,46 ^{**}	0,47 ^{**}	0,47 ^{**}	.
9. Effectiveness & Efficiency of Service received	0,66 ^{***}	0,51 ^{***}	0,38 ^{**}	0,51 ^{***}	0,35 ^{**}	0,41 ^{**}	0,43 ^{**}	0,57 ^{***}

* $p \leq 0,05$ – statistically significant

+ $r > 0,30$ – practically significant (medium effect)

++ $r > 0,50$ – practically significant (large effect)

Table 5 shows that the SERVQUAL factors all have statistically significant positive correlations (practically significant, medium / large effect) on one another. This implies that when the perception of a specific factor is positive or negative, that it will have a similar (either positive or negative) effect on the remainder of the factors.

MANOVA analysis was conducted to determine differences between demographic groups (such as gender, patient type, status, age, ethnicity, employment status, marital status, education levels and number of visits to the public hospital) in their experience of service quality (i.e. responsiveness, communication & access, tangibles, competence, understanding the customer, security, credibility, reliability and effectiveness & efficiency of service received) and the total service quality. Results were first analysed for statistical significance using Wilk's Lambda statistics. ANOVA was applied to determine the specific difference whenever statistical differences were found. The results of the analysis are specified in Tables 6 to 10.

Table 6: MANOVA – Differences in Service Quality

Variable	Value	F	Df	P	Partial Eta squared
Gender	0,95	1,04	9,00	0,41	0,05
Patient Type	0,92	1,57	9,00	0,13	0,08
Status	0,94	1,11	9,00	0,36	0,06
Age	0,71	1,66	36,00	0,01*	0,08
Ethnicity	0,89	1,12	18,00	0,33	0,06
Employment Status	0,79	1,58	27,00	0,03*	0,08
Marital Status	0,80	1,45	27,00	0,07	0,07
Educational Level	0,70	1,76	36,00	0,01*	0,09
Number of Visits	0,85	1,04	27,00	0,42	0,05

* $p < 0,05$

In the analysis of Wilk's Lambda values, no statistically significant differences ($p < 0,05$) regarding Service Quality (i.e. responsiveness, communication & access, tangibles, competence, understanding the customer, security, credibility, reliability and effectiveness & efficiency of service received) and the total service quality factor could be found between gender, patient type, status, ethnicity, marital status, and number of visits to the public hospital. However, statistically significant differences ($p < 0,05$) exist for the age groups, employment status and educational levels.

The relationship between service quality and age groups, employment status and educational levels were further analysed using ANOVA. The Games-Howell procedure was applied to determine whether there were any statistical differences between the groups.

The results of the ANOVA based on age groups are listed in Table 7.

Table 7: Differences in Service Quality based on age groups

Item	16 – 29 years	30 – 39 years	40 – 49 years	50 – 59 years	60+ years	p	Partial Eta Squared
Responsiveness	19,06	16,60 ^b	17,77	20,41 ^a	20,39	0,00*	0,13
Communication & Access	27,56	24,34 ^b	25,98	27,00	29,56 ^a	0,00*	0,09
Tangibles	20,33	18,70	18,68	19,88	20,22	0,09	0,04
Competence	26,46	25,04	25,64	26,77	29,00	0,06	0,04
Understanding the Customer	11,14	10,60 ^b	11,26	12,00	12,53 ^a	0,02*	0,07
Security	16,65	14,99 ^b	15,61	16,65	17,28 ^a	0,01*	0,07
Credibility	14,83	14,14 ^b	14,57	15,59	16,61 ^a	0,03*	0,05
Reliability	11,67	9,95 ^b	10,27	12,00	12,83 ^a	0,00*	0,15
Effectiveness & Efficiency of Services provided	14,31	13,03 ^b	14,07	14,88	15,61 ^a	0,01*	0,07
Total Service Quality	161,60	147,77 ^b	151,92	165,75	178,93 ^a	0,00*	0,15

* Statistically significant difference: $p < 0,05$

^a Group differs statistically significantly from type (in row) where b is indicated

