

DURBAN UNIVERSITY OF TECHNOLOGY

**IMPROVING SERVICE DELIVERY AT A PUBLIC HEALTH CARE CLINIC THROUGH A QUALITY
MANAGEMENT SYSTEM: THE CASE OF HARTEBEESKOP CLINIC IN ELUKWATINI,
MPUMALANGA.**

SIBAHLE SHANDU

AUGUST 2024



IMPROVING SERVICE DELIVERY AT A PUBLIC HEALTH CARE CLINIC THROUGH A QUALITY MANAGEMENT SYSTEM: THE CASE OF HARTEBEESKOP CLINIC IN ELUKWATINI, MPUMALANGA

This work is submitted in fulfilment of the requirements of the degree in Master of Management Sciences Specialising in Quality Management in the Faculty of Management Sciences at the Durban University of Technology.

SIBAHLE SHANDU

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APPROVED FOR FINAL SUBMISSION

Supervisor: Prof. M Ramchander **Signature:**

Date: 13 /08/24

Abstract

Service quality challenges in public healthcare clinics in South Africa are multi-faceted and complex. Resource constraints, staff-related challenges, and patient-related challenges are healthcare providers' primary obstacles in providing high-quality service. These challenges are interrelated and can have a significant impact on the quality of service provided to patients.

The implementation of a Quality Management System (QMS) can have significant benefits for public healthcare clinics in South Africa, including improvements in patient satisfaction, quality of care, and staff morale. QMS can also help to address some of the challenges facing public health care clinics in South Africa, including resource constraints, resistance to change, inadequate training and support, cultural and language barriers, and a lack of effective leadership and governance. However, successful QMS implementation requires adequate resources, effective training and support, successful communication and buy-in from all stakeholders, good leadership and governance, and sustained monitoring and evaluation.

Therefore, there is a need for a concerted effort to support the implementation of QMS in public health care clinics in South Africa, including policy support, funding, training and support, and ongoing monitoring and evaluation. Numerous studies have been conducted to evaluate the effectiveness of QMS in the public clinics in South Africa. The studies have assessed the impact of QMS on various aspects of healthcare services, such as patient outcomes, healthcare workers' satisfaction, and healthcare system performance. However, in all these studies, a gap still emerges in that in some studies, only patients were participants, while in others, only health care providers were participants.

This research project aimed to Improve service delivery at a public health care clinic through a Quality Management System: The case of Hartebeeskop Clinic in Elukwatini, Mpumalanga.

By ascertaining the challenges and gaps in service delivery at the Hartebeeskop Clinic and to improve service delivery, by discovering the gaps in service delivery at the clinic through conducting a survey amongst patients and conducting interviews with the health care providers to ascertain the effectiveness of the QMS that is currently in place at the clinic by document analysis. The study also set out to establish how the health sector can realise the provision of quality service delivery to the community, as enshrined in the South African Constitution, Act 108 of 1996.

A pragmatist paradigm was deemed to be most suitable for this study because the researcher gathered quantitative data from patients and qualitative data from clinic staff, thus enabling a complete picture of the phenomena under study to emerge. The study employed a mixed

methods research design and as a result, the researcher was able to corroborate the findings and better interpret them and give a deeper understanding to the study.

The researcher adopted phenomenology as a design in quantitative research because the researcher sought to understand how patients experience the service delivered by the healthcare providers, in addition to exploring the experiences and perspectives of patients and healthcare providers. For the quantitative part of the study, the research had a population of 6000 patients and the sample size of 364 patients. The researcher used Kaur's (2018) formula to find the sample size for a quantitative study. The participants were selected using systematic probability sampling. The researcher chose every 3rd patient who did not answer previously and agreed to participate in the study; for patients who refused to participate, the researcher asked the next patient.

The population for the qualitative study was 18 healthcare givers. Therefore, there was no sampling because the population was small, and all healthcare providers were interviewed. Reliability assumes that data collection instruments and procedures will produce consistent results. The researcher used the software SPSS version 20 for Windows 11 for data analysis. According to Heris (2018), a construct or variable is said to be highly reliable if it provides a Cronbach Alpha value of $> 0.7 - 0.9$. The researcher used Cronbach's Alpha to determine the reliability of the questionnaire.

This study recommends that the government ensures that there is improvement in resource allocation to public healthcare institutions, so that public institutions provide quality service delivery and quality healthcare services to customers. The National Health Department must ensure that all public institutions implement the National Core Standards (NCS); Batho Pele principles should be familiar to staff to ensure patients' rights and to enhance service delivery at the public clinic. Reducing staff attitudes at Hartebeeskop Clinic is an essential endeavour. The challenges faced by healthcare workers in these settings are numerous, but with the right strategies and a commitment to improving the work environment, positive change is possible. By addressing issues such as resource allocation, communication, training, and organisational culture, Hartebeeskop Clinic can create a more positive atmosphere for both staff and patients. Continuous monitoring and adaptation of these strategies are key to long-term success in improving staff attitudes and, consequently, the quality of care provided to the community. The study's contributions include an identification of key service delivery factors and demonstration of QMS effectiveness, providing valuable insights for healthcare quality improvement in public clinics.

DECLARATION

The work described in this was performed by the author under the supervision of Prof. Manduth Ramchander at Durban University of Technology, Durban, South Africa, between 2022 and 2024. The study presents original work by the author that has not been submitted in any form at another university. Where use is made of the work of others, this has been clearly stated in the text.

Signed:

Date:

13/08/2024

Candidate

Signed:

Date

13/08/24

Supervisor

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DEDICATION

This work is dedicated to my late father, Mr Simon Mncandeni Shandu, who always believed in me when I was young, and saw me as his most brilliant and ambitious little girl who someday would make his name known to the world. There is more I must accomplish. Hopefully, he is proud of me.

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ABBREVIATIONS AND ACRYNOMS

QMS - Quality management system

HPRS - Health patient registration system

TIER - Three Interlinked Electronic Registers

PDSA - Plan Do Study Act

Doh - Department of Health

WHO – World Health Organisation

APPENDICES

Appendix A: Ethical Clearance

Appendix B: Letter of Information

Appendix C: Letter Consent Interview Schedule – For health care providers/Manager

Appendix D: Survey Questionnaire – for patient

Appendix E: Interview Schedule – For health care providers/Manager

Appendix F: Gatekeepers' Permission

CHAPTER 1 INTRODUCTION AND BACKGROUND

1.1 Introduction

Access to healthcare is considered a fundamental right for all individuals. However, the provision of public healthcare services in South Africa faces numerous challenges, such as extended waiting times, staff shortages, insufficient resources, subpar infrastructure, and ineffective service delivery systems, as highlighted by (Botes *et al.* 2019). These issues have led to unfavourable health outcomes, diminished patient satisfaction, and a lack of trust in the public healthcare system. Consequently, there is a pressing need to enhance the quality-of-service delivery at public healthcare clinics in South Africa.

One proposed solution to tackle these challenges involves the implementation of a Quality Management System (QMS) in healthcare clinics. A QMS is a methodical approach to quality management designed to ensure that healthcare services align with the expectations and needs of patients, healthcare providers, and other stakeholders, as discussed by (Botes *et al.* 2019). This chapter aims to provide a comprehensive background to the identified problem. Additionally, it outlines the objectives and goals of the study. Finally, the chapter explores the study's overview and underscores its significance in addressing the shortcomings in the South African public healthcare system.

1.2 Background of the study

Clinics play a vital role in healthcare systems, aiming to deliver optimal care to enhance and sustain health (Gorgiladze *et al.* 2020). The Hartebeeskop Clinic, situated in Hartebeeskop within the Gert Sibande District Municipality of Mpumalanga, South Africa, operates as a government-funded healthcare facility, offering free services to the community.

In the realm of healthcare organisations, service quality stands out as a pivotal factor influencing success, with perceived service quality being positively associated with tangibility, emotional support, and patient satisfaction (Phonthanukitithaworn *et al.* 2020). According to Akhavan and Tillgren (2015), patients hold specific expectations regarding service performance, but these expectations do not inherently reflect their perceptions of service quality. The authors assert that perceived performance emerges as the most fitting metric for gauging service quality. Therefore, a comprehensive evaluation of healthcare service quality in local public clinics necessitates a thorough examination of factors such as service provider constraints, the reality of service delivery, and patients' experiences and perceptions. This multifaceted approach is crucial for the development of a robust quality management system.

The study adopted the theoretical framework for examining service quality by incorporating the dimensions proposed by Hosseini *et al.* (2018) and the SERVQUAL model introduced by Parasuraman and Berry in 1985. Additionally, the gold standard for addressing quality issues across various industries

continues to be the seven tools of quality management, which originated after World War II. Rahman (2022) identifies these tools as the histogram, check sheet, cause and effect diagram, Pareto chart (following the 80-20 rule), scatter diagram, stratification, and control chart.

1.3 Motivation for the study

The research aims to offer recommendations for enhancing the quality of service provided to patients at Hartebeeskop Clinic, located in the rural area of Mpumalanga province. As the primary healthcare provider for the community in and around Elukwatini, the study assessed customer satisfaction, as well as the experiences of both customers and staff. The goal was to evaluate the extent to which Hartebeeskop Clinic complies with established standards for quality service provision.

The potential beneficiaries of this study include Hartebeeskop Clinic patients, clinic staff, management, local communities, and the South African National Health Departments. The study identified areas requiring improvement and proposed recommendations, anticipating positive outcomes for patients who will access improved quality service delivery and healthcare services from Hartebeeskop Clinic. Clinic employees are expected to benefit from positive attitudes, behaviours, and feedback from patients, contributing to the practical application of the Batho Pele principles by all clinic staff. Management stands to gain by the overall enhancement of quality service delivery and healthcare services, particularly as rural communities heavily rely on government-operated health institutions like Hartebeeskop Clinic for quality healthcare.

The study findings are anticipated to inspire compliance with core values and standards set by the National Department of Health, potentially resulting in reduced complaints, distrust, and patients' demands. These benefits collectively contribute to Hartebeeskop Clinic's ability to provide quality healthcare service delivery. Furthermore, the study aims to minimise wasteful, fruitless, and irregular expenditures at Hartebeeskop Clinic, thereby promoting efficient resource utilisation.

1.4 Research Problem

The expected standard of care for patients is rooted in evidence-based medicine, particularly in public clinics where the government oversees the employment of qualified medical professionals to ensure efficient and resource-effective healthcare delivery. This approach, as highlighted by Seelbach and Branan (2022), emphasises the importance of respecting patients and involving them in relevant care plans. Albarqouni *et al.* (2018) define "evidence-based medicine" as the scientific method employed to organise and apply current data for informed healthcare decisionmaking. The adherence to principles like the Hippocratic Oath, aligned promises, and quality management systems collectively reinforces the goal of optimising patient care and outcomes, aligning with the intended purpose of healthcare facilities (South African Department of Health 1996).

Seelbach and Branan (2022) identify six healthcare quality domains crucial for achieving highquality healthcare: safety, effectiveness, patient-centeredness, timeliness, efficiency, and equitable healthcare quality. Despite these standards, concerns persist regarding the quality of healthcare services in South African public clinics. Reports from TimesLive (2018) highlight public grievances, including resource shortages in hospitals, extended waiting times, medication shortages, and perceived indifference from staff and nurses.

Addressing such concerns, the Hartebeeskop Clinic, as documented in the Belveredeere community minutes (2022), has implemented innovative measures such as extended hours. However, patients continue to express dissatisfaction with issues like prolonged waiting times, medication supply chain challenges, and interactions with healthcare providers. A specific problem highlighted is the Health Patient Registration System, illustrated in Figure 1.1. These challenges underscore the ongoing need for improvements in public healthcare services to meet the defined standards and enhance patient experiences.

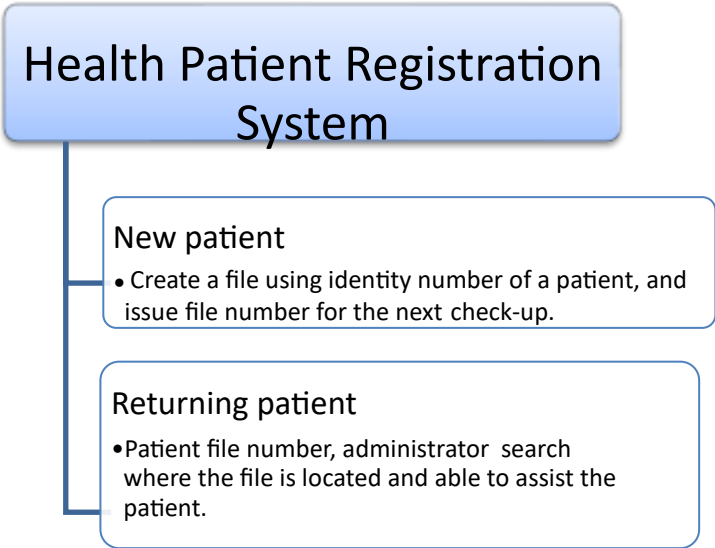


Figure 1.1 Healthcare registration system

Source: Researcher's construction

In Figure 1.1 the operational flow of the health patient registration system at Hartebeeskop Clinic is illustrated. A significant issue with this system is the occurrence of duplicate file numbering, creating challenges for administrators in effectively assisting patients. This problem contributes to a time-consuming process, particularly during identity document verification. The complexity is exacerbated

during Eskom's load shedding, making it challenging to locate a patient's file containing crucial prescription records. Consequently, patients may leave without the prescribed medication.

To comprehensively assess the quality of healthcare service delivery at local public clinic facilities, it is essential to consider factors arising from both service provider constraints and the reality of operations, as well as the experiences and perceptions of patients (Gorgiladze *et al.* 2020).

1.5 Research Aim and Objectives

1.5.1 The aim of the study

Aim: Improving service delivery at a public health care clinic through a Quality Management System: The case of Hartebeeskop Clinic in Elukwatini, Mpumalanga.

1.5.2 Study Objectives

The objectives that have been set for this study are grouped according to primary objectives and secondary objectives as follows:

1.5.2.1 Primary objective

- (i) To investigate the effectiveness of Quality Management System in improving service delivery at Hartebeeskop Clinic in Elukwatini.

1.5.2.2 Secondary objectives

- (i) To identify the gaps in service delivery at the clinic from patients and healthcare providers perspectives.
- (ii) To ascertain the effectiveness of the QMS that is currently in place at the clinic by documentary analysis; and
- (iii) To make recommendations to the management of Hartebeeskop Clinic in Elukwatini towards improving service delivery.

1.6 Research Questions

- (i) What are the perceptions of the service delivery within the patients' group?
- (ii) What are the perceptions of the service quality within the health care clinic?
- (iii) What is the impact of service delivery on the health care facility performance?

1.7 Significance of the study

- i. The study will assist the Hartebeeskop Clinic to understand how patients perceive the entire organisation;
- ii. It will make recommendations on how the public clinic can meet the needs of its patients;
- iii. The study will identify service quality dimensions as applicable to Hartebeeskop

Clinic and strategies to improve service quality;

- iv. The study will provide the clinic with data-based recommendations to reposition, redesign, and review service deliver strategies to meet patients' expectations and perceptions, and;
- v. It will improve the effectiveness of the Hartebeeskop Clinic.

The United Nations General Assembly adopted the 2030 Agenda for Sustainable Development which is made up of 17 Sustainable Development Goals (SDG). Collins (2016) state that the aim of the SDGs is to balance economic, environmental, and social needs, allowing prosperity for current and future generations. There are 17 sustainable development goals: Goal 1 - No poverty, Goal 2 - Zero hunger; Goal 3 - Good Health and well-being; Goal 4 - Quality Education; Goal 5 - Gender Equality; Goal 6 - Clean Water and Sanitation; Goal 7 - Affordable and Clean Energy; Goal 8 - Decent Work and Economic Growth; Goal 9 - Industry, Innovation and

Infrastructure; Goal 10 - Reduced inequality; Goal 11 - Sustainable Cities; Goal 12 - Responsible Consumption and Production; Goal 13

- Climate Action; Goal 14 - Life Below Water; Goal 15 - Life on Land; Goal 16 – Peace, and Justice and Goal 17 - Partnerships for the Goals. This study is crucial because the aim is directly aligned to SDG Goal 3 (Good health and well-being).

1.8 Limitations of the study

This study is focused exclusively on a single public clinic due to constraints related to time and sample size. The findings are specifically applicable to rural health systems, as the participants are from rural areas within the Gert Sibande District at Elukwatini. It's important to note that the results should not be generalized to the wider South African health sector facilities. Nonetheless, the insights gained from this case can offer valuable lessons for other health facilities.

1.9 Ethical considerations

Ethics encompasses the principles that guide moral behaviour and decision-making, drawing influence from cultural, religious, or philosophical beliefs, ultimately shaping the choices of individuals and societies (Jones 2021). In the context of a research study, the researcher diligently informed participants about the study's aims and objectives. Participation was entirely voluntary, with no coercion involved; participants were invited to respond to the questionnaire willingly.

Participants were assured of their right to withdraw from the study at any point without facing any consequences. The researcher took measures to ensure the well-being of participants, making certain

that there was no mental or physical harm caused during their involvement in the study. The information collected was treated with confidentiality and subjected to analysis for research purposes.

To respect the privacy and comfort of participants, the researcher refrained from disclosing respondents' demographic data, especially for those who opted not to disclose their names on the consent form. Prior to engaging in the questionnaire, respondents were provided with written permission outlining the study's objectives. Notably, authorization to conduct the study was obtained from the Department of Health, as indicated in an official letter.

1.10 The outline of chapters

This study is presented according to the chapters as detailed below:

Chapter 1: Introduction

This chapter of the inquiry presents the examination, offering an outline of its key components. It delves into the study's background, articulates the problem statement, outlines the purpose, specifies the objectives, and formulates the research questions.

Additionally, it sheds light on the study's constraints or limitations.

Chapter 2: Literature Review

In this chapter, an examination of the literature is undertaken with a primary emphasis on gauging patient satisfaction concerning healthcare services offered by public institutions. The review delves into various aspects, including the characteristics of service delivery, the correlation between service quality and patient satisfaction, hurdles encountered in public clinics related to service quality, the influence of Quality Management System (QMS) on both patient satisfaction and service delivery, and the difficulties associated with implementing a QMS in public health clinics.

Chapter 3: Research Methodology

In this chapter, the research design and methodology employed for data gathering and analysis are elucidated. The details encompass the procedures of data collection as well as the methodology applied in analysing the collected data. The chapter serves to offer insights into the overall research process, shedding light on both the approach to gathering information and the subsequent analytical methods utilised.

Chapter 4: Discussion of Qualitative Data

In this chapter, the outcomes and discoveries of the qualitative study are unveiled. These findings stem from the data collected and analysed using the methodology chosen for the study.

Chapter 5: Discussion of Quantitative Data

This section unveils the outcomes and discoveries derived from the quantitative research. These findings stem from the analysis of data collected and processed within the framework of the adopted research methodology.

Chapter 6: Recommendations and Conclusion

In this chapter, an analysis of the research findings is presented, and a connection is established with the study objectives. The results are interpreted, emphasizing their significance, and contextualising them within the existing knowledge related to the researched problem. Furthermore, this section delves into any novel insights or understandings gained from the findings, shedding light on the research problem. The conclusion assesses the extent to which the investigation successfully achieves its aims, highlighting any limitations encountered. Recommendations aligned with the study objectives are also provided. Additionally, the chapter underscores the importance of the findings and identifies gaps in knowledge, paving the way for future research endeavours.

1.11 Conclusion

In this chapter, an introduction to the study and its background was provided. It outlined the significance of the research and explained the formulation of objectives aimed at gathering data. The ultimate goal is to enhance service delivery at a public health care clinic by implementing a Quality Management System. The next chapter presents the literature review of the study.

CHAPTER 2 LITERATURE REVIEW

2.1 Introduction

The previous chapter provided an overview of the research problem, background and context, highlighting the need to improve service delivery at Haterbeeskop clinic in Elukwatini. The chapter also presented the research objectives and significance of the study. Building on this foundation, Chapter 2 reviews the existing literature on quality management system and service delivery in healthcare settings, particularly in public clinics.

This chapter commences by providing an overview of the Hartebeeskop Public Healthcare Clinic, commonly known as Hartebeeskop Clinic. It encompasses an exploration of public service standards, legislations related to quality management, and various perspectives on quality. The chapter also traces the historical development of quality and includes a brief discussion on influential figures known as quality gurus and their significant contributions to the field of quality and service.

Furthermore, the chapter offers a comprehensive overview of patient experience and performance services offered at public clinics in South Africa. It places a specific focus on the Quality Management System (QMS) implemented in the country's public healthcare clinics and assesses the effectiveness of those clinics that have already embraced QMS. In-depth analysis of the current service delivery in South African clinics is undertaken, shedding light on both its effectiveness and the challenges associated with the adoption of QMS in public healthcare settings.

The researcher delves into studies conducted in South African public healthcare clinics that utilise QMS, along with the applications of the SERVQUAL model in various contexts. Finally, the chapter critically examines potential gaps in the existing literature on health facilities in South Africa and explores the strategies and programs implemented by the South African government to enhance service quality. The study addresses dimensions of service quality and patient satisfaction, service quality models, and the government's initiatives aimed at improving service delivery. The chapter concludes by summarising its key findings.

2.2 Description of the South African public health care system

The Department of Health (DoH) in South Africa operates in accordance with the guidelines set forth in the National Health Act of 2003. This legislation mandates the establishment of a wellorganised and standardised health system in the country, outlining the specific responsibilities of the three levels of government in providing health services.

The primary goal of the National Health Act (2003) is to improve public health by actively preventing illnesses and diseases, promoting healthy lifestyles, and consistently enhancing the healthcare delivery system. The focus is on ensuring accessibility, equity, efficiency, quality, and sustainability in healthcare. The Department of Health's ongoing priorities include the implementation of the National Health Insurance (NHI), initiatives targeting the prevention and treatment of both communicable and non-communicable diseases, investments in health infrastructure, support for tertiary healthcare services at the provincial level, and the continual development of the health workforce.

2.2.1 Use of health facilities

According to the General Household Survey by Statistics South Africa (2021), 71.9% of households expressed a preference for seeking initial medical assistance from public clinics, hospitals, or other government-run institutions. On the other hand, 27.0% of households indicated a preference for consulting a private doctor, private clinic, or hospital as their first choice (Statistics South Africa, 2021).

The utilisation of public health facilities varied across regions, with the Western Cape reporting the lowest rate at 52.1%, followed by Gauteng at 64.2%. In contrast, Limpopo (85.4%), Mpumalanga (84.8%), and the Eastern Cape (82.1%) had the highest proportions of households choosing public health facilities (Statistics South Africa 2021).

2.2.2 Health Patient Registration System (HPRS)

The Health Patient Registry System (HPRS) in South Africa has made significant advancements in aligning with the National Health Act (2003). Utilising the South African identification number and various legal identification forms, the HPRS functions as a Patient Registry and Master Patient Index. As of mid-2022, the HPRS has successfully registered over 57 million individuals across 3,111 health facilities. Ongoing efforts are directed towards the development of a unified and portable patient record system, integrating seamlessly with an interoperable digital platform (Dludlu 2018).

2.2.3 Location of the Hartebeeskop public clinic

Hartebeeskop is an area of 31 840km²; it is a developing village located in Elukwatini, under Mpumalanga province, as presented in Figure 2.1. Hartebeeskop, in early 2000, had a few houses with electricity but now this has become a developing area with electricity in every household with a streetlight.



Figure 2.1 Location of the Hartebeeskop Clinic (Gert Sibande District Municipality, Mpumalanga).

Source: Dludlu (2018)

The Gert Sibande District Municipality is a Category C municipality located in the Mpumalanga Province. It is the largest of the province's three districts, covering nearly half of the total geographical area. The district shares borders with the Ehlanzeni and Nkangala District Municipalities to the north, KwaZulu-Natal and the Free State to the south, Swaziland to the east, and Gauteng to the west (Dludlu 2018).

Comprising seven local municipalities, namely Govan Mbeki, Chief Albert Luthuli, Msukaligwa, Dipaleseng, Mkhondo, Lekwa, and Dr Pixley ka Isaka Seme, the Gert Sibande District Municipality is well-connected by major highways. These include the N11, linking to the N2 in KwaZulu-Natal, the N17 from Gauteng through Swaziland, and the N3 from Gauteng to KwaZulu-Natal.

Several cities and towns are situated within this district, such as Amersfoort, Amsterdam, Balfour, Bethal, Breyten, Carolina, Charl Cilliers, Chrissiesmeer, Davel, Ekulindeni, Embalenhle, Empuluzi, Ermelo, Evander, Greylingstad, Grootvlei, Kinross, Leandra, Lothair, Morgenzon, Perdekop, Secunda, Standerton, Trichardt, Volksrust, Wakkerstroom, eManzana, and eMkhondo (Piet Retief).

Hartebeeskop, predominantly a rural area, has experienced notable development, including the establishment of a local clinic and schools near households. The strategically located Hartebeeskop Clinic, adjacent to highway N17, ensures easy access during emergencies for those traveling along the N17 route.

Emphasising the significance of primary healthcare, the Department of Health (2013) underscores its role as the first line of defence against various diseases that can lead to high rates of mortality and morbidity.

Primary healthcare encompasses community health centres, clinics, and district hospitals, providing essential healthcare services to patients. District hospitals play a crucial role in receiving referral patients from clinics and 22 community health centres, offering generalist support for health treatments provided by general healthcare practitioners or primary healthcare nurses (Department of Health 2013).

The National Health Act 61 of 2003 highlights the broader role of the national health system in issuing and promoting adherence to norms and standards related to health matters and environmental conditions posing health hazards. The Act grants environmental health practitioners the authority to enter premises, excluding private residences, at any reasonable time to inspect and enforce compliance with health regulations (The National Health Act 61 of 2003).

2.3. South African public health care legislative framework

2.3.1. The South Africa Constitution Act 108 of 1996

The regulations that oversee the healthcare system and the delivery of healthcare services by healthcare institutions in South Africa are based on the Constitution of the Republic of South Africa, 1996, Act No. 108 of 1996. The South African Constitution holds the highest legal authority in the country, and as per section 27(1)(a), all South African citizens are entitled to access quality healthcare services and reproductive services (Government of South Africa 1996). Additionally, in accordance with section 195, public administration is required to uphold high standards of professionalism, offer fair and quality services, remain impartial, address people's needs, and provide accurate information to society.

2.3.2. The National Health Act no. 61 of 2003

The National Health Act No. 61 of 2003 establishes consistent standards for healthcare services across South Africa, aiming to provide equal and high-quality healthcare to all citizens. It places emphasis on prioritising vulnerable groups, including women, children, persons with disabilities, and the elderly. According to the Act, individuals receiving health services are required to treat health workers with dignity and respect. If someone declines treatment, they must sign a liability release to formalise their decision. Additionally, the Act supports the creation of district health systems tailored to the population size served by health facilities.

2.3.3 Occupational Health and safety Act 85 of 1993

The Occupational Health and Safety Act No. 85 of 1993 is designed to regulate and ensure the health and safety of individuals during work activities and the use of facilities. It extends its provisions to safeguard not only those actively engaged in work but also protects individuals not directly involved in work from potential health and safety hazards related to work activities. The Act aims to establish an advisory council dedicated to occupational health and safety, addressing various connected matters. Additionally, the

legislation outlines the appointment of health and safety officers, tasked with overseeing workplace safety measures. These officers play a crucial role in evaluating the effectiveness of recordkeeping practices and safety measures within the work environment.

2.3.4 Labour Relation Act 66 of 1995

The Labour Relations Act, enacted as number 66 of 1995, governs the organisational rights of trade unions within workplaces. Its primary objective is to promote and facilitate collective bargaining in diverse settings, including the workplace, forums, and alternative dispute resolution mechanisms. The legislation also addresses issues pertaining to strikes and lockouts. The Act is specifically crafted to ensure fair labour practices by encouraging employee involvement in decision-making processes and fostering the effective resolution of disputes.

In instances of workplace disputes, managers must comply with the stipulations laid out in the Labour Relations Act. Additionally, the legislation establishes key entities such as the CCMA (Commission for Conciliation, Mediation, and Arbitration), the Labour Court, and the Appeal Court. These entities serve as superior courts with exclusive jurisdiction to adjudicate on matters arising from the Labour Relations Act of 1995.

2.3.5 Significance of national health insurance in health facilities

South Africa's healthcare system operates through two primary channels: the private health sector and the public health sector, as defined by the Republic of South Africa Health Department (2015). Public healthcare, funded by the government, aims to serve all citizens but faces challenges such as long waiting times, rushed appointments, outdated facilities, and insufficient disease control and prevention measures, according to Young (2018).

On the other hand, the private healthcare sector offers several advantages compared to public services, including shorter waiting times, more relaxed appointments, superior facilities, and more effective disease control and prevention practices, as highlighted by Young (2018). Acknowledging the deficiencies in the current system, South Africa has introduced the National Health Insurance (NHI) to establish a unified healthcare system that ensures accessibility and affordability for all citizens, as stressed by Young *et al* (2018).

Young (2018) argues that five years after the release of the green paper on National Health Insurance (NHI) and the initiation of pilot programs, South Africa must now establish the necessary legal and institutional frameworks and systems to implement the Universal Health Coverage system through NHI. The objective is to guarantee quality and free healthcare services to all citizens, particularly those who may struggle to afford healthcare. The National Health Insurance (NHI) is envisioned as a comprehensive solution to address the healthcare needs of the entire South African population.

2.3.6 Batho Pele principles on service standards

After the democratic election in 1994, the South African government introduced the Batho Pele White Paper in 1997 to fulfil its commitment to improving public service delivery. This initiative, based on the Batho Pele principles, aimed to make public services in South Africa more efficient, aligning with the requirements of the Constitution. Essentially, the Batho Pele principles advocate for a philosophy centered on delivering effective and efficient services to the public, prompting a shift in how civil servants carry out their duties.

The Batho Pele Handbook, released in 2005, acts as a tool for South African citizens to hold civil servants accountable for the quality of service provided to the community. These principles emphasise the need to alter the behaviour of public servants, ensuring they are accountable and responsible for the type and quality of services delivered. Evaluating the effectiveness of these services involves assessing how well public servants respond to the needs of society.

The Department of Public Service and Administration (DPSA) (1997) states that South Africa embarked on a transformative journey by introducing the Batho Pele principles as a pioneering policy framework. Designed to reshape the landscape of public service delivery, these principles underscore the government's commitment to fostering a citizen-centric approach. Comprising eight fundamental tenets, the Batho Pele framework serves as a compass, guiding public servants in their collective efforts to elevate the quality and effectiveness of service delivery.

The Batho Pele principles encapsulate a holistic vision for public service, with each principle reflecting a core aspect of citizen-government interactions. This framework is not merely a set of guidelines but a visionary roadmap that seeks to instil a culture of transparency, accountability, and efficiency within public institutions. To unravel the essence of the Batho Pele principles, principles are examined as follows:

Consultation: Citizens must be consulted to determine their expectations from the government. The government is obligated to inform the community about the anticipated quality of service from public institutions, allowing society to choose the type of services that will meet their needs;

Service Standards: Public institutions must transparently communicate the level and quality of service they intend to provide. This transparency enables society to understand the expected level of service delivery and empowers the public to assess the services provided by public institutions;

Access: Society should have equal access to government-provided services, regardless of political affiliation, race, or gender. Services should be allocated based on qualifications, ensuring fair and equitable distribution;

Courtesy: The South African government must treat all members of society with respect, courtesy, and consideration when delivering services;

Information Dissemination: Public institutions must furnish comprehensive and legitimate information to society about the services they offer. The government should proactively inform society about the available services;

Openness and Transparency: Those in public office must disclose information about their functioning and the utilization of public funds. This principle aims to ensure accountability in resource utilization and encourages public participation in decision-making;

Redress and Complaint Handling: Society is encouraged to voice concerns if promised service delivery is not received. Public institutions should provide detailed explanations and promptly rectify mistakes in response to public complaints; and

Value for Money: Government services should be economically and cost effectively delivered, ensuring efficiency since public funds finance these services. Public institutions should provide services that represent value for the money paid.

Research indicates that the Batho Pele initiative has positively impacted public service delivery in South Africa, particularly in healthcare, education, and housing. Despite these improvements, challenges such as a lack of political will, insufficient funding, and a shortage of capacity and skills among public servants need to be addressed for the initiative's long-term sustainability (Nkomo & Wissink 2018).

2.4 Evolution of quality

Quality has played a crucial role in business operations for an extended period, particularly within the manufacturing industry. It has served as a pivotal tool for enhancing productivity, efficiency, and competitiveness. Over time, the concept of quality has undergone significant changes, and the approach to quality management has evolved.

According to Harvey (2017), the evolution of quality pertains to the shifts in how organisations define, measure, and enhance the quality of their products and services. Recently, there has been a growing interest in studying the evolution of quality as businesses strive to remain competitive in a dynamic marketplace.

One notable transformation in quality management is the move from a compliance-based model to a risk-based approach. Traditionally, quality management focused on adhering to standards and regulations (Dabestani *et al.* 2017). However, this approach proved ineffective in addressing the root causes of quality issues. In contemporary quality management, there has been a shift towards a risk-based strategy, emphasising the identification and mitigation of risks that could impact quality (Fatima *et al.* 2018).

Brauns and Walis (2018) highlights another significant change in quality management— the adoption of a continuous improvement approach. In recent years, the focus has shifted towards continually enhancing processes and systems to ensure the sustained and progressive improvement of quality over time.

2.4.1 Quality Evolution in Healthcare

Quality management has become increasingly important in the healthcare sector. The focus on quality in healthcare has been driven by the need to improve patient outcomes, reduce costs, and increase efficiency. In healthcare, quality is defined as the degree to which health services meet or exceed the patient's expectations (Porter 2023). The evolution of quality management in healthcare has been characterised by the adoption of a patient-centred approach, the use of data analytics to improve quality, and the focus on reducing variation in processes (Porter 2023).

One of the major changes that have occurred in quality management in healthcare is the adoption of a patient-centred approach. In the past, quality in healthcare was focused on achieving clinical outcomes (Luthra 2020). However, this approach did not consider the patient's experience. In recent years, quality management in healthcare has shifted towards a patient-centred approach, where the focus is on meeting the patient's expectations and improving the patient's experience (Luthra, 2020).

Porter (2023) mentioned that another major change that has occurred in quality management in healthcare is the use of data analytics to improve quality. In the past, quality in healthcare was assessed using traditional quality metrics such as mortality rates, readmission rates, and infection rates. Porter (2023) emphasises that these metrics did not provide a complete picture of the quality of care provided. More recently, healthcare organizations have adopted data analytics tools to measure and improve quality. These tools enable healthcare organisations to collect and analyse large amounts of data to identify trends and patterns that can be used to improve quality.

Healthcare organisations have adopted process improvement methodologies, such as Lean Six Sigma, to reduce variation and improve efficiency (Danese, 2017). The most principle used in South African health care services is the Batho Pele (people first) principles which emphasise how the health care givers must handle the conditions of the patients.

2.4.2 Quality Evolution in manufacturing

Quality management in manufacturing has also evolved significantly in recent years. The focus on quality in manufacturing has been driven by the need to improve efficiency, reduce costs, and meet customer expectations (De wet 2019). The evolution of quality management in manufacturing has been characterised by the adoption of a customer centric approach, the use of technology to improve quality, and the focus on sustainability (Said 2019).

One of the major changes that have occurred in quality management in manufacturing is the adoption of a customer-centric approach. In the past, quality in manufacturing was focused on achieving internal targets and meeting regulatory requirements (De wet 2019).

However, this approach did not always result in products that met customer expectations. In recent years, quality management in manufacturing has shifted towards a customer centric approach, where the focus is on meeting customer needs and expectations (Lee *et al.* 2021).

Another major change that has occurred in quality management in manufacturing is the use of technology to improve quality. In the past, quality management in manufacturing relied on manual inspection and testing (Lee *et al.* 2021). However, this approach was timeconsuming and prone to errors. In recent years, manufacturing organisations have adopted technology such as automation, artificial intelligence, and machine learning to improve quality.

In addition, quality management in manufacturing has focused on sustainability. In the past, quality in manufacturing was focused on achieving efficiency and reducing costs. However, this approach often led to environmental degradation and social injustice, and more recently, manufacturing organisations have adopted sustainable manufacturing practices, such as reducing waste and energy consumption, to improve quality and reduce their impact on the environment (Cai 2021).

Quality management has thus evolved significantly over the years. The approach to quality management has shifted from a compliance-based approach to a risk-based approach, and from a focus on achieving a level of quality that meets or exceeds customer expectations to a continuous improvement approach (Cai 2021). In healthcare, quality management has become increasingly important, and the focus has shifted towards a patient-centred approach, the use of data analytics, and reducing variation in processes. In manufacturing, the focus has shifted towards a customer-centric approach, the use of technology to improve quality and sustainability (Cai 2021). The evolution of quality management has been driven by the need to improve efficiency, reduce costs, meet customer expectations, and improve patient outcomes.

However, despite the significant advances in quality management, there are still challenges that organisations face. According to Said (2019) one of the major challenges is the need to balance the competing demands of quality, cost, and time, organisations need to deliver high-quality products or services while keeping costs low and meeting tight deadlines. Said (2019) further mentioned that another challenge is the need to engage employees and create a culture of continuous improvement. Quality management requires the participation and engagement of employees at all levels and creating a culture of continuous improvement can be difficult.

2.5 Range of quality perspectives

Quality has been defined in various ways, depending on the context in which it is being used. In the manufacturing industry, quality is defined as "the degree to which a product or service meets or exceeds the customer's expectations" (Kruger, 2018). In the service industry, quality is defined as "the degree to which a service meets or exceeds the customer's expectations" (Parasuraman, Zeithaml & Berry 1985). The range of perspectives as articulated by Chegg (2020), is presented in Table 2.1.

Table 2.1: The perspectives of quality

Perspectives	Definition
Transcendent perspective	The term "transcendent" is widely employed by consumers to signify exceptional quality. This viewpoint is regarded as universally absolute and recognisable, characterised by unwavering standards and notable accomplishments at a high level.
Product perspective	The product-related definition of quality pertains to the measurement of product attributes, such as the thread count in a shirt or the features in a mobile phone or automobile. In this context, higher quality is associated with a greater quantity of product attributes. Manufacturers are motivated to include numerous features in their products as it enhances the perceived quality.
Value perspective	The quality definition based on value is a relationship between benefits in a product and its price. Consumers no more buy a product based on its price. They now compare the goods and services packages with other competitive offers the business might offer.
User perspective	People have diverse needs, desires, and expectations. This diversity influences how individuals define quality or design a product based on its intended use.
Manufacturing perspective	Some entities and individuals anticipate uniformity in the offerings they receive. These entities typically establish a set of criteria for both products and services, considering adherence to these benchmarks as a measure of quality. These specifications encompass specific goals and acceptable variations, as established by the creators or manufacturers of the respective products.
Customer perspective	The customer defines quality as the extent to which they get what they want from the organization.

Source: Researcher’s own construction

Various viewpoints exist regarding the concept of "quality." The definitions provided above illustrate that quality extends beyond the mere delivery of superior products or services; instead, it is a comprehensive phenomenon that encompasses the interests and contributions of various stakeholders.

In service sectors such as a Clinics, the healthcare providers should not only consider patient's perceptions towards the service delivered to them but utilise every resource and implement robust system which will enable to satisfy their patients whenever they embark their treatment journey with the clinic.

2.6 Recent Trends in Quality Evolution

In recent years, there has been a growing interest in quality evolution, driven by several factors, including advances in technology, changing customer expectations, and increasing global competition. Some of the key trends and developments in the field are discussed below.

2.6.1 Quality 4.0

Quality 4.0, as introduced by the American Society for Quality (ASQ), refers to the integration of Industry 4.0 advancements into quality management practices. This approach merges traditional quality management principles with cutting-edge digital technologies like artificial intelligence (AI), the Internet of Things (IoT), and big data analytics. The objective is to elevate the standards of product and service quality, ultimately leading to enhanced customer satisfaction (Anbari *et al.* 2019).

Several studies have explored the potential of Quality 4.0 to transform quality management. For example, Vergragt (2019) developed a framework for Quality 4.0 that integrates digital technologies with quality management practices to improve product quality and reduce costs. Similarly, Berthaut *et al.* (2023) proposed a Quality 4.0 maturity model that can be used to assess the readiness of organisations to adopt digital quality management practices.

2.6.2 Agile Quality Management

Agile quality management is a methodology focused on ensuring high-quality outcomes through flexibility, adaptability, and ongoing enhancements (Joubert 2019). It draws inspiration from the principles of agile software development, placing importance on customer collaboration, iterative progress, and swift feedback (Joubert 2019).

Several studies have explored the application of agile quality management in various industries. For example, Kajko-Mattsson and Röstlinger (2017) developed an agile quality management framework for software development projects that emphasizes continuous improvement and customer satisfaction. Similarly, Joubert (2019) proposed an agile quality management approach for the healthcare sector that focuses on collaboration and continuous learning.

Agile quality management enhances the medical environment and assist the health care providers to achieve projects milestones by boosting in efficiency and productivity, allowing health care providers to keep track of their tasks and able to meet their deadlines for instance, for auditing or follow up on a patient, to improve patient care efforts.

2.6.3 Sustainable Quality

Sustainable quality is an emerging trend in quality management that emphasizes the importance of environmental and social sustainability in product and service quality. Sustainable quality aims to reduce

the environmental impact of products and services while improving their overall quality and value to customers (Mgutshini 2018).

Several studies have explored the potential of sustainable quality to improve product and service quality while reducing environmental impact. For example, Gualandris and Kalchschmidt (2020) developed a sustainable quality management framework for the fashion industry that integrates environmental and social sustainability into quality management practices. Similarly, Hassini (2018) proposed a sustainability-oriented quality management framework that integrates environmental and social sustainability into quality management practices. Menezes *et al.* (2021) developed a quality and sustainability management model for the construction industry that considers the entire project lifecycle and promotes sustainable practices.

Sustainable healthcare, according to the World Health Organization (2020), is a system that promotes health while minimizing harm to the environment, it aims to capitalize on opportunities to rejuvenate and enhance the environment for the well-being of current and future generations. Healthcare providers can contribute to this by adopting practices such as chemical safety, adhering to waste disposal guidelines, conserving energy, and preserving water. The success of sustainability in healthcare relies on the active participation of healthcare workers who play a crucial role in implementing these measures (WHO 2020).

However, integrating quality and sustainability can be challenging, as it requires a comprehensive approach that considers the entire product or service lifecycle. One of the major challenges of integrating quality and sustainability is the lack of a universal definition of sustainability. According to Nishitani *et al.* (2018), there are various interpretations of sustainability, including environmental, social, and economic sustainability. The lack of a clear definition of sustainability can confuse, leading to inconsistencies in how businesses approach sustainability. According to Al-Tahat (2018), integrating sustainability into quality management systems requires a significant investment of time and resources and many businesses may not have the necessary resources, such as financial or human resources, to implement sustainable practices.

2.6.4 Data Quality and Analytics

The increasing use of digital technologies in quality management has created a vast amount of data that needs to be analysed and interpreted to improve quality. However, ensuring the quality of data and using it effectively for quality improvement remains a significant challenge. Several studies have highlighted the importance of data quality and analytics in quality evolution. For example, Khodadad *et al.* (2018) developed a data quality framework for quality management systems that can be used to ensure the accuracy and completeness of data. Similarly, Bousdekis *et al.* (2018) proposed a data analytics

framework for quality management that uses machine learning algorithms to identify quality issues and predict future performance.

2.6.5 Cultural and Organisational Change

Effective quality evolution requires cultural and organizational change that promotes a continuous improvement mindset and fosters a culture of quality throughout the organisation. However, cultural, and organisational change can be challenging to implement and sustain over time (Anderson and Martinez 2021). Several studies have explored the challenges and opportunities of cultural and organizational change in quality evolution. For example, Jiao *et al.* (2021) conducted a case study of a Chinese manufacturing company and found that cultural change was essential for successful quality evolution. Similarly, Errida and Lotfi (2021) proposed a change management framework for quality management systems that emphasises the importance of communication, training, and leadership in driving cultural change.

Quality evolution aims to improve product and service quality over time through continuous improvement and innovation. Recent trends in quality evolution include Quality 4.0, agile quality management, and sustainable quality, all of which have the potential to transform quality management practices. However, several challenges need to be addressed, including data quality and analytics, cultural and organizational change, and the integration of quality and sustainability.

Data quality and analytics is the biggest challenges faced in the health care sectors, which leads to duplicate file numbering, and storing files of the deceased; if the government invests in data and analytics, it will ease the quality system for health care providers.

2.7 Quality gurus

The concept of quality has always been central to businesses and over time several quality gurus, such as Deming, Juran, Crosby, Ishikawa, Taguchi and Feigenbaum have contributed significantly to the development and understanding of quality and quality management. That which follows is a discussion of the key contributions of some of the quality gurus.

2.7.1 W. Edwards Deming

W. Edwards Deming is commonly recognized as the pioneer of contemporary quality management. His renowned philosophy underscores the significance of ongoing enhancement, prioritizing customer satisfaction, and fostering teamwork. Deming's substantial contributions have significantly influenced the evolution of quality management systems, playing a pivotal role in the success of numerous organizations (Best and Neuhauser 2018). One of his notable contributions is the formulation of the "Deming's 14 Points

for Management" in the 1950s, a set of principles outlined in Table 2.2 that organizations can adopt to enhance their overall quality.

Table 2.2: Demings 14 points for management

14 Steps	Implication
Management commitment	The management should implement quality policy and it must be clearly communicated to the organisation.
The total improvement team	The organization should formulate employees who will be responsible for quality in each department.
Quality measurement	In each process, employees should be able to measure if the product or service still conforms the quality or is it still within the accepted tolerances.
The cost of quality	It should be projected through mechanisms for the identification of areas that will result in the profitability of improvements
Quality awareness	Quality should be raised amongst all employees
Corrective action	Action should be taken if the previous stages failed.
Zero defects planning	Formulate an appropriate plan that is relevant to the institution's culture.
Quality education	Supervisor training and employee training is necessary for everyone to have knowledge before quality programmes commences and implemented.
Zero defects day	There should be a day maybe in a month where employees are going to produce zero defects and it should be rewarded.
Goal setting	Establishment of improvement goals for both individuals and their teams are necessary.
Error cause removal	Entails encouraging employees to be energetic in informing management of any challenge that might lead them to make defects.
Recognition	Employee appreciation should be given to those who have met their quality goals.
Quality councils	These should be established and should regularly meet to impart problems, experiences, and ideas.
Do it over again	Steps 1 to 13 should be repeated thus emphasising the continuous quality improvement.

Source: Researcher's own construction

Deming's 14 Points have been widely adopted by organisations worldwide, and his approach to quality has had a significant impact on the quality movement. A study conducted by Antony and Kumar (2018) found that organizations that implemented Deming's principles were more successful in achieving their goals than those that did not.

Deming's emphasis on continuous improvement has also been widely adopted in industries such as healthcare, where it has been shown to improve patient outcomes and reduce costs (Antony and Kumar 2018).

2.7.2 Joseph M. Juran

Joseph M. Juran, a prominent figure in the realm of quality management, played a crucial role as a quality guru, contributing substantially to the field. His most notable contribution is the introduction of the 'quality

trilogy,' which encompasses his extensive work on quality control, quality planning, and quality improvement (Kim *et al.* 2018). Juran advocated for a perspective where quality is systematically measured and controlled, as illustrated in Figure

2.2. This approach is aimed at enhancing product quality and minimizing wastage (Kim *et al.* 2021).

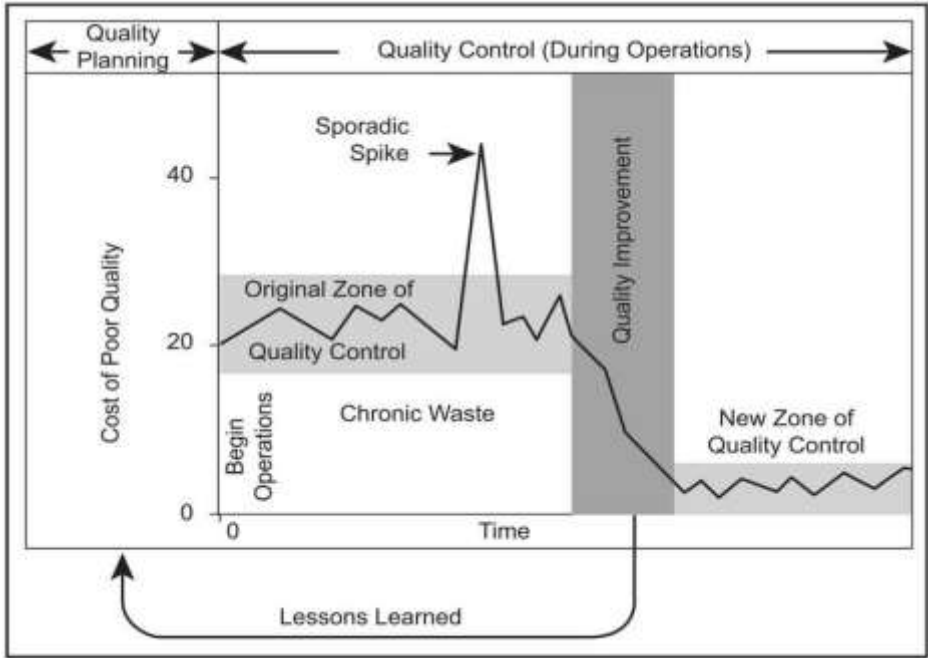


Figure 2.2 Juran’s Quality Trilogy

Adapted from Juran (1995)

Juran’s quality trilogy, consists of the following three interconnected processes:

- (i) Quality planning: the process of identifying customer needs and developing products and services to meet those needs;
- (ii) Quality control: the process of measuring and controlling the quality of products and services to ensure they meet customer needs, and
- (iii) Quality improvement: the process of continuously improving the quality of products and services.

Juran's approach to quality has been widely adopted by organizations worldwide, and his work has had a significant impact on the field of quality management. Research has shown that Juran's quality planning concept is still relevant today, with organizations that prioritize quality planning tending to have higher levels of customer satisfaction and profitability (Srivastava and Kumar 2019). There has also been a renewed interest in Juran's ideas, particularly in the context of healthcare. A study by Kim *et al.* (2017), found that Juran's TQM principles can help healthcare organizations improve patient outcomes and reduce costs.

2.7.3 Philip Crosby

Philip Crosby is known for his contribution to the concept of zero defects, which emphasises the importance of prevention rather than detection of defects. For Crosby (1979), there are no "different levels of quality" - either quality is present, or it is not, because quality is expensive. the following formula known as the “price of nonconformance”, to enable managers to track the cost of doing things wrong:

Cost of quality (COQ) = Price of conformance (POC) + Price of non-conformance (PONC)

The POC refers to the cost of getting things right the first time of doing it and PONC refer to the wasted costs such as repeating the process or reworking goods for the second or third time till it improves it quality. The bedrock of Crosby’s (1987) approach is prevention, which is underpinned by the approaches in Table 2.3.

Table 2.3: Crosby’s approach to prevention

Crosby approach	Implication
Do it right the first time	Crosby's approach focuses on getting things right on the first try, there is no room for high, medium, or low. He believes that there should be no reason to plan or invest in case something goes wrong (e.g., hiring people for redo the work if the product is not up to scratch).
Zero defects	This approach does not mean that the product must be perfect, but Crosby meant that every employee is obliged to meet the requirements right at the first attempt.
The four absolutes of quality	Crosby's four fundamental principles of quality can be summarized as follows: First, quality means conforming to the specified requirements. Second, the quality system should emphasize prevention rather than correction. Third, the standard of performance is set at achieving zero defects. Finally, the measure of quality is determined by the price of non-conformity. These guiding principles assist management in directing their efforts towards effective quality management. According to Crosby (1979), there's a direct correlation between increasing quality and decreasing costs. This implies that the pursuit of quality doesn't incur additional expenses; instead, it can be seen as a cost-effective approach.
Prevention process	This approach advice that organization should prevent rather than correcting the errors.
The quality vaccine	Crosby (1984) states that problems are like bacteria of non-conformance that must be vaccinated with antibiotics to avoid problems. Crosby formulated a quality vaccine that is made up three distinct management actions: Determination - when the management sees the need for a change, and it needs management action; Education - to provide all employees with sufficient knowledge to know about quality so that the organization can attain the same goal and Implementation- is when management develops an effective plan and provides enough resources to meet the goal.

The six C's	Crosby (1984) states that education is a composite process that every entity must go through, Kumar (2017) states and explains Crosby's six C's commitment, comprehension, competence, communication, continuance, and correction. Crosby's six C's emphasise that everyone in the organization must adhere to quality policy, the employee should understand what is meant by quality, and competence is defined as every employee should be taught about quality and understand it to prevent drifting back to the old system before they implement quality principles: Communication - when all employees in the organizations fully understand quality and can ask, the goal for continuous improvement will be successfully attained and the aim is to prevent correcting the product but to do it right the first; and continuance. These principles should not be only visited once but it should be a way in which an organisation should always follow.
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Source: Researcher's own construction

Crosby's ideas have been widely adopted in many industries, including manufacturing, healthcare, and service sectors. In recent years, there has been a renewed interest in Crosby's ideas, particularly in the context of service quality. In a study by Liu and Kang (2020), the authors found that Crosby's zero defects philosophy can help service organizations improve customer satisfaction and reduce costs.

2.7.4 Kaoru Ishikawa

Kaoru Ishikawa is renowned for his significant role in developing the concept of quality circles. Kaoru philosophy underscores the crucial involvement of employees in quality management, with his ideas finding extensive application across diverse industries such as manufacturing, healthcare, and the service sector (Adegboye *et al.* 2020). Recently, there has been a resurgence of interest in Ishikawa's principles, particularly within the healthcare domain. According to a study conducted by Lee *et al.* (2018), the implementation of Ishikawa's quality circles in healthcare organisations has been identified as a valuable strategy for enhancing patient outcomes and cost reduction.

2.7.5 Armand Feigenbaum

Armand Feigenbaum is known for his contribution to the concept of Total Quality Control (TQC). Feigenbaum's philosophy emphasizes the importance of quality control at all stages of the production process (Mutanda and Van Zyl 2018). In a study by Mutanda and Van Zyl (2018), the authors found that Feigenbaum's TQC principles can help manufacturing organizations improve product quality and reduce costs. Feigenbaum's ideas have been widely adopted in many industries, including manufacturing, healthcare, and service sectors.

2.7.6 Genichi Taguchi

Genichi Taguchi is known for his contribution to the concept of robust design. Taguchi's philosophy emphasises the importance of designing products that are robust to variations in manufacturing processes, Taguchi's ideas have been widely adopted in many industries, including manufacturing, healthcare, and service sectors (Ngwenya *et al.* 2018).

Quality thought leaders have played a pivotal role in influencing and guiding the quality movement throughout its evolution. Their innovative ideas and frameworks have gained widespread acceptance among global organizations, profoundly shaping the field of quality management. The impact of influential figures like W. Edwards Deming, Joseph M. Juran, Armand V. Feigenbaum, Philip B. Crosby, and Kaoru Ishikawa cannot be overstated. Their contributions have equipped organizations with the necessary tools and methodologies to attain high-quality standards. As businesses persist in their quest for quality, the invaluable insights provided by these quality gurus will remain a crucial asset for organizations striving to enhance their overall quality.

While organisations may employ varied approaches to quality management, a shared principle among quality gurus is the pursuit of enhancing the quality of products and services. The perspectives of these experts provide valuable insights into the principles and practices of quality management, contributing to a deeper comprehension for researchers. This understanding extends to how the aspects advocated by quality gurus can be applied to enhance service delivery in public clinics.

2.8 Quality management system

A Quality Management System (QMS) comprises a set of guidelines, processes, and documented information outlining an organisation's approach to achieving its quality goals and fulfilling customer expectations (Zhang *et al.* 2017). It establishes a structured framework for overseeing and enhancing quality, guaranteeing that the organization's products and services consistently meet or surpass customer standards. A strong QMS contributes to bolstering an organization's reputation, cutting down on costs, elevating customer satisfaction, and securing a competitive edge in the market (Zhang *et al.* 2020).

2.8.1 Implementation of Quality Management System

Implementing a QMS involves a systematic approach that requires the commitment of top management, the involvement of employees, and the use of quality tools and techniques. In a study by Zhang *et al.* (2017), the authors identified the critical success factors for QMS implementation in small and medium-sized enterprises (SMEs). The study revealed that top management commitment, employee involvement, training, and communication were essential elements of successful QMS implementation. The authors also emphasized the importance of integrating QMS with other management systems and ensuring that it is aligned with the organization's objectives.

Another study by Kog (2018) investigated the factors influencing the implementation of QMS in the healthcare sector. The authors found that leadership support, staff engagement, and organizational culture were significant determinants of QMS implementation. The study also highlighted the importance of stakeholder engagement and the need to tailor QMS to the specific needs of the healthcare sector.

2.8.2 Benefits of Quality Management Systems

The adoption of Quality Management Systems (QMS) can bring about various advantages for organizations, such as enhanced customer satisfaction, heightened operational efficiency, cost reduction, and an improved overall reputation. Khan (2020) conducted a study examining the influence of QMS on the performance of organizations within the Pakistani textile industry. The results indicated that the implementation of QMS led to substantial enhancements in customer satisfaction, employee performance, and financial outcomes. Additionally, Ahire *et al.* (2018) found, in their research, that QMS implementation significantly elevated the quality of products and services, consequently increasing customer satisfaction levels.

In a separate investigation by Wu and Chang (2019) focusing on Chinese manufacturing firms, the impact of QMS on innovation performance was explored. The findings revealed a positive correlation, suggesting that QMS plays a constructive role in fostering innovation. This implies that QMS can contribute to the development of novel products and processes within organisations.

2.8.3 Impact of Quality Management System on Organisational Performance

Several studies have examined the impact of QMS on organizational performance, and most of them have found a positive correlation between QMS implementation and organizational performance. A study by Piso and Muscalu (2018) found that QMS implementation led to improved organizational performance by enhancing the effectiveness and efficiency of the organization's processes. The study also found that QMS implementation led to increased employee motivation and improved communication within the organization.

Another study by Hidalgo (2020) found that QMS implementation had a significant positive impact on the financial performance of the organization, including increased profitability and return on investment. The study also found that QMS implementation led to improved customer satisfaction and retention, which further enhanced the financial performance of the organization.

2.8.4 Challenges in Quality Management System Implementation

Despite the benefits of QMS implementation, there are several challenges that organizations face when implementing QMS. One of the major challenges is resistance from employees, who may view QMS implementation as a burden or an additional task that they must perform. According to a study by Kotiadis *et al.* (2017), employee resistance is one of the main barriers to QMS implementation, and organizations need to address this issue by involving employees in the implementation process and providing them with the necessary training and support.

Another challenge in QMS implementation is the lack of top management commitment and support. According to a study by Poksinska (2017), top management commitment and support are critical for the

success of QMS implementation, and organizations need to ensure that top management is actively involved in the implementation process and provides the necessary resources and support.

QMS is an important aspect of organizational management, and its implementation has several benefits for organizations, including improved product quality, increased customer satisfaction, reduced costs, and enhanced organizational performance. The research reviewed in this literature review indicates that QMS implementation has a positive impact on organizational performance, including improved financial performance, increased customer satisfaction, and enhanced employee motivation and communication.

QMS implementation also faces several challenges, including employee resistance and lack of top management commitment and support. Organizations need to address these challenges to ensure the successful implementation and maintenance of QMS, the best way to successfully implement QMS is to educate the employees because some of them may feel threatened with their job.

2.9 Latest developments in Quality Management System

2.9.1 International Organisational for Standardisation (ISO)

The ISO 9000 series of standards provides guidelines for implementing a QMS. The latest version, ISO 9001:2015, was published in September 2015. It emphasises risk-based thinking, customer focus, and continuous improvement. The standard is based on a plan do-check-act (PDCA) presented in the Figure 2.3 cycle, which involves the following stages:

- I. Plan: Define the goals and procedures essential for achieving outcomes in accordance with customer specifications and the policies of the organization.
- II. Do: Execute the procedures.
- III. Check: Monitor and assess the processes in comparison to the set objectives, and then communicate the outcomes through reporting.
- IV. Act: Consistently take steps to enhance the efficiency and effectiveness of processes.

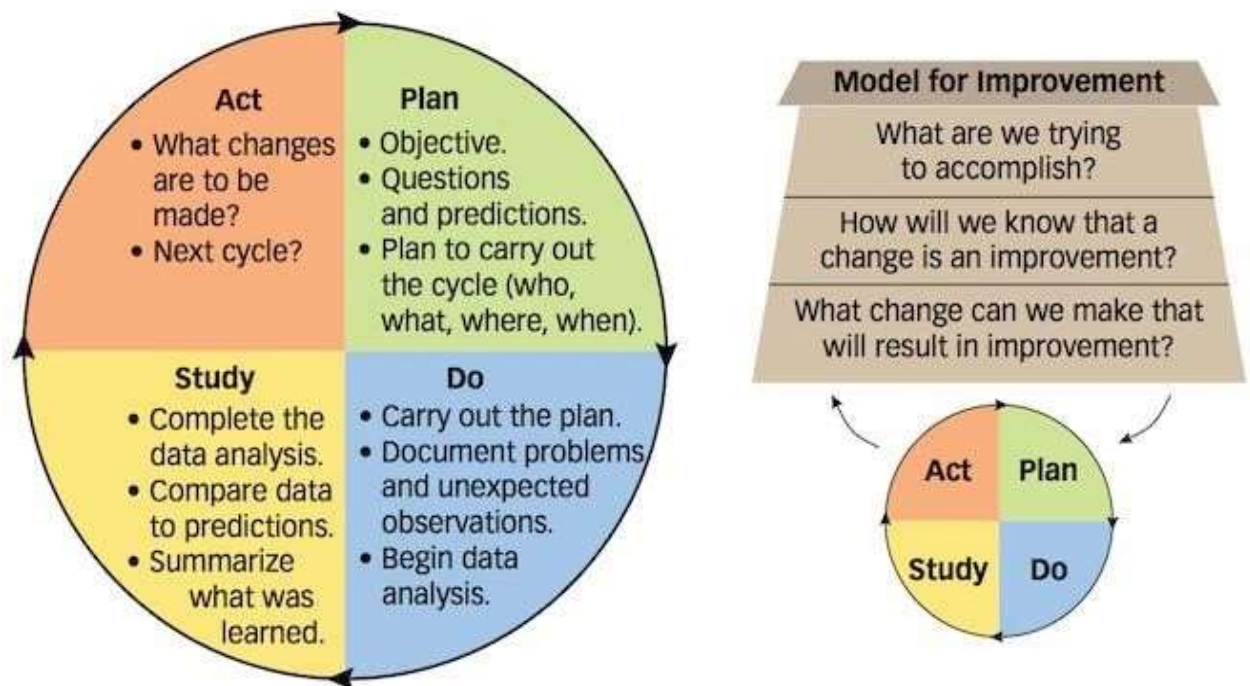


Figure 2.3: Deming PDSA Model

Source: Adapted (Deming 1991)

The Plan-Do-Study-Act (PDSA) cycles are commonly employed for quality improvement (QI) in many healthcare systems, drawing inspiration from tools and models rooted in industrial management practices (Reed and Card 2016). At the heart of the PDSA cycle is the structuring of the improvement process in alignment with the scientific method of experimental learning (Portela *et al.* 2016).

The ISO 9001:2015 standard has achieved widespread adoption across global organizations. According to ISO (2019), over 1.1 million organizations in 187 countries had obtained certification to ISO 9001:2015 (ISO 2019). Notably, this standard has demonstrated a positive impact on organizational performance, customer satisfaction, and employee engagement, as highlighted in research by (Nasir *et al.* 2015).

2.9.2 Quality Culture

One of the critical elements of a QMS is the development of a quality culture. A quality culture is a set of values, beliefs, and behaviours that promote quality throughout the organization. It is essential to establish a quality culture that emphasizes customer focus, continuous improvement, and employee engagement. A study by Koivisto and Hamari (2019) found that the implementation of a QMS improved the quality culture of an organization and increased employee engagement.

2.9.3 Continuous Improvement

Continuous improvement is a key principle of QMS. It involves continually monitoring and analysing processes to identify areas for improvement. The PDCA cycle is a powerful tool for continuous improvement. The ISO 9001:2015 standard requires organizations to establish a process for continual improvement and to document the results of these activities (ISO 2015). A study by Reed (2016) found that the implementation of a QMS improved the performance of an organization and led to continuous improvement.

2.9.4 Supplier Management

Supplier management is an essential aspect of QMS. Organizations must ensure that their suppliers provide products or services that meet their requirements and expectations. The ISO 9001:2015 standard requires organizations to establish criteria for selecting suppliers, evaluate their performance, and take appropriate actions to address any deficiencies (ISO 2015). A study by Yang *et al.* (2021) found that supplier management is critical to the success of QMS implementation.

2.9.5 Integrated Management Systems

An integrated management system (IMS) is a holistic structure that brings together different management systems, such as Quality Management System (QMS), Environmental Management System (EMS), and Occupational Health and Safety Management System (Moshabela 2017; Maharaj 2018). By integrating these systems, organizations can improve their overall performance and efficiency.

Administrative challenges, including a lack of management support, inadequate recordkeeping, and poor data management, were identified as a significant challenge to service delivery at public clinics in South Africa. These challenges lead to delays in treatment and compromise the quality of care provided. Administrative challenges, including a lack of management support, inadequate record-keeping, and poor data management, are also significant challenges to service delivery at public clinics in South Africa. These challenges lead to delays in treatment and compromise the quality of care provided. Previous studies have also identified administrative challenges as significant barriers to service delivery in public clinics (Moshabela 2017; Maharaj 2018).

The identified challenges include human resource shortages, inadequate infrastructure and equipment, medication and supply chain management, patient load and demand, communication, and administrative challenges. These challenges compromise the quality of care provided and lead to delays in treatment and dissatisfaction among patients. The mentioned latest quality trends can assist in enhancing service quality and it is what is needed to address these challenges and improve the quality of health care services provided in public clinics in South Africa.

2.10 Service Quality and Patient Satisfaction

In the context of healthcare, service quality refers to the degree to which healthcare services meet or exceed patients' expectations (Lee *et al.* 2021). It is a multidimensional construct that encompasses various aspects of healthcare services, including accessibility, responsiveness, empathy, reliability, and assurance (Alghamdi 2021; Jalal 2017). Patient satisfaction, on the other hand, refers to patients' subjective evaluation of the healthcare services they receive (Khan 2020). It reflects patients' perceptions of the quality of care, including the technical quality of care and the interpersonal aspects of care (Gupta and Goyal 2019; Cohen *et al.* 2018).

According to Yung (2018), QM was effectively developed and found to be applicable to Western organizations, as illustrated in Figure 2.4. Consequently, it gained extensive acceptance among industries and non-profit organizations globally.

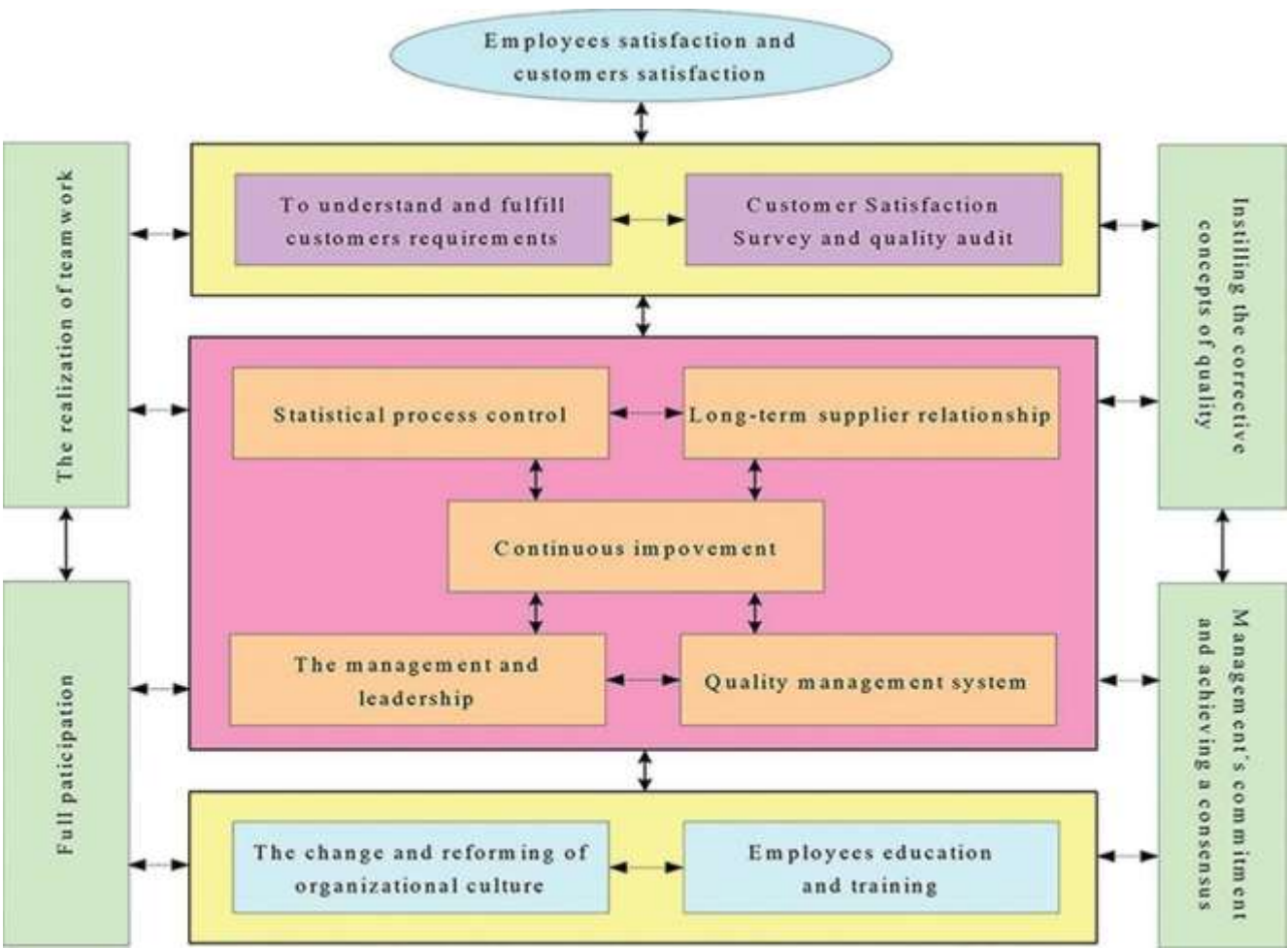


Figure 2.4: Employee satisfaction and customer satisfaction

Source: Yung (2018)

Figure 2.4 shows in detail how an organisation could improve customer (patient) satisfaction as well as employee satisfaction. The figure shows that if an organisation could engage both employees and its

customers and provide sufficient training and educate all employees so that they are able to provide high quality care to customers, this could increase the level of improvement while creating a healthy long-term supplier relationship to avoid shortage of medication and take into consideration customers' complaints to improve their quality management system because there is always room for improvement.

The development of the Quality Management System (QMS) was shaped by the ideas of prominent Western quality experts, specifically Deming, Juran, and Crosby, as noted by Yung in 2018. Deming emphasized that quality involves meeting customer requirements and ensuring their satisfaction (Deming 1986). Crosby's definition of quality was similar, emphasizing adherence to customer requirements (Crosby 1979). Juran viewed quality as the fitness for the purpose of use, with judgment coming from users rather than manufacturers or merchants (Juran 1974).

The QMS emerged as an amalgamation of management philosophies, quality concepts, and a set of practices. It drew inspiration from Deming's 14 points and Juran's quality trilogy. However, the successful implementation of the QMS requires the integration of both "hard side" elements, such as statistical methods, quality control tools, process standardization, and improvement, and "soft side" aspects (Sila 2017). This holistic approach ensures a comprehensive and effective implementation of the Quality Management System.

2.10.1 Empirical studies undertaken on the relationship between service quality and patient satisfaction.

Numerous research endeavours have explored the connection between the quality of healthcare services and patient satisfaction. The majority of these studies have consistently revealed a positive correlation between service quality and patient contentment, as evidenced by Alghamdi (2021); Jalal (2017); Lee and Yom (2019). For instance, Alghamdi's (2021) investigation into Saudi Arabian hospitals established that higher service quality significantly predicted increased patient satisfaction. Similar findings were observed in Jalal (2017) study on Pakistani hospitals and Lee and Yom (2019) examination of Korean healthcare settings.

Moreover, Yoo (2017) demonstrated the significant impact of service quality on patient satisfaction, echoing the results of Jankovic and Kelley (2018) in the context of Serbian healthcare and Liu and Kang (2020) in Chinese healthcare. Notably, the literature suggests that various dimensions of service quality play distinct roles in shaping patient satisfaction. Jun and Norris (2015) identified empathy, communication, and responsiveness as crucial factors in Korean healthcare, while Ng *et al.* (2017) highlighted reliability, tangibility, and empathy in Malaysian healthcare, and Kim *et al.* (2019) emphasised responsiveness and assurance in the Korean healthcare setting.

Furthermore, the interpersonal relationship between patients and healthcare providers emerges as a key factor influencing patient satisfaction. Studies, including those by Lee *et al.* (2021) in Korean healthcare and Cai (2021) in Chinese healthcare, underscore the significance of healthcare providers' empathy, communication skills, and respect in determining patient satisfaction. In essence, the quality of the patient-provider relationship appears pivotal in shaping the overall satisfaction experienced by patients in various healthcare contexts.

Another factor that influences patient satisfaction is the quality of healthcare facilities and equipment. Patients tend to be more satisfied with healthcare services when the facilities are modern, clean, and comfortable, and when the equipment is up-to-date and well-maintained. In various healthcare settings around the world, research studies have consistently highlighted the critical role of service quality in shaping patient satisfaction. For instance, investigations in the Pakistani healthcare context by Yousuf

(2020) underscored the substantial influence of the physical environment of healthcare facilities on patient satisfaction. Similarly, findings from Kim *et al.* (2020) revealed that the quality of healthcare facilities and equipment significantly affected patient satisfaction within the Korean healthcare landscape.

The efficiency, effectiveness, and timeliness of healthcare processes also emerged as key factors impacting patient satisfaction. Han *et al.* (2016) observed in the Korean healthcare context that timely healthcare services contributed significantly to patient satisfaction, while Gao (2013) found a similar trend in Chinese healthcare, emphasizing the importance of efficient healthcare processes.

Patient expectations were identified as another crucial element in shaping satisfaction levels. Studies conducted in Iranian and Saudi Arabian healthcare contexts by Bahadori *et al.* (2016) and Anbari *et al.* (2019) respectively highlighted the significant impact of patient expectations on satisfaction levels. High expectations, when unmet, were associated with reduced satisfaction with healthcare services.

The influence of cultural differences on the service quality-patient satisfaction relationship was explored in various studies. Al Awa (2014) demonstrated the impact of cultural differences on patient satisfaction in Saudi Arabian healthcare, while Kim *et al.* (2019) found similar patterns in the Korean healthcare context.

As technology continues to advance, its role in healthcare is becoming increasingly prominent. Research by Alomari (2020) in Jordanian healthcare and Cai (2021) in Chinese healthcare indicated that healthcare technology significantly impacted patient satisfaction, emphasizing its potential to enhance service quality.

Furthermore, the connection between service quality, patient satisfaction, and healthcare outcomes was highlighted in several studies. Wang *et al.* (2019) in Chinese healthcare and Kim *et al.* (2021) in Korean healthcare found that service quality and patient satisfaction had significant implications for healthcare outcomes.

However, it is important to note certain limitations in the reviewed literature. The studies were conducted in diverse countries, limiting the generalizability of findings due to variations in cultural differences, healthcare systems, and patient expectations. Methodological differences in measuring service quality and patient satisfaction across studies also hindered direct comparisons. Additionally, the reviewed literature primarily focused on the relationship between service quality and patient satisfaction, neglecting exploration of other potential factors, such as patient characteristics or healthcare outcomes. Finally, the review's temporal scope, spanning from 2017 to 2023, may have overlooked important studies published before 2015. Overall, these findings underscore the need for healthcare providers to prioritize service quality improvements to enhance patient satisfaction and, consequently, positively impact patient outcomes.

2.10.2 Dimensions of Service Quality and Patient Satisfaction

Several studies have investigated the relationship between specific dimensions of service quality and patient satisfaction. These studies have found that different dimensions of service quality (Fig.2.5) have different effects on patient satisfaction (Alghamdi 2021; Hosseini *et al.* 2018; Cohen *et al.* 2018). The figure 2.5 below represents the dimensions of service quality in the SERVQUAL, the researcher modified the diagram in relation to meeting the patients’ expectations at the Hartebeeskop Clinic.

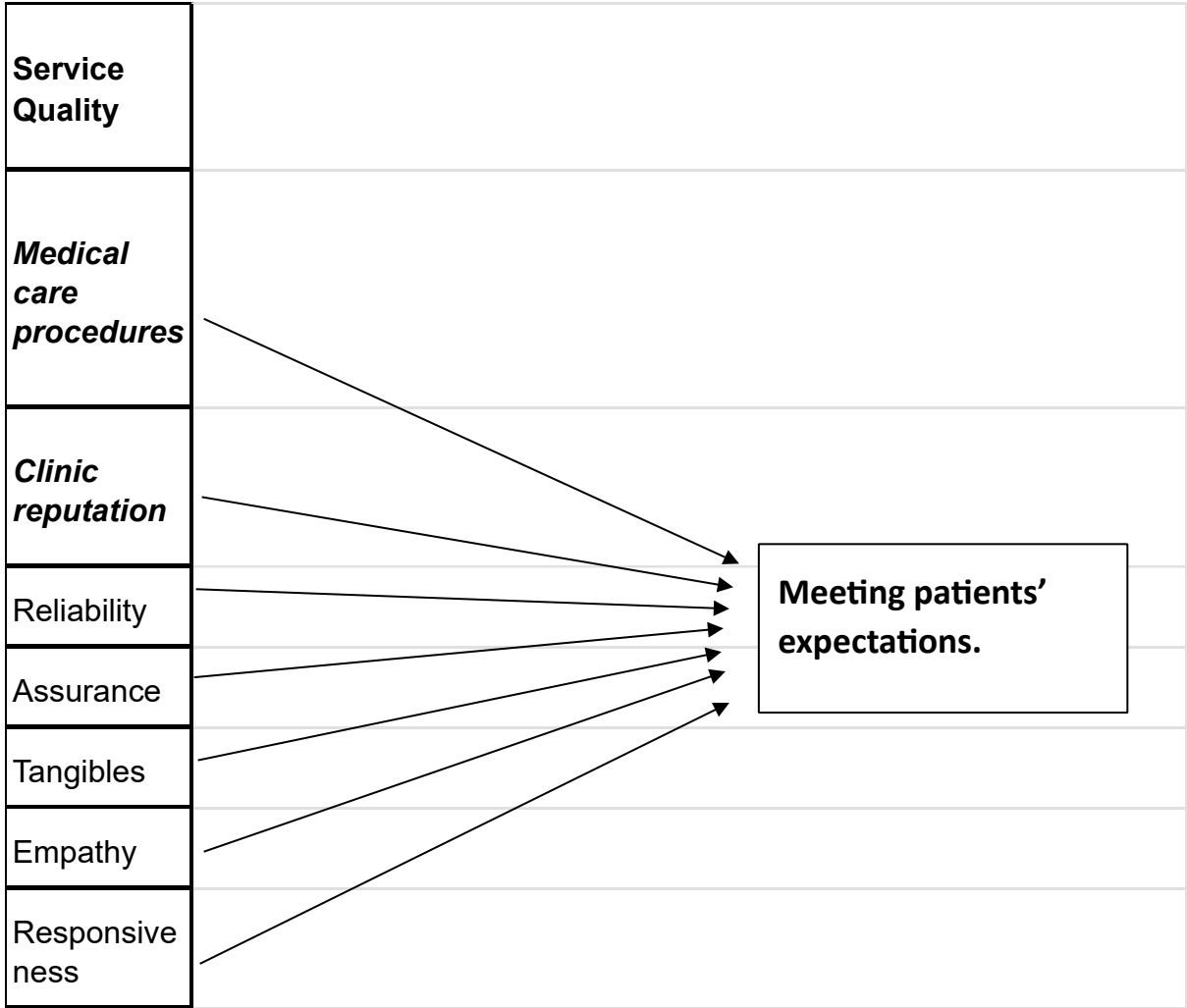


Figure 2.5 Dimensions of service quality

Adapted from Hosseini *et al.* (2018)

Dimensions of service quality in the SEVQUAL are designed to measure and meet patient’s expectations and perceptions as well as identify the gaps in the service quality dimensions.

Medical care procedures and clinic reputation contribute to meeting patients’ expectations.

2.10.3 Service quality challenges in public clinics

South Africa’s public healthcare system is one of the largest in the world, catering to the health needs of a diverse population of more than 58 million people (Miot *et al.* 2017). Despite the considerable efforts made by the government to improve the quality of care in public health facilities, there are still significant

challenges in the delivery of services in these clinics. One way to address these challenges is through the implementation of a Quality Management System (QMS) that ensures the provision of high-quality services to patients.

The importance of service quality in healthcare is not only limited to providing patients with better medical treatment but also ensuring that they receive care in a safe and comfortable environment (Van den Heever 2019). However, providing high-quality service in public healthcare clinics in South Africa is not an easy task. There are several challenges that healthcare providers face, ranging from resource constraints to a lack of trained staff.

2.10.3.1 Staff-related challenges

A significant challenge facing public healthcare clinics in South Africa is the shortage of trained medical staff. Many clinics lack adequate staff to provide high-quality service, which can lead to overworked and stressed healthcare providers. The shortage of staff can also result in long waiting times for patients and inadequate time spent with healthcare providers. Additionally, staff turnover is high in public healthcare clinics, which means that clinics often lack experienced healthcare providers (Ramphal and Garidzirai 2020). The lack of adequate staffing levels hinders the ability of clinics to meet the demands of the population and provide efficient care, this shortage also puts additional stress on healthcare workers, impacting their job satisfaction and morale (Nxumalo and Goudge, 2021).

(i) Staff attitude

The quality of healthcare services is heavily influenced by the attitudes of the staff working in public clinics. Understanding the significance of staff attitude in healthcare is crucial. Patient satisfaction, adherence to medical advice, and the overall healthcare experience are closely linked to the attitudes of healthcare providers. Therefore, determining the quality of healthcare service delivery at local public clinic facilities requires an in-depth consideration of factors from the service provider constraints and reality along with patients' experiences and perceptions (Gorgiladze *et al.* 2020).

Many criticisms of the South African healthcare system revolve around the unsatisfactory demeanour of staff in public facilities. Patients frequently report encounters with rude or indifferent personnel, a departure from the principles of healthcare and the spirit of ubuntu in South Africa. Numerous studies have delved into the reasons behind the mistreatment of patients by nurses in the country. Identified factors include organizational issues like poor communication, professional insecurities, a desire for control, and an ingrained perception of patient inferiority (Alkman 2018). According to Johnson (2017), the organizational culture within public clinics significantly influences staff attitudes, clinics fostering a culture of respect, communication, and continuous improvement tend to exhibit more positive staff attitudes. Despite encouraging trends, challenges persist, with factors like staff burnout, heavy workloads, and

limited resources negatively impacting attitudes. Nonetheless, proactive measures such as mindfulness programs, team-building activities, and initiatives promoting improved work-life balance are being implemented to address these challenges (Patel 2022).

Johnson (2017) further describes items that leads to negative attitude from the health care providers as follows:

- a. **Patient Perspectives:** Patient feedback provides valuable insights into staff attitudes. Surveys and qualitative studies indicate that patients appreciate clinics where staff members are approachable, communicative, and demonstrate genuine concern for their well-being.
- b. **Technology's Role:** The integration of technology in healthcare services has also impacted staff attitudes. Electronic health records, telemedicine, and other technological advancements have streamlined processes, potentially reducing stress levels among staff, and improving their overall attitude.
- c. **Training and Professional Development:** Continuous training and professional development programs are essential in maintaining positive staff attitudes. Clinics that invest in ongoing education for their staff witness not only enhanced clinical skills but also improved interpersonal skills and job satisfaction.
- d. **Comparative Analysis:** Comparative analyses between different regions or types of public clinics reveal variations in staff attitudes. Factors such as geographical location, socioeconomic status of the population served, and clinic size contribute to these differences.

Challenges persist, but innovative solutions and a growing awareness of the importance of staff attitudes can contribute to a more patient-centric healthcare environment. Research and implementation of best practices will further enhance the overall quality of healthcare services provided by public clinics.

2.10.3.2 Data Capturing

Administrative challenges, including a lack of management support, inadequate recordkeeping, and poor data management, were identified as a significant challenge to service delivery at public clinics in South Africa. These challenges lead to delays in treatment and compromise the quality of care provided, administrative challenges, including a lack of management support, inadequate record-keeping, and poor data management, are also significant challenges to service delivery at public clinics in South Africa (Nxumalo and Goudge 2021). These challenges lead to delays in treatment and compromise the quality of care provided. Previous studies have also identified administrative challenges as significant barriers to service delivery in public clinics (Moshabela 2017; Maharaj 2018). Manyisa and Van Aswegen (2017)

stated that the absence of proper administrative tools and qualified professionals has a negative impact on the quality of healthcare provided in medical facilities.

(ii) Load shedding

Load shedding refers to the intentional reduction of electrical power in specific areas when the electricity demand exceeds the supply (Johnson 2017). It is a strategy employed by utility companies to prevent the collapse of the entire power system. While load shedding is often a necessary measure to maintain the stability of the power grid, its consequences on critical services, such as healthcare, cannot be ignored. In many countries, including South Africa public clinics are critical institutions that provide healthcare services to a large segment of the population. The reliability of electricity in these clinics is essential for various medical equipment, refrigeration of vaccines, and maintaining a conducive environment for both patients and healthcare providers.

The relationship between load shedding and healthcare is intricate. Power interruptions can jeopardize the functionality of medical equipment, disrupt diagnostic procedures, and compromise the storage of temperature-sensitive medications. Additionally, the lack of electricity can hinder communication systems, impeding the coordination of patient care and emergency responses.