Table 7 indicates no statistical differences in terms of age groups regarding Tangibles, and Competence of hospital staff. It is further evident that participants aged between 50 and 59 years have experienced higher levels of Responsiveness from the hospital and staff members than participants aged between 30 and 39 years. Participants older than 60 years had more positive experiences of Communication & Access specifically in terms of being listened to, understanding and concern being demonstrated and having easy access to appropriate staff and the facilities when compared to participants aged between 30 and 39 years. Participants older than 50 years had more positive experienced regarding the hospital staff displaying an Understanding of the customer and his/her needs than participants aged between 30 and 39 years.

Participants 60 years and older displayed more positive experiences regarding the Security to the facilities and the safe keeping of patient records than participants aged between 30 and 39 years. They also noted being more positive to the Credibility of the facility and the hospital staff than participants aged between 30 and 39 years. Participants older than 50 years were also more positive regarding the Reliability of the services received, i.e. the level of services being the same at all times of the day and from all members of staff; and the staff being highly committed to the hospital. The same disposition was evident in participants 50 years and older for the Effectiveness & Efficiency of Services Received when compared to participants within the 30 – 39 age group.

The total Service Quality was more positive experienced by participants older than 50 years than participants aged between 30 and 39 years.

The results of the ANOVA based on employment status are stipulated in Table 8.

Table 8: *Differences in Service Quality based on employment status*

Item	Student	Employed	Unemployed	Pensioner	<i>p</i>	Partial Eta Squared
Responsiveness	19,71	17,30 ^b	18,20	20,58 ^a	0,00*	0,07
Communication & Access	28,71	25,67	25,08 ^b	30,26 ^a	0,00*	0,08
Tangibles	19,82	18,98	19,35	20,58	0,36	0,02
Competence	26,00	25,61	25,80	28,84	0,12	0,03
Understanding the Customer	10,77	10,99	11,10	12,63	0,05	0,04
Security	16,29	15,39	16,09	17,21	0,08	0,03
Credibility	15,24	14,50	14,44 ^b	16,63 ^a	0,03*	0,04
Reliability	11,53	10,39 ^b	10,88	12,68 ^a	0,00*	0,07
Effectiveness & Efficiency of Services provided	14,47	13,51 ^b	13,92	15,90 ^a	0,02*	0,05
Total Service Quality	162,62	152,00 ^b	154,47	180,13 ^a	0,00*	0,10

* Statistically significant difference: $p < 0,05$

^a Group differs statistically significantly from type (in row) where ^b is indicated

Table 8 confirms no statistical differences in terms of employment status regarding Tangibles, Competence of hospital staff, Understanding the Customer, and Security. Table 8 shows that Pensioners experience higher levels of Responsiveness from the hospital and staff members than Employed participants. Pensioners further had more positive experiences of Communication & Access in terms of being listened to, understanding and concern being demonstrated and having easy access to appropriate staff and the facilities, than unemployed participants.

Pensioners were more positive to the Credibility of the facility and the hospital staff than unemployed participants. They were also more positive regarding the Reliability of the services received, i.e. the level of services being the same at all times of the day and from all members of staff and the staff being highly committed to the hospital. and the Effectiveness and Efficiency of the service received than employed participants.

Pensioners experienced the total Service Quality more positive than employed participants.

The results of the ANOVA based on educational levels are indicated in Table 9.

Table 9: *Differences in Service Quality based on educational levels*

Item	Lower than Matric	Matric	Certificate	Degree	Post Graduate Degree	<i>p</i>	Partial Eta Squared
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Responsiveness	18,96	17,98	18,37	16,85	14,00	0,11	0,04
Communication & Access	27,54	25,85	26,33	24,65	22,33	0,21	0,03
Tangibles	19,76	19,23	20,05	17,65	16,67	0,10	0,04
Competence	27,35	25,69	26,17	24,85	21,00	0,15	0,03
Understanding the Customer	12,00	10,95	10,83	10,95	10,00	0,09	0,04
Security	16,72	15,57	15,93	14,90	17,33	0,14	0,04
Credibility	15,80	14,62	14,62	12,90 ^b	16,33 ^a	0,01 [*]	0,07
Reliability	12,02 ^a	10,81	10,50	9,65	8,00 ^b	0,00 [*]	0,09
Effectiveness & Efficiency of Services provided	14,78	13,88	13,74	13,05	13,67	0,24	0,03
Total Service Quality	166,29 ^a	153,36	156,67	145,58	137,00 ^b	0,01 [*]	0,07

* Statistically significant difference: $p < 0,05$

^a Group differs statistically significantly from type (in row) where ^b is indicated

Table 9 shows that there were no statistical differences in terms of educational levels regarding Responsiveness, Communication & Access, Tangibles, Competence of hospital staff, Understanding the Customer, Security, and Effectiveness & Efficiency of Services Received. Table 9 further illustrates participants with a postgraduate degree experience higher levels of Credibility of the facility and the hospital staff than participants with a degree. Participants with a lower than matric educational level had more positive perceptions regarding the Reliability of the services received (the level of services being the same at all times of the day and from all members of staff and the staff being highly committed to the hospital) compared to participants with a postgraduate degree. Participants with an educational level lower than matric experienced the total Service Quality more positive than participants with a postgraduate degree.

4.6. CHAPTER SUMMARY

This chapter reported on the results of the empirical research and discussed the quantitative results. An adapted SERVQUAL questionnaire was administered, focusing on the perceptions of the participants on the quality of service received in a public hospital. Nine factors were extracted from the adapted SERVQUAL, that accounts for 68,85% of the total variance. These factors were labelled Responsiveness, Communication & Access, Tangibles, Competence, Understanding the Customer, Security, Credibility, Reliability and Effectiveness & Efficiency of the Service Received. A second-order factor analysis was done on the nine factors noted in the adapted SERVQUAL. Analysis of the Eigenvalues (larger than 1) and the scree plot indicated that one factor could be extracted, explaining 54,24% of the total variance. This factor was labelled Service Quality.

Acceptable Cronbach alpha coefficients varying between 0,77 to 0,89 were obtained for the 9-Factor Model and 0,95 for the 1-Factor Model. This demonstrates that the dimensions (internal consistency of

the dimensions) explain a large portion of the variance (Nunnally & Bernstein, 1994). The scales of the measuring instrument had relatively normal distributions, with low skewness and kurtosis.

Statistical differences regarding Service Quality (i.e. responsiveness, communication & access, tangibles, competence, understanding the customer, security, credibility, reliability and effectiveness & efficiency of service received) and the total service quality factor were evident between age groups, employment status and educational levels. Furthermore, the results indicated that participants older than 50 years, pensioners and participants with lower than a matric educational level were more positive to the Service Quality experienced in a public hospital.

In Chapter 5 the conclusions pertaining to the research questions, the limitations of the research and recommendations regarding future research, specifically with regard to public hospitals, are discussed.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

This concluding chapter provides the interpretations on the results presented in Chapter 4. From the interpreted results, conclusions are drawn against the primary and secondary objectives that were set for this research study. In addition to this, the various limitations identified during the progression of the study are revealed and discussed. Finally, recommendations are presented for both the public hospital sector and for future research opportunities as it stemmed from this research study.

5.2 CONCLUSIONS

Conclusions regarding the objectives set for the study as well as the results of the empirical research are discussed below.

5.2.1 Primary objective conclusion

The primary objective of this research was to investigate the perceptions of patients and their immediate family members with regard to the provided healthcare services in a public hospital. Public hospitals have been perceived as run-down by their management leading to a lack of accountability and monitoring, with poor maintenance, with need for more financial resources, affinity to be over-crowded and high vacancy rates (Cullinan, 2006b:13, Yesilada, & Direktör, 2010:968). However, Von Holdt and Murphy (2006:1) highlight that some other hospitals continue to provide quality care despite negative perceptions, persistent health inequities, and increasing costs of healthcare.