Load shedding poses a substantial risk to the functionality of medical equipment crucial for diagnosis and treatment. Imaging devices, life support systems, and laboratory equipment require a constant and reliable power supply. Power interruptions can lead to equipment failures, potentially compromising patient care and safety. This issue is well-documented in studies such as Smith (2019) and Johnson (2017). Public clinics play a pivotal role in immunization programs. The storage of vaccines is highly dependent on a stable electricity supply to maintain the cold chain. Load shedding can disrupt this chain, rendering vaccines ineffective and posing a threat to public health. Research by Patel (2022) highlights the vulnerability of vaccine storage systems in the face of irregular power supply. Effective communication is vital in healthcare settings. Load shedding can disrupt communication systems, hindering the coordination of medical staff, emergency services, and administrative functions. Studies by Reddy (2016) emphasize the negative impact of load shedding on healthcare communication infrastructure. The consequences of load shedding on patient outcomes cannot be overlooked. Delayed or compromised medical interventions due to power interruptions may lead to adverse health outcomes. Research conducted by Health Watch (2023) indicates a correlation between load shedding and an increase in patient morbidity and mortality rates. Several case studies and reports highlight the realworld impact of load shedding on public clinics. According to a report by the World Health Organization (WHO) (2021), load shedding in sub-Saharan Africa led to a 30% increase in maternal mortality rates due to disruptions in essential healthcare services during power outages (WHO 2021). In a case study conducted in India in

2020, it was found that frequent load shedding led to a decline in the overall efficiency of public clinics, with a notable increase in patient waiting times and delays in medical procedures (Yellapu *et al.* 2019).

Addressing the challenges posed by load shedding in public clinics requires a multi-faceted approach. Implementing alternative power sources, such as solar or backup generators, can help ensure a continuous power supply during load-shedding periods. Furthermore, developing and implementing robust energy storage solutions can contribute to mitigating the impact of power interruptions on critical healthcare infrastructure (Yellapu *et al.* 2019). Government intervention is crucial in addressing the impact of load shedding on public clinics. Policies that prioritize the healthcare sector in electricity distribution planning and invest in sustainable energy solutions can make a significant difference. Collaborative efforts between health and energy ministries, as well as partnerships with the private sector, can enhance the resilience of public clinics in the face of power challenges (Yellapu *et al.* 2019).

Load shedding at public clinics poses a significant threat to healthcare services, impacting patient care, safety, and the overall efficiency of these facilities. The consequences are not limited to a specific region but are a global concern, especially in developing nations. Addressing this issue requires collaborative efforts from governments, healthcare providers, and energy stakeholders to invest in sustainable and resilient energy solutions. By doing so, there will be assurance that public clinics remain reliable sources of healthcare even in the face of energy challenges (Yellapu *et al.* 2019).

2.10.3.3 Supply Chain

The importance of service quality in healthcare is not only limited to providing patients with better medical treatment but also ensuring that they receive care in a safe and comfortable environment (Van den Heever 2019). However, providing high-quality service in public healthcare clinics in South Africa is not an easy task.

Most of the articles reviewed highlighted resource constraints as a significant challenge facing public healthcare clinics in South Africa. Resource constraints included a lack of essential medical equipment, inadequate infrastructure, and a shortage of medication. These challenges often lead to long waiting times for patients, which can negatively impact the quality of service they receive. Additionally, resource constraints can lead to the rationing of healthcare services, which means that patients may not receive the appropriate level of care.

As per a TimesLIVE report dated June 14, 2018, there are growing concerns among the public about shortages of essential medical equipment in hospitals, causing critical delays in urgent surgical procedures. The backlog of work is contributing to extended waiting times for certain patients who require treatment, primarily due to the insufficient availability of necessary equipment. The report highlights that

these prolonged delays in medical interventions may subject patients to the risk of developing complications or even facing a loss of life (TimesLIVE 2018).

Furthermore, a study conducted by Mokoena (2017) emphasised the inadequacy of material resources, equipment, and supplies within hospitals, resulting in extended patient stays. Participants in the study pointed out issues with the functionality of the scan machine, noting its improper condition. Consequently, patients either had to be referred to other hospitals for necessary investigations or had to endure waiting times until the machine was repaired, leading to delayed diagnoses and treatment (Mokoena 2017).

2.10.3.3.1 Causes of Medication Shortages

Medication shortages in South African public clinics have been a persistent challenge, affecting the healthcare system and, ultimately, the well-being of the population. To effectively address medication shortages at public clinics, it is crucial to understand their underlying causes. Research and reports have identified several contributing factors:

(i) Economic factors

Economic factors play a pivotal role in medication shortages. Funding constraints, budgetary limitations, and currency fluctuations can impact the procurement of pharmaceuticals, government budget allocations to healthcare, influenced by broader economic conditions, may not always align with the increasing demand for medications in public clinics (Fetters 2016).

(ii) Supply Chain Challenges

The pharmaceutical supply chain is highly complex, and any disruptions at various stages can result in shortages of medications. Challenges such as transportation bottlenecks, inefficient distribution networks, and insufficient storage facilities can jeopardize the prompt delivery of drugs to clinics (Fetters 2016). According to the Public Finance Management Act (PFMA) no. 1 of 1999, supplier accounts must be settled within a 30-day period from the receipt of a valid invoice (Gray *et al.* 2017). Modisakeng (2020) found that there were delays exceeding 21 days in waiting for orders from suppliers. Furthermore, in certain instances, suppliers failed to deliver the complete quantities of orders. Some participants reported receiving inaccurate information from suppliers regarding stock availability, leading to shortages of medicines in their hospitals. Participants also highlighted instances where tenders were awarded to companies lacking the capacity to fulfil them, with significant implications for patient care within their hospitals.

(iii) Regulatory Issues

Nkomo and Wissink (2018) state that the regulatory hurdles are another factor that contributes to causes of medication shortages, including delays in approval processes and compliance issues, can contribute

to shortages. Stringent regulatory requirements can impede the entrance of new medications into the market or delay the restocking of essential drugs.

(iv) Global Health Crises

The COVID-19 pandemic has highlighted the vulnerability of healthcare systems worldwide. The increased demand for certain medications, disruptions in global supply chains, and diversion of resources to address the pandemic have exacerbated medication shortages (Othman *et al.* 2017).

(v) Pharmaceutical Industry Practices

Certain practices within the pharmaceutical industry, such as stockpiling, production delays, and market withdrawal of less profitable drugs, can contribute to shortages. Understanding the motivations of pharmaceutical companies is crucial in addressing these issues (Forbes and Ahmed 2011).

(vi) Political and Governance Issues

Political instability and governance challenges can influence healthcare systems, including medication procurement and distribution. Corruption, mismanagement, and inadequate policy frameworks may hinder the effective functioning of the healthcare sector (Ahmed *et al.* 2012).

(vii) Patient Behaviour and Adherence

Inadequate patient adherence to prescribed medications can also play a role in shortages. If patients fail to complete their treatment courses or misuse medications, it can lead to increased demand and stockouts (Nkomo and Wissink 2018).

Addressing medication shortages in South African public clinics requires a multifaceted approach that considers economic, supply chain, regulatory, global health, industry, political, and patient-related factors. Collaborative efforts between government bodies, pharmaceutical companies, regulatory agencies, and healthcare professionals are essential to develop sustainable solutions.

2.10.3.3.2 The Impact of Medication Shortages

Medication shortages have far-reaching consequences, affecting both patients and healthcare systems. Wong (2021) states that some of the key impacts include:

- (i) Compromised patient care: Patients may receive suboptimal treatment or be forced to switch to fewer effective medications, leading to worsened health outcomes.
- (ii) Increased healthcare costs: Medication shortages often lead to the use of more expensive alternative drugs, increasing healthcare expenditures.
- (iii) Healthcare provider burden: Clinicians and pharmacists must invest additional time and resources in managing shortages, diverting their attention from patient care.

(iv) public health risks: Shortages can impact vaccination programs and disease outbreaks, potentially leading to public health crises.

The shortage of medications in public clinics has severe consequences, particularly for vulnerable populations. Chronic diseases such as HIV/AIDS and tuberculosis require consistent medication to manage symptoms and prevent further complications. In the absence of regular access to these medications, patients face increased health risks, leading to a potential rise in mortality rates. Maternal and child health is also at risk, as shortages in medications for prenatal care and child vaccinations could result in long-term health implications. The burden falls disproportionately on those who can least afford it, exacerbating existing health disparities (Wong 2021).

2.10.3.3 Possible solutions

The origins of the crisis can be traced to systemic issues such as budget constraints, mismanagement, and an overburdened healthcare system. According to a report by the South African Human Rights Commission (2018), these factors have been exacerbated by a lack of effective policy implementation and governance.

One of the primary contributors to the medication shortage crisis is the inadequate allocation of funds to the healthcare sector. Insufficient financial resources limit the ability of public clinics to maintain adequate stock levels of essential medications. In a study conducted by the World Health Organization (WHO) in 2020, it was revealed that South Africa spent only a fraction of its GDP on healthcare compared to international benchmarks.

Moreover, the mismanagement of available resources has played a detrimental role. Inefficient procurement practices, delayed deliveries, and poor inventory management have led to a situation where essential medications are not reaching the patients who need them. The escalating crisis has prompted calls for urgent action. Civil society organizations, healthcare professionals, and concerned citizens have advocated for increased funding for the healthcare sector, improved governance, and a comprehensive review of procurement processes. The South African Medical Association (SAMA) has been at the forefront of this advocacy, emphasizing the need for a sustainable and patient-centred healthcare system.

In response to mounting pressure, the South African government has initiated policy reforms aimed at addressing the systemic issues contributing to medication shortages. The National Department of Health unveiled a strategic plan (2022) outlines measures to improve the procurement process, strengthen supply chain management, and enhance budget allocations to healthcare. International collaboration has also played a crucial role in tackling the crisis. Partnerships with organizations such as the World Bank and the Global Fund have brought in financial assistance and technical expertise to support South Africa's efforts in reforming its healthcare system.

Bureaucratic barriers often impede the smooth execution of policy changes. Streamlining administrative processes, reducing red tape, and fostering transparent communication channels between different levels of healthcare administration can alleviate these obstacles. Introducing technology-driven solutions, such as digital inventory management systems and real-time tracking, can enhance the efficiency of procurement and distribution processes (Nkomo & Wissink 2018). This not only reduces the likelihood of medication shortages but also creates a more agile and responsive healthcare infrastructure. While policy reforms have been initiated, the sustainability of funding remains a critical concern. Government commitment to allocating a significant portion of the national budget to healthcare is vital for ensuring a robust and resilient system. Diversifying funding sources, exploring public-private partnerships, and leveraging international aid can contribute to a more stable financial foundation for the healthcare sector (Nkomo and Wissink 2018). The implementation of innovative funding models, such as health impact bonds or outcome-based financing, can incentivize the efficient use of resources and ensure that funds are directed toward areas with the greatest impact on patient outcomes.

Wong (2021) states that continuous monitoring and evaluation are essential components of successful policy implementation. Regular assessments of the impact of reforms, coupled with feedback mechanisms from healthcare providers and patients, enable policymakers to make informed adjustments. International organizations, such as the World Health Organization and the African Union, can play a supportive role in establishing frameworks for monitoring and evaluation. Regular reporting on key performance indicators, such as medication availability rates and patient outcomes, can provide valuable insights into the effectiveness of implemented reforms.

As South Africa grapples with the complexities of addressing medication shortages, the issue transcends national borders. It is a global imperative to support nations facing healthcare challenges and work collaboratively toward sustainable solutions. International solidarity, in the form of knowledge sharing, technical assistance, and financial support, is crucial in the fight against medication shortages and the broader goal of achieving universal health coverage (Wong 2021). The journey ahead is marked by challenges, but it is also defined by the resilience of individuals, communities, and nations committed to forging a healthier future. South Africa is navigating the intricate path toward overcoming medication shortages, and the lessons learned, and solutions implemented, can serve as a beacon of hope for other regions facing similar challenges.

2.3.10.4 Waiting time

The deterioration of South Africa's healthcare system is ascribed to various factors. Politicians have sought to attribute the decline in the public sector to a range of problems, deflecting blame from their own actions. These issues encompass migrants, inadequate funding, understaffing, the presence of medical

schemes, legal actions for medical negligence, the existence of two tiers, and even the impact of the middle class (Van den Heever 2019). The challenges in South Africa's healthcare system can be traced back to ingrained patronage within provincial and national government, undermining the capabilities of both national and provincial public health organizations (Van den Heever 2019). Supporting this perspective, Maphumulo and Bhengu (2019) highlight prolonged waiting times due to a scarcity of human resources, adverse events, substandard hygiene and infection control measures, heightened litigation resulting from preventable errors, a deficit of resources in medicine and equipment, and inadequate recordkeeping as additional issues that need attention.

The deterioration of South Africa's healthcare system is attributed to various factors, with politicians deflecting blame onto migrants, insufficient funds, staff shortages, legal actions for medical negligence, and the existence of a two-tier system (Van den Heever 2019). However, scholars argue that the core issues stem from institutionalised patronage within the government, eroding the capabilities of public health organizations at both national and provincial levels (Van den Heever 2019). Maphumulo and Bhengu (2019) concur, emphasizing the need to address prolonged waiting times, human resource shortages, adverse events, hygiene issues, litigation due to errors, resource shortages, and inadequate recordkeeping for a comprehensive healthcare reform.

Factors contributing to extended waiting periods include high patient volumes, understaffing, and resource constraints. The Journal of Public Health in Africa (2019) highlighted these challenges, emphasizing the need for systemic improvements to enhance efficiency in public clinics (Author *et al.*

2019).

Efforts to address this issue have been ongoing, with initiatives aimed at improving healthcare infrastructure, increasing staffing levels, and optimizing scheduling systems.

However, the effectiveness of these measures may vary across different regions and facilities.

2.11 Quality Management System in South African Public Health Care Clinics

The South African Department of Health has made efforts to improve service delivery in public health care clinics through the implementation of QMS. The government has implemented the National Core Standards (NCS), which provide a set of minimum requirements for the provision of health care services in public facilities (National Department of Health 2016). The NCS is a comprehensive framework that covers all aspects of service delivery, including infrastructure, human resources, equipment, and supplies.

One of the key components of the NCS is the implementation of QMS in public health care clinics. The QMS framework provides a systematic approach to identifying and addressing quality issues in healthcare

facilities. It includes a set of standard operating procedures (SOPs) that guide the delivery of services, as well as a system for monitoring and evaluating the quality of care provided.

QMS has been widely implemented in the healthcare industry to improve service delivery and patient outcomes. In South Africa, the National Department of Health has implemented a QMS framework for public healthcare clinics. The QMS framework is designed to promote quality service delivery, patient safety, and continuous improvement in public healthcare clinics.

2.11.1 Impact of QMS on patient satisfaction and service delivery

In South Africa, the delivery of healthcare services is mainly divided into two sectors: the public and private sectors. The public sector, which serves more than 80% of the population, faces numerous challenges, including staff shortages, inadequate resources, and infrastructure limitations, which result in a low quality of care. Additionally, the country's high burden of disease, including HIV/AIDS, tuberculosis, and non-communicable diseases (NCDs), puts a significant strain on the public health system.

Introducing a Quality Management System (QMS) in public health clinics holds the potential to enhance the quality of healthcare services and elevate patient satisfaction. In South Africa, the National Department of Health (1993) has formulated a comprehensive framework for implementing QMS in public health facilities, encompassing key elements such as leadership, planning, resource management, service delivery, monitoring, and evaluation.

Numerous studies have been undertaken to assess the effects of QMS implementation on patient satisfaction and service delivery within public health clinics in South Africa. A study conducted in the Western Cape province revealed that the adoption of a QMS led to notable improvements in patient satisfaction and increased staff motivation. Additionally, the study highlighted the positive impact of the QMS on the overall quality of care, resulting in better patient outcomes and a reduction in medication errors.

Another study conducted in the KwaZulu-Natal province found that the implementation of a QMS resulted in improved service delivery, with a reduction in waiting times and improved patient flow. The study also found that the QMS had a positive impact on staff motivation and morale, with increased job satisfaction and a sense of ownership over their work.

2.11.2 Role of leadership in QMS implementation

Leadership plays a critical role in the successful implementation of a QMS in public health clinics. One study conducted in the Western Cape province found that effective leadership was a key factor in the successful implementation of a QMS. The study found that leaders who were committed to the implementation of the QMS and provided support to staff members were more likely to achieve success.

Another study conducted in the Gauteng province found that the lack of leadership support was a significant barrier to the implementation.

In South Africa, access to quality health care is a fundamental human right enshrined in the Constitution of the country. However, despite the efforts of the government to provide public health care, the quality of service delivery in public health facilities remains a major challenge (Author *et al.* 2019). Poor infrastructure, inadequate funding, and limited resources often result in long waiting times, inadequate services, and limited access to essential medicines. To address these challenges, public health care clinics in South Africa have begun to implement Quality Management Systems (Author *et al.* 2019).

2.11.3 Effectiveness of QMS in Public Healthcare Clinics

Several studies have investigated the effectiveness of QMS in public healthcare clinics in South Africa. These studies have shown that QMS can significantly improve service delivery in public healthcare clinics. The following sections will review some of the key findings from these studies.

2.11.3.1 Improvement in Patient Satisfaction

One of the primary objectives of QMS in public healthcare clinics is to improve patient satisfaction. A study by De Wet (2019) showed that QMS implementation led to a significant increase in patient satisfaction levels in two public healthcare clinics in the Western Cape province. The study reported that patient satisfaction scores increased from 65% to 88% following QMS implementation.

Another study by Barron (2018) reported similar findings. The study evaluated the impact of QMS implementation on patient satisfaction in four public healthcare clinics in KwaZuluNatal province. The study found that patient satisfaction levels increased from 54% to 78% following QMS implementation.

2.11.3.2 Improvement in Clinical Processes

QMS implementation has also been shown to improve clinical processes in public healthcare clinics. Several studies have reported improvements in clinical processes following QMS implementation in public healthcare clinics in South Africa.

For example, a study by Madzivire *et al.* (2019) evaluated the impact of QMS implementation on clinical processes in a public healthcare clinic in the Eastern Cape province. The study found that QMS implementation led to significant improvements in clinical processes, including increased adherence to clinical protocols, improved patient record-keeping, and reduced waiting times.

Similarly, a study by Mulaudzi *et al.* (2019) evaluated the impact of QMS implementation on clinical processes in a public healthcare clinic in Limpopo province. The study reported significant improvements in clinical processes, including increased adherence to clinical protocols, improved patient record-keeping, and increased patient safety.

2.11.3.3 Reduction in Waiting Times

One of the major challenges facing the public healthcare system in South Africa is long waiting times. Waiting times refer to the time patients spend waiting for medical attention in public healthcare clinics (Seleti *et al.* 2018). Long waiting times have been associated with low patient satisfaction and poor healthcare outcomes. QMS implementation has been shown to reduce waiting times in public healthcare clinics in South Africa.

A study by Seleti *et al.* (2018) evaluated the impact of QMS implementation on waiting times in a public healthcare clinic in Limpopo province. The study reported that waiting times for patients decreased by 40% following QMS implementation. The study also reported improvements in appointment scheduling, patient flow management, and staff communication.

Similarly, a study by Joubert (2019) evaluated the impact of QMS implementation on waiting times in four public healthcare clinics in Gauteng province. The study reported a significant reduction in waiting times, with the average waiting time decreasing from 111 minutes to 62 minutes following QMS implementation.

2.11.4 Improved Staff Performance and Satisfaction

QMS implementation has also been shown to improve staff performance and satisfaction in public healthcare clinics in South Africa. Staff performance refers to the quality of work performed by healthcare providers, while staff satisfaction refers to the level of job satisfaction experienced by healthcare providers (Maphumulo and Bhengu 2019).

Improved staff performance and satisfaction are important for providing quality healthcare services.

A study by Mgutshini (2018) evaluated the impact of QMS implementation on staff performance and satisfaction in a public healthcare clinic in Mpumalanga province. The study reported significant improvements in staff performance, including increased adherence to clinical protocols, improved patient record-keeping, and increased patient safety. The study also reported significant improvements in staff satisfaction, with 85% of staff reporting high levels of job satisfaction following QMS implementation.

Another study by Woodcock and Wosinska (2013) evaluated the impact of QMS implementation on staff performance and satisfaction in a public healthcare clinic in Limpopo province. The study reported significant improvements in staff performance, including increased adherence to clinical protocols, improved patient record-keeping, and increased patient safety. The study also reported significant improvements in staff satisfaction, with 82% of staff reporting high levels of job satisfaction following QMS implementation.

QMS implementation has the potential to significantly improve service delivery in public healthcare clinics in South Africa. However, several barriers to successful implementation exist, including a lack of resources

and resistance to change among healthcare providers. Addressing these barriers is crucial for successful QMS implementation in public healthcare clinics in South Africa. The researcher aims to recommend some quality tools.

2.12 How the implementation of the QMS can improve service delivery in South African public clinics?

Public health care clinics are critical components of the South African healthcare system, providing access to affordable and quality health care to millions of people who cannot afford private healthcare. However, the delivery of services in these clinics is often hampered by poor management systems, inadequate resources, and poor staff morale (Pattinson *et al.* 2018).

South Africa has one of the largest public healthcare systems in the world, providing healthcare to more than 80% of the population. Despite this, the system is plagued by numerous challenges that include poor infrastructure, lack of resources, poor staff morale, and inefficient management systems. Miot *et al.* (2017) state that these challenges often result in long waiting times, poor quality of care, and high patient dissatisfaction levels. As a result, there has been a growing interest in the implementation of QMS in public health care clinics as a way of improving service delivery.

Mayosi *et al.* (2012) states that improving service delivery in public health care clinics through a QMS can have several benefits in improving service delivery:

- (i) QMS can enhance the quality of care by ensuring that all staff members are properly trained, and that policies and procedures are in place to ensure that patients receive the right care at the right time;
- (ii) QMS can improve patient safety by reducing the risk of errors, accidents, and infection, and
- (iii) QMS can improve staff morale by providing a structured approach to service delivery, and by giving staff members the tools and support they need to perform their jobs effectively.

In South Africa, the implementation of QMS in public health care clinics has been a key priority for the government in recent years. In 2015, the National Department of Health launched the Ideal Clinic Realisation and Maintenance (ICRM) program, which aimed to improve the quality of care in public health care clinics by implementing a QMS. The program identified six core areas of focus, including clinical care, human resources, management and leadership, infrastructure, information management, and quality improvement (National Department of Health 2017).

Several studies have evaluated the impact of QMS implementation in public health care clinics in South Africa. A study conducted by Mabuza *et al.* (2020) evaluated the implementation of the ICRM program in Mpumalanga province and found that the program had led to improvements in the quality of care, patient

satisfaction, and staff morale. The study found that the QMS had led to better patient monitoring, improved communication between staff members, and increased accountability for patient outcomes. Another study conducted by Thembela (2019) evaluated the implementation of a QMS in a primary health care clinic in the Eastern Cape and found that the program had led to improvements in patient safety, quality of care, and staff satisfaction. The study found that the QMS had led to better patient education, improved record-keeping, and increased staff engagement.

2.13 Challenges in Implementing Quality Management System in Public Health Care

Mayosi *et al.* (2014) state that Implementation Despite the potential benefits of QMS implementation, there are several challenges that need to be addressed for successful implementation.

- (i) The lack of resources can be a major barrier to QMS implementation. Public health care clinics in South Africa often face resource constraints, including a lack of funding, staff, and infrastructure. This can make it difficult to implement QMS effectively, as adequate resources are necessary to support QMS implementation;
- (ii) Resistance to change can also be a major barrier to successful QMS implementation. Staff members may be resistant to change and may view the implementation of QMS as an additional burden on their already heavy workload. This can lead to a lack of buy-in from staff members, which can hinder QMS implementation;
- (iii) Inadequate training and support can also hinder QMS implementation. Staff members may not have the necessary skills and knowledge to implement the QMS effectively, which can lead to a lack of understanding of the QMS and a lack of commitment to its implementation;
- (iv) There may be cultural and language barriers that need to be addressed for successful QMS implementation. South Africa is a diverse country, with many different languages and cultures. This can make it difficult to communicate the importance of QMS effectively and to ensure that everyone understands the QMS and is committed to its implementation;
- (v) There may be a lack of effective leadership and governance to support QMS implementation. Effective leadership and governance are necessary to ensure that the QMS is implemented effectively and that staff members are supported in its implementation and;
- (vi) There may be a lack of effective monitoring and evaluation of QMS implementation. Monitoring and evaluation are necessary to ensure that the QMS is implemented effectively and to identify areas for improvement. To successfully implement QMS, it requires adequate resources, effective training and support, effective communication and buy-in from all stakeholders, effective leadership and governance, and effective monitoring and evaluation. Therefore, there is a need for a concerted effort to support the implementation of QMS in

public health care clinics in South Africa, including policy support, funding, training and support, and ongoing monitoring and evaluation.

2.14 Studies on Quality Management System in South African Public Healthcare

Clinics

This collection of studies delves into the implementation of Quality Management Systems (QMS) in various public healthcare clinics across different provinces in South Africa. Researchers such as Schwartzberg *et al.* (2018) and others presented in Table 2.4, collectively discovered that the adoption of QMS consistently resulted in enhanced patient satisfaction, reduced waiting times, and improved quality of care, affirming the potential of QMS in positively impacting healthcare delivery and patient outcomes in public healthcare clinics.

Table 2.4 South African clinic studies and findings

Author/s	Findings
Schwartzberg <i>et al.</i> (2018)	The investigation assessed the influence of Quality Management Systems (QMS) on patient satisfaction in a Limpopo Province primary healthcare clinic, South Africa. Results indicate that QMS implementation enhanced patient satisfaction, notably in communication with healthcare providers, decreased waiting times, and improved access to healthcare services. This study underscores that integrating QMS into public healthcare clinics has the potential to enhance patient satisfaction and contribute to better health outcomes.
Adegboye <i>et al.</i> (2020)	The investigation into QMS implementation in a KwaZulu-Natal public hospital revealed enhanced patient safety, diminished medical errors, and improved care quality. The findings suggest that employing QMS can effectively enhance healthcare delivery and elevate patient outcomes within public healthcare clinics.
Ndou <i>et al.</i> (2019)	The study investigated QMS implementation in a Limpopo Province, South Africa public healthcare clinic. Results indicate that QMS implementation improved patient satisfaction, reduced waiting times, and enhanced healthcare service accessibility. Conclusively, QMS implementation in public healthcare clinics has the potential to elevate healthcare delivery and enhance patient outcomes.
Nsereko and King (2019)	The examination of QMS implementation in a South African public healthcare clinic revealed enhanced patient satisfaction, decreased waiting times, and improved care quality. Conclusively, the study advocates for the effective use of QMS to elevate healthcare delivery and enhance patient outcomes in public healthcare clinics.
Mavengere <i>et al.</i> (2017)	The examination of QMS implementation in a South African public healthcare clinic revealed enhanced patient satisfaction, decreased waiting times, and elevated quality of care. Findings suggest that QMS effectively improves healthcare delivery and patient outcomes within such clinics, emphasizing its potential for widespread application in public healthcare settings.
Ngwenya <i>et al.</i> (2018)	The study investigated the application of QMS in a public healthcare clinic in Mpumalanga Province, South Africa. Results revealed enhanced patient satisfaction, decreased waiting times, and improved healthcare service accessibility following QMS implementation. Conclusively, the findings suggest that QMS is a valuable tool for enhancing healthcare delivery and patient outcomes in public healthcare clinics.

Malatji and Van Zyl (2018)	The examination of QMS implementation in a Limpopo Province, South Africa, public healthcare clinic revealed enhanced patient satisfaction, decreased waiting times, and elevated quality of care. Findings suggest that QMS implementation has the potential to significantly enhance healthcare delivery and patient outcomes in public healthcare clinics.
Mutanda and Van Zyl (2018)	The examination of QMS implementation in a Gauteng Province public healthcare clinic revealed enhanced patient satisfaction, reduced wait times, and improved care quality. Findings suggest that QMS implementation positively influences healthcare delivery and patient outcomes in public clinics, advocating for its widespread adoption in similar settings.

Source: Researcher's own construction

The implementation of QMS in public healthcare clinics in South Africa has been shown to improve healthcare delivery and patient outcomes. The studies reviewed showed that the implementation of QMS led to improved patient satisfaction, reduced waiting times, and improved quality of care. QMS has also been shown to improve patient safety and reduce medical errors. The implementation of QMS in public healthcare clinics can, therefore, lead to better health outcomes and improved population health.

2.15 Service Quality Models

As mentioned earlier, the notion of service quality has been widely interpreted, with no consensus on a single definition. In this study, we adhere to the definition proposed by Parasuraman *et al.* (1988), which conceptualises service quality as the difference between a customer's expectations and their perception of the actual service received. The evaluation of service quality has consistently been a focal point in management literature, as emphasised by (Parasuraman *et al.* 1988; Gronroos 1984; Cronin *et al.* 1992). This enduring interest stems from the need to establish reliable tools for systematically assessing a firm's performance from the customer's perspective. Additionally, the correlation between perceived service quality and various organizational outcomes (Cronin 2010) has driven the creation of models for measuring service quality.

A comprehensive exploration by Gilbert (2018) delves into diverse methodologies for measuring service quality. Their review encompasses a range of approaches, reflecting the ongoing efforts to establish effective means of evaluating and understanding the quality of services.

- (i) The expectancy-disconfirmation approach revolves around evaluating service performance by comparing customers' initial expectations with their actual experiences after a service encounter.
Following the service interaction, customers reflect on their expectations to gauge the quality of the service provided;
- (ii) The performance-only method assesses service quality by gauging customers' satisfaction levels with different service features following a service interaction;
- (iii) The technical and functional dichotomy approaches distinguish between two aspects that contribute to customer satisfaction. Technical quality revolves around product attributes such as durability,

security, and physical features. On the other hand, functional quality pertains to the relationship between the service provider and the customer, encompassing elements like courtesy, speed of delivery, and helpfulness;

- (iv) The service quality versus service satisfaction approach focuses on two interconnected elements: first, the evaluation of specific quality features during a particular service interaction (transition-specific assessment), and second, an overall assessment that gauges the general quality of the service. This method connects the perceived quality during or shortly after the service encounter directly to overall satisfaction, without explicitly comparing it to customer expectations; and
- (v) The attribute importance approach underscores the significance consumers attribute to various factors linked to their satisfaction with a service.

Parasuraman *et al.* (1985) crafted a conceptual framework for service quality, pinpointing five gaps that could influence how consumers assess service quality across various industries. These industries encompassed retail banking, credit cards, securities brokerage, and product repair and maintenance.

2.15.1 The Development and Evolution of the SERVQUAL Model

Parasuraman *et al.* (1985) identified 97 attributes which were found to have an impact on service quality. In the evaluation of customer expectations and perceptions regarding delivered services, Kumar (2018) identified 97 attributes as crucial criteria. These attributes were subsequently organised into ten dimensions by Parasuraman *et al.* (1985). To refine the assessment instruments and identify influential factors, a two-stage process was undertaken, as outlined by Parasuraman *et al.* (1988). The initial purification stage yielded twelve dimensions for evaluating service quality, including:

- (i) tangibles;
- (ii) reliability;
- (iii) responsiveness;
- (iv) communication;
- (v) credibility;
- (vi) security;
- (vii) competence;
- (viii) courtesy;
- (ix) understanding;
- (x) knowing;
- (xi) customers; and (xii) access.

Moving to the second purification stage, emphasis was placed on condensing scale dimensionality and enhancing reliability. This led to the consolidation of the initial ten dimensions into five key dimensions:

- (i) Tangibility: Encompassing physical facilities, equipment, and the appearance of personnel;
- (ii) Reliability: Focused on the ability to deliver promised services consistently and accurately;
- (iii) Responsiveness: Centered around the willingness to assist customers and provide prompt service;
- (iv) Assurance: Involving the knowledge and courtesy of employees, as well as their ability to inspire trust and confidence and;
- (v) Empathy: Addressing the caring and individualized attention the firm provides to its customers.

Certainly, assurance and empathy now incorporate elements that were traditionally part of dimensions like communication, credibility, security, competence, courtesy, understanding/knowing customers, and access.

The variables ceased to remain distinct after two stages of scale purification (Parasuraman *et al.* 1988). The original five dimensions, as per Parasuraman *et al.* (1985), are represented by 22 statements. The scale underwent additional reliability testing using five independent samples across various service industries, consistent with the purification stages. The variables demonstrated high reliability and minimal correlation in the independent samples.

Parasuraman *et al.* (1988) identified certain factors that function independently or linearly, serving as criteria to evaluate service quality. The researchers conducted a validity test on the established scale using the same samples, with reliability being the initial criterion. Content validity was assessed by examining the clarity of the construct being measured and the degree to which the scale items accurately represented the construct domain.

The development of the SERVQUAL followed specific criteria to ensure content validity, as outlined by (Parasuraman *et al.* 1988). In assessing scale validity, the focus was on convergent validity, examining the correlation between SERVQUAL scores and respondents' overall quality ratings for the evaluated companies, thus confirming validity according to (Parasuraman *et al.* 1988).

The researchers proposed the integration of the SERVQUAL model with other models, particularly in industries like retail. In such cases, an additional model could be employed to assess employees' perceptions of service quality, identifying areas for improvement based on their recommendations. The researchers stressed the significance of measuring the relative importance of each dimension, suggesting the use of a weighted SERVQUAL model, as advocated by (Cronin and Taylor 1992). The SERVQUAL model plays a crucial role in classifying a company's customers into different quality ranks by determining their SERVQUAL scores, offering valuable insights for targeting various customer segments.

2.15.2 Measuring service quality using SERVQUAL Model

Parasuraman and Berry (1985) identified service quality as a conceptual framework for assessing the quality of service in public healthcare services. According to their quality-of service model, patients'

perceptions of quality are influenced by four key gaps: the external gap, communication gap, delivery gap, and design gap.

2.15.3 The gaps in-service delivery using SERVQUAL Model

The SERVQUAL gap model, illustrated in Figure 2.6, was introduced by Parasuraman and Berry in 1985 with the primary objective of aiding organizations in comprehending customer satisfaction. In essence, this model is predominantly employed to grasp the different discrepancies that arise during the service delivery process to customers.

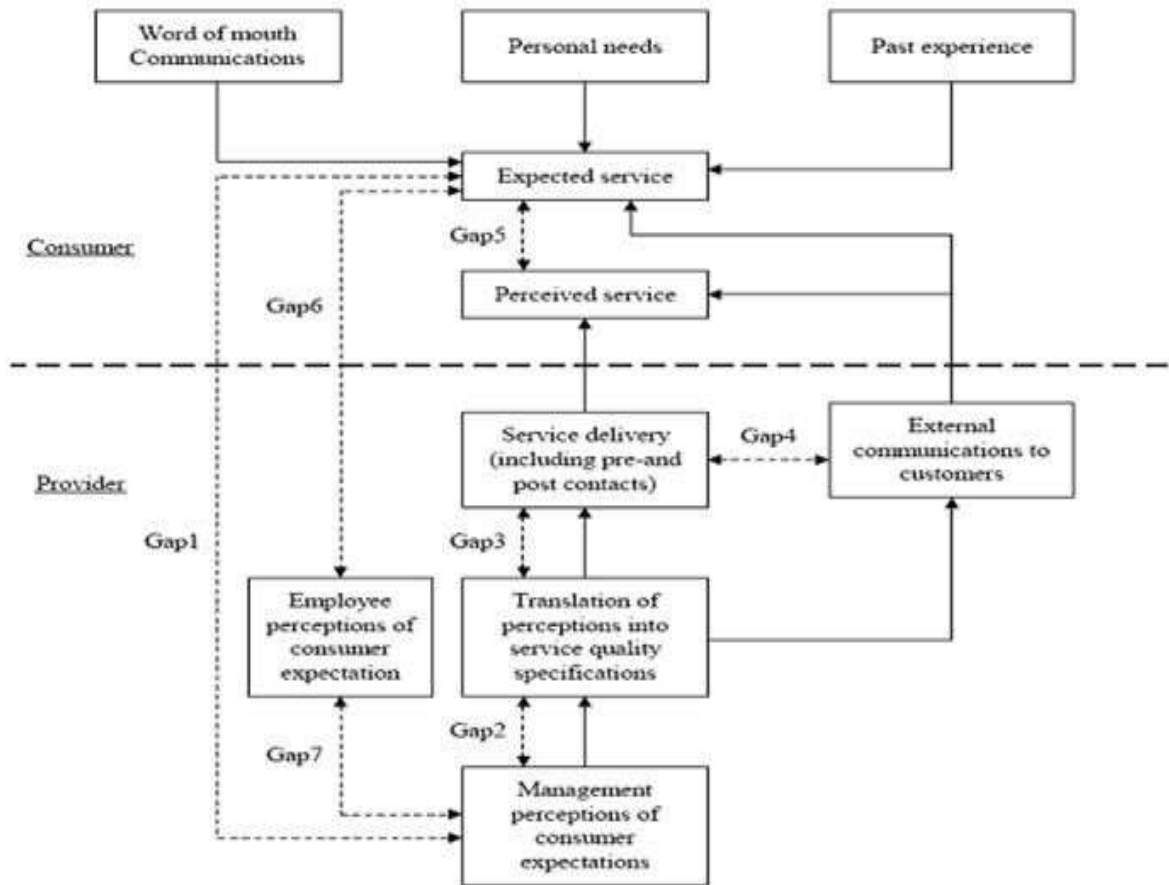


Figure 2.6: The SERVQUAL gap model

Source: A. Parasuraman, Zeithaml and Berry (1985)

The SERVQUAL model offers a comprehensive framework for grasping and effectively managing service quality. By systematically addressing each gap outlined in the model, organizations have the opportunity to elevate customer satisfaction, foster loyalty, and bolster overall business success. Consistent measurement, feedback mechanisms, and a steadfast commitment to closing these identified gaps play a pivotal role in driving continuous enhancements in service quality.

Introduced by Parasuraman, Zeithaml, and Berry (1985), the SERVQUAL Gap Model pinpoints discrepancies between customer expectations and their actual perceptions of service quality. These

identified gaps serve as valuable indicators, shedding light on areas where organizations may fall short in meeting customer expectations. The insights garnered from these gaps provide a roadmap for meaningful service improvements. Table

2.6 visually represents the key components of the SERVQUAL Gap Model.

Table 2.6 SERVQUAL gaps identification

Gap	Identification of gap	Explanation of gap
1	The gap between Customer Expectation and Management Perception	This gap arises when management fails to analyse what are the customers' needs or/ and wants. It may also result when there is a poor communication between the employee and the management. For instance: when management puts a suggestion/ complaint box at the clinic but also fails to comply and solve what patients complain about or to take their suggestions into consideration.
2	The gap between Service Quality Specification and Management Perception.	This gap arises when service provider correctly perceives what the customer wants but unable to meet those standards. It can be due to poor service design.
3	The gap between Service Quality Specification and Service Delivery	This gap may occur due to improper training, incapability to meet the set service standards. It can also occur because of compensation systems. Another reason is when a business is failing to balance the demand and supply which results a lack of empowerment. An example would be a clinic having standards and policies, but staff members are not provided work instructions on how to comply with these policies and systems. A question- based interviews will include questions which will allow the researcher to assess the type of training that stuff undergo and what procedures is followed.
4	The gap between Service Delivery and External Communication	Consumer Expectations are highly influenced by the statements made by the marketing department, as they are responsible to paint a good image of the company. The role of service quality is a critical determinant for the success of an organization in a competitive environment. An example would be when patients have their expectations towards services offered by the public health clinic only to find out it does not meet and exceed their expectations.
5	The gap between the Expected Service and Experienced Service	This gap arises when the consumer misunderstands the quality offered by the service provider. Example: A manager may keep visiting a customer in a furniture store to check employee satisfaction, but the customer may interpret this as an indication that something is wrong in the service provided by the employees/manager.

Adapted from Parasuraman and Berry (1985)

The GAP Model serves as a guide for the overall service delivery process, revealing and addressing gaps between various processes to enhance the efficiency and effectiveness of the entire model. It enables service providers to identify and rectify inefficiencies within the service delivery process.

Shifting focus to the quality management system, it plays a crucial role in safeguarding an organization's reputation and meeting the expectations of patients. By offering a comprehensive view of decisions,

records, and audit trails, it minimises legal risks and lowers the costs associated with locating and maintaining content for a defensible business, as highlighted by (Taylor and Pearson 1994). Therefore, an effective QMS in a clinic empowers service providers to reduce patient complaints and surpass patient expectations.

2.15.4 Application of the SERVQUAL Model in Different Contexts

SERVQUAL has been adapted to measure service quality in a variety of settings, presented in Table 2.6. The application of the SERVQUAL model in diverse contexts involves assessing service quality across various industries. This model, designed to measure customer perceptions and expectations, proves adaptable to different sectors, enabling a comprehensive evaluation of service excellence and aiding in targeted improvements for enhanced customer satisfaction.

Table 2.6 Authors adapt SERVQUAL for diverse settings.

Setting	Author/s
Health care facilities	Babakus and Mangold, 1992; Bebeko and Garg, 1995; Bowers <i>et al.</i> (1994); Clow <i>et al.</i> (1995); Headley and Miller (1993); Licata <i>et al.</i> 1995; Lytle and Mokwa, (1992) O'Connor <i>et al.</i> (1994); Reidenbach and Sandifer-Smallwood, (1997); Woodside (1970).
Dental school patient clinic, a business school placement centre, a tire store, and acute care hospital	Carman (1990)
Independent dental offices	McAlexander 1994)
AIDS service agencies	Fusilier and Simpson (1994)
With physicians	Brown and Swartz (1989); Walbridge and Delene (1993).
Large retail chains	Teas (1993)
Banking Pest control Dry cleaning and Fast-food restaurant	Cronin and Taylor (1992)

Source Researcher’s own construction

Kumar *et al.* (2009) applied the SERVQUAL model to analyse the crucial factors influencing the delivery of service quality in Malaysian banks. Departing from the conventional SERVQUAL model, they adapted it by incorporating six dimensions, namely tangibility, reliability, responsiveness, assurance, empathy, and convenience, encompassing a total of 26 statements. Recognising the significance of convenience as a

determinant of customer satisfaction in Malaysian banking, Kumar (2018) emphasised its substantial contribution to customers' perceptions of service quality.

Surveying respondents based on the 26 statements, the researchers sought to understand both customer expectations and experiences. The study encompassed banking customers regardless of the specific bank used or the nature of their transactions, whether domestic or international. Following their investigation, Kumar (2018) identified four critical factors: tangibility, reliability, convenience, and competence. Notably, these variables exhibited significant disparities between customer expectations and perceptions, with tangibility showing the smallest gap and convenience displaying the largest.

The researchers recommended that banks enhance their competence in service delivery, fulfil customer assurances, and provide banking services with greater convenience. In a similar vein, Curry *et al.* (2017) employed the SERVQUAL model to assess the quality of physiotherapy services in Dundee,

Scotland. Adapting the original ten criteria into five dimensions—tangibles, reliability, responsiveness, assurance, and empathy—they aimed to evaluate the overall quality of physiotherapy services in the specified region.

2.16 Service delivery processes and patient experiences

The processes for delivering health services in public clinics may also contribute to challenges in service delivery (Ntuli 2017). Patients may experience long waiting times, inadequate communication, and a lack of privacy and confidentiality during consultations (Ntuli 2017; Doherty 2018). These experiences may lead to patients feeling dissatisfied with the care they receive, resulting in decreased trust and utilisation of health services (Ntuli 2017).

2.16.1 Identifying gaps in service delivery in public clinics.

The challenges outlined above highlight gaps in service delivery in public clinics in South Africa. While some studies have explored the challenges facing healthcare providers, fewer studies have focused on patient experiences and perspectives. Research has shown that engaging patients in the assessment of healthcare services can provide valuable insights into service delivery gaps and areas for improvement (Doherty 2018; World Health Organization 2018).