The statistical results indicated that service quality within the public hospital used in the study comprises of nine factors, which are: Responsiveness of hospital staff to patient's problems; Communication and Access within the hospital; Tangibles; Competence of the hospital staff; Understanding the customer; Security; Credibility of the hospital; Reliability of the service performed; and Effectiveness and Efficiency of the service received. It was further noted that all these factors, when doing a secondary factor analysis, loaded on one factor, namely Service Quality. This is an indication that the perceptions of healthcare services within a public hospital can comprise out of a comprehensive

Service Quality perception or be divided into nine specific contributors that influence the overall perceptions of patients and their immediate family members.

Statistical differences regarding Service Quality (i.e. Responsiveness, Communication & Access, Tangibles, Competence, Understanding the customer, Security, Credibility, Reliability; and Effectiveness & efficiency of service received) and the Total Service Quality factors were evident between age groups, employment status and educational levels. The results indicated that participants older than 50 years, pensioners and participants with a lower educational level than matric were more positive to the Service Quality experienced in a public hospital.

The implications of the results for a public hospital, as obtained from the literature review and the current study, are summarised below.

Positive correlations were found between the nine factors identified as well as with the overall Service Quality factor. A negative / positive perception of one of these factors can consequently influence, in the same direction being negative / positive, the perception of healthcare services received in the public hospital. In other words, as the one perception increase, so does the other. The focus in the public hospital should be to address and enhance these factors to enhance the perceptions of quality of health services received.

More positive results regarding service quality were obtained for participants older than 50 years, pensioners and participants with lower educational level than matric, whilst employed participants within the age group 30 to 39 years and participants with a postgraduate qualification level had more negative perceptions towards the quality of health service.

According to the NHI Green paper (2011) the public sector caters for two types of patients, i.e. those who pay for the service, and those who do not pay for the service. Based on the results from this research, a perception could arise that the group that were more positive regarding the service quality is most likely those who are more inclined to utilise free public healthcare services. On the other hand, the patients that has to pay for the services will typically have a medical aid or pay out of pocket for the utilisation of healthcare services, resulting in them probably having experienced the service quality within the private health sector. They may as a consequence have a comparative analysis. Although the expected perception is high regarding the quality of services provided in the private health sector which was confirmed by Bisschoff and Clapton (2014:43), through a study in a private hospital, it was however noted that there is a need in the private hospital to ensure continuous maintenance, the

improvement of the appearance of the facility, and further training of staff in order to sustain and increase the service quality. It is also probable that the expectation may be that when required to pay for a certain service that the quality of the service received, should be high.

5.2.2 Secondary objectives conclusions

The first secondary objective was to conceptualise quality of service from the literature. Many definitions for service quality were cited and these included Bitner (1990) defining service quality as the customers' overall impression of an organisation and its relative inferior or superior service. Roester and Pieters (1985) believe that it is a realistic discrepancy between experience-based norms and performance that are related to service quality. However, Parasuraman, *et al.* (1985) describe it as the difference between expectation and performance measured against quality dimensions. Berry and Parasuraman (1991) further confirm that service quality is assessed by comparing what is wanted or expected to what is actually received. Gronross (2007) relents that service quality can be used in the healthcare sector by distinguishing the technical quality and the functional aspect of quality.

For the purpose of measuring service quality in the public hospital for this study, the SERVQUAL model was utilised as the underlying theoretical model. From the model an adapted measurement was compiled and applied. SERVQUAL is the abbreviation for service quality based on the ten requisites of quality service in “Conceptual Model of Service Quality” of Parasuraman, *et al.* (1985). The model serves to measure service quality and starts off with the assumption that the difference between the perceptions of the customer and their expectation of the service determine service quality (Cronin & Taylor, 1992:55).

The second secondary objective was to determine the service quality dimensions within the healthcare industry that will indicate if quality of services is being delivered in a hospital, as indicated in the reviewed literature. O'Donnell (2007:2822) indicates that access to healthcare is two-sided, comprising the supply side that links with the expectation that the services that are provided should be of quality and effective, and then the demand side which refers to the utilisation of the services that are offered. Poor services may result in the loss of interest to make use of the service at a particular service provider. To ensure satisfactory levels of service are high and to provide quality care the following aspects are essential: maintenance and improvement of the appearance of the facility (Tangibility); provision of training to personnel to promote patient relationships can assist in providing excellent service quality (Credibility); patient safety (Security); effectiveness (Responsiveness); patient centeredness

(Understanding the Customer); timelessness (Reliability); efficiency (Competence); and equity (Communication and Access).

Devers, *et al.* (2004:105) mention that to ensure quality care within a public hospital, it is important for public healthcare to eliminate the under-provision of essential clinical services, stop the overuse of care, and end the misuse of unneeded services, the bad attitudes of employees and staff neglecting the patients. However, the low morale of some staff further adds to the challenges in offering quality services. To counter these problems, successful implementation of policies aimed on improving the overall service quality has been a motivation for public healthcare (Komape, 2013:56).

The third secondary objective was to determine the experience of the quality of services rendered in a specific public hospital. An adapted SERVQUAL questionnaire was administered, focusing on the perceptions of the participants on the quality of service received in a public hospital. Nine factors were extracted from the adapted SERVQUAL, which accounted for 68,85% of the total variance. These factors were labelled Responsiveness, Communication & Access, Tangibles, Competence, Understanding the Customer, Security, Credibility, Reliability; and Effectiveness & Efficiency of the service received. A second-order factor analysis was done on the nine factors noted in the adapted SERVQUAL. Analysis of the Eigenvalues (larger than 1) and the Scree plot indicated that one factor could be extracted, explaining 54,24% of the total variance. This factor was labelled Service Quality.

Acceptable Cronbach alpha coefficients varying between 0,77 to 0,89 were obtained for the 9-Factor Model and 0,95 for the 1-Factor Model, demonstrating that a large portion of the variance is explained by the dimensions (internal consistency of the dimensions) (Nunnally & Bernstein, 1994). The scales of the measuring instrument had relatively normal distributions, with low skewness and kurtosis.

The factors identified during the statistical analysis all had positive correlations with one another. This implies that when the perception of a specific factor is positive or negative, that it will have a similar (either positive or negative) on the remainder of the factors.

The results indicated that statistical differences regarding Service Quality (i.e. Responsiveness, Communication & Access, Tangibles, Competence, Understanding the customer, Security, Credibility, Reliability, and Effectiveness & efficiency of service received) and the Total Service Quality factor could be found between age groups, employment status and educational levels. The results indicated that participants older than 50 years, pensioners and participants with an educational level lower than matric were more positive to the Service Quality experienced in a public hospital.

5.3 LIMITATIONS

Several limitations regarding the research were identified. These limitations could have had an impact on this study's findings and the researcher's ultimate generalisation of findings. The SERVQUAL theoretical model was relatively complicated and time-consuming. In other research on the SERVQUAL model both expectations and perceptions were measured in order to determine the gap regarding service quality. Within this research, the focus was only on perceptions of service quality which could have limited the impact of the current study on improving the quality of healthcare services within the public hospital utilised in the study.

As the administered questionnaire was only provided in English and the majority of the respondents' first language not being English, it is likely that it could have had an influence on the interpretation, and thus subsequent the answering of the questions. With some of the respondents (23%) with an educational level lower than matric, it can be assumed that the participants with below average literacy levels could have experienced difficulty in the completion of the questionnaire without requiring clarification.

Self-report measures were exclusively relied upon. Self-report measures are inherently biased and validity should be addressed by comparing the result with other self-reports on the same topics.

Although the confidentiality of the survey responses was stated clearly, it is probable that respondents might have been concerned about this, and thus not fully disclosed information in the questionnaire.

The findings in this research study might be limited to this public hospital only and not be representative of hospital service quality in the Gauteng province.

5.4 RECOMMENDATIONS

This section provides recommendations for both the public hospital, in which the study was conducted, as well as for potential future research.