This literature review has highlighted the challenges facing public clinics in South Africa, including human resource shortages, lack of resources and infrastructure, and challenges in service delivery processes and patient experiences. These challenges have contributed to gaps in service delivery, which may have negative impacts on patient outcomes and health equity. While there have been efforts to address these challenges, further research is needed to identify and address the root causes of these gaps and improve the delivery of health services in public clinics.

2.17 Strategies and Programs Adopted by the South African Government

The South African government has put significant efforts into enhancing the quality-of service delivery in public health clinics. This literature review focuses on the various strategies and programs adopted by the government in South Africa to enhance quality delivery in public health clinics.

South Africa is among the most developed countries in Africa with an advanced healthcare system. However, the healthcare system is still facing significant challenges, especially in public health clinics. The quality-of-service delivery in public health clinics in South Africa has been a significant concern for the government and the citizens, public health clinics are supposed to provide healthcare services to the majority of South Africans, especially those in the low-income bracket (Doherty 2018; World Health Organization 2018). Therefore, the government has implemented various strategies and programs to enhance the quality-of-service delivery in public health clinics.

2.17.1 Integrated Clinical Services Management (ICSM)

ICSM is a management approach that focuses on the integration of service delivery in various clinical areas, the strategy involves the alignment of clinical and managerial activities to enhance service delivery (Topp 2018). ICSM was launched in South Africa in 2015 to enhance the quality-of-service delivery in public health clinics (Department of Health 2017). The program was initiated to improve the integration of clinical services, data management, and the management of the health facility. According to Topp (2018), ICSM has been successful in enhancing the quality-of-service delivery in public health clinics in South Africa.

2.17.2 Ideal Clinic Realisation and Maintenance (ICRM)

The Ideal Clinic Realisation and Maintenance (ICRM) programme is a government initiative aimed at improving the quality of primary healthcare services in public health clinics (Doherty 2018; World Health Organization 2018). The programme was launched in 2015 and seeks to ensure that all public health clinics in South Africa provide quality healthcare services that meet the needs of the communities they serve. The ICRM programme has nine components that include infrastructure, basic amenities, medicines, medical equipment, infection prevention, waste management, staff attitudes, clinical guidelines, and data management (National Department of Health 2018).

The program also involves the establishment of a monitoring and evaluation system to track the progress of the implementation of the standard operating procedures. According to Kon and Lackan (2008), the ICRM program has improved the quality-of-service delivery in public health clinics in South Africa.

The ICRM programme's objective is to ensure that all public health clinics in South Africa are transformed into ideal clinics that provide quality healthcare services that meet international standards (National

Department of Health 2019). The programme's success will depend on the government's ability to provide adequate funding and resources to public health clinics to implement the programme effectively.

2.17.3 National Health Insurance (NHI)

The NHI, initiated by the South African government, is a program designed to ensure that all citizens have universal access to high-quality healthcare services. The primary goal is to achieve universal health coverage in South Africa, offering quality healthcare regardless of socio-economic status (National Department of Health 2018). The program aims to bridge the gap in healthcare provision between the affluent and the underprivileged by offering free healthcare services at the point of care, it involves the establishment of a single-payer system, where the government is the sole provider of healthcare services for all citizens (National Department of Health 2018). Currently in the implementation stage, the NHI program is expected to significantly enhance the quality-of-service delivery in public health clinics across South Africa.

According to Lehohla (2016), the NHI program anticipates an improvement in the quality of healthcare services in public health clinics through the provision of adequate resources. This includes essential components such as healthcare workers, equipment, and infrastructure, all of which are crucial for the delivery of high-quality healthcare services.

2.17.4 Performance-Based Financing (PBF)

PBF is a strategy that involves the payment of healthcare providers based on the quality of-service delivery. The program was launched in South Africa in 2018 to enhance the quality-of-service delivery in public health clinics. The program involves the establishment of performance indicators that healthcare providers should meet to receive payment. The program aims to incentivize healthcare providers to provide quality healthcare services (Chirwa *et al.* 2020). According to Nxumalo and Goudge (2021), the PBF program has improved the quality-of-service delivery in public health clinics in South Africa.

2.17.5 District Clinical Specialist Teams (DCSTs)

The District Clinical Support Teams (DCST), consist of healthcare professionals tasked with offering technical assistance and mentorship to healthcare providers working in public health clinics. This initiative was introduced in South Africa in 2016 with the aim of elevating the quality of service provided in these clinics, as reported by (Ntuli *et al.* 2017). The DCSTs play a crucial role in enhancing the skills and knowledge of healthcare providers through training and support. Wattrus (2020) have observed a significant improvement in the quality-of-service delivery in South African public health clinics attributable to the efforts of the DCSTs.

2.17.6 Facility-Based Maternal and Neonatal Mortality Reviews (FMMRs)

Facility Maternal and Neonatal Mortality Reviews (FMMR) are assessments carried out in public health clinics with the aim of identifying factors that contribute to maternal and neonatal deaths. Healthcare professionals conduct these reviews to pinpoint areas where service delivery can be enhanced. The initiative was introduced in South Africa in 2015, with the goal of improving the quality-of-service delivery in public health clinics. According to Pattinson *et al.* (2018), FMMRs have proven successful in identifying areas for improvement, leading to enhancements in the overall quality of service delivery in these clinics.

2.17.7 Primary Health Care Reengineering (PHC)

PHC is a program launched by the South African government to enhance the quality of service delivery in primary healthcare services. The program aims to transform the primary healthcare system in South Africa by improving access to healthcare services, enhancing the quality of service delivery, and promoting community involvement in healthcare service provision (Department of Health 2019). The program was launched in 2016, and it is still in the implementation stage. According to Pillay (2019), the PHC program has the potential to significantly improve the quality of service delivery in public health clinics in South Africa.

2.17.8 Health System Strengthening (HSS)

HSS is a program launched by the South African government to strengthen the healthcare system in the country. The program aims to address the challenges facing the healthcare system, including the shortage of healthcare professionals, inadequate healthcare infrastructure, and insufficient funding (Department of Health 2019). The program involves the implementation of various strategies to strengthen the healthcare system, including the recruitment and training of healthcare professionals, the renovation of healthcare facilities, and the provision of adequate funding for healthcare service delivery. The HSS programme has four components that include health financing, health workforce, service delivery, and health information systems. According to Mayosi *et al.* (2014), the HSS program has the potential to significantly enhance the quality-of-service delivery in public health clinics in South Africa.

Enhancing the quality-of-service delivery in public health clinics is a significant challenge facing the South African government. The government has implemented various strategies and programs to address this challenge, including ICSM, ICRM, NHI, PBF, DCSTs, FMMRs, PHC, and HSS. These programs have had a significant impact on enhancing the quality-of-service delivery in public health clinics in South Africa. However, there is still room for improvement, and the government needs to continue implementing strategies to enhance the quality of service delivery in public health clinics in the country especially in rural areas.

2.18 Conclusion

This chapter has centred on examining support from existing literature regarding the importance of the evolution of quality, quality service delivery, and methods to enhance such delivery in public clinics. Emphasis was placed on the utilization of the SERVQUAL model and its advantages in pinpointing gaps between anticipated services and the actual service delivery by organizations.

Additionally, the chapter sheds light on various deficiencies within the South African Department of Health and outlines responses aimed at addressing healthcare challenges in the country. Within the South African healthcare context, the National Core Standards have emerged as a pivotal focal point for the National Department of Health in executing its plan.

Furthermore, the chapter outlines strategies for the South African National Department of Health to implement, aiming to transform negative patient perceptions of service delivery and public healthcare services in the country. It also delves into the underlying reasons for subpar service delivery and healthcare services in South African public hospitals.

The subsequent chapter will delve into the research methodology employed in conducting the study. This methodology will not only elucidate the approach taken but also assess the level of quality service delivery and healthcare services at Hartebeeskop Clinic.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Introduction

In the previous chapters, the setting of the research was staged and in chapter 2 the understanding of theoretical foundations was explained through the literature review.

In this chapter, the research design and methodology employed in this study are discussed. The primary goal is to present the approach used for conducting the research, the design chosen, the methods used for data collection, and the techniques employed for data analysis. It will be argued that the investigative strategy chosen is the most suitable one for addressing the research objectives of this study. Additionally, the rationale behind selecting this specific research design is explained and its appropriateness is justified.

The research design encompasses several important components, including the population and sampling of the study, data collection, and data analysis. Additionally, it involves multiple methods of data collection, measures taken to ensure validity and reliability, the data analysis process, the steps followed during the field study for data legitimacy, and the ethical considerations considered. By addressing these methodological dimensions in detail, the research design and methodology chapter provides a comprehensive understanding of how the study was conducted, ensuring transparency, rigour, and ethical integrity in the research process.

3.2 Research Paradigms

A research paradigm is the framework within which the theories and practices of a discipline fit to create the research plan; the research paradigm guides all areas of the research (Taylor & Medina 2020).

Research paradigms are categorised into five types: positivism, constructivism, pragmatism, critical and constructivist/interpretive paradigms. In the positivist research paradigm, researchers gather quantitative data from a large representative sample, utilising descriptive and inferential statistics for analysis (Johnson 2017). Elkind (2019) characterises the constructivist/interpretive paradigm as acknowledging that reality emerges from the interaction of human intelligence with real-world experiences.

Positivism advocates value neutrality, emphasising the removal of personal biases and values from the research process (Teddlie and Tashakkori, 2019). It promotes rigorous and systematic methods replicable by other researchers to ensure objectivity and prevent subjective interpretations from influencing research findings.

Contrastingly, the constructivist paradigm involves understanding participants' subjective truths or perceptions rather than assuming an objective external reality (Taylor and Medina 2020). The researcher's values and dispositions play a role in constructing knowledge through interaction with the phenomenon and participants.

Interpretivism, as highlighted by Johnson (2021), underscores the significance of understanding individuals' subjective experiences and the meanings they attach to those experiences. It allows researchers to explore the complexities of human experiences and the diverse interpretations individuals assign to actions and the world around them.

Critical research, according to Smith (2019), prioritises understanding power relations and social inequalities. It contends that social reality is constructed through power exercise, advocating for research methods that amplify the voices of marginalised groups, including participatory action research and critical ethnography.

The constructivist research paradigm asserts that knowledge is socially constructed through subjective interpretation and interaction (Flick 2019). Charmaz (2019), further describes constructivism as a reality that is actively created through human perception and understanding, acknowledging diverse perspectives and experiences.

Pragmatists integrate positivist and constructivist principles within the same study to investigate different aspects of a research problem (Elkind 2019). Pragmatism in social science research addresses challenges in complex, dynamic social systems, emphasizing practical implications and incorporating multiple perspectives.

Pragmatist research's application in evidence-based policy and practice is noted by Tehseen *et al.*

(2017), who argue that it bridges the gap between research and policy by focusing on practical, actionable knowledge. However, critics (Teddle and Tashakkori 2019) question pragmatism's potential neglect of theoretical and conceptual issues and its ability to generate reliable and valid knowledge (Elkind 2019).

A pragmatist paradigm was deemed to be most suitable for this study because the researcher gathered quantitative data from patients and qualitative data from clinic staff, thus enabling a complete picture of the phenomena under study to emerge.

3.3 RESEARCH APPROACH AND RESEARCH DESIGN

3.3.1 Research Approach

The research approach refers to the broad framework that guides the research process, including the underlying assumptions, theories, and methods employed (Creswell and Plano Clark 2018). Mixed method research is a research approach that combines qualitative and quantitative research methods to

provide a more comprehensive and nuanced understanding of the research problem (George 2021). This approach recognises that different research questions require different types of data, and that the integration of qualitative and quantitative methods can produce more robust and valid findings than either method used alone (Creswell and Plano Clark 2018).

3.3.2 Quantitative approach versus Qualitative approach

The choice between quantitative and qualitative research approaches is a pivotal decision that researchers make in designing their studies. This decision significantly shapes the research process and the nature of the data collected, influencing the overall study outcomes. This introduction provides a brief overview of the key distinctions between the quantitative and qualitative approaches, highlighting the approaches strength hand applications, presented in Table 3.1.

Table 3.1 Research approaches

	Quantitative approach	Qualitative approach
Definitions	Qualitative research involves a naturalistic approach to inquiry, aiming to gain a comprehensive understanding of social phenomena within their authentic environments.	Non-numerical data that explains the qualities or opinions.
Collection methods	In person or online, the researcher chooses to collect data in the form of questionnaires for quantitative research.	Open-ended survey questions, interviews, or observations.
Best for	Making conclusions through larger scale studies and for statistical analyses	Gathering detailed data from smaller group, the researcher uses schedule interviews for qualitative research.
Analysis	Statistical through charts and tables, the researcher represents the finding through graphs for quantitative research approach.	Immerse in data, identify patterns, code themes, and interpret meanings. Use constant comparison, reflexivity, and triangulation for a comprehensive understanding of phenomena.

Source: Elliott 2020, Modified by the researcher

The mixed methods approach is grounded in pragmatism, which emphasises the use of multiple methods to solve real-world problems (Creswell and Plano Clark 2018). The mixed methods approach is particularly useful in the research context because the research problem is complex, multi-faceted, and cannot be fully understood using a single research method. Therefore, the researcher adopts a mixed methods approach to conduct the study. A mixed research method is suitable for this study to explore the quality system at the Hartebeeskop Clinic, measure healthcare providers' performance using qualitative methods such as interviews and explore the experiences and perceptions of patients towards the service delivered at the clinic.

3.3.3 Research Design

The research design encompasses the specific plan or approach employed by a researcher to conduct a study, outlining methods for data collection, sampling, and data analysis. Examples of design include concurrent, sequential, or transformative designs (Creswell and Plano Clark 2018).

In a concurrent design, both qualitative and quantitative data are gathered and analysed simultaneously, providing equal weight to both. This design aims to offer a more comprehensive understanding of the research problem by triangulating data from diverse sources (Teddlie and Tashakkori 2019). For instance, it could be used to assess a new medical therapy's effectiveness, utilising quantitative measures like blood tests alongside qualitative insights from patient interviews (Teddlie and Tashakkori 2019). Concurrent designs come in three types: concurrent triangulation, concurrent nested, and concurrent transformative (Jones 2021), each collecting both types of data at the same stage, albeit with varying emphasis on one over the other.

In a sequential design, one type of data is collected and analysed before proceeding to the other. This approach is useful for complex research problems requiring a deeper understanding of the context before delving into the second type of data (Schmidt 2019). Two types of sequential designs exist: explanatory and exploratory. Explanatory sequential design involves analysing quantitative data first, followed by qualitative data to enhance understanding (Wu and Chang 2019). In exploratory sequential design, a survey might precede qualitative methods like interviews to explore factors influencing job satisfaction among employees.

Transformative design integrates both qualitative and quantitative data to derive insights applicable to real-world problem-solving, rooted in critical theory with a focus on addressing social inequalities (Zhu *et al.* 2019). The process is iterative, engaging participants to promote empowerment and agency. For instance, it might be used to assess a community-based intervention program's impact on adolescent substance abuse, combining quantitative and qualitative data to evaluate behavioural and attitudinal changes.

The researcher in question adopted a concurrent research design, collecting data simultaneously to enhance efficiency and interdisciplinary synergy (Smith 2019). Questionnaires were administered in the morning, followed by interviews in the afternoon, employing a concurrent triangulation design to mitigate potential biases in the study.

3.3.4 The strengths and weaknesses of a mixed methods design

Mixed methods research is a strategy that integrates qualitative and quantitative methods for collecting and analysing data, aiming to enhance the comprehension of a research issue. By combining the advantages of both approaches, researchers can conduct a more comprehensive and resilient investigation. Nevertheless, it's important to acknowledge that even the most effective methods have their

limitations. Table 3.2 outlines the strengths and weaknesses associated with the adoption of a mixed methods design.

Table 3.2: Strengths and Weaknesses of a mixed method

Strength	Weakness
Comprehensive understanding of the research problem: Mixed methods research combines qualitative and quantitative data collection and analysis methods to provide a more comprehensive and nuanced understanding of the research problem. This approach can produce more robust and valid findings than either method used alone (Johnson and Kuhm 2017).	Integration challenges: Integrating qualitative and quantitative data can be challenging, particularly when the data sources are disparate. The researcher needs to ensure that the data is compatible, and that the analysis is appropriately integrated.
Increased validity and reliability: The triangulation of data from different sources in mixed methods research can increase the validity and reliability of the findings. This is because the researcher can cross-check the findings from one method against the findings from the other method (Johnson and Kuhm 2017).	Risk of bias: Mixed methods research can be susceptible to bias if the researcher is not careful in collecting, analysing, and integrating the data. The researcher needs to be aware of their biases and ensure that they do not influence the findings (Johnson and Kuhm 2017).
Flexibility: Mixed methods research is a flexible approach that can be adapted to different research contexts and questions. The researcher can use different types of data collection and analysis methods depending on the nature of the research problem and the available resources (Yin 2016).	Time-consuming: Mixed methods research requires a considerable amount of time and resources to collect, analyse, and integrate both qualitative and quantitative data. This can make the research process lengthy and costly (Johnson 2022).
Pragmatic orientation: Mixed methods research is grounded in pragmatism, which emphasizes the use of multiple methods to solve real-world problems. This approach is particularly useful in research contexts where the research problem is complex and cannot be fully understood using a single research method (Johnson 2022).	Complexity: Mixed methods research can be complex, requiring a high level of skill and expertise in both qualitative and quantitative research methods. This complexity can make the research process challenging for researchers who are not familiar with both methods (Yin 2016).

Source: Researcher’s own construction

The researcher initially encountered a challenge related to time constraints, acknowledging it as a weakness. However, this obstacle was successfully addressed by adopting a concurrent approach, effectively saving time, and facilitating the simultaneous analysis of data for both qualitative and quantitative studies. Although mixed method designs come with their own set of strengths and limitations, their synergistic use proves valuable in gaining a more comprehensive understanding of service delivery in public clinics.

Qualitative designs played a crucial role in unveiling the perspectives and experiences of both patients and healthcare providers. Additionally, they shed light on the social and cultural context within which healthcare services are provided. On the other hand, quantitative designs provided a means for the researcher to assess the effectiveness of interventions and identify factors contributing to suboptimal service delivery. The combination of these approaches enriched the overall research endeavour, offering a more holistic perspective on the intricacies of healthcare service delivery.

3.4 Qualitative Research Design in Improving Service Delivery in Public Clinics

Different research approaches vary in their appropriateness, and researchers have the flexibility to select the most suitable ones for their study. In recent years, qualitative research has emerged as a valuable instrument in enhancing healthcare, highlighting the significance of patient-centred care and contextual factors (Smith 2019). Utilizing methods like in-depth interviews, focus group discussions, and content analysis, researchers have explored the first-hand experiences of individuals utilizing public clinic services. This exploration has unearthed valuable insights that can shape healthcare policy and practice (Brownson *et al.* 2017). Table 3.3 outlines various qualitative research designs that can be employed to enhance service delivery in public clinics.

Table 3.3 The types of qualitative research design

Qualitative research design	Definition
Case studies	Case studies entail a detailed examination of one or a few cases, serving to pinpoint factors contributing to successful service delivery in public clinics (Othman <i>et al.</i> 2017).
Phenomenology	Phenomenology aims to grasp how individuals experience a specific phenomenon, such as a health condition, offering insights into patients' experiences with public clinic services and areas for enhancement (Li <i>et al.</i> 2019)
Ethnography	Ethnography involves prolonged fieldwork to comprehend cultural and social factors influencing service delivery in public clinics (Li <i>et al.</i> 2019).
Grounded theory	Grounded theory involves developing a theory grounded in patient and provider experiences through data collected via interviews, observations, and other sources (Mokoena 2017).
Narrative inquiry	Narrative inquiry involves collecting and analysing personal stories to understand patients' experiences with public clinic services and identify improvement areas (Mokoena 2017).

Source: Researcher’s own construction

The researcher chose a phenomenological design for her quantitative research to delve into the way patients perceive the healthcare services provided. Beyond examining the perspectives of both patients and healthcare providers, this design also shed light on the organizational and systemic factors impacting service delivery in public clinics.

3.4.1 Qualitative designs in public clinics

Qualitative research methodologies have gained increasing recognition and prominence in the field of healthcare, particularly within the context of public clinics, as presented in Table 3.4. As healthcare systems evolve and strive to enhance patient outcomes, the integration of qualitative designs has proven invaluable in capturing nuanced insights that quantitative approaches may overlook.

Table 3.4 Research design and findings

Author/s	Findings
Mokoena (2017)	The authors used an ethnographic design to explore the experiences of patients and healthcare providers in a public clinic in South Africa.

Li <i>et al.</i> (2019)	The grounded theory design was used to develop a theory of service delivery in public clinics in China. The study found that the quality-of-service delivery was influenced by several factors, including the attitudes and behaviours of healthcare providers, the availability of resources, and the organization of the clinic.
Ned <i>et al.</i> (2017)	The authors used a narrative inquiry design to explore the experiences of patients with chronic conditions in a public clinic in Sweden. The study found that patients felt stigmatized and marginalized by healthcare providers and that their experiences were influenced by the organization of the clinic.
Jiao <i>et al.</i> (2021)	A phenomenological design was used to explore the experiences of patients with hypertension in a public clinic in China. The study found that patients had difficulty understanding their condition and the treatment options available to them.
Brown and Swart <i>et al.</i> (1989)	A case study design was used to examine a successful public clinic in South Africa. The study found that the clinic's success was due to several factors, including a focus on patient-centred care a commitment to continuous improvement, and strong leadership.

Source: Researcher's own construction

These studies demonstrate the usefulness of qualitative research designs in improving service delivery in public clinics by exploring the experiences and perspectives of patients.

However, a noticeable gap emerges as there is a lack of synthesis or comparison among these diverse international contexts. The researcher aims to bridge this gap by conducting a comparative analysis, identifying commonalities and differences in patient experiences and service delivery. This research will yield valuable insights for developing universally applicable strategies to enhance service delivery effectiveness and patient satisfaction.

3.4.2 Challenges in Conducting Qualitative Research in Public Clinics

Conducting qualitative research in public clinics presents challenges such as navigating diverse patient experiences, addressing privacy concerns, and managing the dynamic healthcare environment. These challenges underscore the need for methodological sensitivity and thoughtful approaches to ensure the validity and reliability of the research findings. Daniel and Stephen (2021) state the challenges that the researcher may face when conducting the study at a public clinic in Table 3.5.

Table 3.5. Challenges of Qualitative Research in Public Clinics

Challenge	Explanation	How the challenge was addressed
Access to participants	Gaining access to participants in public clinics can be challenging due to bureaucratic hurdles or privacy concerns.	The researcher overcame access challenges by building rapport with clinic staff and administrators and involving them in the research process. This collaborative approach facilitated smoother access to participants, ensuring their comfort and cooperation during the study.
Language barriers	Communicating effectively with participants who speak different languages can pose a significant challenge.	The researcher addressed language barriers by employing bilingual translators familiar with the cultural context. This ensured accurate communication and a
		nuanced understanding of participants' experiences, fostering a more comprehensive qualitative analysis.

Time constraints	Public clinics often operate under tight schedules, impacting researchers' ability to conduct in-depth qualitative investigations.	To navigate time constraints, the researcher strategically scheduled interviews during non-peak hours, respecting the clinic's operational demands. This approach allowed for comprehensive data collection without disrupting the clinic's daily activities.
Ethics	Maintaining ethical standards is paramount in qualitative research, especially when dealing with sensitive topics in healthcare.	The researcher addressed ethical concerns by obtaining approval from the department of health ethics committee, transparently communicating the study's purpose to participants, and ensuring confidentiality throughout the research process. This approach upheld ethical standards and safeguarded participants' rights and privacy.

Source: Researcher’s own construction

The researcher faced challenges in accessing participants, overcoming bureaucratic hurdles by collaborating with clinic staff. Language barriers were addressed using bilingual translators, ensuring accurate communication. Time constraints were managed by scheduling interviews during non-peak hours. Ethical standards were maintained through approval from the health ethics committee and transparent communication with participants, ensuring confidentiality.

3.5 Quantitative designs for improving the service delivery in public clinics.

Service delivery in public clinics is critical in ensuring that patients receive quality healthcare services. Quantitative research designs can be used to improve service delivery in public clinics by providing reliable and valid data to identify areas of improvement, evaluate interventions, and monitor progress over time.

Quantitative research designs involve the collection and analysis of numerical data to test hypotheses and establish cause-and-effect relationships (Creswell *et al.* 2018). These designs are characterized using standardized data collection instruments, statistical analysis techniques, and objective measurement of variables (Zhu *et al.* 2019). In healthcare, quantitative research designs can be used to evaluate the effectiveness of healthcare interventions, measure patient outcomes, and assess healthcare service delivery performance. Several studies have used quantitative research designs to improve service delivery in public clinics.

Public clinics play a pivotal role in delivering healthcare services to diverse populations and the continuous improvement of their effectiveness is paramount. The application of quantitative research designs has emerged as a powerful tool for assessing, refining, and optimizing healthcare delivery in public clinic, presented in Table 3.6.

Table 3.6 Research approach in a public clinic

Author/s	Measured
Ahmed and Tariq (2019)	The authors used a survey to evaluate the impact of a patient-centered care intervention on patient satisfaction with service delivery in public clinics in Pakistan.
Patel (2022)	Study used a survey to measure patient satisfaction with service delivery in public clinics in India.
McHugh <i>et al.</i> (2019)	A study conducted by McHugh <i>et al.</i> (2019) evaluated the impact of a nurse-led intervention on reducing emergency department visits by patients with chronic conditions.
Damschroder <i>et al.</i> (2018)	Study used a survey to measure healthcare provider's adherence to evidence-based practices in public clinics in the United States.
Haggerty <i>et al.</i> (2018)	The authors used a survey to evaluate the quality of primary care services in public clinics in Canada.
Cheng (2020)	Study used a survey to evaluate the impact of a quality improvement program on patient satisfaction with service delivery in public clinics in China.

Source: Researcher's own construction

The integration of quantitative research designs has become indispensable in the ongoing pursuit of improving public clinics. Evaluating the effectiveness of the healthcare system at the public clinics make it easier to make recommendations to improve service delivery.

3.5.1 Challenges of Using Quantitative Research Designs in Public Clinics

Taylor and Medina (2020) states that there are several challenges associated with using quantitative research designs in public clinics. Table 3.7 delves into the intricacies and limitations faced when employing quantitative research methodologies in the dynamic context of public healthcare settings, aiming to enhance research effectiveness and validity.

Table 3.7 Challenges in Employing Quantitative Research Design in Public Clinics

Challenge	Explanation	How the challenge can be addressed?
Limited resources	Public clinics often have limited resources, such as funding, staffing and equipment which can make it challenging to conduct quantitative research.	The researcher could collaborate with local non-profit organizations or seek external grants to secure additional funding. This might involve establishing partnerships with community stakeholders to supplement staffing and equipment needs, enhancing the study's feasibility within resource constraints.
Access to participants	Public clinics serve a diverse population, which can make it challenging to recruit participants for quantitative research studies.	The researcher might organize informational sessions within the community, work closely with clinic staff to identify key contact points, and establish trust through consistent communication, ultimately encouraging a more representative participant pool.
Ethics	Quantitative research studies in public clinics must adhere to ethical standards to protect participants' rights and privacy. This can be challenging, especially in settings where patients may not have access to education and resources to	The researcher can design accessible and culturally sensitive informational materials, conduct community workshops to educate potential participants about the study, and establish a process for obtaining informed consent that respects the autonomy of individuals who may face educational and resource limitations.
	make informed decisions about their participation in research studies	

Data quality	The quality of data collected in public clinics may be affected by factors such as staff turnover, lack of training, and inadequate data management systems. This can affect the validity and reliability of quantitative research findings	The researcher could implement rigorous training programs for clinic staff involved in data collection. This might include regular refresher courses, detailed protocols for data entry, and the implementation of robust quality control measures to identify and rectify data integrity issues promptly, thereby enhancing the reliability of the quantitative research findings.
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Source: Researcher’s own construction

The results of quantitative research conducted in public clinics might not be universally applicable to other environments, given variations in healthcare systems, patient demographics, and cultural nuances. Despite these limitations, quantitative research methodologies play a pivotal role in enhancing service delivery within public clinics. These methods serve to pinpoint areas requiring improvement, assess the effectiveness of interventions, and track progress over time.

In the specific case of Hartebeeskop Clinic, incorporating quantitative research designs posed an ethical challenge. To address this, the researcher proactively obtained permission from the department of health committee, acting as gatekeepers, before initiating the study. This ethical consideration ensured the proper conduct of the research within the clinic's context.

3.6 Population and Sampling

Population and sampling are fundamental concepts in the field of research methodology. When conducting research, the term "population" denotes the complete set of individuals or objects that a researcher aims to investigate. On the other hand, a "sample" is a smaller, carefully chosen subset of the population that is examined in the study, (Teddlie and Tashakkori 2019).

3.6.1 Target Population

For the quantitative segment of the study, the population comprises 6000 patients, resulting in a sample size of 364, determined using Kaur’s (2018) formula for quantitative studies. Participants were chosen through systematic probability sampling, with every third patient who had not previously responded and agreed to participate selected; in cases of refusal, the researcher approached the subsequent patient.

The qualitative study involved 18 healthcare providers, constituting the entire population due to its small size. Consequently, all healthcare providers were interviewed without the need for sampling.

In any research investigation, the initial step involves delineating the specific population under scrutiny. The term "population" refers to the complete set of individuals, entities, or occurrences that attract the researcher's attention for examination (Wang *et al.* 2019). Defining the population can be approached in various ways, contingent upon the research query and the accessibility of pertinent data. To illustrate, if a researcher aims to explore the prevalence of obesity in the KwaZulu-Natal region, the population will

encompass all individuals residing in the KwaZulu-Natal province. When interviewed on 12 July 2023, Dube (Operations Manager) disclosed that the population for the quantitative study amounts to six thousand patients.

3.6.2 Sampling

A sample refers to a limited collection of data chosen by a researcher from a larger population, typically employing a specific methodology for the selection process (Bhandari 2022). It involves selecting a subset of elements from a larger population for study. The chosen method must be representative to ensure findings accurately reflect the population characteristics, enhancing the validity and reliability of research outcomes. There are several sampling methods that can be used, as depicted in Table 3.8.

Table 3.8 Sampling Methods

Sampling method	Definition	Example
Random Sampling	A method in which every member of the population has an equal chance of being selected for the study (Moriarty 2019). The researcher used this method for quantitative study because it is appropriate for large-scale studies where it is not possible to study the entire population.	In a study investigating the prevalence of a specific health condition in a city population, researchers use random sampling by assigning a unique identification number to each resident and then selecting participants through a random number generator, ensuring every individual has an equal chance of being included.
Stratified Sampling	A technique involves categorizing a population into distinct strata or subgroups, followed by the selection of a sample from each of these subgroups (Moriarty 2019). This approach proves beneficial when dealing with a diverse population, as it allows the researcher to guarantee sufficient representation from each subgroup in the sample.	When studying the healthcare experiences of different age groups in a hospital, researchers use stratified sampling by dividing the patient population into age categories (strata) and selecting a proportional number of participants from each group to ensure representation across various age ranges.
Cluster Sampling	A technique in which a population is segmented into clusters or groups, and then a representative sample is chosen from each cluster. This method is useful when the population is widely dispersed, and it is not practical to study individuals from each subgroup (Moriarty 2019).	In a study examining the effectiveness of a public health intervention in rural communities, researchers use cluster sampling by dividing the communities into clusters and randomly selecting a few clusters to participate, streamlining the research process, and making it more manageable.

Convenience Sampling	A sampling approach where the selection of participants is determined by convenience or availability, as highlighted by (Moriarty 2019). This method is frequently employed in smallscale or pilot studies where the implementation of more stringent sampling methods may not be feasible or practical.	For a qualitative study exploring patients' immediate reactions to a new clinic service, researchers use convenience sampling by selecting participants based on their availability in the clinic waiting area during the study period, acknowledging the practical constraints of a small-scale, time-sensitive investigation.
Systematic probability sampling	A method of probability sampling involves researchers choosing members of a population at regular intervals that are predetermined (Tehseen <i>et al.</i> 2017).	In a research project aiming to understand the dietary habits of a large university student population, researchers use systematic probability sampling by selecting every nth student from a pre-determined list, ensuring a representative sample while maintaining the efficiency of systematic selection.

Source: Researcher’s own construction

3.6.2.1 Sampling Bias

Morse (2020) state that sampling bias refers to the tendency for a sample to be nonrepresentative of the population and several types of sampling bias can occur. This data explores various biases in research, including selection bias, sampling frame bias, measurement bias, and response bias. Each bias introduces potential distortions in study outcomes, emphasising the importance of addressing these issues to ensure the validity and generalisability of research findings. Sampling biases are presented in Table 3.9.

Table 3.9 Sampling bias

Sampling bias	Definition
Selection bias	Selection bias occurs when the sample is not selected randomly, and some members of the population have a higher chance of being included in the sample than others (Greene 2019). This can happen if the researcher only selects individuals who are easily accessible, or if individuals selfselect to participate in the study.
Sampling Frame Bias	Sampling frame bias occurs when the list of individuals or objects from which the sample is selected is not representative of the population (Greene 2019). For example, if the list is outdated or incomplete, or if it does not include all members of the population.
Measurement Bias	Measurement bias occurs when the data collected from the sample is not accurate or consistent (Greene 2019). For example, if the researcher uses flawed measurement tools or if the participants do not answer the questions truthfully.
Response Bias	Collins (2016) define response bias occurs when the participants in the sample do not represent the entire population because they have a different response pattern than other individuals. For example, if the participants in the sample are more or less likely to answer the questions truthfully or if they have different attitudes or experiences than other individuals in the population.

Source: Researcher’s own construction

The researcher addressed response bias in the study by inviting all healthcare providers to participate unless they chose not to articulate their perspectives on the services they deliver to patients. Similarly, regarding patients, every third individual was selected to ensure a representative sample for the

population. These measures were implemented to mitigate bias and uphold the credibility and validity of the study.

3.7 Data Collection Methods

Once the sample has been selected, the next step is to collect data from the participants.

There are several different data collection methods that can be used, such as surveys, interviews and focus groups (Shukla 2020). Types of data collection methods, examples, advantages and disadvantages are presented in Table 3.10.

Table 3.10: Types of Data Collection Methods, Examples, Advantages, and Disadvantages

Data collection method	Definition	Benefits	Challenges
Surveys	Surveys entail administering questionnaires to a sample of participants to gather information on their attitudes, beliefs, and behaviours (Creswell 2018).	Surveys can be administered online or in person, offering flexibility in data collection.	They may not capture in-depth data on complex topics, potentially limiting the depth of information gathered.
Interviews	Interviews are employed in mixed research to collect qualitative data, involving face-to-face or online interactions with participants to explore their experiences, perspectives, and attitudes (Creswell <i>et al.</i> 2018).	Researchers can collect detailed data through interviews, providing rich insights into participants' perspectives.	Interviews can be time-consuming, demanding substantial resources for both preparation and execution.
Focus group	Focus groups entail assembling a small group of participants to discuss a specific topic in-depth.	Researchers can collect data from multiple participants simultaneously, fostering group dynamics and diverse perspectives.	Focus groups may not capture individual experiences, potentially overlooking nuanced perspectives within the group.

Source: Researcher’s own construction

The investigator employed interviews as a means of data collection to acquire comprehensive information from healthcare providers. Utilising interviews allowed for in-depth exploration of topics and cost reduction through concurrent methods, such as distributing questionnaires in the morning and conducting interviews with healthcare providers in the afternoon. Additionally, surveys were employed as an alternative method for data collection.

3.8 Document Analysis

Document analysis is a systematic approach for examining or assessing various documents, serving multiple purposes such as establishing context, generating inquiries, complementing other research data, monitoring changes over time, and validating information from different sources (Bowen 2009). In a widely recognised social research methodology, Bowen (2009) suggests a sequential process, involving an initial skim for an overview, followed by a more in-depth reading to identify pertinent categories for analysis across the entire document set, and ultimately interpreting the document body (Bowen 2009).

Similar to various other research approaches, document analysis encounters potential issues related to validity, reliability, authenticity, motivated authorship, and representativeness. However, these concerns can be mitigated through established techniques that enhance qualitative rigor. These techniques include triangulation (within documents and across methods and theoretical perspectives), ensuring an adequate sample size, active engagement with the documents, member checking, and peer debriefing as outlined (Maxwell 2005).

Document analysis can function as a standalone method, particularly for scrutinising the evolution of specific policy types over time and variations across different regions. Additionally, it proves effective when combined with other research methods to cross validate and enrich concurrent approaches. This aligns with the understanding that both documents and individuals serve as primary sources of information in the field of public policy research (Bardach and Patashnik 2015).

In the realm of public policy research, the integration of document analysis and interviews is highlighted, where interviewees are prompted to address questions arising from policy documents and guide the discovery of additional relevant documents. This iterative process, alternately engaging with documents and interviews, is emphasised as one source often leads to the other, exemplified by scanning interviewees' materials for relevant titles and authors (Bardach and Patashnik 2015). Depending on the research questions, document analysis can be complemented with various interview types, observation, quantitative analyses, and other common methods in policy research.

To analyse documents, the researcher followed the steps outlined by Dalglish *et al.* (2015).

- **Step 1**

- ***Ready your materials:***

The initial document consists of transcripts derived from health professionals and administrative staff associated with the Hartebeeskop clinic. The interviews, designed as part of a broader study, sought insights into the perspectives of health professionals regarding service delivery and their comprehension of quality within the healthcare context. The clinic's diverse staff, including administrators, nurses at various levels, pharmacists, pharmacy assistants, operations managers, and cleaners, were all invited to participate in the study.

As for the second document employed in the data collection process, it was a systematic review. A comprehensive search across seven databases was conducted to identify articles focused on total quality management within the health department. Inclusion criteria encompassed articles reporting studies conducted in public facilities, utilizing quantitative, qualitative, or mixed methodologies. The articles had to be published between 2018 and 2023, and the researcher needed access to the full text. Consequently, thematic analysis was employed to develop a data extraction tool for further analysis.

Table 3.1 Types of documents that were consulted in studies of health policies.

Category	example
Official document	Policies or policy directives • Strategies for sectors or on specific health problems • Official position papers • Statistical surveys or publication
Implementation documents	Training manuals or work tools (booklets, clinical files.
Working documents	Meeting reports or minutes • Memoranda • Committee reports • Mission reports
Scholarly work	Scientific or peer-reviewed publications • Masters or doctoral dissertations • Textbooks and course materials

Source: Researcher’s own construction

• **Step 2. Extract data**

The data extraction process for document analysis within the framework of service delivery at South African public clinics was a methodical undertaking. Initially, pertinent documents, including reports, records, and service delivery-related policies, were identified and gathered from the specified clinics. Subsequently, essential information concerning service delivery practices, patient outcomes, and operational procedures was systematically extracted from these documents.

The extraction procedure encompassed the categorization and organization of data, facilitating a comprehensive analysis. This included the identification of patterns, trends, and noteworthy findings embedded within the documents. Special attention was dedicated to factors influencing service delivery, such as resource allocation, staff training, and adherence to established protocols.

The overarching goal of the data extraction process for document analysis in South African public clinics was to provide an in-depth understanding of the service delivery landscape. This understanding aimed to enable informed assessments and open avenues for potential enhancements in the delivery of healthcare services.

• **Step 3: Analyse data**

Data was analysed using content analysis for South African public clinics' documents such as policies, guidelines, and Standard Operating Procedures (SOPs) involved a systematic approach to extract meaningful insights from textual data. Content analysis is a method that allows researchers to explore

and understand the content of documents, in this case, policies, guidelines, and SOPs. Here's a step-by-step guide on how content analysis for Hartebeeskop public clinic:

(i) Define Objectives and Research Questions:

Research objectives and objectives were articulated thoroughly to identify specific aspects of policies, guidelines, and SOPs that the researcher analysed, this included identifying themes, patterns and gaps in the documents.

(ii) Create a Coding Scheme:

The researcher developed a coding scheme that aligned with the research objectives, coding scheme served as a guide in identifying and classification of content within the documents.

(iii) Analyse the Data:

The researcher analysed the data to identify patterns, themes, trends and relationships between codes and any emerging insights.

(iv) Report Findings:

The researcher represented the findings of this study.

3.8.1 Questionnaire Analysis

The data collection also involved self-administered survey questionnaires which were adopted and developed based on the conceptual and theoretical framework of the study. The survey questionnaire proved to be an effective instrument for gathering information as it allowed the respondents to reflect on five dimensions of the implementation of quality management systems in their respective institutions (Bayraktar *et al.* 2008). These dimensions include tangibles, responsiveness, assurance, reliability, and empathy (Bayraktar *et al.* 2008; Asif *et al.* 2013).

The study utilised a self-administered survey questionnaire designed in alignment with the conceptual and theoretical framework of the research. The survey proved to be a valuable tool for collecting information, enabling participants to contemplate and provide insights on five specific dimensions related to the implementation of quality management systems in their institutions. These dimensions encompassed tangibles, responsiveness, assurance, reliability, and empathy, as established in prior studies (Bayraktar *et al.* 2008; Asif *et al.* 2013).

The survey questionnaires were distributed to 364 participants from the Hartebeeskop Clinic, with 363 returns. What follows is the descriptive analysis of the survey questionnaires. Further analysis of data was conducted to ascertain the extent to which the participants strongly disagree, disagree, neutral, strongly agree or agree with the statements/notions presented in each dimension.

Survey questionnaires presented as statements under each dimension (see Appendix D). Respondents were requested to indicate whether they strongly disagree, disagree, neutral, agree or strongly agree with statements on a 5-point Likert scale.

Several studies have investigated the relationship between specific dimensions of service quality and patient satisfaction. These studies have found that different dimensions of service quality have different effects on patient satisfaction (Alghamdi 2021; Hussain *et al.* 2018; Cohen *et al.* 2018). The quality management dimensions used in the survey questionnaire are a representation of service quality dimensions discussed in a range of literature on the measurement of service quality. This includes the five common quality management dimensions in the SERVQUAL model.

3.8.2 Interviews

The research methodology involved a two-step process, starting with document analysis followed by interviews. Prior to conducting interviews, data from institutional documents was thoroughly analysed, providing crucial insights that guided the development of the interview schedule and the overall interview process. Interviews served as the primary data-collection method, allowing the researcher to gather in-depth information from the selected participants.

The strength of interviews as a data-collection tool lies in their ability to access the perspectives, attitudes, and opinions of the interviewees, as noted by Babbie *et al.* (2001). Literature suggests that interviews are particularly valuable when observing behaviours is challenging or when exploring implicit factors such as participant beliefs, feelings, and interpretations of their environments (Babbie *et al.* 2001).

In this study, face-to-face, semi-structured interviews were employed to extract relevant information regarding participants' attitudes and perceptions concerning the development and implementation of existing quality management systems, including policies and practices. Interviews were chosen for their unique capacity to employ a multi-sensory approach to understanding verbal responses, allowing participants to act more as informants than mere respondents. This approach facilitated participants in providing their insights and served as a basis for further clarification of the issues under consideration.

The researcher, following Rutakumwa (1998) suggestion, utilised both notetaking and tape-recording during interviews. All interviews were recorded and supplemented by notes, which were taken immediately after each interview. Each interview was recorded separately, saved, dated, and labelled with the interviewee's name. Transcripts were subsequently generated from the recordings, and due to the volume of interviews, a transcriber's services were enlisted. A robust data management system was essential for tracking and facilitating the reliable and easy usage of the data (Harris *et al.* 2014). The interview transcripts and notes were organised in a dedicated folder on the computer's Microsoft Word program, clearly labelled for easy retrieval.