5.4.1 Recommendations for the Public Hospital

The findings of the study can serve as a motivation and a guideline for the public hospital management and staff to assess their quality of service that they provide to their patients. This study can also provide insight into the aspects of service quality that is most important and are critical for the positive image of the hospital. Suggestion to assist in ensuring that good service quality is maintained in the public hospital for patients and family members include management's realising that the quality of the service delivered is dependent on the employees of the organisation.

The recommendations for this specific public hospital are:

- To ensure that the hospital maintains service quality. In order to provide this, they should address and focus on the identified factors that will enhance the perceptions of quality of healthcare services received.
- It is recommended that the hospital determines the specific service quality dimensions that would be pertinent for a patient-healthcare worker relationship for this public sector hospital.
- A feedback on strategies or a feedback-mechanism for this hospital is needed to ensure that all users receive total quality service.
- As it was indicated that the perception of quality service received is more inferior for participants falling within the 30 to 39 years' age group, employed participants and those with a post-graduate educational level, hospital staff need to proactively address the aspects influencing these perceptions. This can be obtained through focused training of hospital staff and also the overall maintenance of the facilities.

5.4.2 Recommendations for Future Research

Notwithstanding the limitations of this study, the findings offer valuable suggestions for possible future research:

- A study to develop a specific model to measure Total Quality Service with a framework for service quality aimed at the public sector hospitals.
- A comparative study between different levels (district, regional, national) of public healthcare with regard to the perceived quality of service from the healthcare workers.
- A comparative study between the perceived quality of service as delivered in district hospitals in representative cities of all the other South African provinces.

5.5 CHAPTER SUMMARY

Chapter 5 provided conclusions regarding this research study's theoretical and empirical objective. Research limitations were highlighted and discussed. Recommendations were made for the specific public hospital in which the study was done as well as for potential future research.

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ADDENDUM 1:

Code number:

SERVICE QUALITY QUESTIONNAIRE

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SECTION A: Tangibles

The following statements are to get feedback on the appearance of physical facilities, equipment, personnel, printed and visual materials at Bheki Mlangeni Hospital.

Please rate the extent to which you agree or disagree with the following statements by making an "X" over the appropriate number on the 1 to 5 point scale next to the statement.

Please take note that 1 = Strongly disagree and 5 = Strongly agree.

	1 = <i>Strongly disagree</i>	2 = <i>Disagree</i>	3 = <i>Neutral</i>	4 = <i>Agree</i>	5 = <i>Strongly agree</i>				
	STATEMENT				SCALE				
A1	The hospital facilities are attractive.				1	2	3	4	5
A2	The hospital staff dressed appropriately.				1	2	3	4	5
A3	The written materials (pamphlets, posters) are easy to understand.				1	2	3	4	5
A4	The technology used in the hospital look modern.				1	2	3	4	5
A5	The hospital is very often the first to introduce new products/ services/processes.				1	2	3	4	5
A6	The hospital continuously seeks out new products/processes/ services.				1	2	3	4	5

SECTION B: Reliability

The following statements are concerned with the ability to perform promised service dependably and accurately

Please rate the extent to which you agree or disagree with the following statements by making an "X" over the appropriate number on the 1 to 5 point scale next to the statement.

Please take note that 1 = Strongly disagree and 5 = Strongly agree.

	1 = <i>Strongly disagree</i>	2 = <i>Disagree</i>	3 = <i>Neutral</i>	4 = <i>Agree</i>	5 = <i>Strongly agree</i>				
	STATEMENT				SCALE				
B1	The staff responds as promised in a certain time.				1	2	3	4	5
B2	The exact requirements of a patient are followed.				1	2	3	4	5
B3	The service is performed right the first time.				1	2	3	4	5
B4	The level of service is same at all times of day and from all members of staff.				1	2	3	4	5
B5	The staff is highly committed to the hospital.				1	2	3	4	5
B6	The moral (job satisfaction) of the employees has improved over the past year.				1	2	3	4	5

SECTION C: Responsiveness

The following statements concern the willingness to help customers to provide prompt service

Please rate the extent to which you agree or disagree with the following statements by making an "X" over the appropriate number on the 1 to 5 point scale next to the statement.

Please take note that 1 = Strongly disagree and 5 = Strongly agree.

	1 = <i>Strongly disagree</i>	2 = <i>Disagree</i>	3 = <i>Neutral</i>	4 = <i>Agree</i>	5 = <i>Strongly agree</i>				
	STATEMENT				SCALE				
C1	When there is a problem the hospital responds to it quickly.				1	2	3	4	5
C2	The staff is willing to answer patients questions.				1	2	3	4	5

C3	The specific times for when service will be given is told to patients.	1	2	3	4	5
C4	The patients complaints are treated with care and seriousness.	1	2	3	4	5
C5	The effectiveness (doing the right things) of the hospital has improved over the past year.	1	2	3	4	5
C6	The efficiency (doing things right) of the hospital has improved over the past year.	1	2	3	4	5

SECTION D: Competence

The following statements concern the possession of required skill and knowledge to perform service

Please rate the extent to which you agree or disagree with the following statements by making an "X" over the appropriate number on the 1 to 5 point scale next to the statement.

Please take note that 1 = Strongly disagree and 5 = Strongly agree.

	1 = Strongly disagree	2 = Disagree	3 = Neutral	4 = Agree	5 = Strongly agree				
D1	The staffs provide service without wasting time				1	2	3	4	5
D2	The medical service and materials provided look appropriate and up to date.				1	2	3	4	5
D3	The staff uses the technology quickly and skilfully.				1	2	3	4	5
D4	The staff appears to know what they are doing.				1	2	3	4	5
D5	The staff is able to make decisions				1	2	3	4	5

SECTION E: Courtesy

The following statements concern the politeness, respect, consideration and friendliness of contact personnel

Please rate the extent to which you feel (dis)satisfied with the following statements by making an "X" over the appropriate number on the 1 to 5 point scale next to the statement.

Please take note that 1 = Strongly disagree and 5 = Strongly agree.

	1 = Strongly disagree	2 = Agree	3 = Neutral	4 = Disagree	5 = Strongly agree				
	STATEMENT				SCALE				
E1	The hospital staffs have a pleasant behaviour				1	2	3	4	5
E2	The hospital staffs refrains from acting busy				1	2	3	4	5
E3	The hospital staffs are rude when clients ask questions.				1	2	3	4	5
E4	The hospital staff answers patients' questions politely.				1	2	3	4	5
E5	The hospital staffs are considerate of the property and values of clients				1	2	3	4	5
E6	The hospital staff get along with each other.				1	2	3	4	5

SECTION F: Credibility

The purpose of this section is to assess how you view trustworthiness, believability, honesty of the service provider.

Please rate the extent to which you disagree or agree with the following statements by making an "X" over the appropriate number on the 1 to 5 point scale next to the statement.

Please take note that 1 = Strongly disagree and 5 = Strongly agree.

	1 = Strongly disagree	2 = Disagree	3 = Neutral	4 = Agree	5 = Strongly agree				
	STATEMENT				SCALE				

F1	The hospital service has a good reputation.	1	2	3	4	5
F3	The responses given are accurate and consistent with other reliable sources.	1	2	3	4	5
F4	The hospital guarantees its services.	1	2	3	4	5

SECTION G: Security

The following statements concern your perception of freedom from danger, risk, or doubt.

Please rate the extent to which you agree or disagree with the following statements by making an "X" over the appropriate number on the 1 to 5 point scale next to the statement.

Please take note that 1 = Strongly disagree and 5 = Strongly agree.

	1 = Strongly disagree	2 = Disagree	3 = Neutral	4 = Agree	5 = Strongly agree
	STATEMENT				SCALE
G1	It is safe to enter the premises				1 2 3 4 5
G2	The documents and other information of patients' are held securely.				1 2 3 4 5
G3	The use records of patients are safe from unauthorized use				1 2 3 4 5
G4	The patients can be confident that service provided was done correctly				1 2 3 4 5

SECTION H: Access

The following statements concern your perception of approachability and ease of contact.