3.9 Construction of the research instruments

Questions were developed specifically for this study. An open-ended question is a question that require more than one word to answer the question being asked by the researcher and open-ended questions are phrased as a statement that need a longer response (Nargundkar 2018). The researcher used open ended questions to create a schedule of interview questions for health care providers. The interview schedule questions were compiled using the dimensions of service quality as a basis, but the questions were open-ended.

The researcher contacted the clinic telephonically to make appointment with the health care providers to conduct the interviews. All interviews were tape recorded and vary in length from 20 minutes to 30 minutes. The interviews were informal, open ended and carried out in a conversational style. The researcher took notes while recording the interviews.

3.9.1 Design and administration of questionnaires

Closed-ended queries were employed in formulating questions for the quantitative research. The survey starts with demographic inquiries as they are straightforward to respond to and pose no intimidation (Nargundkar 2018). To structure the questionnaire, the Likert Scale was adopted, allowing participants to express their responses through a five-point scale, ranging from strongly disagree (1) to strongly agree (5). The researcher set choices from strongly agree to strongly disagree, and the questionnaire provided a comprehensive view of patients' opinions plus patient's level of agreement to what was asked by the researcher.

Questionnaires for quantitative study were distributed using systematic sampling, the researcher approached the patient in the waiting area at the clinic. The researcher clearly explained the purpose of the study before the patient signed the consent form.

Questionnaires were written in English and translated into Siswati (the dominant language) to accommodate patients who are not fluent in English. The researcher distributed pens to patients to complete the questionnaires. The researcher left a box at the clinic; once the patient was done answering the questions, the patient dropped the questionnaires into the box and the researcher collected the questionnaires from the box.

3.10 Data analysis

In this study, delving into qualitative aspects encompasses a varied array of data collection methods and analytical strategies, with the goal of offering a contextual understanding and interpretation of a social

phenomenon (Vaismoradi & Snelgrove 2019). Neuendorf (2019) highlights content analysis and thematic analysis as extensively utilized methods for scrutinising message content in relation to various phenomena. However, criticism of traditional content analysis, citing its superficial nature and oversight of latent content and contexts, has led to the emergence of a qualitative approach known as qualitative content analysis (Vaismoradi & Snelgrove 2019).

The researcher incorporates two data analysis methods: qualitative content analysis and thematic analysis. These choices are informed by insights from Vaismoradi and Snelgrove (2019) observations, emphasising philosophical foundations, data immersion, attention to both description and interpretation, contextual consideration, and the exploration of overarching themes.

In the data analysis process, the researcher established categories and extracted themes, aiming to present a comprehensive narrative derived from the data. The initial step involves subjectively selecting the unit of analysis, reflecting on the phenomenon's realities, which becomes the analytical instrument. The researcher navigates between data, prior experience, and existing knowledge to construct new insights. Both content analysis and thematic analysis provide a contextual framework. Thematic analysis results in descriptive themes (Braun and Clarke 2019), while content analysis yields categories, themes, subcategories, and subthemes. Thematic analysis, as suggested by Joffe & Yardley (2004), offers a systematic structure akin to content analysis, merging meaning and context analysis. The choice between these approaches depends on the researcher's aim to achieve descriptive or interpretive levels of analysis.

The data management process encompasses the initial loop of the spiral, involving reading, meaningmaking, coding, classification, and categorization. Ned *et al.* (2017) inductive process guides category development, with criteria formulated based on theoretical background and research questions. This leads to the development, review, reduction, and reliability check of tentative categories.

In this study, the analysis of institutional documents includes extracting factual statements about internal quality systems, existing review systems, covered support services, manual contents, standards set, and opinions/findings from reviews and audits. Documentary analysis serves as a triangulation mechanism, cross-correlating with interviews for integrated interpretation and data validation.

The use of NVivo Software streamlined the creation of categories during data analysis. Themes and subthemes were identified from coded interviews, guided by hermeneutic theory. Techniques like word clouds and cluster analysis were employed to explore frequency and commonalities. Coding, essential in Grounded Theory analysis, involved segmenting, labelling, and categorising data for theoretical emergence. Ethical considerations included participant validation, stakeholder engagement, and advocacy, ensuring credibility in qualitative research. Results and provisional analyses were presented

for feedback from community organisations, validating interpretations and resonating with participants' feelings and experiences.

3.11 Validity and Reliability for Quantitative study

3.11.1 Validity

Validity plays a pivotal role in research, determining the relevance of collected data to the research question or hypothesis. As emphasized by Creswell *et al.* (2018), it is a fundamental element that enables researchers to draw accurate conclusions from the study's findings. When a study lacks validity, the results become disconnected from the research question, resulting in misguided conclusions. In the realm of quantitative research, researchers must address various validity types, such as content validity, criterion validity, construct validity, and internal validity.

Creswell (2018) discusses the types of validity as follows:

- (i) Content validity- As per Polit and Beck (2018), content validity refers to how well a measurement tool comprehensively encompasses the entire scope of the concept it aims to evaluate. In essence, a study demonstrating strong content validity ensures that the information gathered is pertinent to the specific research question or hypothesis being investigated. Face validity is one of the methods used to measure validity. Polit and Beck (2018) state that face validity is determined through subjective judgment and is not an accurate measure of validity. A study that has good face validity is more likely to be accepted by participants and stakeholders, leading to higher response rates.
- (ii) Criterion validity - According to Creswell (2018), criterion validity is essential in determining whether a measure is accurate in predicting an outcome. A study that has good criterion validity ensures that the data collected can be used to predict an outcome accurately. This type of validity is used to determine whether a measure is useful in predicting an outcome, expert judgment is one of the methods used to compute validity. Creswell (2018) finds that expert judgment is essential in determining the content validity of a study. Experts can provide feedback on the relevance and accuracy of the study's measures.
- (iii) Construct validity - Polit and Beck (2018) assert that construct validity is essential in determining whether a measure is accurate in measuring the theoretical construct it is intended to measure. A study that has good construct validity ensures that the data collected is relevant to the research question or hypothesis. Content validity is one commonly used to evaluate construct validity. Polit and Beck (2018) explain content validity as a method of determining the validity of a study by assessing the relevance and accuracy of the measures used to collect data. Content validity can be

assessed through expert judgment or by using a content validity index (CVI). According to Polit and Beck (2018), a CVI assesses the degree to which the items in a measure represent the construct being measured.

(iv) Internal validity - Creswell (2018) outlines the significance of internal validity as a crucial factor in establishing the causality of the relationship between independent and dependent variables. A study with high internal validity guarantees that the collected data precisely reflects the true nature of the connection between the independent and dependent variables.

The dimensions of service quality (tangibles, reliability, responsiveness, assurance, and empathy) were used to inform the items that constitute the questions for the questionnaire. This was further guided by items used in previously validated questions used in other studies, measuring similar constructs. Additionally, the decision as to whether an item should be included or not would be made by enlisting the opinions of five disciplinary experts (academics), from the researcher's department and faculty.

Differences in opinions were resolved employing Lawshe's (1975) content validity ratio threshold of 0.99, calculated using $CVR = (N_e - N/2) / (N/2)$, where: N_e is the number of subject matter experts indicating essential and N is the total number of subject matters experts. The choice of paradigm influenced the validity and reliability of a research study. The researcher used standardised instruments to collect data, which enhanced the validity of the study.

3.11.2 Reliability

As per Kumar (2018), a research tool characterized by precision and consistency is deemed reliable. Reliability implies that both the instruments used for data collection and the associated procedures will consistently yield dependable and uniform results.

3.11.2.1 Types of Reliability

In research, reliability is a crucial aspect that signifies the extent to which a study generates consistent and dependable outcomes. It plays a vital role in guaranteeing the precision and credibility of the data acquired from a research project. As defined by Polit and Beck (2018), reliability pertains to the extent to which a measurement consistently yields the same results across various situations and over time.

Quantitative researchers must take into account various forms of reliability, as outlined in Table 3.11. These encompass test-retest reliability, inter-rater reliability, internal consistency reliability, and parallelforms reliability. Each of these reliability types contributes to the overall trustworthiness and stability of the research findings.

3.11.2.2 Methods to Measure Reliability

Reliability measurement methods play a pivotal role in ensuring the consistency and stability of research instruments. The various techniques used to assess reliability, are vital for establishing trustworthiness and replicability in research outcomes. Methods discussed include test-retest, internal consistency, and inter-rater reliability assessments, presented in Table 3.11.

Table 3.11 Methods to measure reliability.

Methods	Definition
Test-retest reliability	To evaluate test-retest reliability, researchers conduct the same assessment on a specific group of individuals at two separate occasions (Polit and Beck 2018). The obtained scores from both instances are then analysed for correlation to ascertain the extent of consistency between the two sets of scores. The correlation coefficient, ranging from -1 to 1, serves as a measure, with values closer to 1 signifying stronger test-retest reliability (Polit and Beck 2018).
Inter-rater reliability	Tehseen <i>et al.</i> (2017) state that to assess inter-rater reliability, researchers administer the same measure to different raters who score the responses independently. The scores obtained from the different ratters are then correlated to determine the degree of consistency between the different sets of scores. The correlation coefficient can range from -1 to 1, with values closer to 1 indicating higher levels of inter-rater reliability (Polit and Beck 2018).
Internal consistency reliability	To evaluate the internal consistency reliability of a measurement tool, researchers use a test with multiple items designed to gauge the same underlying concept (Creswell 2018). They analyse the obtained scores from these various items by correlating them, aiming to assess the consistency
	across different sets of scores. Cronbach's alpha is a widely employed metric for internal consistency reliability, measuring between 0 and 1. Values closer to 1 suggest stronger internal consistency reliability (Creswell 2018).
Parallel-forms reliability	To evaluate parallel-forms reliability, researchers give a group of participants two distinct versions of the same assessment. They then analyse the obtained scores from both versions by correlating them, aiming to measure the consistency between the two sets of scores (Polit and Beck 2018). The correlation coefficient, which varies from -1 to 1, is used to gauge the extent of reliability, with values closer to 1 suggesting stronger parallel-forms reliability (Polit and Beck 2018).

Source: Researcher’s own construction

Reliability in research implies the expectation that the tools and methods employed for data gathering will yield consistent outcomes. In this study, the researcher utilised SPSS version 20 on the Windows 11

platform. As indicated by Heris (2018), a construct or variable is considered highly reliable if the Cronbach Alpha value falls within the range of 0.7 to 0.9. The researcher employed Cronbach's Alpha as a metric to assess the reliability of the questionnaire.

3.11.2.3 The Importance of Validity and Reliability in Research Studies

Validity and reliability are crucial elements in quantitative research. Validity ensures that a study accurately measures the intended variables, while reliability guarantees consistent and dependable results. The absence of validity and reliability in a study can result in inaccurate findings, potentially leading to flawed conclusions and misguided recommendations.

The researcher ensured that the measures were valid and reliable to ensure that the results were accurate and trustworthy. This is important as the results that the decisions and recommendations based on research have a significant impact on patient outcomes. Furthermore, validity and reliability are essential in ensuring that the results of a study can be replicated, which is essential in advancing scientific knowledge.

The researcher has employed practices to enhance the validity and reliability of the study by conducting a pilot study to refine measurement instruments, using diverse sampling strategies to minimise bias. Adopting rigorous research methodologies, employing interrater reliability checks, and providing transparent documentation of research processes validate and make a study reliable (Tashakkori and Teddlie 2019). Collaborative efforts, peer review, and adherence to ethical guidelines also contribute to the credibility of research findings (Foster and Isobel 2018). The researcher used the department's lecturers and other students in the same field to review the questionnaires before administering them to the participants.

3.12 Trustworthiness in a Qualitative Study

Various qualitative researchers hold different perspectives on the criteria that are most suitable for assessing the trustworthiness of their work. Nevertheless, there is a prevailing consensus that credibility, transferability, dependability, and confirmability are the four key factors considered in evaluating the trustworthiness of research. The definitions of these criteria and illustrations of their application in the study are crucial components in establishing the research's reliability.

(i) Credibility

The term "credibility" in qualitative research refers to how well the collected qualitative data truly reflect the experiences or perspectives of the participants. Researchers enhance credibility by employing different strategies, including prolonged engagement, member checking, and triangulation. These approaches contribute to the overall trustworthiness of the qualitative findings. In a study by Smith (2019), prolonged engagement with participants allowed the researchers to build trust, thereby enhancing the

credibility of the data. Similarly, Zhu *et al.* (2019) employed member checking, where participants reviewed the researcher's interpretations, contributing to the credibility of the findings. These studies highlight the significance of establishing credibility through rigorous engagement and validation techniques.

The researcher ensured credibility, of the interview transcript by sharing with the interviewee the transcript to ensure that she accurately captured the views the interviewees intended to convey. Another method used to ensure credibility is member checking, which involves sharing the findings with participants and asking them to verify the accuracy of the data. This method helps to ensure that the data accurately represents the perspectives and experiences of participants. It also enhances the trustworthiness of the data by showing that participants were involved in the research process and had a voice in the findings.

(ii) Transferability

Establishing a comprehensive understanding is achieved through detailed and thorough descriptions, incorporating relevant context in presenting findings and interpreting participants' intentions (Moser 2018). Transferability, on the other hand, refers to the degree to which qualitative findings can be relevant and applicable to different contexts or settings (Chen and Hofmann 2019). Although qualitative research doesn't aim for generalizability, researchers aim to offer detailed descriptions that empower readers to assess the applicability of the findings in their own situations.

In a study by Chen (2020), the researchers utilized thick descriptions, including rich details and contextual information, to enhance the transferability of the data. Similarly, Brown *et al.* (2017) employed theoretical sampling to ensure diverse participant perspectives, increasing the potential transferability of the findings. These studies emphasize the importance of providing comprehensive descriptions and diverse participant samples to enhance transferability. Regarding transferability, the researcher provided adequate descriptions of the study output to enable independent researchers to determine the transferability of outputs to their own contexts.

(iii) Dependability

Describing the reliability and stability of qualitative data over time and among different researchers (Chen and Hofmann 2019). Researchers ensure dependability through methods like maintaining an audit trail, engaging in peer debriefing, and establishing intercoder reliability. In a study by Lee *et al.* (2021), an audit trail was used to document the research process, including decision-making and data analysis steps, ensuring the dependability of the findings.

Additionally, Anderson and Martinez (2021) employed peer debriefing, where a colleague reviewed and questioned the researcher's interpretations, contributing to the dependability of the analysis. These studies highlight the importance of transparently documenting the research process and engaging in peer

review to ensure dependability. The researcher ensured that an audit trail of records of the raw data, the field notes, and transcripts were kept in a documented reflexive journal, to assure the output is supported by the data, thus ensuring dependability.

(iv) Confirmability

Refers to the neutrality and objectivity of qualitative data, ensuring that the interpretations are grounded in the data rather than the researcher's biases (Wang *et al.* 2019). Techniques such as reflexivity, negative case analysis, and member validation contribute to confirmability. In a study by Garcia and Caro (2019), the researchers employed reflexivity by explicitly acknowledging their preconceptions and continuously reflecting on their influence throughout the research process. The researcher ensured confirmability by the inclusion of markers such as the reasons for theoretical, methodical, and analytical choices made in the study and how interpretations and conclusions have been made.

This practice ensured that the interpretations were not unduly biased. Likewise, Smith *et al.* (2017) conducted negative case analyses, actively searching for disconfirming evidence to challenge initial interpretations, thereby increasing confirmability. These studies underscore the importance of selfreflection and actively seeking disconfirming evidence to enhance confirmability.

3.13 Ethical considerations

In the process of recruiting participants for a research study, ethical principles play a pivotal role. Researchers are obligated to adhere to principles such as informed consent, confidentiality, and ensuring participants have the right to withdraw from the study without encountering any repercussions. Informed consent entails securing permission from participants by ensuring they are fully informed about the study's objectives, procedures, and potential risks and benefits (World Medical Association 2018).

Maintaining confidentiality is another essential ethical consideration during participant selection. Participants should receive assurance that their personal information will be kept confidential, and their privacy will be respected. Furthermore, participants retain the autonomy to withdraw from the study at any juncture without facing adverse consequences (World Medical Association 2018).

Before the study commenced, the researcher obtained permission from the provincial department of health ethics committee, acting as gatekeepers. This was preceded by the issuance of ethical clearance (refer to Appendix A) from the institutional research ethics committee to which the researcher is affiliated. Participants were provided with a detailed letter (refer to Appendix D) outlining information about the study, its nature, research purpose, utilization of findings, and the extent of participant involvement, including the assurance of confidentiality throughout the research process.

On receipt of confirmation from prospective interviewees of their willingness to participate, an appointment was arranged, and an interview schedule was electronically forwarded to familiarise the interviewee with

the anticipated lines of inquiry. For qualitative study, face to-face interviews were conducted, and a consent form was signed prior to the commencement of the interview. It was made clear to the participants that during the study, they might withdraw without penalty, or any offense should they need to. It was also made clear to participants that all data obtained during the data collection phase would be confidentially kept and securely stored and would be accessible to the researcher only. The researcher gave participants the assurance that their identity would not be disclosed under any circumstances.

3.14 CONCLUSION

This chapter discussed the research design and methodologies adopted for this study. It expounded on the theoretical orientation of the qualitative methods approach within a pragmatist paradigm. The chapter outlined how qualitative and quantitative methods are used and explained that the study was based on a mixed methods approach.

The chapter also discussed the research strategy employed, which included the study design, data collection processes, data collection instruments, and methods used for data analysis. In addition, it explained how the baseline survey was used to develop interview schedule questions that were used as the main data collection method.

The chapter explained how the data gathered through document review and interviews were analysed using qualitative content analysis. Finally, strategies were explored through which the trustworthiness of the study could be established, and the ethical issues considered. In further discussion, the following chapter presents the results of the study by delving into how data was analysed and interpreted. The next chapter presents the analysis, results and interpretation of the qualitative data.

ANALYSIS, RESULTS AND INTERPRETATION OF THE QUALITATIVE DATA

4.1 Introduction

The previous chapter presented the methodology of how the qualitative and quantitative study were carried out. This chapter presents the descriptive data gathered for the study, obtained through interviews conducted with participants at the Hartebeeskop Clinic. The qualitative data was collected from healthcare providers at the clinic through scheduled interviews. The chapter begins by discussing the qualitative techniques employed for data analysis, followed by an exploration of the themes identified during the thematic analysis. A summary is then provided, highlighting each theme discovered in the study and elucidating their relevance to achieving the study objectives. Lastly, the chapter triangulates the data by integrating the analysis and interpretation of information obtained, incorporating results from document analysis and participant interviews.

QUALITATIVE DATA ANALYSIS PROCESS

4.2 The analysis and results of qualitative data

In this study, 18 healthcare providers at Hartebeeskop Clinic, spanning management, health professionals, administrators, and cleaners, were interviewed. Interview schedule guided the data collection process. Subsequently, the researcher analysed and interpreted the collected data, aligning conclusions with existing literature and study objectives. The chapter commences with demographic details of the healthcare providers.

Recorded using a digital voice recorder, interviews were saved as Windows Media Audio files on a computer. Transcribed verbatim, each interview became a Microsoft Word document, later imported into NVivo 20, a qualitative data analysis software. Employing thematic analysis rooted in hermeneutic theory, the researcher coded and re-coded transcripts, identifying exclusionary themes. The results section featured italicised verbatim quotations from participants, illustrating findings.

Techniques like word clouds, cluster analysis, tree maps, and word trees were employed for frequency determination and data interpretation. These methods facilitated the identification of relevant core themes and subthemes. Core themes corresponded to interview questions, while inductive subthemes emerged

from dialogue reflections. Validation occurred through a second round of analysis utilising the aforementioned techniques.

4.3 PRESENTATION, ANALYSIS, INTERPRETATION AND DISCUSSION OF THE FINDINGS

Section A: Demographics

Figure 4.1 illustrates the distribution of age within the studied population. The visual representation offers a concise overview of the age demographics, providing insight into the age composition and facilitating a comprehensive understanding of the dataset's age-related patterns in a qualitative approach.

4.3.1. Age analysis

Table 4.2 presents the age of participants to identify their suitability in taking part in the study. The researcher considered that the age of the participants was of particularly importance to the study's findings therefore ensured that the process of gathering data aligns to the characteristics of participants. Participants of various age groups have diverse perspectives on the challenges and opportunities under investigation. Table 4.2 below shows the findings from analysis of participants age data and Figure 4.1 illustrates the age distribution. Table 4.2 Age Distribution of Respondents

Range (years)	Frequency (n)	Percentage (%)	Valid percentage (%)	Cumulative percentage (%)
18 to 34	0	0%	n\a	n\a
35 to 40	2	20%	20%	20%
41 to 49	4	40%	40%	60%
50 to 54	2	20%	20%	80%
Over 55	2	20%	20%	100%
Total:	10	100%		

Source: Researcher’s own construction

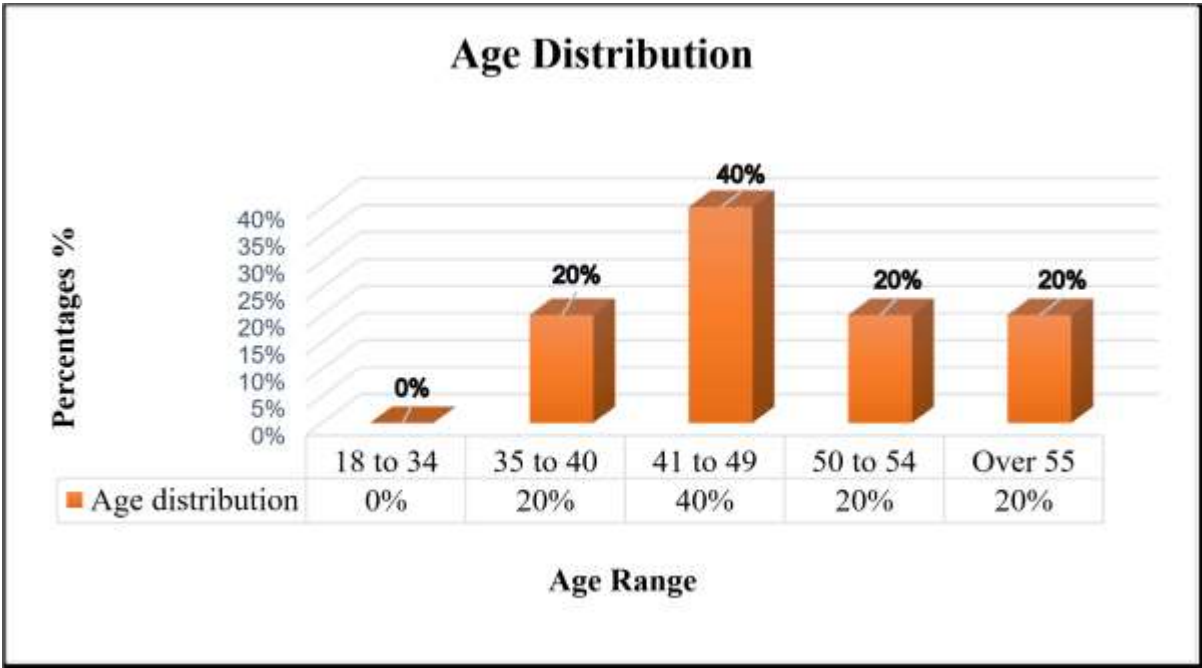


Figure 4.1 Age

Source: Researcher’s own construction

The figure has five elements that represent age group. Most respondent were above the age of thirty. This implies maturity in the workplace. Figure 4.1 shows 20% (n = 2) of participants were over the age of 55 years, then 20% (n = 2) of participants were aged between 50 to 54 years, followed by 40% (n = 4) of participants aged between 41 to 49 years and lastly 20% (n = 2) of participants were aged between 35 to 40 years. These findings show that the majority of all intended age groups were recorded thus enabling the gathering of data from several perspectives that presented various age groups.

4.3.2. Gender analysis

In the dynamic landscape of healthcare, gender diversity among providers is essential for holistic and patient-centred services. This amalgamation not only reflects the evolving demographics of healthcare professionals but also enriches the spectrum of care through varied experiences and insights. Gender in the qualitative approach is presented in Figure

4.2.

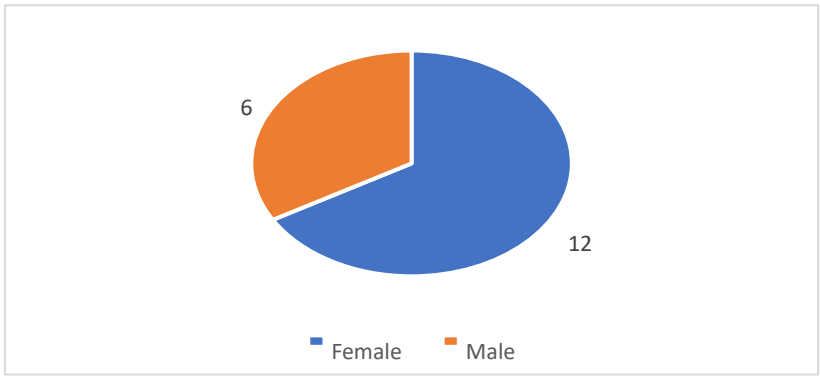


Figure 4.2 Gender

Source: Researcher’s own construction

In the public clinic, a harmonious blend of six male and twelve female healthcare providers signifies the healthcare industry's progress towards gender inclusivity. Regardless of gender, each individual contributes unique skills and empathy, creating a nurturing environment. This collaborative diversity ensures a holistic approach to patient well-being, advancing gender equity in healthcare.

In the dynamic landscape of healthcare, the experience of healthcare providers plays a crucial role in delivering quality services. This discussion on Figure 4.3 focuses on the diverse spectrum of healthcare professionals at a public clinic, categorizing them based on their years of experience. From newcomers with 0-5 years to seasoned veterans with 21 plus years, each provider brings a unique perspective, skill set, and commitment to the delivery of healthcare services.

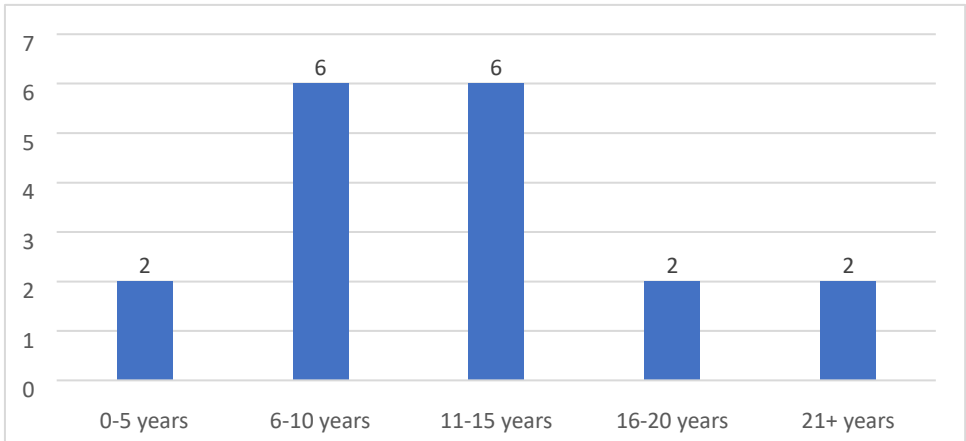


Figure 4.3 Professional Expertise and Work Experience

Source: Researcher’s own construction

In the public clinic, a diverse mix of healthcare providers contributes to a dynamic environment. The 2 providers with 0-5 years bring fresh perspectives, while the 6 with 610 years offer a balanced blend of experience and innovation. Another 6 providers with 1115 years bring seasoned expertise, followed by 2

with 16-20 years and 2 with 21+ years, providing a rich spectrum of skills and knowledge to enhance patient care and service delivery.

This research approach explores the dynamic roles within a public clinic, examining the unique responsibilities of administration, nurses, operations manager, HIV counsellor, tester, and cleaner. Investigating the collaborative efforts of these diverse job titles sheds light on the integral functions that contribute to the clinic's overall effectiveness and public health impact, presented in Figure 4.4.

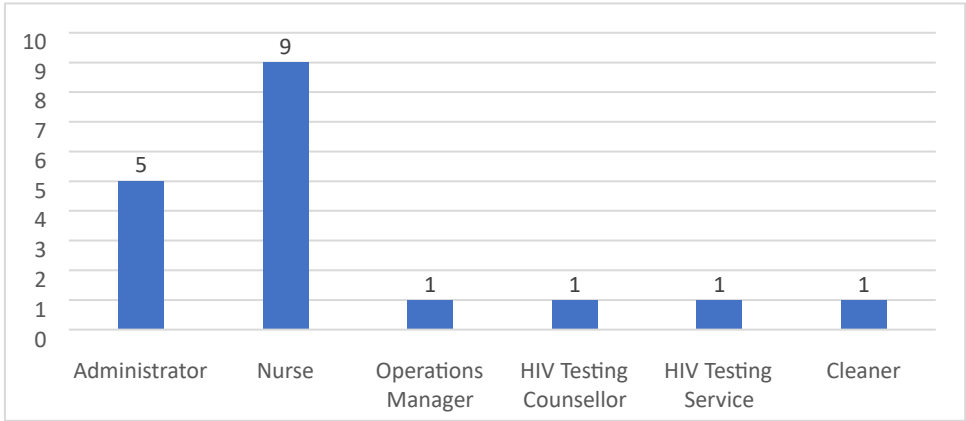


Figure 4.4 Job title

Source: Researcher’s own construction

In the dynamic environment of a public clinic, a cohesive team comprising 5 administrators ensures smooth operations. Supported by 9 dedicated nurses, an operations manager oversees efficiency. The vital roles of an HIV counsellor, an HIV tester, and a meticulous cleaner contribute to a holistic healthcare environment, promoting community well-being.

4.4 Section B: Qualitative Analysis

Qualitative analysis was used as a research approach delving into the richness and depth of data, aiming to understand the complexities of health care providers’ experiences. The qualitative techniques used are explained as follows;

4.4.1 Word cloud

A word cloud presented in Figure 4.5, is a visual representation of text data, where words are displayed in varying sizes based on their frequency. It provides an intuitive overview of prominent terms within a corpus. This definition draws from various sources, including studies by Smith (2019) and Jones (2021).



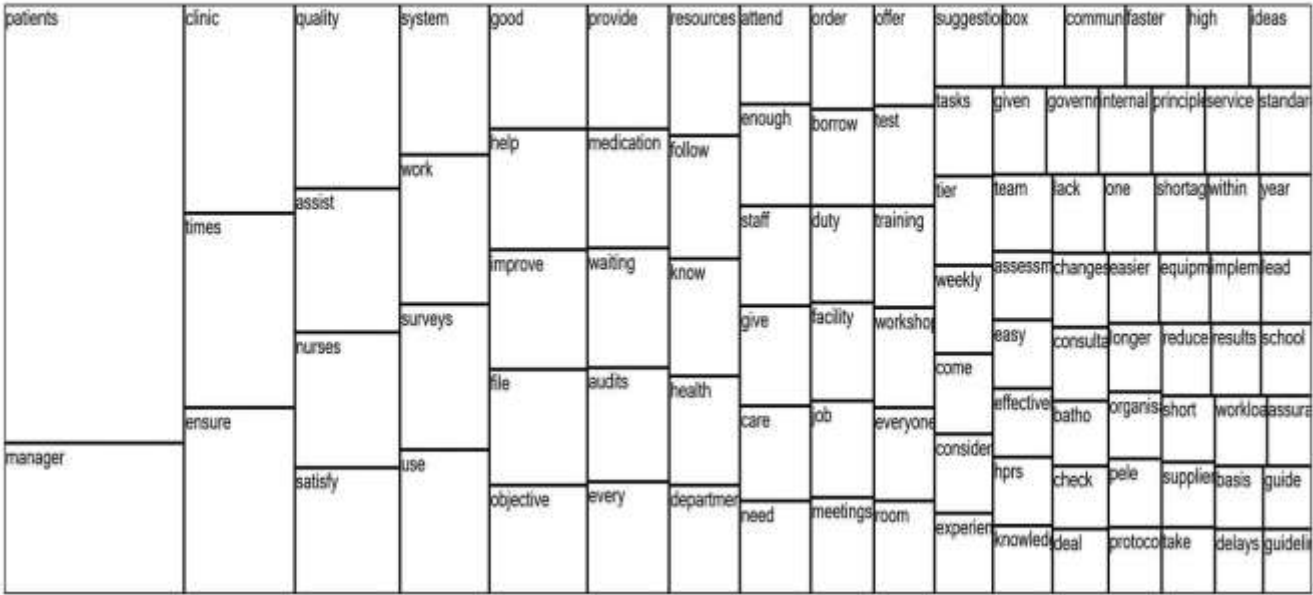
Figure 4.5 Word cloud: Unveiling all themes

Source: Researcher’s own construction

Figure 4.5 shows that the word that appears the most from the scheduled interview with the health care providers is ‘patients’, followed by ‘the manager’; so, the grandeur the words, the more times it appeared during the schedule interview.

4.4.2 Tree Map

Tree Map presented in Figure 4.6 refers to a data visualisation technique representing hierarchical structures through nested rectangles; each subdivided into smaller rectangles proportionate to data values (. Popularised by the seminal works of Schneiderman (1992), this method enhances information comprehension and is widely used in diverse fields, such as finance and information technology (Johnson 2022)).



4.4.4 Hierarchy Chart

An organizational chart visually depicts the internal structure of a company, outlining roles, responsibilities, and relationships among individuals (Chen 2020). It serves as a tool to illustrate bureaucratic arrangements. Figure 4.8 in our study displays the hierarchy chart derived from scheduled interviews with healthcare providers.



Figure 4.8 Hierarchy chart: Unveiling all themes.

Source: Researchers’ own construction

Figure 4.8 represent the hierarchy chart, depicting levels of authority and relationships. It also indicates a clear overview of roles, responsibilities, and communication channels from each department with the Hartebeeskop clinic.

4.4.5 Word Trees

Word trees in Figure 4.9 refer to hierarchical structures representing relationships between linguistic elements. Rooted in syntax, tree structures visually depict the organization of words in a sentence (Chen 2020).



Figure 4.9 Word tree: Unveiling all themes

Source: researchers' own construction

The figure above illustrates how healthcare providers work to satisfy patients' needs and expectations. It indicates that providers primarily rely on internal audits, conducted quarterly by internal provincial teams, to enhance patient satisfaction and improve service delivery.

The analysis was aligned to the 5 key themes, namely, quality relevance in organisation, management and objectives, current tools, and systems to promote quality, evaluating quality and improvement and forward thinking towards quality.

4.5 Quality relevance in organisation

This primary theme examined the current understanding as well as the relevance of quality within the organisation. Figure 4.10 depicts an overview of the first theme in the qualitative data using a cluster analysis.

4.5.1 Research question 1:

□ ***What are the perceptions of the service delivery within the patients' group?***

Perception of factors to promote quality in organisation.

The factors that were considered to promote quality from the respondents' perspective were informed by the sub themes discussed from 4.5.1 to 4.5.10 as follows:

4.5.1.1 Patients driven

Many people believed that the measure of quality in healthcare stemmed from a patient-centric viewpoint. This belief was grounded in various factors, notably the South African Constitution, which serves as the paramount law of the nation. Section 27(1)(a) of the Constitution explicitly grants all South African citizens the right to access healthcare services and reproductive services of high quality (Government of South Africa 1996). Additionally, Section 195 underscores that public administration is obligated to uphold elevated standards of professionalism, deliver services that are both fair and of high quality, remain impartial, address the needs of the people, and furnish accurate information to society. Consequently, it is deemed a patient's entitlement to receive quality care, and healthcare providers bear the responsibility of ensuring that the well-being of patients always takes precedence.

4.5.1.2 Batho Pele

This entailed always putting the patient first through a continuous practice of Batho Pele (People First). This is supported by the following participants who conveyed the same.

Participant 1: "To treat patients according to Batho Pele principles".

Participant 2: "Yes, we are guided by Batho Pele's principles and patient's rights principles".

Participant 3: "By putting patients first and willing to help always".

Research indicates that the Batho Pele initiative has positively influenced public service delivery in South Africa. Despite successes in healthcare, education, and

housing, challenges persist, such as inadequate funding, a dearth of political will, and insufficient capacity and skills among public servants. To ensure the initiative's lasting success, addressing these barriers is essential for sustained improvements in service quality across various sectors (Republic of South Africa 1997).

4.5.1.3 Patient satisfaction

Patient contentment emerged as a prominent factor in assessing healthcare quality. The assurance of patients' happiness with the service they receive, and the fulfilment of their needs serves as a crucial quality indicator. A pivotal element influencing patient satisfaction is the calibre of the interpersonal bond between patients and healthcare providers. Numerous studies have demonstrated that patients who perceive their healthcare providers as empathetic, communicative, and respectful tend to express higher satisfaction with the care they receive. For instance, Lee *et al.* (2021) highlighted the significant role of the patient-provider relationship in predicting satisfaction within the framework of Korean healthcare. Similarly, research conducted by Cai in 2021 found a positive correlation between patients perceiving healthcare providers as more empathetic and their overall satisfaction with care in the context of Chinese healthcare.

4.5.1.4 Patient prioritisation

Prioritising patients emerged as a key quality indicator, underscoring the significance attributed to patient well-being. The emphasis on patient prioritization was echoed by respondents, affirming its pivotal role in assessing quality. This shared perspective highlights a consensus on the value placed on individual health within the context of healthcare services (Pillay 2019). The alignment between the prioritisation of patients and respondents' views establishes a compelling connection, reinforcing the notion that allocating importance to patient health is a fundamental criterion for evaluating and ensuring quality in healthcare practices. This insight underscores the symbiotic relationship between patient-centric care and perceived quality in the healthcare domain (Pillay 2019).

4.5.1.5 Patient care

Naturally, patient care became a key aspect of quality. This ensured patient health and wellbeing. Respondent 1 expressed that prioritising patient care quality is our primary focus within the realm of quality management. This indicates that healthcare providers are always willing to go the extra mile in satisfying patients' needs.

4.5.1.6 Holistic treatment

A participant argued that the quality of healthcare is influenced by the comprehensive care given to patients. According to the National Health Act of (2003), individuals receiving health services are required to treat healthcare professionals with dignity and courtesy. If someone declines treatment, they are expected to sign a liability release indicating their refusal. Furthermore, the Act outlines the establishment of district health systems tailored to the population size served by healthcare facilities.

4.5.2 Research question 2:

□ ***What are the perceptions of the service quality within the health care clinic?***

Service driven.

Quality, according to numerous respondents, revolves around service delivery excellence. Within this overarching concept, sub-sub themes emerged, reflecting a commitment to being service-driven. These themes underscored the significance of providing exceptional services as a cornerstone of quality, emphasizing the vital role of service excellence in meeting organizational objectives and satisfying stakeholder expectations:

4.5.2.1 Reduce waiting time.

The reduction of waiting time was highly ranked as a key indicator of quality from a service perspective. Prioritising children and emergencies are essential. One of the strategies involves swiftly obtaining the patient's file to ensure timely attention from the nursing staff. Long waiting times have been associated with low patient satisfaction and poor healthcare outcomes. QMS implementation has been shown to reduce waiting times in public healthcare clinics in South Africa. A study by Seleti *et al.* (2018) evaluated the impact of QMS implementation on waiting times in a public healthcare clinic in Limpopo province. The study reported that waiting times for patients decreased by 40% following QMS implementation.

4.5.2.2 Service delivery

Service delivery in terms of clean and proper facilities complemented quality. The healthcare providers mentioned that they do ensure good housekeeping at the Hartebeeskop health care facility. It was imperative for suppliers to also be part of quality by ensuring that medication was not expired.

4.5.2.3 Standards, guidelines and protocols

Adhering to national norms and standards and strictly following established protocols can enhance the overall quality of services. According to respondents, they consistently adhere to standards, guidelines, and protocols. Transparency from public institutions regarding the anticipated level and quality of service is crucial. These institutions should inform society about the expected standards and levels of service delivery. This transparency helps the public understand what services to anticipate from the government and enables them to assess the quality of service provided by public institutions (Republic of South Africa 1997).

4.5.2.4 Uniformity

Ensuring nationwide uniformity in systems is essential for standardized quality. Respondent 3 highlights the benefits, emphasizing that the identical system employed in Gauteng clinics extends to Mpumalanga, illustrating the government's commitment to consistency. This approach enhances efficiency and maintains a high standard of quality healthcare services across the country.

4.5.3 Research question 3:

• *What is the impact of service delivery on the health care facility performance?*

Performance driven.

Quality was also related to accurate results are a good indicator of quality as these impacts on patient health and cannot be compromised. The healthcare providers also mentioned that they perform beyond the norm to demonstrate quality through performance. This is supported by the following respondent who conveyed as follows:

Participant 5: "To be willing to assist patients and willing to go beyond".

4.5.4 Environment driven.

The facility environment itself should reflect quality. Cleanliness of the facility promotes hygiene for staff and patients thereby promoting facility quality in this regard. The healthcare providers mentioned that they play their role by ensuring hygiene and safety, to make the patient's situation comply.

4.5.5 Need for quality.

Respondents emphasized the imperative for quality in healthcare, citing its importance for ongoing patient care and the cultivation of patient loyalty. High standards were deemed crucial

to ensure satisfaction, retain patients, and attract new ones through positive referrals. This is corroborated by the respondents who expressed similar sentiments.

“It is because we want to serve patients in a good way offering high standard quality so that they can prefer our clinics other than attending other clinics”.

4.5.6 Working and performance

Quality is needed when it comes to working and performing at duties. Staff could integrate quality into their work and in turn work effectively. Targets can be met when quality is exercised. Examples of responses were:

“To ensure we meet our daily targets”.

“Quality can be standardised to ensure uniformity of work”.

4.5.7 Working environment

This underlying subtheme pertains to the current work environment, influencing its impact on quality. The allocation of workload per shift has been defined, recognizing its potential impact on quality when staff members are burdened with excessive tasks.

Many of the respondents (over 10 respondents) indicated that the workload was manageable and favourable. This was a positive result. However, two respondents felt that staff were overworked and that the ratio of work to staff was uneven. Another challenge in QMS implementation is the lack of top management commitment and support. According to a study by Poksinska (2017), top management commitment and support are critical for the success of QMS implementation, and organizations need to ensure that top management is actively involved in the implementation process and provides the necessary resources and support. Another respondent felt that the current SOPs were inflexible. Being able to change the SOPS could make certain work tasks easier.

Responses included the following examples:

“It is much hard because we are not allowed to implement changes from the given SOPs that will make our task be easier and faster the procedure”.

4.5.8 Resource constraints

Resources Constraints were one of the main factors. One of the contributing factors was the issue of orders. There were longer lead times experienced due to ordering by agreed date,

and while orders are placed on respective dates, delivery can be delayed, which comprises inventory. The lack of resources and medication leads to reschedule of patient's appointments. Examples that were included in the responses are as follows:

"We experience longer lead times because we do place an order on the exact dates which leads us to send the manager to borrow other resources to the government school but sometimes, we must wait till they do deliver".

"Orders must adhere to specified dates, prohibiting bulk orders except for chronic medication. Delays are common in stock procurement, causing shortages and increased waiting times, despite efforts to minimize delays".

4.5.8.1 Medication

There is a shortage of medication at times which impacts on duties and patients.

Included in the responses are the following examples:

"Some of the time we struggle with the shortage of medication, we make it hard for us to perform our duties effectively."

"We do order weekly basis, but we experience out-of-stock from the depot, then we fail to have enough supply of medication to supply patients."

Most of the articles reviewed highlighted resource constraints as a significant challenge facing public healthcare clinics in South Africa. Resource constraints included a lack of essential medical equipment, inadequate infrastructure, and a shortage of medication.

These challenges often lead to long waiting times for patients, which can negatively impact the quality of service they receive (Van den Heever 2019). Additionally, resource constraints can lead to the rationing of healthcare services, which means that patients may not receive the appropriate level of care.

According to an article from Times LIVE on June 14, 2018, concerns have been raised by the public regarding the insufficient availability of equipment in hospitals. This shortage has resulted in significant delays in urgent surgical procedures, creating a backlog of work and causing extended waiting periods for certain patients in need of treatment. The inadequate supply of necessary equipment has been identified as a major factor contributing to prolonged waiting times, which, as highlighted in the report, can expose patients to potential complications and, in severe cases, even lead to loss

of life (Times LIVE 2018). A 2017 study by Mokoena further revealed that the scarcity of material resources, equipment, and supplies contributes to prolonged hospital stays for patients.

4.5.8.2 Lack of maintenance

Neglected machine servicing adversely affects result accuracy. Without regular maintenance, machines may develop issues that compromise their precision and reliability. Ensuring timely and thorough servicing is crucial to uphold the integrity of results and prevent inaccuracies that may have consequential impacts in various fields, from healthcare to manufacturing. The responses contain the following examples:

“...when the machines are not serviced or are no longer in good place it results wrong readings.”

4.5.1 Quality improvement- collective vs separated responsibility.

This subtheme delved into the collaborative versus individual nature of quality improvement within the environment. It examined whether enhancing quality was a shared responsibility among the team or if it fell under the purview of individual roles, shedding light on the dynamics shaping the approach to quality enhancement within the given context.

4.5.9.1 Collective responsibility

Most respondents agreed that quality improvement was a collective responsibility. It involved everyone as everyone worked to ensure and improve quality. Some answers from the schedule interview are as follows:

“...we ensure quality improvement”.

“It also involved the different levels from junior to senior levels. All levels had to integrate quality into their respective space.”

“It is everyone’s duty, if it is your shift, you are responsible for checking every Monday or new stock, we then use a green register to sign off that the resources conform to quality, and we also confirm with the nurses (they are our witness) that the kits are within the acceptable specifications.”

Quality was linked to continuity: if someone was absent, then another staff member should be able to continue in their place.

4.5.9.2 Separated responsibility.

However, some believed that quality improvement was separate. One respondent felt that the daily responsibilities of taking care of patients were too much and one could not pay as much attention to quality. The responses contain the following examples.

“It is separate development work, we are always busy so we cannot pay much detail in quality development work, but I do ensure that all patients are well taken care of always.”

Another respondent asserted that *“whilst it was everyone’s responsibility, it was also up to the individual to be able to manage quality on their own.”*

4.5.10 Recommend facility to others to work at

This subtheme determined if the current workplace would be recommended to others to work in. The majority of survey participants expressed their inclination to recommend their workplace to others, citing teamwork as the foremost factor. This sentiment was unanimously agreed upon by 10 respondents.

One respondent asserted that they had a good manager. This was positive finding indicating that teamwork complement quality within the workplace. Some of their responses are outlined below.

“No, and yes because we have good teamwork even though it hurt not to assist patients.”

“Yes, we work as a team, and we share ideas so we can all have knowledge.”

4.5.10.1 Would not recommend

Some individuals hesitate to recommend the workplace due to concerns about insufficient resources, including medication availability. Mokoena (2017) study revealed significant issues with material resources, equipment, and scanner conditions, leading to extended patient stays, delayed diagnoses, and treatment. Healthcare providers expressed dissatisfaction with management practices, citing low staff motivation levels. Some of their responses are outlined below.

“No, because the management system is not up to good standards.”

Staff motivation was currently low.

“...there is nothing that motivate you to come to work.”

4.6 Management and Objectives

This primary theme examined the overall concept of organisational management and its objectives related to quality; this theme is represented in Figure 4.11.



Figure 4.11 Tree map: Unveiling the 2nd theme (Management and objective’s theme)

Source: Researcher’s own construction

These visualizations depict data, particularly commonly used words, represented by varying block sizes. Larger blocks signify the prevalence of specific words. The complete map provides a comprehensive overview of the arrangement of data based on the size of references, offering insight into the prominent elements in the dataset.

The respondents' viewpoint on management and objectives was shaped by the sub-themes covered in sections 4.6.1 to 4.6.4. These considerations played a pivotal role in informing their perspective on the discussed factors.

4.6.1 Role of management in achieving quality

Understanding the pivotal role of management in achieving quality is crucial. Managers contribute significantly by setting standards, fostering a culture of excellence, and implementing effective quality control measures. Their role extends to ensuring adherence to protocols, continuous improvement, and creating an environment that prioritizes and sustains high-quality outcomes in organizational processes.

4.6.1.1 Guidance and trainings

Guidance and training were a key aspect expedited by management. Management did provide training which plays a role in promoting quality. Staff can gain more understanding and work more effectively through training. Guidelines were also provided which served to guide staff accordingly in their line of work. This is corroborated by healthcare professionals who expressed similar views.

“The management provides trainings and workshops for us to add more knowledge and remind us how to deal with the patient.”

4.6.1.2 Staffing and resources

Management also played a role in staffing capacity and resources. Due to a shortage of staff, the managers do try to manage and contain the situation by borrowing staff from other departments and facilities. Similarly, managers try to obtain, rearrange, and borrow resources so that the clinic operations remain unhindered. Healthcare experts have corroborated this information, affirming their shared perspectives.

“The management assists us by borrowing certain staff that we do not have to the government school e.g., Papers or staples.”

4.6.1.3 Adherence

The manager ensures that there is adherence to principles and standards. Adhering to principles such as Batho Pele to satisfy patients, is regarded as a priority by management. This is confirmed by healthcare professionals who expressed similar opinions.

“The management assists us in ensuring that we satisfy patient and we do follow Batho Pele principles.”

Managers meticulous by ensuring that staff do a detailed examination on health conditions of patients and manager try by all means to foster relationship building.

“...by ensuring that we as staff consider in detail any health conditions that come with the patient.”

4.6.1.4 Promote good relations.

A manager ensured that there were always good relations between staff and patients. Healthcare professionals have affirmed this, sharing comparable perspectives. This is supported by healthcare providers who share the same sentiments.

“I am creating a good relationship between my staff and patients,”

The manager also plays a role in following up with patients should they miss an appointment. They also follow-up with staff on given tasks and Managers try to make interventions to deal with unexpected situations.

“...he identifies emergencies as we are inside the consultation rooms and brings patients that need urgent help.”

4.6.2 Relationship between quality objectives and organisational objectives This primary subtheme examined the relationship between quality objectives and organisational objectives. The organisation was people-centred and therefore factored quality into this in the following ways:

4.6.2.1 Satisfaction and quality

Patient satisfaction was an objective. Therefore, quality was measured through patient satisfaction. By ensuring that patients were happy and satisfied, the service received was of good quality. Some of the responses were stated as follow:

“The relationship between our objectives and the organization's objectives is that we all aim to satisfy patients and meet their needs.”

4.6.2.2 Patient health

Similarly, ensuring patient health was a key objective and therefore linked to quality. As alluded to in other themes, Batho Pele was at the centre of patient care. Education and empowerment of patients were also an objective related to quality. Some of the responses were stated as follow:

“...the organisation has Batho Pele principles to ensure that we do obey the rules.”

“Our objective is to ensure that we do follow-up on our patients and if they do not come back, we call to check up on them or send home base workers.”

4.6.2.3 Efficiency

Efficiency was very important in reducing waiting time and promoting patient satisfaction by creating and transferring patient files within a short period of time was seen as crucial for efficiency and obtaining quality care and to reduce waiting time for patients and led to patient satisfaction. This is all linked to quality. Some of the responses were stated as follow:

“Our objective is to ensure all patients get their files within a short period of time and refer them to the clinic; the organisation’s objective is to satisfy patients and we assist by making the procedure faster by getting files or registering the patient into the system within a short period of time.”

4.6.2.4 Knowledge

Knowledge promoted quality and was therefore part of the objectives. Knowledge was promoted through trainings and workshops. It was also shared between staff, and this enabled all staff to be knowledgeable. Some of the responses were stated as follow:

“Our objective is to ensure that we have enough knowledge as nurses and the organization provides workshops throughout the year; workshop assists us in gaining knowledge and educating each other.”

4.6.3 Instructional impact and suggestions

This subtheme focused on the positive instructional impact on work quality, incorporating suggestions for improvement. Managerial instructions guided staff in patient care, enhancing efficiency and overall work quality, as acknowledged by healthcare providers.

Certain replies were expressed in the following manner:

“Yes, it makes it easier for me to able to be more effective quality of care to employees(staff), patients and community.”

4.6.3.1 Lack of consideration

Most respondents implied a lack of consideration by management for suggestions made by staff in terms of improvement. Overall, staff indicated that even though suggestions were made and communicated, management did not consider them. No proper reasoning was given, and staff were not given opportunities to present their ideas. Certain replies were expressed in the following manner:

“Yes, but mostly they are not considered with no explanation why they are not.”

“Yes, but they are not considered which makes me often not complete the surveys given by the top manager, and we lose interest in our tasks.”

“Yes, but they are not considered. Every time we attend meetings weekly, I do raise my hand, but I am not pointed to say what I want to say nor contribute to what is being discussed.”

4.6.3.2 Inputs Considered

Some respondents indicated that their inputs were considered. One respondent asserted that it was a team effort, and all inputs were discussed and considered as a team. Certain replies were expressed in the following manner:

“Yes, we discuss as a team when approved, we then communicate with patients if they are going to be any changes at the clinic.”

Four respondents indicated there were regular meetings where ideas were tabled by staff. These were considered and approved where applicable. Certain replies were expressed in the following manner:

“Yes, if you have an idea, you raise it during the weekly meeting and if the manager approves it then he will say what is the next step, but I have not raised any idea so far. I am still happy with the current system.”

4.7 Current Tools and Systems to Promote Quality

This primarily examined the current tools and systems to promote quality in the organisation. These are classified below; the theme is represented in Figure 4.12.

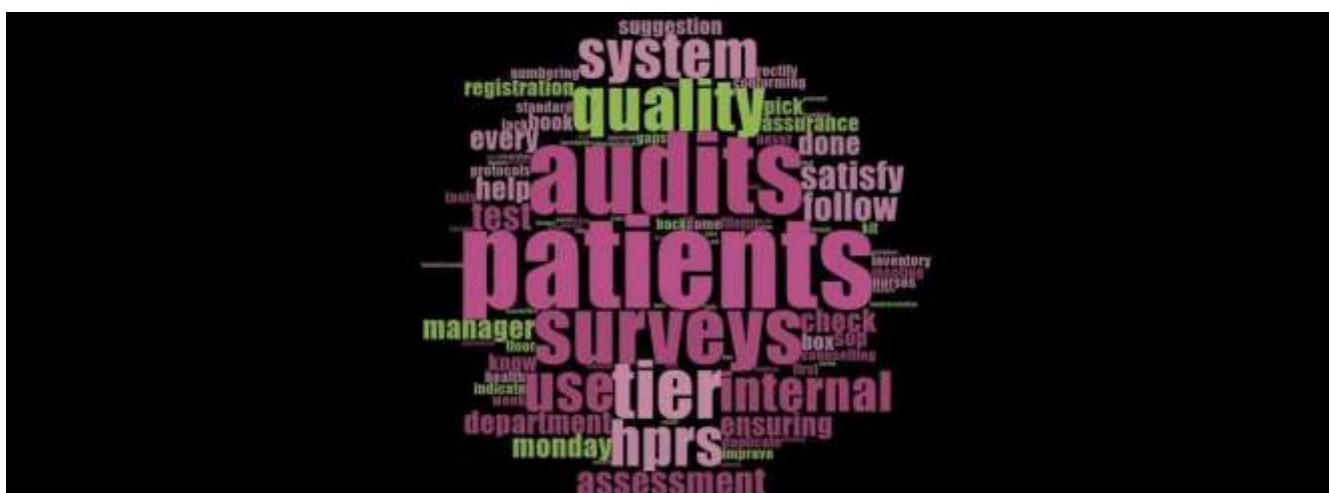


Figure 4.12 Word cloud: Unveiling the 3rd theme.

Source: Researcher's own construction

Word Clouds visually represent the frequency of words, with larger font sizes indicating more frequent usage. This visual tool is valuable for pinpointing key themes and areas by highlighting the prominence of specific words in a given text or dataset.

The respondents' viewpoint on Current Tools and Systems to promote quality was shaped by the sub-themes covered in sections 4.7.1 to 4.7.6. These considerations played a pivotal role in informing their perspective on the discussed factors.

4.7.1 Audit and Quality Assurance

In the assessment of audit and quality assurance, noteworthy findings have emerged. This examination reveals key insights and observations from a perspective centered on ensuring adherence to standards and enhancing overall quality in processes and operations.

4.7.1.1 Internal audits

Internal auditing ensured that internal departments were aligning with quality protocols, and this was primarily done by the respective manager. Several replies were articulated in the following manner:

"...followed by audit to ensure we still align to quality protocols. The audit is done by the manager."

"...having internal audits, we help each other by ensuring that our department pass the audits."

4.7.1.2 External audits

External audits are also performed, and this is done randomly so internal staff are not aware. This is effective in ensuring that all protocols are being followed. The statements from some participants were expressed in the following way:

"After the surveys we also have external audits from the department they come randomly, without us knowing, to see if we still follow health protocols."

4.7.1.3 File audits

Nurses conducted targeted file audits, focusing on the meticulous examination of records to identify and rectify any gaps or discrepancies. This approach aimed to ensure thorough documentation and uphold standards in healthcare practices, promoting quality assurance within the healthcare system. Here is how some respondents conveyed their thoughts:

Auditing and file auditing by us as nurses. We pick up gaps and fill them to satisfy patients.

4.7.2 Inventory

Inventory checks are done as well to ensure that there is a conformance and nonconforming inventory is rejected. Certain individuals conveyed their responses as follows:

“...we do quality assurance every Monday. If the inventory is conforming, we sign and utilize the inventory but when it non-conforming we never use it and put it under rejects.”

4.7.3 Surveys and Suggestion Boxes

Most respondents expressed a high regard for surveys and suggestions as a prominent type of quality system. The recognition of surveys and suggestions underscores their perceived effectiveness in gathering valuable insights and feedback to enhance overall quality within the surveyed context.

4.7.3.1 Surveys

Quality surveys are run, and patients can evaluate the services offered. These are done every week. The following represents how a few responses were phrased:

“Yes, we have a quality survey, done every Monday.”

“Yes, we have patients’ surveys whereby patients rate us and tell us where we need to improve.”

4.7.3.2 Suggestion box

Suggestion boxes also served to obtain feedback and complaints from patients. This served to determine where service gaps could be identified and addressed. Here are the expressions provided by some respondents:

“Yes, we have a suggestion box that is opened by the manager and clinic committee, after their meeting the manager comes back with feedback, and we try to rectify mistakes that we had to satisfy the patients.”

4.7.4 Assessments

Quality assessments were conducted to scrutinize and evaluate various aspects, providing valuable insights into the standard and effectiveness of processes. These assessments played a pivotal role in ensuring adherence to quality benchmarks and identifying areas for improvement within the evaluated context.

4.7.4.1 Internal assessment

Internal assessments are done to determine grey areas in need of improvement/s.

Some of the replies were formulated in the following manner:

“Yes, we do an internal assessment that helps us to know where we lack.”

“Yes, we do internal assessments quarterly.”

“We have an internal audit assessment.”

4.7.4.2 District assessment

A district assessment was conducted, guaranteeing adherence to standards at the district level. This comprehensive evaluation aimed to ensure compliance with established criteria within the designated district and DEAL assessments were also conducted. Here's how some participants chose to articulate their responses: *“...national core standards done after 3 years, and district assessment that helps us to know where we lack.”*

4.7.5 Systems

The electronic systems in operation are centred on the following aspects, forming the focal points that govern their functionality and contribute to the overall efficiency and effectiveness of the operational framework.

4.7.5.1 TIER system

Most respondents indicated a TIER system is in place. This is a type of electronic patient management system that is used for the management and monitoring of patients. The following outlines how certain responses were conveyed:

“...the system is easy to use even if you have never used it before and does not allow duplicate numbering.”

“Yes, we have TIER, the system picks up when there are errors when you are registering the first time and when there is a duplicate in numbering.”

4.7.5.2 HPRS system

The Health Practitioner Registration System (HPRS) was another noteworthy element in the landscape, signifying a vital component within the broader context of health services and professional registration. The following outlines how certain responses were conveyed: *“We also have a Health system patient registration.”*

4.7.5.3 Computer registration book

There was a computer registration book in place. One respondent also mentioned an ‘Administration book’. In the following statements, you can see how respondent expressed their views:

“...going through the registration book to check details.”

4.7.5.4 Counselling and Testing System

A Counselling and testing system were in place to facilitate the recruitment of patients for testing. Several replies were articulated in the following manner:

“Yes, we have Counselling and testing system, assuring that we use a positive approach to recruit patients to test.”

“Yes, we have Counselling and testing tools known as ABON and first respond self-test kit; we do quality assurance every Monday.”

4.7.5.5 Monitoring and checks

Various monitoring and checking mechanisms were in place. There was daily monitoring of and replenishment of the emergency trolleys. Quality checks are done on test-kits. In

addition, medication is checked for expiry dates. Here is how some respondents conveyed their thoughts:

“As quality surveyors for patients, we also double-check the expiration date before we use those resources for patients.”

4.8 Evaluating Quality

The primary theme centered on quality evaluation, drawing insights from various subthemes, as illustrated in Figure 4.13. This comprehensive examination explored diverse facets to provide a nuanced understanding of the overarching quality assessment.

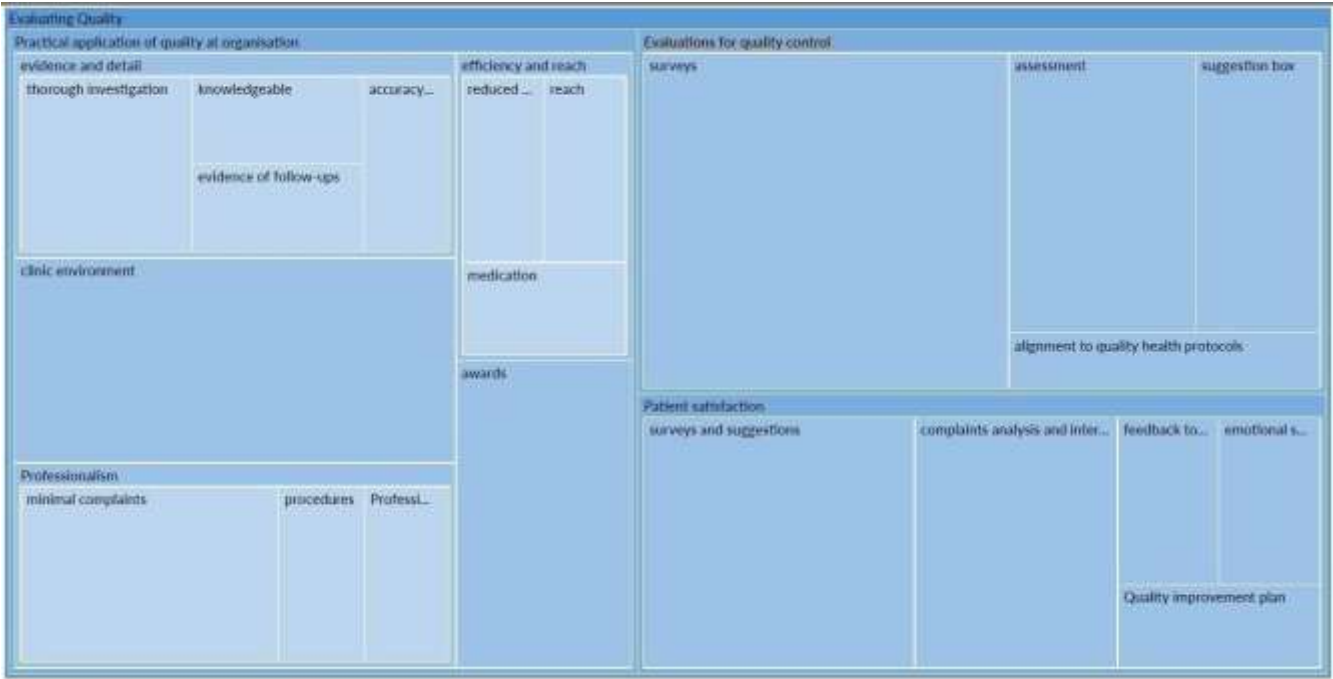


Figure 4.13 Hierarchy chart: Unveiling the 4th theme.

Source: Researcher’s own construction

These dimensions indicate node size, with larger sizes signifying a greater volume or concentration of responses in the respective area. The visual representation reflects the prominence and significance of each node in the dataset.

The respondents' viewpoint on Current Tools and Systems to promote quality was shaped by the sub-themes covered in sections 4.8.1 to 4.8.5 These considerations played a pivotal role in informing their perspective on the discussed factors.

4.8.1 Evaluations for quality control

Assessments for quality control are conducted to gauge and ensure the adherence of products, processes, or services to predefined standards, aiming for consistency, efficiency, and excellence throughout various stages of production or implementation.

4.8.1.1 Surveys

Surveys again ranked highly as improvements were based on the feedback received from such surveys. These surveys were examined by the nurses and management. The following represents how a few responses were phrased:

“We use surveys and are evaluated by the nurses and audits done by the manager.”

“Overall survey is done to a patient on a quarterly basis, that helps us to get feedback and fill the gaps.”

4.8.1.2 Suggestion box

Suggestion boxes were also used to evaluate complaints and compliments in terms of quality. Some of the replies were formulated in the following manner:

“We have a suggestion box, used for complaints or compliments from the patients, and patients survey are used to rate us, they help us which area to focus on when improving quality within the organisation.”

4.8.1.3 Assessment

Internal assessments for quality are done, as alluded to in other themes as well.

The statements from some participants were expressed in the following way:

“...an audit assessment done by provincial officials to ensure that everyone is satisfied, it is done once a year.”

4.8.2 Patient satisfaction

Concerning assessments of patient satisfaction, the evaluations revolved around gauging the level of contentment and fulfilment experienced by individuals within the healthcare context, encompassing diverse aspects of their interactions and experiences within the system.

4.8.2.1 Survey and Suggestions

Surveys and suggestion boxes again became a recurring theme, and it appears that these were the first line of evaluations for satisfaction. Some of the replies were formulated in the following manner:

“We use a patient’s satisfaction survey (twice a year), and a suggestion box... Complaints are evaluated by managers and clinic committees. Relevant actions and interventions were made to address the issues.”

4.8.3 Quality Improvement Plan

Efforts in quality improvement involved the implementation of improvement plans, strategically crafted to foster enhancement in various aspects, reflecting a commitment to continual improvement and excellence within the organizational framework.

4.8.3.1 Emotional support

Some individuals needed emotional support in addition to medical care. The facility endeavoured to provide enhanced emotional assistance to patients. Prioritization was determined by assessing specific needs and vulnerabilities, with priority given to categories such as the elderly, pregnant women, and children.

4.8.4 Practical application of quality at the organisation

Tangible instances showcasing the application of quality measures within the organization illustrate its commitment to excellence. These practical examples serve as tangible demonstrations of the organization's dedication to maintaining and enhancing quality standards in its operations.

4.8.4.1 Evidence and detail and follow up.

Consistent adherence to thorough practices and meticulous documentation was observed. Comprehensive evidence of patient follow-up procedures was consistently recorded, reflecting a commitment to maintaining a high standard of care and accountability within the healthcare system.

4.8.4.2 Accuracy of test results

Test results are always accurate by ensuring that multiple methods validities is used before confirming results. Several replies were articulated in the following:

“We use rapid tests, it happened that one test is positive, and the other is negative, we use a confirmability machine to verify which kit is accurate or we refer the patient to the nurse so that they can take the patient’s blood to the lab for analysis.”

4.8.4.3 Awards

The Facility also received awards of excellence indicating high standards and quality.

Several replies were articulated in the following manner:

“We have a platinum award as a reward from the National Occupational Health and Safety and we also received an award of excellent from one of the NGO 2014.”

4.8.5 Professionalism

Prioritizing professionalism is paramount, emphasizing a continuous dedication to maintaining standards, ethical conduct, and excellence across different domains. This commitment ensures a consistently elevated level of performance, notably reflected in staff interactions with patients. There were minimal complaints received which implied patient satisfaction. In addition, patients were always attended to and not left unattended.

4.9 Improvement and forward thinking towards Quality

This primary theme focused on improvement and forward thinking in terms of quality; this theme is represented in Figure 4.14.

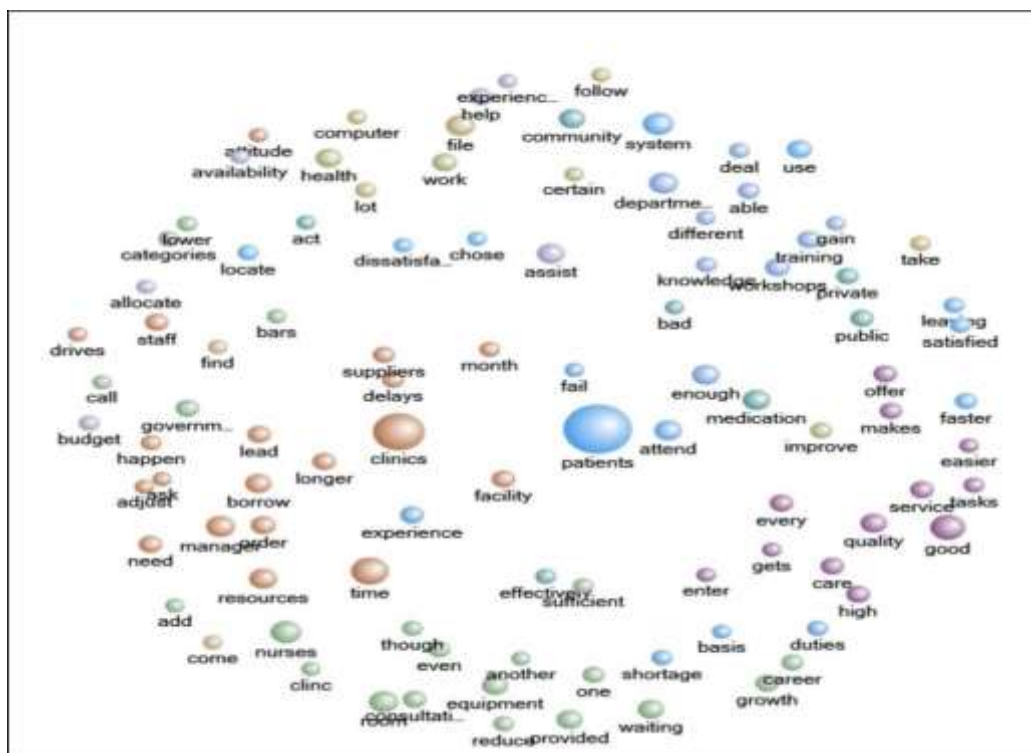


Figure 4.14 Cluster analysis: Unveiling the 5th theme.

Source: Researcher's own construction

Figure 4.14 was extracted from NVivo representing the link and relationship between sub themes. From the figure, 'patients' has the biggest balloon which means that most health care

providers mentioned the word several times. The balloons that share same colour and are close to each other have a relationship or a link.

The respondents' perspective on enhancing quality and forward-thinking was influenced by the sub-themes discussed in sections 4.9.1 to 4.9.4. These elements significantly contributed to shaping their outlook on the factors under discussion.

4.9.1 Strengths, weaknesses, opportunities, and threats within environment

This primary subtheme outlined strengths, weaknesses, opportunities, and threats within the work environment. This is important as so the organisation understands its strengths and opportunities to grow, but also to improve on weaknesses and threats.

4.9.1.1 Strengths

The key strengths discovered through the results are classified as professionalism, quality care, attitude, confidentiality, and positive response given to the patients. There was always professionalism shown in the work and professional services given to patients. Quality care was always given to the patients and all patients were always assisted. The following represents how a few responses were phrased: *“Every patient gets high-quality care always, immediately after they enter our premises.”*

4.9.1.2 Weakness

Weaknesses were identified within the staffing aspect, highlighting areas that require attention and improvement. This examination focuses on addressing deficiencies to enhance the overall effectiveness and efficiency of the staffing component.

4.9.1.2.1 Staff incompetence and knowledge

One respondent (nurse) reported that the clinic is operated by unqualified nurses and has inaccurate bar levels. There was a lack of knowledge. Some of the replies were formulated in the following manner:

“...our clinic runs by unqualified nurses, we call it bars, so if you have 3 or more, they are based on your experience but here you a nurse with all bars but do not qualify.”

“We are lacking knowledge.”

4.9.1.2.2 Nepotism

Instances of nepotism are evident, with vacant positions being favourably allocated to individuals based on personal connections or friendships. This

practice undermines fair and merit-based hiring processes, raising concerns about transparency, equity, and the overall integrity of the organizational recruitment system, which results staff does not seem motivated to come to work hence motivation levels were low. In the following statements, you can see how some respondents expressed their views:

“Vacancy posts are given to friends.”

“No, you should have added question that are we motivated to come to work? Well, we are not motivated, there is nothing that drives us to excel in what I do.”

4.9.1.2.3 Resources

Resource limitations, particularly the scarcity of consultation rooms, significantly contributed to prolonged waiting times. Additionally, a pervasive shortage of medication further exacerbated the challenges, highlighting the pressing need for increased resources to address these critical issues and enhance overall service delivery.

4.9.1.2.4 Electricity and networks

The electricity problem which affects the entire country has a massive impact on operations and service delivery. This leads to delays in service and inability to access computers. Networks are also affected.

Administrative challenges, including a lack of management support, inadequate record-keeping, and poor data management, were identified as a significant challenge to service delivery at public clinics in South Africa. These challenges lead to delays in treatment and compromise the quality of care provided. Previous studies have also identified administrative challenges as significant barriers to service delivery in public clinics (Moshabela 2017; Maharaj 2018).

The following outlines how certain response were conveyed:

“Unable to locate a file or register new patients to the system assist patients if the power is off and they must return home and that is how they chose other clinics.”

4.9.1.2.5 Patient hesitance

Patients are also hesitant to sometimes come to the facility as staff members are from the same community. Hence patients become worried about confidentiality.

4.9.1.3 Opportunities

This subtheme delineates potential avenues for the organization to leverage and capitalize upon. It highlights prospective opportunities that, if strategically harnessed, could contribute to the organization's growth, development, and overall success.

4.9.1.3.1 Training and knowledge

There was ample training given to staff which served as an opportunity to build new knowledge and keep abreast with the field. The following outlines how certain responses were conveyed:

“We attend workshops and gain knowledge to that makes us to be able to assist in different scenarios e.g., when we were attacked by the Corona Virus we were trained and able to deal with such.”

4.9.1.4 Threats

Similar to the identified weaknesses, respondents outlined diverse threats impacting the scenario. The recognition of these threats adds depth to the understanding of challenges, highlighting the need for strategic mitigation and proactive measures to navigate potential adversities effectively.

4.9.1.4.1 Alternative healthcare facilities.

There were always other clinics and facilities. This meant that patients could leave the current facilities and opt for another if they were not satisfied. One respondent did notice a decrease in clinic statistics in this regard.

4.9.1.4.2 Manager communication

Communication with management can be challenging even in instances when he/she is not adhering to health protocols. This can lead to patient dissatisfaction. The statement from some participants were expressed in the following way:

“We cannot tell our manager even though his not being fair or acts out of health protocols, so this will lead to the dissatisfaction of patients.”

4.9.2 Quality management system - private versus public

This subtheme assessed the feasibility of implementing a quality management system utilized in advanced private facilities within the public clinic sector. The focus was on determining the adaptability and efficacy of such a system in the context of less developed healthcare settings.

4.9.2.1 Positive response

Respondents embraced changes, foreseeing positive impacts like enhanced service quality, and streamlined tasks. Introducing similar systems aimed to attract qualified personnel. Disparities underscored the need for increased resources in the public sector.

4.9.2.2 Operational differences

However, two respondents felt that system in private clinics may not work as the contexts were different along with operations. A thorough analysis would have to be done before adoption of such systems as well as a revamp of infrastructure to accommodate such systems.

4.9.3 Provision of necessary equipment and resources to perform duties.

The central focus was on management's commitment to facilitating duty performance by ensuring the provision of essential equipment and resources, reflecting a strategic approach to enhance operational efficiency and employee effectiveness.

4.9.3.1 Borrowing

Due to resource constraints, managers tend to try and overcome this by borrowing resources and staff from other departments and facilities. Hence borrowing resources was the most highly ranked factor in this regard. The statements from some participants were expressed in the following way:

"We do place an order once a month and most of the time we experience delays, so we then ask the manager to borrow from other clinics or at a government school next to us."

4.9.3.2 Advance ordering

Advanced ordering was done to ensure that equipment and resources are secured and there are different suppliers for each department are not hindered by using only one supplier. Here's how some participants chose to articulate their responses:

“We do not experience any shortage of equipment or any resources because we order in advance, and we monitor our room temperature because there is equipment that does not need to be in high room temperatures.”

4.9.3.3 Budget allocations

Budget allocations are set at the beginning for the year to procure relevant resources. Sometimes budgets are small, and they are also adjusted accordingly to acquire most needed items. Several replies were articulated in the following manner:

“Sometimes it does happen that the budget located for us is small and we cannot purchase the exact number of resources we need, we then call and ask them to adjust our budget...”

4.9.4 Recommendations to improve quality system.

The primary subtheme focuses on pivotal recommendations aimed at enhancing the facility's quality system. These proposals address crucial aspects to elevate overall quality, ensuring a robust and efficient framework for sustained excellence and continual improvement.

4.9.4.1 Equipment and resources

More equipment and resources were needed. This would impact positively on staff duties and service delivery quality. Several replies were articulated in the following manner:

“Have all equipment in one consultation room to reduce waiting because 1 patient must consult in one room and move to another room with another nurse.”

4.9.4.2 Infrastructure

Infrastructure must be improved upon. This included added consultation rooms. Here are the expressions provided by some respondents:

“Change our infrastructure, I am sharing with an emergency, there are only 2 consultation rooms so there is not enough space in the clinic, which leads to less privacy for patients.”

4.9.4.3 Reduce waiting time.

Waiting time must be reduced further. This can be done by monitoring the current file transfer process from the time the patient enters the clinic. Gaps can be

identified and addressed to speed up the process. To optimize storage and prevent redundancy, it is imperative to promptly delete files of deceased patients. This practice streamlines data management and conserves valuable storage space efficiently.

4.9.4.4 Demonstration book

A respondent emphasized the necessity for a demonstration book, highlighting its crucial role in conveying information effectively. Recognizing the significance of a tangible example, this perspective underscores the practicality and educational value that a demonstration book could bring to enhance understanding and communication within a given context.

4.9.4.5 Adding staff

The shortage of staff can also result in long waiting times for patients and inadequate time spent with healthcare providers. Additionally, staff turnover is high in public healthcare clinics, which means that clinics often lack experienced healthcare providers (Ramphal and Garidzirai 2020). The lack of adequate staffing levels hinders the ability of clinics to meet the demands of the population and provide efficient care; this shortage also puts additional stress on healthcare workers, impacting their job satisfaction and morale (Nxumalo and Goudge 2021).

4.9.4.6 Staff accountability

There must be more staff employed and staff should be accountability in their duties with ample consequence management and a rating scale must be given as so staff can rate their managers. This is because often manager determine how staff must/should work. Certain individuals conveyed their responses as follows:

“One has to be accountable, if she/he did not finish his duties/tasks and the manager should take action if one has not”.

“I wish you gave us a rating scale for our management because the management often use powers to influence how we perform our duties”.

4.9.4.7 Community engagement and Awareness campaigns There must be more community engagement to determine the needs of the community, and

this can be done by the clinic committee. In addition, awareness campaigns must be done monthly to educate and empower the community.

Some of the replies were formulated in the following manner:

“To work collectively with the community, but for now as we have a clinic committee so that acts as a mediator between the community and the clinic; however, it is not effective.”

4.9.4.8 Regular drills

Regular nursing drills are crucial for emergency preparedness among healthcare staff. These drills serve as invaluable training sessions, ensuring that nurses are adept at responding swiftly and effectively in critical situations. By simulating emergencies, nurses can hone their skills, practice teamwork, and familiarize themselves with emergency protocols. These drills not only enhance individual competency but also contribute to a cohesive and well-coordinated healthcare team. Given the unpredictable nature of emergencies, the periodic repetition of nursing drills is essential to maintain a high level of readiness. Incorporating these drills into regular training schedules empowers nurses to handle diverse medical crises with confidence and precision.

4.9.5 Continuity

Operational continuity stands as a paramount consideration, indispensable in sidestepping disruptions and setbacks. In the dynamic landscape of business and operations, maintaining seamless functionality becomes imperative. This ensures a resilient framework capable of withstanding unforeseen challenges. Emphasizing operational continuity not only safeguards against potential pitfalls but also fortifies organizational resilience, enabling sustained performance and adaptability. Recognizing its significance underscores a proactive approach to business management, mitigating risks and reinforcing the foundation for sustained success in the face of uncertainties.

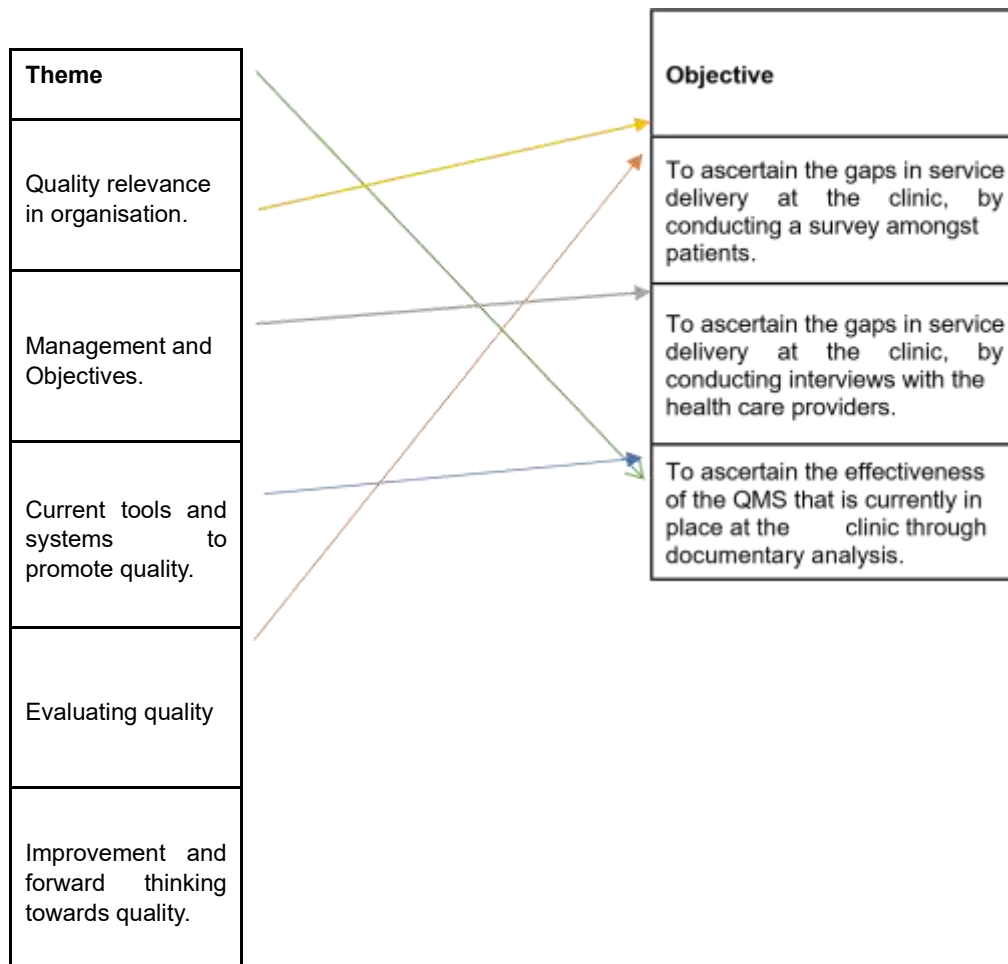
4.9.5.1 Network uptime

There must be more availability of networks even during loadshedding as so patients can still be attended to, and files allocated, as represented in Figure 4.14. The facility must consider obtaining a generator to cater for electricity disruptions such as loadshedding which is a national problem. Separate transformers can be used as so the facility is not disrupted when electrical cables are stolen. The municipality should assist in this.

4.10 A comprehensive cross-multiplying analysis

Quality in healthcare organizations is a paramount theme that encompasses various aspects, including service delivery, management, evaluation, and continuous improvement. This study focused on exploring the relevance of quality within the context of a clinic. The management and objectives associated with quality, along with the current tools and systems implemented to promote quality, form critical components of this examination. The study also aimed to evaluate the effectiveness of the existing Quality Management System (QMS) and foster forward-thinking approaches to quality improvement. Through a comprehensive approach, this research sought to identify gaps in service delivery, incorporating perspectives from both patients and healthcare providers, and to analyse the efficacy of the clinic's current quality initiatives. Table 4.1 serves as a comprehensive cross-multiplying analysis. The table highlights each theme identified in the study and delineates the extent to which each theme contributes to the satisfaction of specific objectives. The analytical framework offers valuable insights into the interconnectedness between themes and the achievement of the study objectives.

Table 4.1 A comprehensive cross-multiplying analysis



Source: *Researcher's own construction*

This data explores themes of quality relevance, management objectives, current tools/systems for quality promotion, and quality evaluation. The objective is to identify service delivery gaps through patient surveys, provider interviews, and QMS analysis.

4.11 Data analysis and interpretation

This study aimed to investigate the implementation of quality management at the Hartebeeskop clinic, focusing on its development and execution mechanisms. Primary data collection methods included document analysis and scheduled interviews with healthcare providers.

The investigation followed three key lines of inquiry. Firstly, it assessed the extent to which the support sector at the Hartebeeskop clinic adopted, developed, implemented, and monitored service quality principles. Secondly, it explored the reasons behind similarities or differences in service quality adoption across South African public clinics. Lastly, the research identified drivers and barriers to quality management system implementation at

the Hartebeeskop clinic. This chapter presented a thematic analysis of the study's results, derived from qualitative data. Participants' insights, gathered through interviews and document analysis, focused on various aspects, including quality management mechanisms, support services activities, hindrances to implementation, and areas requiring development.

Interviews enriched understanding, while document analysis provided a nuanced view of quality management processes. This study contributes valuable insights to the broader discourse on quality management in public healthcare, offering a detailed examination of the Hartebeeskop clinic's experiences. The findings inform policymakers and practitioners aiming to enhance healthcare quality in similar settings.

This chapter triangulates data by combining analysis and interpretation of gathered information with results from document analysis and participant interviews.

4.11.1 Documentary Data Analysis

In this research, document analysis played a pivotal role in contextualizing quality management policy frameworks and understanding the environmental factors influencing the Department of Health's (DoH) quality management systems. This method complemented insights from interviews, enabling a comprehensive examination. Findings deepened our understanding of the DoH's strategies, policy guidelines, and institutional arrangements, particularly in service quality. Various institutional documents, accessible publicly or obtained through collaboration with the operations manager, contributed to a thorough exploration. The data analysis employed an inductive approach, utilizing qualitative content analysis informed by established methodologies. Despite efforts to minimize bias, interpretation was guided by the researcher's prior knowledge and literature insights.