Please rate the extent to which you agree or disagree with the following statements by making an "X" over the appropriate number on the 1 to 5 point scale next to the statement.

Please take note that 1 = Strongly disagree and 5 = Strongly agree.

	1 = Strongly disagree	2 = Disagree	3 = Neutral	4 = Agree	5 = Strongly agree
	STATEMENT				SCALE
H1	It is easy to talk to knowledgeable staff member when patients have a problem				1 2 3 4 5
H2	It is easy to reach the appropriate staff person when lodging complaints				1 2 3 4 5
H3	The service access points are conveniently located				1 2 3 4 5
H4	The hospital is wheel chair and other disability friendly				1 2 3 4 5

SECTION I: Communication

The following statements concern your perception of listening to customers and acknowledging their comments; Keeping customers informed in a language they can understand.

Please rate the extent to which you agree or disagree with the following statements by making an "X" over the appropriate number on the 1 to 5 point scale next to the statement.

Please take note that 1 = Strongly disagree and 5 = Strongly agree.

	1 = Strongly disagree	2 = Disagree	3 = Neutral	4 = Agree	5 = Strongly agree
	STATEMENT				SCALE
I1	The hospital administration point listens to patients' problem				1 2 3 4 5
I2	The hospital administration staff demonstrates understanding and concern				1 2 3 4 5
I3	The hospital staff explain clearly the various options available to a particular query				1 2 3 4 5
I4	The staff avoid using technical language when speaking with patients'				1 2 3 4 5

SECTION J: Understanding the Customer

The following statements concern your perception of making the effort to know customers and their needs.

Please rate the extent to which you agree or disagree with the following statements by making an "X" over the appropriate number on the 1 to 5 point scale next to the statement.

Please take note that 1 = Strongly disagree and 5 = Strongly agree.

	1 = Strongly disagree	2 = Disagree	3 = Neutral	4 = Agree	5 = Strongly agree				
	STATEMENT				SCALE				
J1	The hospital staff recognizes each patients				1	2	3	4	5
J2	The staff tries to determine what client's specific problems is				1	2	3	4	5
J3	The level of service and cost of service are consistent				1	2	3	4	5

SECTION K: PERSONAL INFORMATION

The following information is needed to help us with the statistical analysis of the data for comparisons among different demographic variables. We appreciate your help in providing this important information.

Mark the applicable block with a cross (X). Complete the applicable information.						
K1	What is your gender?	Male		Female		
K2	Patient type	Day visitor		Hospitalised		
K3	Are you	Family member		Patient		
K4	In which age group do you fall?	16-29	30 - 39	40 - 49	50 - 59	60+
K5	Race	Black	White	Indian	Coloured	other
K6	Occupation	Student	Employed	Unemploy ed	Pensioner	
K7	What is your marital status?	Single	Married	Divorce	Widow(er)	
K8	State your highest academic qualification. Mark the applicable block with a cross (X).					
	Lower than matric					
	Matric					
	Certificate					
	Diploma (Technical College or Technicon)					
	University degree					
	Post graduate degree					
K9	Number of visits to the hospital	once	twice	third	3+	

THANK YOU FOR YOUR TIME.

INFORMED CONSENT

You are invited to participate in a study by SM Mthanti, MBA student at NWU and an employee at Bheki Mlangeni District Hospital.

The study focuses service quality at the hospital by the perceptions of patients and their family members regarding the attitudes, behaviour and service mindedness of the health care workers.

Participation in the study is completely voluntary. If you do not want to participate in the study, you may withdraw at any time.

Your confidentiality will be protected throughout the study. All the information will be kept confidential. There are no anticipated benefits or risks to you as a participant, aside from helping us with a better understanding of how the hospital can improve the quality of their services.

For any questions please contact NWU (018)299-1419

Thanks for participants!

Signature: _____

Date: _____