The coding process utilized an institutional document analysis checklist and interview schedule, guiding data classification into themes for subsequent discussion. The presented list encapsulates these derived themes, offering a comprehensive analysis of the DoH's quality management landscape.

- (i) Quality relevance in organisation;
- (ii) Management and objectives;
- (iii) Current tools and systems to promote quality;
- (iv) Evaluating quality; and
- (v) Improvement and forward thinking towards quality.

(i) Quality relevance in organisation

Quality is a pivotal factor in the effectiveness and efficiency of healthcare services within South African public clinics, particularly exemplified at the Hartebeeskop clinic. The organization's dedication to quality is evident in its mission and vision statements, emphasizing the delivery of accessible, equitable, and patient-cantered healthcare. The clinic's strategic goals underscore the significance of quality by prioritizing the enhancement of patient outcomes, satisfaction, and the overall well-being of the community.

Situated in a rural area, the Hartebeeskop clinic has crafted a patient-centric strategic plan that explicitly addresses the quality of the patient experience through service excellence and delivery. The clinic commits to ensuring and continuously improving the quality of healthcare provided, recognizing that maintaining high standards is crucial for fostering trust among both patients and stakeholders.

In alignment with its patient-cantered approach, the clinic places a strong emphasis on patient satisfaction as a top priority. It pledges to uphold quality in healthcare, promising excellence in service delivery, and aims to empower individuals through effective service delivery, leadership, governance, and the provision of quality infrastructure and systems. Overall, the Hartebeeskop clinic's commitment to quality serves as a cornerstone for building trust and fulfilling its mission of providing outstanding healthcare services to the community.

(ii) Management and objectives

Efficient management of South African public clinics is pivotal for integrating quality into the organization's fundamental goals. The research underscores the dedicated leadership at Hartebeeskop clinic, emphasizing their commitment to fostering a culture of ongoing enhancement and responsibility. The clinic's goals are in harmony with the national health priorities, as illustrated in Table 4.2, which outlines Hartebeeskop public clinic's vision and mission alongside those of the South African health department.

Table....

	Vision statement	Mission statement
Hartebeeskop clinic	A society characterized by well-being and longevity.	Our goal is to deliver enduring health services centred around people, with a focus on ensuring longer, healthier lives for the residents of Mpumalanga. We prioritize access, equity, efficiency, and quality to enhance the well-being of the community.

South African health	Wishing enduring health and wellness for every individual in South Africa.	Enhancing health outcomes involves preventing illnesses, diseases, and advancing a healthcare system that prioritizes accessibility, equity, efficiency, quality, and sustainability. This aims to foster overall well-being and improve the delivery of health services.
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Source: Researcher's own construction

Both entities share a vision for overall well-being, with a commitment to providing enduring health services. However, the differences lie in the scope of their missions and the specific strategies outlined. Hartebeeskop Clinic concentrates on Mpumalanga residents, while the South African Health adopts a nationwide approach, incorporating a comprehensive strategy to enhance health outcomes for all. Each entity's unique mission reflects its specific commitment and focus within the broader context of promoting health and wellness.

The research also highlights the management's dedication to creating a safe and inclusive work environment for healthcare professionals. It recognizes the direct link between staff well-being and the delivery of quality healthcare services. An interesting observation is that the operations manager actively supports the clinic's functions, going to the extent of borrowing stationary from other public facilities when shortages occur, ensuring continued support for patient care.

Nevertheless, some healthcare providers note that career advancement, respect, and consideration of ideas during weekly meetings with the operations manager may depend on the individual's relationship with the manager. This suggests that interpersonal dynamics and rapport play a role in professional growth and the acknowledgment of contributions within the clinic's operational discussions.

(iii) Current tools and systems to promote quality.

Ensuring equal access to entitled services for all citizens is a priority. To enhance accessibility, the clinic has adapted and improved the physical conditions of delivery sites, with clear signage both inside and outside the Hartebeeskop clinic for easy navigation. However, the researcher identified a discrepancy in the information dissemination approach, as only posters in English were displayed, potentially excluding Batho-speaking citizens. Although complaint and suggestion boxes were available, the absence of complaint procedures and writing materials (pens and paper) at the clinics raised concerns. It is crucial to make complaint procedures easily accessible to citizens, providing clarity on how to lodge complaints and the process for addressing them.

The assessment of support services at the Hartebeeskop clinic is an integral part of the overall quality assurance policy, aiming for service excellence. Tools such as patient satisfaction surveys and other assessments of service quality are utilized for self-reflection and continuous improvement, ensuring that the clinic remains committed to providing highquality healthcare service.

(iv) Evaluating quality

Evaluating the quality of services in South African public clinics is a comprehensive process that encompasses various aspects. Key performance indicators (KPIs) are set up to gauge clinical outcomes, patient satisfaction, and operational efficiency. The Hartebeeskop clinic conducts regular audits and assessments are carried out to identify areas for improvement and rectify any deviations from established standards. Feedback from patients, collected through mechanisms like surveys and focus groups, is used to gain insights into the patient experience and identify opportunities for improvement. The organization actively engages in external accreditation processes to measure its performance against national and international benchmarks.

As citizens are the primary users of government services, their feedback is considered crucial in evaluating the performance of departments in terms of service delivery. However, during interactions, citizens reported instances of nurses gossiping about patients' illnesses, which contradicts the National Health Act's provisions regarding user information.

The researcher also noted that due to a shortage of consultation rooms, patients experienced long queues, leading to extended waiting times. Complaints from citizens included the lack of respect and unfriendly behaviour exhibited by nurses, contrary to the Batho Pele principle of Courtesy, which emphasizes treating citizens with courtesy and consideration. Additional concerns were raised about the absence of dedicated personnel to guide and direct patients, leading to long waits, especially for emergency cases in need of urgent attention.

While the researcher found business hours and information on primary healthcare services displayed at the Hartebeeskop clinic, healthcare providers were unaware of the content of Departmental service charters, which were also on display. This lack of awareness contradicts the Batho Pele principles of Access and Information, emphasizing the importance of readily available information for citizens to empower them and address their needs.

The evaluation highlights a need for addressing issues such as staff behaviour, waiting times, and awareness of service charters to improve the overall quality of public clinic services in South Africa.

(v) Improvement and forward thinking towards quality

Continuous improvement is ingrained in the organizational ethos of the South African public clinic. Regular efforts are made to enhance quality through various initiatives. Collaboration among healthcare professionals, administrators, and patients is a key aspect, with staff holding weekly meetings and a monthly clinic committee meeting involving community representatives. The organization adopts a forward-thinking approach to quality, integrating technological advancements and evidence-based practices into its strategies. Future plans include the implementation of demonstration books, additional workshops to train and remind healthcare providers of fundamental principles, and the introduction of telemedicine services at Hartebeeskop. The clinic also aims to further integrate data analytics for decision-making and prioritize community engagement to foster health awareness and preventive care.

4.10.4 Conclusion

This chapter has presented the results from qualitative study and the data gathered through documentary analysis and participants' interviews. In the realm of healthcare quality within South African public clinics, particularly exemplified at the Hartebeeskop clinic, a steadfast commitment to quality is deeply rooted in the organization's mission and vision. The clinic places paramount importance on delivering accessible, equitable, and patient-centered healthcare, with strategic goals geared towards improving patient outcomes, satisfaction, and community well-being. In a rural setting, the Hartebeeskop clinic has crafted a patient-centric strategic plan emphasizing service excellence and continuous improvement, recognizing that maintaining high standards is essential for fostering trust among patients and stakeholders. The clinic's dedication to quality is evident in its patient satisfaction centric approach, promising excellence in service delivery and prioritizing community engagement to fulfil its mission of providing outstanding healthcare services.

The effective administration of the South African public clinic, particularly at Hartebeeskop, is instrumental in embedding quality within the organization's core objectives. Leadership demonstrates a commitment to cultivating a culture of continuous improvement and accountability, aligning clinic objectives with national health priorities. The management actively supports a safe and inclusive work environment for healthcare professionals,

acknowledging the direct link between staff well-being and the delivery of quality healthcare services. However, the study reveals that interpersonal dynamics with the operations manager may influence career advancement and recognition of contributions in weekly meetings, highlighting the importance of relationships in professional growth within the clinic's operational discussions.

The next chapter will present a discussion of quantitative data.

CHAPTER 5

ANALYSIS, RESULTS AND INTERPRETATION OF THE QUALITATIVE DATA

5.1 Introduction

This chapter analyses data gathered from the 363 answered and returned questionnaires, delving into both primary and secondary quantitative results. It offers a thorough discussion and aligns the research findings with prior studies for a comprehensive perspective.

5.2 QUANTITATIVE ANALYSIS

PRESENTATION, ANALYSIS, INTERPRETATION AND DISCUSSION

The results of quantitative data

This section summarizes the biographical information of the patients in the study and the type of visit to the clinic.

5.2.1 Age of respondents

The age distribution of patients is a crucial aspect in healthcare research, providing valuable insights into the demographic characteristics of a study population. Understanding the age composition of patients allows healthcare professionals, researchers, and policymakers to tailor interventions and allocate resources effectively. Figure 5.1 presents the age distribution of 363 patients, categorising them into distinct age intervals.

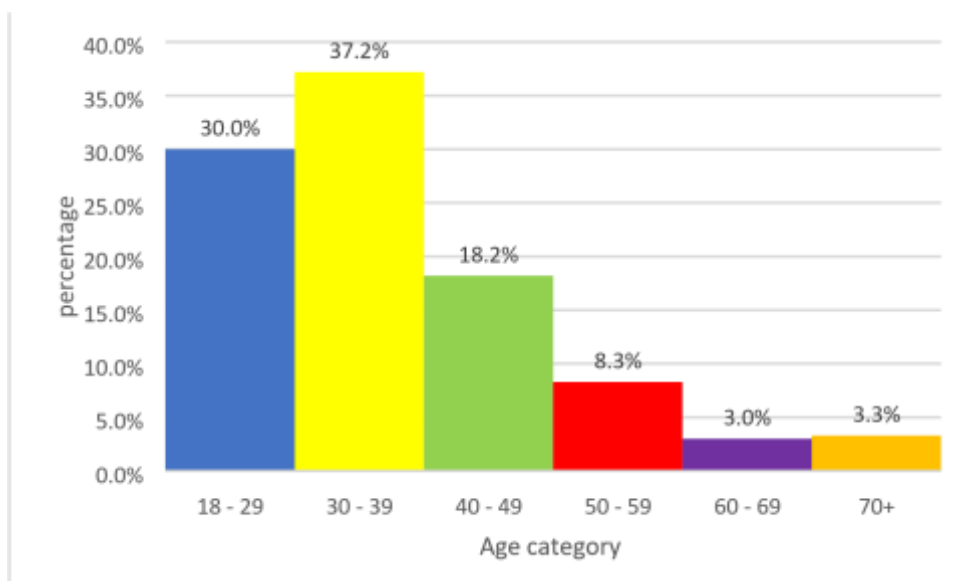


Figure 5.1 Age category of patients

Source: Researcher's own construction

This trend may have implications for healthcare planning, as it suggests that certain health conditions may be more prevalent or diagnosed in specific age brackets. The chosen age groupings, ranging from 18 to 70+, provide a nuanced understanding of patient demographics. These intervals are likely selected based on the anticipated relevance to the healthcare context under investigation. The concentration of patients in the 30 – 39 age group may necessitate targeted healthcare services and preventive measures tailored to the health needs of this demographic.

Understanding the distribution of patients across age intervals can aid in resource allocation, ensuring that healthcare facilities are equipped to address the specific healthcare needs associated with different age groups. While the age distribution provides valuable insights, it is essential to consider potential confounding factors such as gender, socio-economic status, and geographic location, which may influence health outcomes.

5.2.2 Gender distribution of patients

Examining the gender distribution among patients illuminates the demographic composition in the studied population. By analysing male and female representation, the goal is to reveal patterns, disparities, and insights, contributing to a nuanced understanding of healthcare dynamics in this context. The presentation of patient gender is depicted in Figure 5.2.

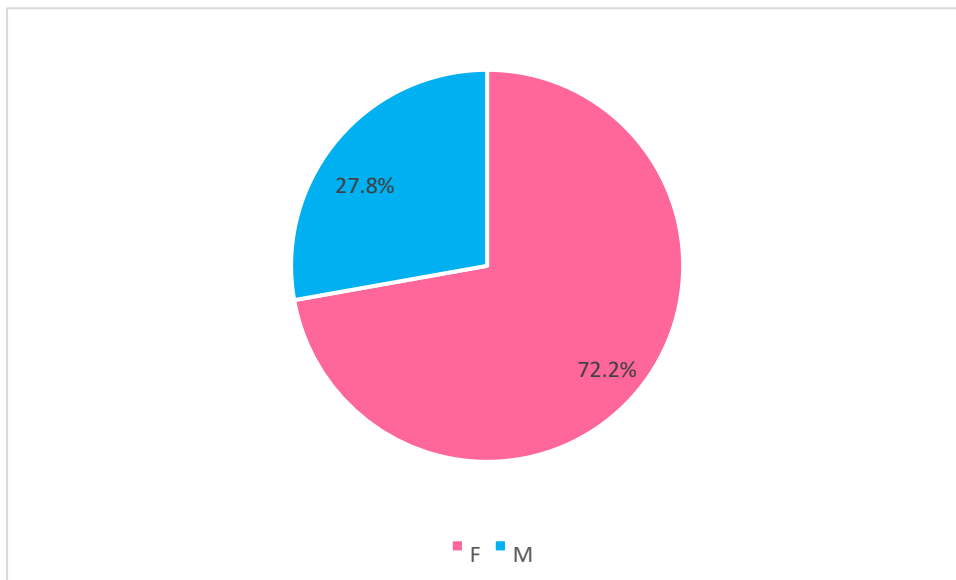


Figure 5.2 Gender of patients

Source: Researcher's own construction

In Rampamba *et al.* study from 2017, it was found that a higher proportion of women than men visit public healthcare facilities. The survey's outcomes revealed a notable gender disparity, with a greater number of female participants compared to their male counterparts. Specifically, 72.2% of the survey sample consisted of female patients, while only 27.8% were male patients, as illustrated in Figure 5.2.

5.2.3 Type of visit to clinic

This study explored the nature of clinic visits, investigating various aspects such as patient demographics, by examining the type of visits to the clinic the aim is to gain insights into the healthcare-seeking behaviour and prevalent health concerns among the diverse patient population figure 5.3 represents the type of visit by the patients.

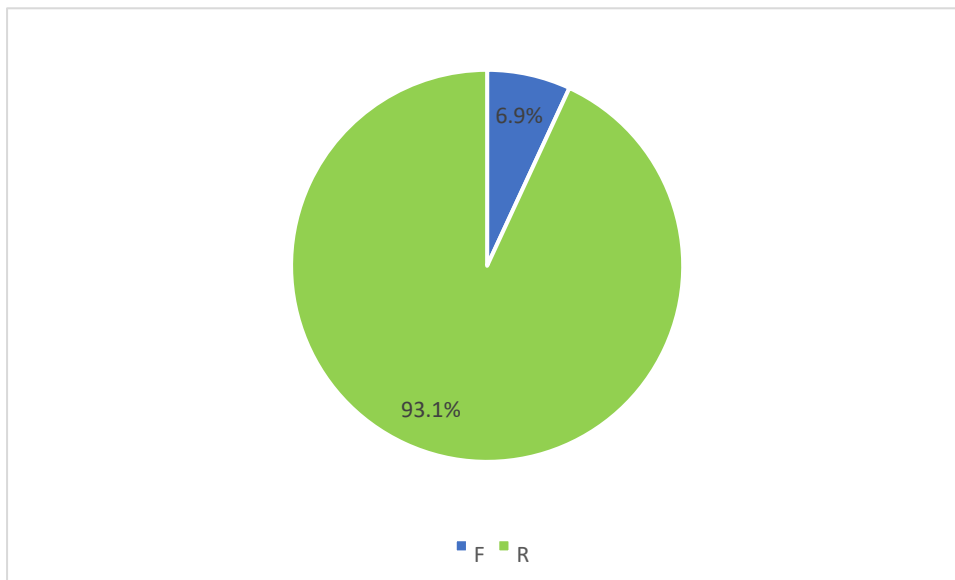


Figure 5.3 Type of visit by patients

Source: Researcher's own construction

The findings from the survey revealed that out of the total participants, 338 were individuals who had visited the clinic before, while only 25 were first-time attendees. Returning patients constituted 93.1% of the surveyed sample, whereas first-time patients comprised only 6.9% of the respondents.

5.3 Reliability of responses to questions in the questionnaire

In this section, the responses to the statements in the questionnaire will be analysed by first checking the reliability of the responses to the questionnaire by patients. This is done by using the Cronbach Alpha value for the statements making up the construct. The constructs for this study are Tangibles, Reliability, Responsiveness, Assurance, and Empathy. The respondents' possible answers to the questions were strongly disagree, which was coded as 5, disagree coded as 4, neutral coded as 3, agree coded as 2, and strongly agree coded as 1. A Cronbach Alpha value greater than 0.7 is viewed as an indication of an acceptable level of agreement and reflects consistency within answers. Responses to questions for all 363 participants were considered.

5.3.1 Tangibles

Table 5.1 represents items in the construct Tangibles and summary measures. The seminal work of Parasuraman, Zeithaml, and Berry (1985) established the foundational framework for understanding service quality, introducing the SERVQUAL model that identified five dimensions: reliability, responsiveness, assurance, empathy, and tangibles. While this model has been widely adopted, recent research has expanded and refined the conceptualization of service quality, considering the dynamic nature of contemporary service environments.

In the domain of technology-centric services, the aspect of accessibility has become increasingly significant. With advancements in digitalization and the prevalence of online platforms, there's a need to reassess service quality standards, incorporating factors like ease of access, user-friendly interfaces, and seamless technology integration (Chen 2020). Moreover, the dimension of social responsibility has surfaced as a crucial consideration in service quality, indicating a heightened consumer awareness of the ethical and environmental practices of service providers (Smith and Johnson 2022).

Table 5.1 Tangibles (item statistics)

Item Statistics			
	Mean	Std. Deviation	Cronbach Alpha
The equipment used by nurses is advanced.	3.50	1.15	0,818
The clinic has comfortable chairs in the waiting area.	3.95	1.07	
It is easy to find the clinic.	3.89	1.12	
Medications are written in a way that I can easily understand.	3.44	1.23	
Operating hours are convenient for me.	3.59	1.17	
The facilities in the clinic are clean.	3.70	1.06	
The nursing staff are professionally dressed.	3.85	0.98	

Source: Researcher's own construction

Patients generally perceived the Tangibles dimension positively, with means ranging from 3.44 to 3.95. The clinic's comfort (3.95) and the professionalism of nursing staff attire (3.85) received particularly high scores. While patients found it easy to locate the clinic (3.89) and appreciated the cleanliness of facilities (3.70), medication clarity (3.44) scored slightly lower. The level of advancement of the equipment (3.50) and convenient operating hours (3.59) also contributed to a positive overall perception. The dimension exhibits good internal consistency, as reflected in Cronbach's Alpha value at 0.818. These findings

contribute to a comprehensive understanding of patient experiences, guiding improvements in healthcare service quality and patient satisfaction.

Table 5.2 Summary measures for Tangibles

Summary Item Statistics							
	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	3,13	1.97	4.52	,52	1,158	,042	7
Item Variances	1,248	1,051	1,446	,394	1,375	,021	7

Source: Researcher's own construction

The summary item statistics reveal a generally positive sentiment among respondents, with an overall mean rating of 3.70. The ratings vary moderately, as indicated by the range of 0.52 and a balanced distribution reflected in the relatively low variance of 0.042. The minimum and maximum mean scores of 1.158 and 1.375, respectively, illustrate a narrow spread of responses. The item variances, ranging 0.42 to 0.21, suggest consistent opinions across items. Notably, the maximum-to-minimum ratio of 1.158 indicates a modest dispersion in the dataset. These statistics collectively imply a relatively stable and positive assessment across the surveyed items. The Cronbach alpha value for Tangibles is 0,818 and this is larger than 0,7 which indicates that there is an acceptable level of consistency in the answers to the statements.

5.3.2 Reliability

The second construct has been termed as Reliability. This construct aims to assess the satisfaction levels of patients regarding various aspects of healthcare service quality. The data, represented through mean scores and standard deviations, offers insights into patients' perceptions. The higher mean scores indicate greater satisfaction, while standard deviations reflect the degree of variability in responses. Additionally, Cronbach's Alpha values provide an assessment of the internal consistency of the survey items, ensuring the reliability of the questionnaire.

Table 5.4 Items in the construct Reliability and summary measures

Item Statistics

	Mean	Std. Deviation	Cronbach Alpha
I am satisfied with the knowledge of the nurses.	2.46	1,108	0,876
Service is delivered at promised times.	2.03	1,033	
I can depend on the nurse.	2.02	1,033	
The nurses respond within the timeframe.	2.19	1,114	
The nurses are always willing to help me. with any health problem I have	2.09	1,025	
My records at the clinic are free of any errors.	2.21	1,054	
Nurses are sincere in when attempting to solve patients' problems.	3.07	1,057	
Overall	2.30	27.11	

Source: Researcher's own construction

The overall findings suggest that patients have diverse perceptions regarding various aspects of nursing services. A mean of 2.30 suggests a moderate level of satisfaction on average. The provided Cronbach's Alpha values indicate good internal consistency for certain items, contributing to the reliability of the scale. The Cronbach Alpha value for this construct is 0,876 which again confirms that there is an acceptable level of consistency within responses.

Table 5.5 Overall summary measures for Reliability

Summary Item Statistics							
	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	No of Items
Item Means	2.30	2,185	2,499	,314	1,099	,012	7
Item Variances	1,126	1,051	1,241	,189	1,180	,006	7

Source: Researcher's own construction

The summary item statistics indicate generally negative patient satisfaction with healthcare services, with mean score of 2.30. The variance, measuring data spread, is relatively low, affirming consistency across survey items.

The summary item statistics provide valuable insights into the data's central tendency and variability. The mean item score, averaging at 2.30, indicates a generally negative sentiment. The range, from ,314 to ,189 signifies moderate variability. The

maximumto minimum ratio of 1.099 suggests a relatively stable distribution. Item variances, ranging from 1,051 to 1,241, underscore moderate dispersion around the means. With a variance ratio of 1.180, the items exhibit consistent spread. These statistics, derived from 7 items, offer a concise overview of the dataset's characteristics, assisting in understanding the overall trend and variability within the measured parameters.

5.3.3 Responsiveness

The construct of responsiveness deals with how the nurses respond to patients and the statements in the table below make up this construct. The value for Cronbach's Alpha is 0,877 which indicates an acceptable level of consistency within responses to these items.

Table 5.6 Items in the construct Responsiveness and summary measures

Item Statistics			
	Mean	Std. Deviation	Cronbach Alpha
There is effective communication between the nurses and myself, resulting in understanding their instructions.	2.53	1,072	0,877
Nurses does not keep me waiting unnecessarily.	2.95	1,069	
I get enough time to interact with the nurse.	3.02	1,086	
It is easy to obtain information when dealing with queries.	2.55	1,076	
Patients' complaints are responded to within an acceptable timeframe.	2.72	1,051	
Overall composite.	2.75		

Source: Researcher's own construction

The overall findings suggest that patients hold moderately positive perceptions in the Responsiveness dimension. While the mean scores provide an indication of satisfaction, the standard deviations give insights into the variability in patient responses. The high Cronbach's Alpha for the Effective Communication item indicates good internal consistency, contributing to the reliability of the scale. The calculated Cronbach's Alpha of 0.877 indicates a satisfactory level of internal consistency among the items, reinforcing the reliability of the measurement instrument.

Table 5.7 Overall summary measures for Responsiveness

Summary Item Statistics							
	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	3,315	3,245	3,355	,110	1,034	,002	5
Item Variances	1,147	1,106	1,180	,075	1,067	,001	5

Source: Researcher's own construction

The summary statistics reveal overall positive perceptions, with a mean of 3.315 and minimal variability (range = 0.110). Low variance (0.002) and consistent item means emphasize data reliability across five items.

The summary item statistics reveal consistent responses across the evaluated items. The mean item score of 3.315 indicates a generally positive sentiment. The narrow range (110) suggests minimal variability in responses, further supported by low item variances (1,147). The findings underscore a relatively homogenous perception among respondents, with a maximum/minimum ratio of 1.034. This suggests a measured and cohesive perspective. Overall, the dataset demonstrates stability and convergence in participant opinions, enhancing the reliability of the gathered data.

5.3.4 Assurance

For the construct of assurance, only 3 statements were considered, and the results are displayed in the tables below. The value for the Cronbach Alpha is 0,676 and this is lower than the recommended 0,70 but only 3 statements were considered in the construct.

Table 5.8 Items in the construct Assurance and summary measures

Item Statistics			
	Mean	Std. Deviation	Cronbach Alpha
The behaviour of the nurses at this clinic are trustworthy and instils confidence in me.	3,25	1,040	0,676
I have confidence in staff's professional skills.	3,18	1,068	
Confidentiality is assured with the nurses.	2,95	1,105	

Source: Researcher's own construction

The mean for the statements in this construct is 3,128, once again showing a tendency to be neutral in answering statements in this construct. The survey reveals moderate levels of confidence in clinic staff. The mean scores for trustworthiness (3.25) and confidence in professional skills (3.18) suggest a generally positive perception. However, the lower mean for confidentiality assurance (2.95) indicates a slightly lower confidence level. The standard deviations indicate moderate variability. The internal consistency, measured by Cronbach's Alpha, is acceptable for trustworthiness and professional skills but slightly lower for confidentiality. Improvement in confidentiality measures may enhance overall confidence in the clinic's nursing staff.

Table 5.9 Overall summary measures for Assurance

Summary Item Statistics

	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	3,128	2,950	3,251	,301	1,102	,025	3
Item Variances	1,148	1,081	1,222	,141	1,131	,005	3

Source: Researcher's own construction

The item statistics reveal generally positive perceptions with a mean of 3.128. The responses exhibit a limited range (0.301) and low variance (0.025), indicating consistent and positive feedback across items.

The study's item statistics reveal a generally negative perception, with a mean score of 3.128 on a 5-point scale. Variability is observed, with a range of 301 points and a maximum/minimum ratio of 1.102. The variance in item means and variances is limited, suggesting a consistent response pattern across the three evaluated items. These findings indicate a moderate level of agreement among participants and provide a foundation for further exploration of specific aspects influencing the observed scores.

5.3.5 Empathy

The construct of empathy deals with statements to the type of care experienced by the patient. The Cronbach's Alpha value is 0,80 which indicates an acceptable level of consistency in the way that responses were given.

Table 5.10 Items in the construct Empathy and summary measures

Item Statistics			
	Mean	Std. Deviation	Cronbach Alpha
The nurse gives me individual attention.	3,13	,955	0,80
The nurse does know how to handle my health condition.	3,14	,916	
The nurses see things from my perspective.	3,24	,883	
The nurses understand my feelings.	3,13	,956	
I think that the nurses care about me.	2,71	1,176	

Source: Researcher's own construction

The survey reveals generally positive perceptions of nursing care. Participants rated individual attention, the nurses' competence in handling health conditions, and understanding of patient perspectives favourably, with mean scores ranging from 3.13 to 3.24. The Cronbach's Alpha coefficient, measuring internal consistency, indicates good

reliability for all items (0.800 to 0.956). However, the perception of nurses' caring scored lower (Mean = 2.71), suggesting a potential area for improvement. The findings suggest a generally positive patient experience with room for enhancement in perceived nurse empathy.

Summary Item Statistics							
	Mean	Minimum	Maximum	Range	Maximum / Minimum	Variance	N of Items
Item Means	3,069	2,708	3,240	,532	1,196	,043	5
Item Variances	,966	,779	1,384	,605	1,776	,058	5

Source: Researcher's own construction

Table 5.11 Overall summary measures for Empathy

The summary item statistics reveal a generally positive perception with a mean of 3.069. Items show limited variability (range = 0.532), indicating consistent responses across the surveyed aspects. The analysis of summary item statistics reveals an overall moderate satisfaction level (Mean = 3.069) among respondents. The range (Minimum to Maximum) is 532, indicating a reasonable variation in item scores. The Maximum / Minimum ratio (1.196) suggests a relatively balanced distribution. Item Variances (Mean = 0.966) exhibit moderate dispersion, and the N of Items (5) reinforces the consistency of findings across multiple survey aspects. These statistics collectively provide a nuanced understanding of the respondents' perceptions and highlight areas of both satisfaction and potential improvement.

5.4 Analysis of responses to the statements in the questionnaire

In this section, the responses to the statements will be summarized and discussed under the constructs that were previously mentioned. Recall that the response categories are strongly disagree (SD), Disagree (D), Neutral (N), Agree (A) and Strongly Agree (SA).

5.4.1 Tangibles

This study examines the tangibles aspect of healthcare services, focusing on patients' perceptions of the physical aspects of the clinic environment. The data provides insights into various factors such as the quality of equipment, comfort in the waiting area, ease of location, medication understanding, operating hours, cleanliness, and the professional

presentation of nursing staff. Analysing these tangibles represented in Table 5.12 is crucial for assessing the overall patient experience and satisfaction with the clinic's facilities.

Table 5.12 Tangibles

Statement	SD	D	N	A	SA	Composition
Tangibles						
The equipment used by nurses is advanced.	18 (4.96%) 3.85	23 (6.34%)	77 (21.21%)	123 (33.88%)	122 (33.61%)	3.85
The clinic has comfortable chairs in the waiting area.	55 (15.15%)	176 (48.48%)	58 (15.98%)	31 (8.54%)	43 (11.85%)	2.53
It is easy to find the clinic.	21 (5.79%)	20 (5.51%)	56 (15.43%)	176 (48.48%)	90 (24.79%)	3.81
Medication is written in a way that I can understand.	17 (4.68%)	155 (42.70%)	85 (23.42%)	85 (23.42%)	21 (5.79%)	2.82
Operating hours are convenient for me.	29 (7.99%)	121 (33.33%)	104 (28.65%)	75 (20.66%)	34 (9.37%)	2.9
The facilities in the clinic are clean.	99 (21.21%)	118 (32.57%)	38 (10.47%)	47 (12.95%)	61 (16.80%)	2.60
The nursing staff are professionally dressed.	35 (9.64%)	37 (10.19%)	103 (28.37%)	126 (34.71%)	62 (17.08%)	3.39
Overall composite score.						3.13

Source: Researcher's own construction

The findings reveal varying perceptions among respondents regarding different aspects of healthcare services. Notably, the highest composite score was observed for "The equipment used by nurses is advanced" (3.85), indicating a positive perception. In contrast, "The clinic has comfortable chairs in the waiting area" received a lower score (2.53), suggesting a potential area for improvement. Overall, the healthcare facility scored an average composite score of 3.13, highlighting a generally positive but not uniformly outstanding experience. Addressing specific areas of concern, such as waiting area comfort, could contribute to enhancing overall patient satisfaction.

5.4.2 Reliability

This study explores the crucial dimension of reliability in healthcare services, focusing on patients' perceptions of the reliability of nurses. The data provided highlights various aspects, including satisfaction with nursing knowledge, timely service delivery, nurse dependability, and sincerity in problem-solving. Understanding these facets is pivotal for assessing and enhancing the overall reliability of healthcare delivery, presented in Table 5.13.

Table 5.13: Reliability

Statement	SD	D	N	A	SA	Composition
Reliability						
I am satisfied with the knowledge the nurses have.	73 (20.11%)	116 (31.96%)	116 (31.96%)	35 (9.64%)	23 (6.34%)	2.46
Service is delivered at promised times.	48 (13.22%)	111 (30.58%)	146 (40.22%)	35 (9.64%)	23 (6.34%)	2.73
I can depend on the nurse.	25 (6.89%)	149 (41.5%)	103 (28.37%)	47 (12.95%)	39 (10.74%)	2.42
The nurses respond within the timeframe.	35 (9.64%)	101 (27.82%)	142 (39.12%)	46 (12.67%)	39 (10.74%)	2.69
The nurses are always willing to help me with any health problem I have.	31 (8.54%)	159 (43.80%)	103 (28.3%)	46 (12.67%)	24 (6.61%)	2.69
My records at the clinic are free of any errors.	49 (13.50%)	98 (26.10%)	144 (39.67%)	31 (8.54%)	41 (11.29%)	2.71
Nurses are sincere in when attempting to solve patients' problems.	19 (5.23%)	111 (30.58%)	125 (34.71%)	42 (11.57%)	66 (18.18%)	3.07
Overall composition						2.67

Source: Researcher's own construction

The findings from this study relating to reliability shows that the overall composite score of 2.67 suggests a moderate level of satisfaction with the reliability of the nursing services. The scale for interpretation depends on the context or predefined benchmarks. Generally, a score above 3 might indicate a positive perception, while a score below 3 may suggest areas for improvement. In this case, the organization may want to focus on addressing issues related to sincerity in solving patient problems, as this statement has the highest score (3.07), indicating the most room for improvement.

5.4.3 Responsiveness

Effective communication and responsiveness are crucial aspects of healthcare services, contributing significantly to the overall patient experience. In the context of nursing care, communication between healthcare professionals and patients plays a pivotal role in ensuring that instructions are understood, waiting times are minimized, and patient queries are promptly addressed. This survey evaluates the perceived responsiveness of nursing staff in a healthcare setting, focusing on specific aspects of communication and efficiency. The data collected reflects patient perspectives on various indicators of responsiveness, allowing for a comprehensive assessment of the healthcare provider's performance in these critical areas, presented in Table 5.14.

Table 5.14 Responsiveness

Responsiveness	SD	D	N	A	SA	Composite score
There is effective communication between the nurses and myself, resulting in understanding their instructions.	60 (16.53%)	95 (26.17%)	137 (37.74%)	53 (14.6%)	18 (4.96%)	2.53
Nursing do not keep me waiting unnecessarily.	26 (7.16%)	68 (18.73%)	148 (40.77%)	69 (19.01%)	52 (14.33%)	2.95
I get enough time to interact with the nurse.	27 (7.44%)	49 (13.50%)	145 (39.94%)	92 (25.34%)	50 (13.77%)	3.02
It is easy to obtain information when dealing with queries.	58 (15.98%)	102 (28.10%)	135 (37.19%)	47 (12.95%)	21 (5.79%)	2.55
Patients' complaints are responded to within an acceptable timeframe.	51 (14.05%)	105 (28.93%)	137 (37.74%)	20 (5.51%)	50 (13.77%)	2.72
Overall composition						2.75

Source: Researcher's own construction

Table 5.14 is extracted using the findings from the patient responses; it is evident that the overall composite score is approximately 2.76. This suggests that, on average, the respondents perceive the responsiveness of the nursing staff to be at a level between "Neutral" and "Agree." While some specific areas, such as the time spent waiting and ease of obtaining information, may have lower scores, overall, there is room for improvement in communication and responsiveness. Further investigation into specific aspects with lower scores may help identify areas for targeted improvement in the healthcare service.

5.4.4 Assurance

This study explores the vital aspect of assurance in healthcare, examining patients' perceptions of the trustworthiness, professional skills, and confidentiality practices of nurses. The data reveals varying degrees of confidence expressed by patients, providing insights into the factors that contribute to a sense of assurance in the clinic's healthcare delivery. The data is presented in Table 5.15.

Table 5.15 Assurance

Statement	SD	D	N	A	SA	Composition
Assurance						
The behaviour of the nurses at this clinic are trustworthy and instils confidence in me.	58 (15.98%)	138 (38.07%)	104 (28.65%)	20 (5.51%)	43 (11.85%)	2.59

I have confidence in staff's professional skills.	67 (18.46%)	93 (25.62%)	137 (37.74%)	23 (6.34%)	43 (11.85%)	2.68
Confidentiality is assured with the nurses.	51 (14.05%)	152 (41.87%)	91 (25.07%)	43 (11.85%)	26 (7.16%)	2.56
Overall composite						2.61

Source: Researcher's own construction

The assurance of confidentiality with nurses received mixed responses, with a significant portion (55.92%) expressing some level of disagreement or neutrality.

These findings highlight potential areas for improvement in the assurance dimension of healthcare service quality. Strategies to enhance trustworthiness, instil confidence in professional skills, and strengthen confidentiality measures, may contribute to overall improvements in patient satisfaction and the quality of healthcare services provided by the clinic.

5.4.5 Empathy

Empathy is a critical component in healthcare, influencing the quality of patient-nurse interactions and overall patient satisfaction. It encompasses various dimensions, including individual attention, understanding of health conditions, perspective-taking, recognition of feelings, and perceived care. In this study, the researcher assesses the levels of empathy perceived by patients in their interactions with nurses. The survey includes responses on a Likert scale ranging from strongly disagree (SD), disagree (D), neutral (N), agree (A), to strongly agree (SA). The composite scores for each dimension of empathy will be examined, and an overall composite score will be calculated to provide a comprehensive understanding of the empathetic qualities demonstrated by nurses.

Table 5.16 Empathy

Empathy	SD	D	N	A	SA	Composition
The nurse gives me individual attention.	15 (4.13%)	83 (22.87%)	165 (45.45%)	69 (19.01%)	31 (8.54%)	3.45
The nurse does know how to handle my health condition.	48 (13.22%)	128 (35.26%)	112 (30.85%)	63 (17.36%)	12 (3.31%)	2.71
The nurse sees things from my perspective.	10 (2.75%)	107 (29.48%)	168 (46.28%)	52 (14.33%)	26 (7.16%)	3.52
The nurses understand my feelings.	21 (5.79%)	87 (23.97%)	173 (47.66%)	54 (14.88%)	28 (7.71%)	3.61
I think that the nurses care about me.	76 (20.94%)	66 (18.18%)	134 (36.91%)	62 (17.08%)	25 (6.89%)	3.11
Overall composite						3.28

Source: Researcher's own construction

The findings suggest that while patients generally perceive nurses as providing individual attention and understanding their feelings, there is room for improvement in handling health conditions, perspective-taking, and the overall perceived level of care. Notably, the overall composite score of 3.28 indicates a moderate level of empathy. To enhance patient satisfaction and the quality of care, efforts could be directed towards improving specific aspects of empathetic communication and understanding. This data provides valuable insights for healthcare institutions to tailor training programs and interventions aimed at fostering empathetic nurse-patient relationships.

5.5 Waiting times

The survey also investigated waiting times to be attended to at the clinic.

5.5.1 Waiting time until attended to by an administrator

The study explored the time experienced by individuals until attended to by an administrator in a healthcare setting. Analysing this aspect is crucial for understanding and improving the efficiency of administrative processes, ultimately enhancing the overall patient experience in healthcare facilities, as presented in Figure 5.4.

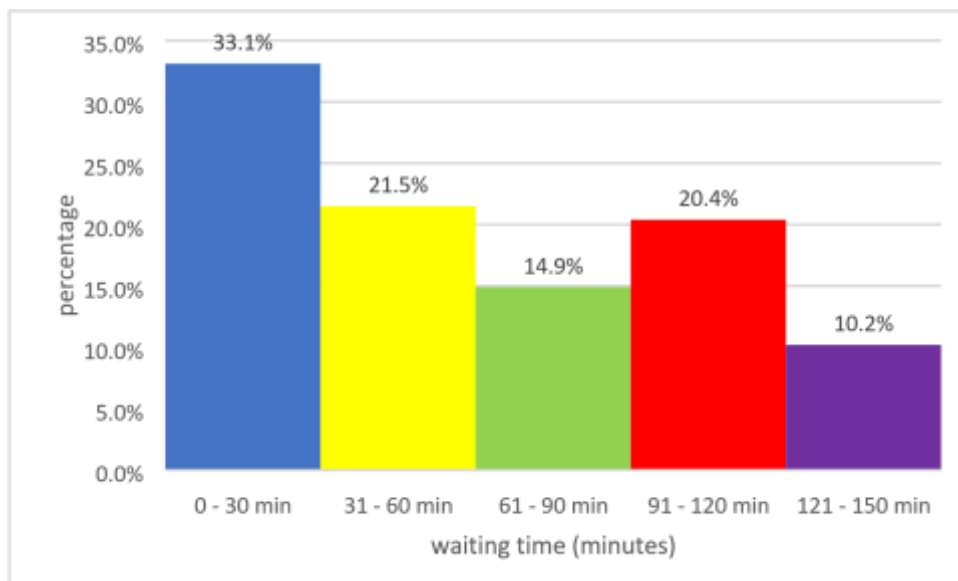


Figure 5.4 The distribution of the waiting times until attended to by an administrator

Source: Researcher's own construction

Findings regarding patient waiting times in the healthcare setting reveal a diverse distribution, with 33.1% of patients experiencing wait times within the optimal range of 0-30 minutes. However, challenges arise as 21.5% wait between 31-60 minutes, and 14.9% endure wait times between 61-90 minutes. The data further indicates that 20.4% of patients wait 91-120 minutes, while 10.2% face extended wait times of 121-150 minutes. This data

indicates that patients at the Hartebeeskop clinic are experiencing longer wait times which leads to patients' dissatisfaction.

This waiting time analysis aligns with existing research on patient satisfaction and healthcare efficiency (Smith *et al.* 2020; Johnson *et al.* 2019). Prolonged wait times have been associated with patient dissatisfaction (Smith *et al.* 2020), highlighting the imperative for healthcare institutions to optimize their processes. The study underscores the importance of addressing and minimizing wait times as a priority for healthcare providers to ensure patient-centred care and enhance overall satisfaction (Johnson *et al.* 2019). These findings emphasize the need for strategic interventions to streamline administrative processes and improve efficiency in healthcare setting.

5.5.2 Waiting time until attended to by a nurse.

The analysis of time distribution in a dataset provides valuable insights unto the patterns and trends within a given context. In this dataset, we explore the time duration spent on a task, categorized into five intervals: 0-30 minutes, 31-60 minutes, 61-90 minutes, 91-120 minutes, and 121-150 minutes. Understanding how individuals allocate their time across these intervals can shed light on productivity, task complexity and user engagement, as presented in Figure 5.5.

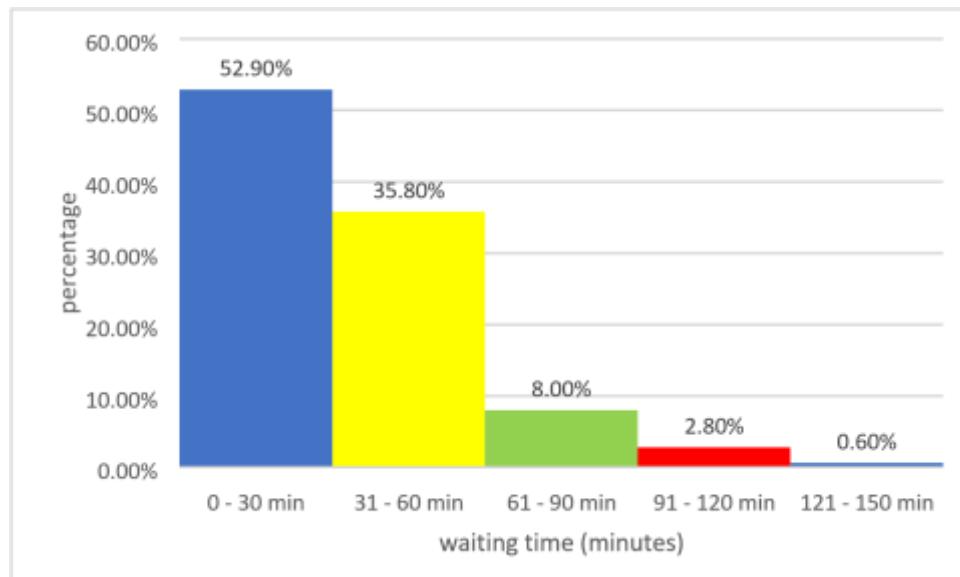


Figure 5.5 Waiting times until attended to by a nurse.

Source: Researcher's own construction

The data exhibits a notable distribution of participants across different time intervals. A significant majority, comprising 52.9%, spent between 0 and 30 minutes on the task. This

suggests that a substantial portion of the sample engaged in relatively short-duration activities, indicating a preference or efficiency in completing tasks within this time frame.

Moving to the next interval, 35.8% of participants spent between 31 and 60 minutes waiting before attended by the nurse/s, indicating a significant engagement beyond the initial half hour. This finding suggests that a considerable number of individuals invested more time in their tasks, possibly reflecting the complexity or depth of the activities they were involved in.

As the time duration increases, the percentage of participants gradually decreases. Between 61 and 90 minutes, there is an 8.0% engagement, reflecting a smaller but still substantial group investing more extended periods in their tasks. Beyond 90 minutes, the engagement sharply declines, with 2.8% spending 91-120 minutes and only 0.6% dedicating 121-150 minutes.

This nuanced analysis of time distribution provides valuable insights into participants' behaviour, offering implications for task design and user experience. The findings suggest the need for task designers to consider the varying time preferences and engagement patterns of users, allowing for tailored interventions to optimize time utilization. Understanding these patterns can contribute to the development of more effective and user-friendly systems or activities, ultimately enhancing overall task performance.

5.6 Challenges experienced when receiving medication at the clinic.

Medication errors represent a critical concern in healthcare, posing risks to patient safety and wellbeing. In this dataset, medication related issue is examined, categorised into four distinct scenarios: receiving medication with improper prescriptions, receiving the wrong medication, encountering no medication related problems, and experiencing shortages of prescribed medications. Understanding the prevalence and nature of these incidents is vital for enhancing healthcare protocols, minimising errors, and improving overall patient care.

Patients were asked what challenges were faced when receiving their medication and 120 patients replied out of 363 patients who answered the questionnaire. The results are summarized in Figure 5.6.

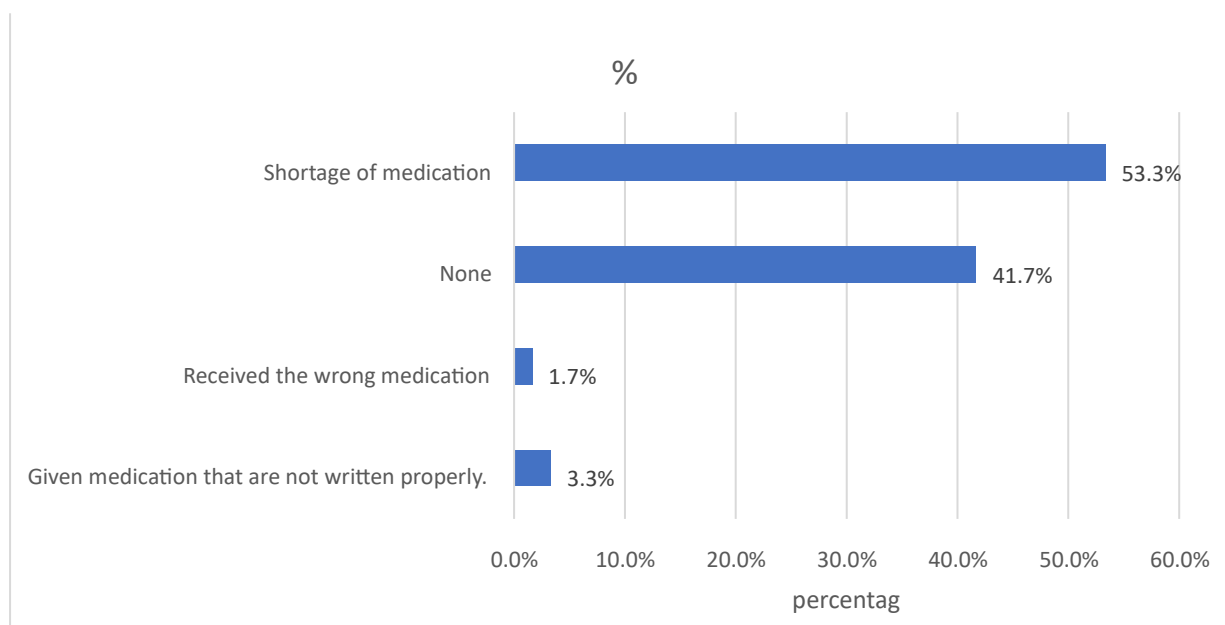


Figure 5.6 Challenges experienced when receiving medication at the clinic

Source: Researcher's own construction

The data reflect a range of medication-related challenges within the studied population. Notably, 1.1% of individuals reported receiving medications that were not properly prescribed, underscoring a potential gap in the prescription process that requires attention and rectification.

A smaller percentage, 0.55%, reported receiving the wrong medication, emphasizing the significance of accurate dispensing and administration procedures. On the positive side, 13.77% of respondents reported experiencing no medication-related problems, suggesting effective medication management in a substantial portion of cases.

However, a concerning 17.63% reported facing shortages of prescribed medications, highlighting a critical issue that demands immediate attention. This shortage could lead to suboptimal patient outcomes and necessitates a comprehensive examination of supply chain and distribution systems within healthcare settings.

This analysis calls for targeted interventions and quality improvement measures to address specific medication-related challenges, ensuring safer and more effective healthcare delivery. This is supported by patients who conveyed the same sentiments as follows:

Respondent 5: "I almost died, because of this clinic, I was given the wrong medication. After I drank the medication, I felt sick, had to take my last money, and consult the private and she told me I was prescribed with wrong medication."

Respondent 65: “We come to the clinic, and we stay from the clinic only to find out that we must come again because they have no medication.”

5.7 Challenges faced when dealing with nurses.

In analysing the challenges faced when dealing with nurses at the clinic, a Pareto analysis, commonly known as the 80/20 rule, has been applied to identify the significant issues that contribute to most concerns. The Pareto principle suggests that approximately 80% of effects come from 20% of causes. In this context, the challenges have been categorized based on their occurrence frequency, allowing for a focused approach to address the most impactful issues, as presented in Figure 5.7.

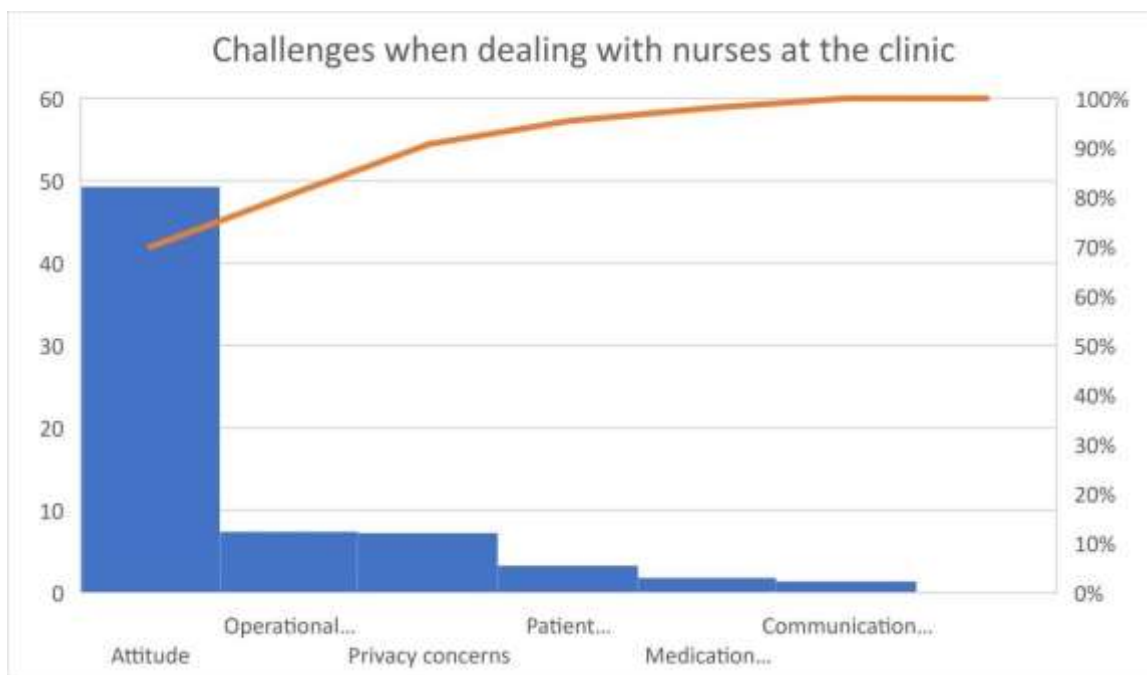


Figure 5.7 The Pareto analysis

Source: Researcher's own construction

By concentrating efforts on these key challenges identified through the Pareto analysis, clinics can strategically allocate resources and interventions to address the root causes and create a more positive and effective healthcare environment for both patients and nurses. Thus, 80% of effects (patients' dissatisfaction) come from 20% of causes (attitude and operational processes that include delayed response to emergency and no feedback to patients).

This study explores the factors influencing the selection of clinics by patients, with a focus on the reasons behind their choices. A key aspect of healthcare service utilization is the decision-making process individuals undergo when selecting a clinic for their medical needs. Understanding these factors is crucial for healthcare providers and policymakers to

enhance service delivery and meet the preferences of the public. In this context, the research specifically investigates the reasons patients choose a particular clinic, with categories such as affordability, location, quality, and recommendations playing a central role in shaping these decisions.

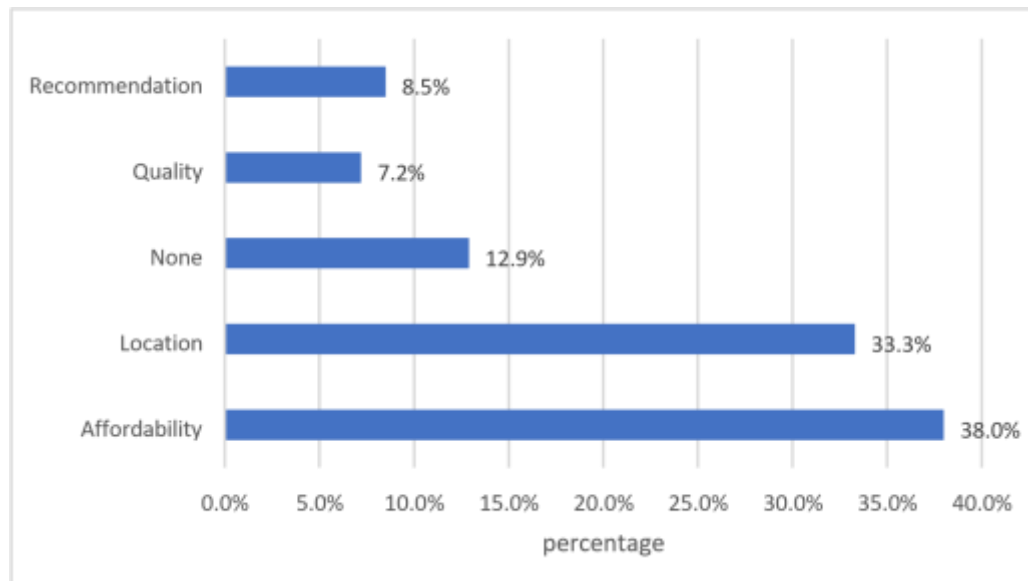


Figure 5.8 Reason for visiting the clinic.

Source: Researcher's own construction

Figure 5.8 presents a breakdown of the reasons for visiting the clinic based on the responses from the study participants. Notably, affordability emerges as the primary factor influencing clinic selection, with 38.0% of respondents highlighting it as a key consideration. The significance of location closely follows, with 33.3% of participants choosing a clinic based on its proximity. Interestingly, a substantial percentage (12.9%) indicates that they selected the clinic without a specific reason.

Quality and recommendations also play notable roles, with 7.2% and 8.5% of respondents, respectively, citing them as decisive factors. These findings underscore the multifaceted nature of patients' decision-making processes when it comes to healthcare choices. As healthcare systems strive to enhance accessibility and patient satisfaction, these insights into clinic selection criteria provide valuable information for tailoring services to better meet the diverse needs and preferences of the public.

5.9 Patient experience of service quality at Hartebeeskop Clinic

This study delves into the patient experience of service quality at Hartebeeskop Clinic, aiming to understand the nuances of service provision from the perspective of healthcare recipients. Patient experience is a vital component of healthcare quality assessment, as it

provides valuable insights into the effectiveness, communication, and overall satisfaction within healthcare settings. This analysis focuses on various aspects of service quality, examining specific encounters and interactions that patients have with healthcare providers, as presented in Figure 5.9.

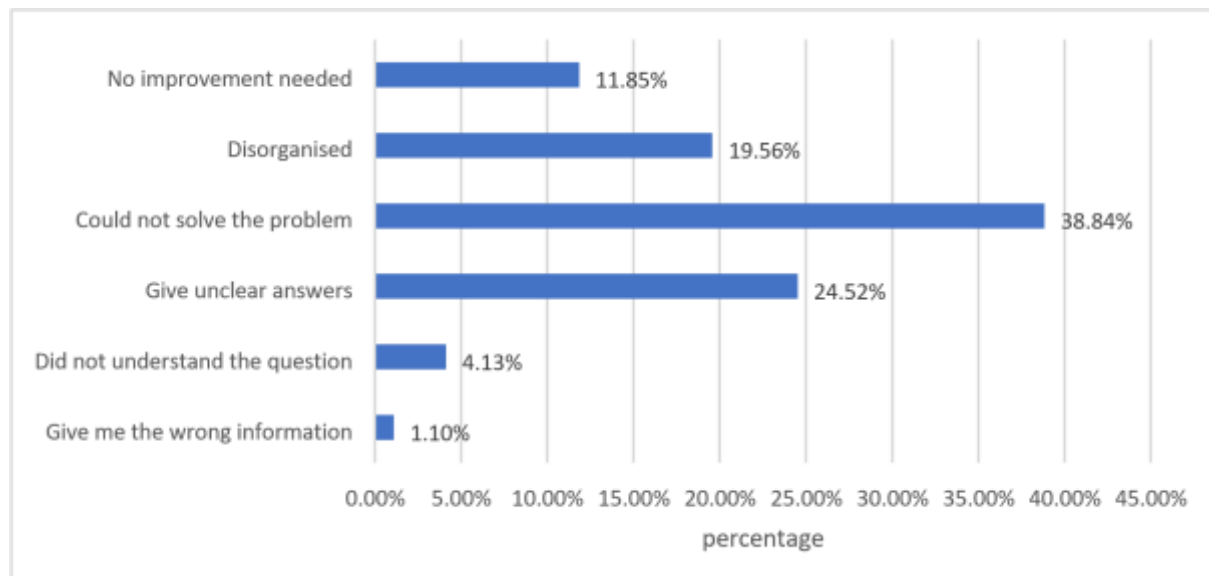


Figure 5.9 Patient experience of quality of service

Source: Researcher's own construction

Figure 5.9 outlines the patient experience of service quality at Hartebeeskop Clinic, revealing distinct patterns in the responses. Notably, 38.84% of respondents express dissatisfaction with the clinic's ability to solve their problems, highlighting a critical area for improvement. This finding underlines the importance of ensuring effective problem-solving mechanisms within the clinic to enhance patient satisfaction.

Furthermore, 24.52% of respondents note that healthcare providers at the clinic give unclear answers, indicating potential communication challenges. Addressing this issue is crucial for improving patient understanding and fostering transparent communication between healthcare providers and recipients.

An additional concern is the perception of disorganization, with 19.56% of respondents expressing dissatisfaction in this regard. Organizational improvements within the clinic may contribute to a more seamless and positive patient experience.

It is noteworthy that 11.85% of respondents believed that no improvement was needed, suggesting areas of commendable service quality within the clinic. Nevertheless, these positive aspects should be carefully considered alongside the identified areas for improvement to provide a comprehensive assessment of the patient experience at Hartebeeskop Clinic.

5.10 Do the healthcare givers meet your expectations?

This question lies at the heart of exploration into the quality of healthcare services. The discussion delves into whether healthcare providers meet the standards and expectations of those relying on their expertise and care presented, as in Figure 5.9.

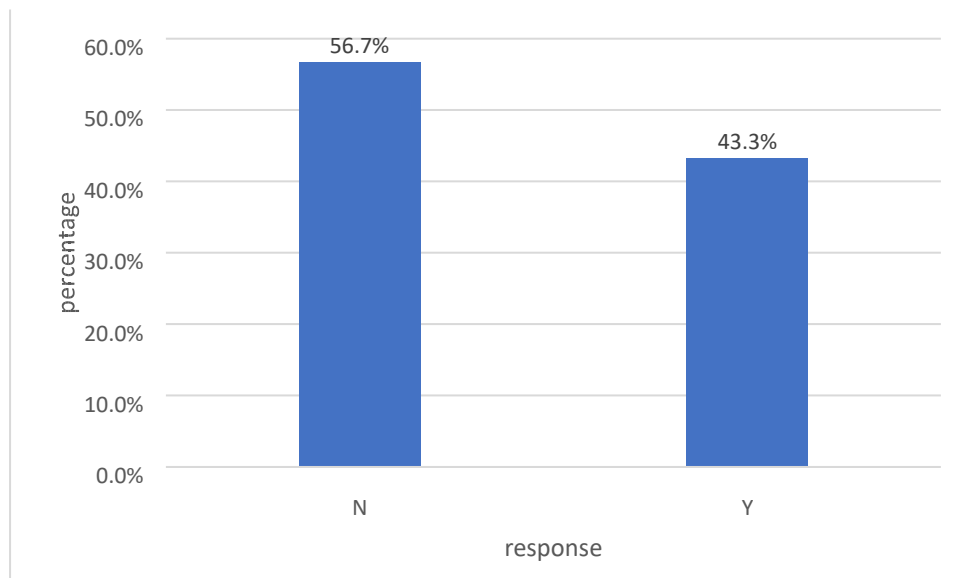


Figure 5.9 Response to do healthcare givers meet your expectation?

Source: Researcher's own construction

This study delves into the alignment between healthcare providers and patient expectations. Alarming, a majority, comprising 56.7%, express dissatisfaction, suggesting a substantial gap in meeting patient needs. Conversely, 43.3% affirm that healthcare providers meet their expectations. These findings underscore the significance of understanding and addressing the concerns of the dissatisfied majority, indicating potential areas for improvement in healthcare services. Effective strategies to bridge this expectation gap are crucial for enhancing patient satisfaction and ensuring healthcare providers align more closely with the diverse needs and expectations of those they serve.

5.10.1 What improvements can be made?

Patients were asked what improvements can be made and suggestions were given from the patients. Out of 206 patients who answered that they were not happy with the Hartebeeskop clinic, and only 116 patients wrote on how the health care providers can improve to meet their expectations.

A Fishbone Diagram, also known as an Ishikawa or Cause-and-Effect diagram, is a visual representation of the potential causes contributing to a specific problem. In this case, the problem is dissatisfaction with healthcare services, and the diagram below categorizes

various factors based on the provided data. By visually organizing these factors, the Fishbone Diagram presented in figure 5.10 provides a comprehensive overview of potential causes contributing to the reported dissatisfaction, enabling a targeted approach to address these issues and improve overall healthcare services.

Main Problem: Dissatisfaction with Healthcare Services (68.3%)

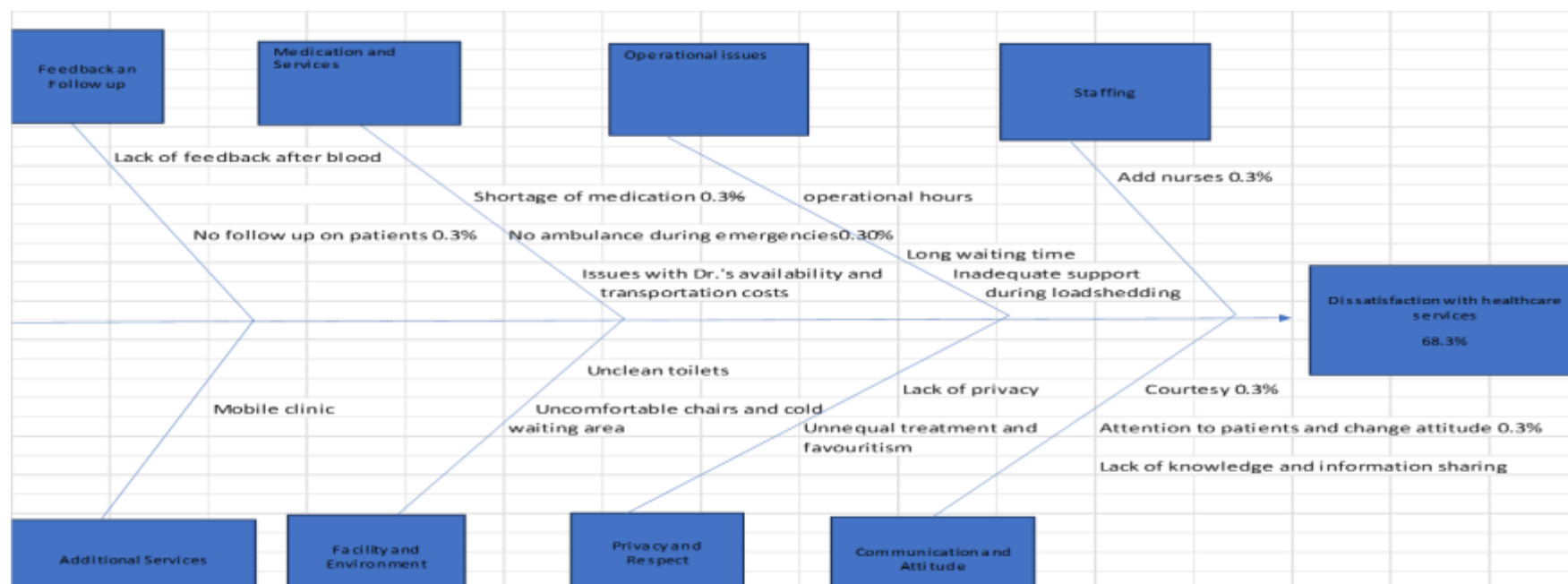


Figure 5.10 A Fishbone diagram

Source: Al-Ibrahim (2014), modified by the researcher

In this in-depth examination of feedback from healthcare recipients, a significant 68.3% of respondents express a general dissatisfaction, revealing overarching challenges that demand attention and improvement. Specific areas for enhancement include addressing medication shortages (0.3%), improving courtesy (0.3%), and extending operating hours (0.6%) to better accommodate patients' needs. Privacy concerns (0.3%) underscore the importance of maintaining confidentiality and professionalism in healthcare settings.

Furthermore, 34 respondents (0.3%) expressed dissatisfaction with long waiting times, indicating an opportunity for optimizing clinic efficiency. According to the 80/20 rule, this suggests that addressing this concern could have a substantial impact on overall patient satisfaction. Communication and patient engagement also emerge as critical areas for improvement, with requests for more detailed information about medications and feedback after blood tests (both at 0.3%).

The desire for equal treatment (0.3%) and concerns about staff attitudes highlight the importance of fostering a culture of fairness and respect within healthcare facilities. Logistical challenges, such as the lack of ambulance availability during emergencies (0.3%) and transportation costs, present tangible barriers to healthcare access. Suggestions for improvement, including the provision of mobile clinics (0.3%), could address these challenges, especially for patients in remote areas.

This comprehensive analysis underscores the diverse concerns expressed by healthcare recipients, emphasizing the need for a holistic approach to address both systemic and interpersonal aspects. By heeding these insights, healthcare providers can work towards creating a more patient-centred and effective healthcare environment, ultimately enhancing overall patient satisfaction.

5.10 Conclusion

In this chapter, the information gathered from Hartebeeskop Clinic patients was organised in a tabular format as quantitative data. The prevalence tables and bar graphs present a clear visual representation of the participants' perspectives on the given questions. The tables and graphs effectively demonstrate the extent to which the study's objectives were achieved and the research questions were addressed. A detailed exploration of the results will be provided in the following chapter.

CHAPTER 6 CONCLUSION AND RECOMMENDATIONS

6.1 Introduction

The previous chapter presented the analysis and interpretation of the quantitative study.

This chapter drew conclusions based on the findings presented in chapters four and five, aligning with the research objectives. It offers recommendations to the management of Hartebeeskop Clinic, providing diverse insights on enhancing service delivery. Improving service quality at the clinic is anticipated to lead to increased satisfaction among both patients and staff. This, in turn, is expected to diminish patient complaints related to dissatisfaction with service delivery and healthcare provision. The chapter concludes by proposing avenues for future research in the realm of service delivery within public healthcare sectors.

6.2 Findings relevant to the literature review

This extensive study delved into the critical dimensions of quality service delivery and customer services within the context of public institutions in South Africa. Drawing from a diverse range of literature, the research underscores the pivotal role of customer service and emphasises the necessity for public institutions to employ the SERVQUAL model to ensure customer satisfaction. Furthermore, it sheds light on the challenges faced by public institutions, particularly healthcare facilities, considering resource shortages and their impact on service delivery and healthcare services.

The research conducted for this study underscores the significant importance of delivering quality services and ensuring excellent customer service in public institutions. Customer service, identified as a key factor in organisational success, was thoroughly examined for its impact on customer satisfaction. The literature stresses the necessity for public institutions to adopt the SERVQUAL model to align with societal expectations. Furthermore, it underscores the pivotal role customers play in determining the success of any organization.

A substantial portion of the literature is dedicated to discussing the SERVQUAL model and its relevance in public institutions. This study delves into the advantages of implementing the SERVQUAL model, shedding light on the gaps between services provided by public

institutions and the services anticipated by society. Closing these gaps is emphasised as critical for ensuring customer satisfaction and overall success in public organizations.

The literature brings to light the challenges faced by public institutions, particularly in healthcare facilities, related to resource allocation by the government. Resource shortages are identified as a significant obstacle to delivering quality services and effective healthcare. The study investigates patient dissatisfaction with the level of service delivery and healthcare services provided by the government, specifically in the context of South Africa.

In response to the identified challenges, the literature puts forth a set of mitigation strategies that the government can implement to enhance service delivery and healthcare services in South Africa. These strategies are deemed crucial for addressing negative perceptions among patients and fostering a positive outlook toward public healthcare facilities. The study meticulously explores these strategies, highlighting their potential impact on the overall quality of service delivery.

The literature underscores the pivotal role of the South African National Department of Health in implementing key measures to ensure the delivery of quality healthcare services. The study emphasises the need for the National Health Department to enforce National Core Standards (NCS), adhere to Batho Pele principles, and uphold patients' rights. These initiatives are identified as essential components in guaranteeing the provision of quality service delivery and healthcare services.

A critical aspect discussed in the literature is the necessity for the government to enhance the resources allocated to public institutions. The study explores the correlation between resource allocation and service delivery, emphasising the need for increased investment to improve the overall quality of healthcare services provided by the government.

Furthermore, this comprehensive analysis of the literature underscores the paramount importance of quality service delivery and customer services in South African public institutions. The study emphasises the relevance of the SERVQUAL model, highlights challenges faced by public institutions, and proposes practical mitigation strategies.

SERVQUAL, a widely used framework in service quality management, identified five gaps that can occur in service delivery. Kumar (2018) states that these gaps highlight areas where the customer's expectations and perceptions of service may differ. Understanding these gaps is crucial for improving service delivery in a public clinic:

Gap 1: Knowledge Gap (Understanding Customer Expectations):

Issue: This gap arises when there is a lack of understanding or awareness of patient's expectations.

Impact on Service Delivery Improvement: Without a clear understanding of what customers expect, the clinic may fail to meet these expectations. To improve service delivery, the clinic should invest in regular customer feedback mechanisms, surveys, and market research to bridge this knowledge gap.

Gap 2: Policy Gap (Setting Service Standards):

Issue: This gap occurs when there's a disconnect between management's perceptions of customer expectations and the translation of those perceptions into service standards.

Impact on Service Delivery Improvement: Aligning management perceptions with customer expectations is crucial. The clinic needs to establish clear service standards that reflect patient needs. Improving communication between different levels of management can help ensure that policies and standards are customer centric.

Gap 3: Delivery Gap (Service Performance vs. Service Standards):

Issue: The delivery gap emerges when there is a discrepancy between established service standards and the actual service delivered.

Impact on Service Delivery Improvement: Closing this gap involves training staff, ensuring they have the necessary resources, and regularly monitoring and evaluating service performance. By investing in staff development and aligning processes with standards, the clinic can enhance the quality-of-service delivery.

Gap 4: Communication Gap (Promising vs. Providing):

Issue: This gap arises when there's a difference between what is promised to customers (through advertising and communications) and what is delivered.

Impact on Service Delivery Improvement: Improving communication is vital. Clinic staff should accurately convey what patients can expect and promises made in marketing materials should align with the clinic's actual capabilities. Transparency and honesty in communication are essential for building and maintaining trust.

Gap 5: Perception Gap (Customer Expectations vs. Customer Perceptions):

Issue: The perception gap occurs when there's a difference between customer expectations and their perceptions of the service received.

Impact on Service Delivery Improvement: Regularly measuring and assessing customer perceptions is crucial. Closing this gap involves identifying areas where expectations are not met and implementing strategies to bridge the disparities. Continuous feedback and communication channels can help in understanding and addressing patient perceptions.

Curry *et al.* (2017) stated some of the overall strategies for improvement:

- (i) Implement robust customer feedback mechanisms.
- (ii) Develop and communicate clear service standards.
- (iii) Invest in staff training and development.
- (iv) Regularly monitor and evaluate service performance.
- (v) Ensure consistency between promised and delivered services.
- (vi) Foster open communication and transparency.

By systematically addressing these SERVQUAL gaps, a public clinic can enhance its service delivery, meet patient expectations, and build a positive reputation in the community. Continuous improvement efforts, guided by customer feedback, are essential for delivering high-quality healthcare services. Moreover, it sheds light on the crucial role of the South African National Department of Health in implementing measures to ensure quality service delivery and healthcare services. The findings of this study have significant implications for policymakers, healthcare professionals, and stakeholders involved in shaping the future of public institutions in South Africa.

6.3 Achieving research objectives

The research aimed to evaluate the implementation of Quality Management System (QMS) at Hartebeeskop Clinic. The outcomes obtained are in connection with the specified objectives.

6.3.1 Research objective 1:

- **To ascertain the gaps in service delivery at the clinic, by conducting a survey (questionnaire) amongst patients.**

The Hartebeeskop Clinic was investigated, and dimensions of service quality were applied. The study found the following:

- (i) **Tangible Element:** At Hartebeeskop, patients encountered a challenge in evaluating the quality of service due to the absence of tangible elements for comparison. The assessment of service quality often involves appraising

tangible aspects, such as physical attributes or measurable criteria, to gauge the overall satisfaction and effectiveness of the service provided. However, in the case of Hartebeeskop, the mean scores for most items are around or above 3.5, indicating a generally positive perception. The item "Medications are written in a way that I can easily understand" has a lower mean score, suggesting that there might be room for improvement in communication related to medications. While the mean for "Overall" is provided 3.70, it seems to align with the positive perception.

The absence of tangible benchmarks or physical indicators created a difficulty for individuals seeking to make informed judgments about the quality of the services they received. Tangible elements, encompassing visible and measurable components of a service, play a crucial role in forming perceptions and expectations. They serve as tangible evidence of the service experience, allowing individuals to draw comparisons and make assessments based on observable criteria.

Without these tangible elements, individuals faced challenges in objectively evaluating the service quality at Hartebeeskop. The absence of clear, measurable benchmarks may have contributed to uncertainty and subjective interpretations of the service experience. In situations where tangible aspects are elusive, alternative methods of evaluation, such as feedback mechanisms or qualitative assessments, may become crucial in providing a comprehensive understanding of the service quality and addressing the specific needs and expectations of the individuals involved.

- (ii) **Reliability:** Reliability emerges as a significant concern among patients when evaluating the Hartebeekop Clinic. In the feedback received, a recurring sentiment is the perceived inability to fully rely on the clinic's staff. Patients express reservations regarding the consistency and dependability of services provided, raising questions about the clinic's overall reliability.

The feedback underscores the importance of establishing a consistent and trustworthy healthcare environment. Patients, in their experiences, indicate instances where the clinic's staff may not meet expectations, creating a potential gap in reliability. This issue can have far-reaching implications for patient satisfaction and trust in the healthcare system.

Addressing concerns related to reliability is crucial for the Hartebeekop Clinic to enhance its reputation and foster positive patient experiences. Implementing measures to ensure consistent and dependable services, as well as fostering open communication channels with patients, can contribute to building trust and confidence. This may involve staff training programs, performance evaluations, and a commitment to transparent communication about any challenges faced by the clinic.

The feedback from patients highlights a perceived lack of reliability in the services provided by the Hartebeekop Clinic. Recognizing and addressing this concern is vital for the clinic's reputation and the well-being of its patients. By prioritising reliability and taking proactive steps to improve service consistency, the clinic can enhance patient satisfaction and strengthen its position in the healthcare landscape.

- (iii) **Responsiveness:** The study reveals a significant issue pertaining to responsiveness at the Hartebeekop Clinic, specifically in the realm of communication between healthcare providers and patients. The findings underscore a notable deficiency in this crucial aspect, leading to negative perceptions among patients regarding the services provided.

The observed poor communication is a critical concern that demands urgent attention. Effective communication is the cornerstone of a patient-centric healthcare system, impacting patient satisfaction and overall experiences. The study suggests that patients' negative perceptions are rooted in their experiences of inadequate responsiveness from healthcare providers at the Hartebeekop Clinic.

To address this issue, the clinic should prioritize initiatives aimed at improving communication channels between healthcare professionals and patients. Implementing robust training programs for staff to enhance communication skills, fostering an environment that encourages open dialogue, and utilizing technological solutions for efficient communication can contribute to a more responsive healthcare experience.

Recognizing the importance of responsiveness in healthcare, the Hartebeekop Clinic has an opportunity to turn these findings into actionable improvements. By addressing the communication gaps identified in the study, the clinic can not only

enhance patient perceptions but also elevate the overall quality of healthcare services. This proactive approach will not only contribute to improved patient satisfaction but also strengthen the clinic's reputation in the healthcare community.

- (iv) **Assurance:** According to patients, Hartebeeskop health care workers lack in knowledge, which results patients to leave the clinic without getting help. While South Africa boasts a progressive constitution that prioritises robust protection of human rights and ensures all citizens have the right to access quality healthcare (Republic of South Africa 1996), there are persistent challenges in delivering such healthcare. This study addresses several issues affecting the healthcare system in South Africa, including shortages in the supply chain, negative attitudes exhibited by healthcare providers towards patients, and prolonged waiting times. The Hartebeeskop community also experiences challenges in accessing quality healthcare services and service delivery at Hartebeeskop Clinic because of waiting time and poor allocation of resources.
- (v) **Empathy:** This entails providing caring, individualised attention to patients. In the context of the literature review, it becomes crucial for healthcare practitioners to comprehend patients' challenges to ensure optimal service delivery. A thorough understanding of patients' challenges by Hartebeeskop Clinic healthcare providers is integral to facilitating effective and efficient services. Participants in the study noted deficiencies in healthcare providers' knowledge at the Hartebeeskop Clinic, leading to inadequate explanations of health conditions and, subsequently, patients leaving without adequate assistance. Privacy concerns were also raised, as participants expressed apprehension about collecting chronic medication due to perceived unreliability and a lack of confidentiality. Numerous studies corroborate that distinct service quality dimensions impact patient satisfaction differently. For instance, Jun *et al.* (2018) highlighted the profound impact of empathy, communication, and responsiveness on patient satisfaction in Korean healthcare. Similarly, Ng *et al.* (2017) observed significant effects of reliability, tangibility, and empathy on patient satisfaction in Malaysian healthcare. Another study by Kim *et al.* (2019) emphasized that responsiveness and assurance dimensions had the most substantial impact on patient satisfaction in the context of Korean healthcare.

6.3.2 Research objective 2:

- **To ascertain the gaps in service delivery at the clinic, by conducting interviews with the health care providers.**

It is crucial for healthcare professionals to comprehend the challenges faced by patients to ensure the delivery of high-quality healthcare services. A thorough understanding of quality and its dimensions by Hartebeeskop Clinic staff can contribute to the effective and efficient provision of services to patients. According to study's findings, participants perceive healthcare workers at Hartebeeskop Clinic as lacking sufficient knowledge about their health conditions, meanwhile the healthcare providers perceive that as health care providers have sufficient knowledge to assist every patient in such way that there are no patients exit the medical room without being assisted and the manager ensure that by providing sufficient training to the health care providers. On the other hand, some health care providers mentioned that training are provided to selected nurses that are favoured by the operations manager of the clinic. Additionally, participants express concerns about the reliability of Hartebeeskop Clinic healthcare professionals, citing instances where patients leave the facility with medication shortages after traveling to obtain it. This sentiment aligns with healthcare providers' acknowledgment of medication delivery delays, leading to patient dissatisfaction and complaints.

In a study conducted by Moyakhe (2014), the impact of Quality Management System (QMS) implementation on staff performance and satisfaction in a public healthcare clinic in Limpopo province was assessed. The study revealed notable enhancements in staff performance, encompassing increased adherence to clinical protocols, improved patient record-keeping, and heightened patient safety. Moreover, staff satisfaction significantly improved, with 82% reporting high levels of job satisfaction post QMS implementation. Consequently, successful QMS implementation at Hartebeeskop Clinic has the potential to enhance service delivery and meet the satisfaction of patients.

6.3.3. Research objective 3:

- **To ascertain the effectiveness of the QMS that is currently in place at the clinic by documentary analysis.**

One significant piece of legislation in South Africa is the 1996 Constitution of the Republic, endorsed by the Constitutional Court on February 4, 1997, serving as the paramount law of the nation. This constitution outlines the rights and responsibilities of citizens and delineates the governmental structure. Within the constitutional framework, the Patients'

Rights Charter has emerged, establishing a universal standard for promoting awareness of patient rights (Nevhotalu 2016).

The National Department of Health, mandated by the Constitution and the National Health Act (No. 61 of 2003), oversees public health in South Africa, directing health policy and coordination. The democratic government has introduced key initiatives such as free-health policies and the district-based primary health care system (among other priority programs) (Van Rensburg 2019).

The South African Medical Association (2015) concurs that the current state of public health facilities is deplorable and unsupportive of delivering high-quality health services. Therefore, decentralisation should be approached cautiously, ensuring sufficient managerial capacity at the district level. Senior officials must be held accountable if they fail to meet the quality standards outlined in their job descriptions.

The Hartebeeskop Clinic is one of the public clinics that must ensure that all patients, who visit the facility always leave the clinic satisfied, the suggestion box should not be opened by the manager but always ensure that the community representatives are present at all times so that they report back to the community regarding their complains in addition represent to the community on what corrective action/s has been done to correct what patients had complain about.

Addressing and Managing Public Complaints: This principle promotes the idea that individuals in society should express their concerns if they do not receive the expected service delivery to which they are entitled. Public institutions are expected to offer thorough explanations to the public and promptly take corrective actions to rectify any errors, as outlined in the Republic of South Africa guidelines from 1997.

6.4 Study recommendations

6.4.1 Tangibles

To enhance the service evaluation process at the Hartebeeskop clinic, it is strongly recommended to introduce tangible elements that allow individuals to make informed judgments about the quality of services received. The current challenge faced by customers, stemming from the absence of tangible benchmarks, could be addressed by incorporating visible and measurable components into the service delivery.

Implementation of tangible elements involves creating clear, physical attributes or measurable criteria that customers can assess to gauge overall satisfaction and

effectiveness. This may include visible indicators of service quality, such as improved facilities, enhanced amenities, or standardized processes that can be objectively measured.

Additionally, the establishment of feedback mechanisms and qualitative assessments could supplement the evaluation process, offering alternative avenues for understanding service quality in the absence of tangible elements. Encouraging customers to provide feedback on their experiences and actively seeking qualitative data will contribute to a more comprehensive understanding of their needs and expectations.

By embracing tangible benchmarks and alternative evaluation methods, Hartebeeskop can bridge the gap in service assessment, fostering a more objective and transparent environment. This not only addresses the current challenge faced by individuals but also demonstrates a commitment to continuous improvement and customer-centric practices.

6.4.1.1 Waiting time.

Reducing wait times at public clinics poses an ongoing challenge that is crucial for ensuring timely and efficient healthcare services. In South Africa, the healthcare system faces significant issues attributed to entrenched patronage within provincial and national governments, leading to a deterioration in the capabilities of public health organizations at both the national and provincial levels (Van den Heever 2019). Aligning with this perspective, Maphumulo and Bhengu (2019) point out that extended waiting times result from various factors such as a shortage of human resources, adverse events, poor hygiene, inadequate infection control measures, increased litigation due to avoidable errors, a lack of resources in medicine and equipment, and deficient recordkeeping. The survey highlights those patients at Hartebeeskop Clinic experience lengthy queues before receiving attention at the facility. Addressing these multifaceted issues is essential for enhancing the overall efficiency and accessibility of healthcare services.

The researcher recommends the implementation of mobile apps at Hartebeeskop Clinic, enabling patients to check wait times, access educational materials, and make online appointments with a 10-minute grace period for lateness. A separate queue system is suggested for medication collection and consultations, with urgent cases prioritized. The app would provide real-time updates on doctor visits, potential load shedding, and appointment status, optimizing patient experience. Drawing inspiration from studies on Quality 4.0, such the framework of Vergragt (2019) on integrating digital technologies for improved product quality and cost reduction, and Lopes and Norris (2019) with their Quality 4.0 maturity model, the recommendations align with the transformative potential of digital quality management practices.

These approaches, when implemented effectively, can lead to shorter waiting times, improved patient satisfaction, and better healthcare outcomes for all. Public clinics should continue to embrace these innovations and adapt to changing patient needs to ensure that waiting times are minimized and quality care is maximised.

6.4.2 Reliability

The researcher recommend that the Hartebeekop Clinic takes immediate and decisive action to address the concerns raised by patients regarding reliability. The feedback clearly indicates a perceived inability to fully rely on the clinic's staff, which has potential implications for patient satisfaction and overall trust in the healthcare system.

To mitigate these concerns, the clinic should consider implementing comprehensive measures aimed at improving the consistency and dependability of services. This may involve the establishment of staff training programs to enhance skills and reinforce a commitment to excellence in patient care. Performance evaluations can be conducted to identify areas for improvement and ensure that each staff member consistently meets the clinic's service standards.

Furthermore, fostering open communication channels with patients is paramount. The clinic should actively seek feedback, address patient concerns promptly, and maintain transparency regarding any challenges faced. This approach not only demonstrates a commitment to patient well-being but also contributes to the establishment of a trustworthy healthcare environment.

In conclusion, by prioritizing reliability and undertaking proactive measures, the Hartebeekop Clinic can not only address the current concerns but also enhance patient satisfaction and bolster its reputation. Recognising the importance of trust in healthcare, the clinic has an opportunity to strengthen its position in the healthcare landscape and reaffirm its commitment to providing high-quality, dependable services.

6.4.3 Responsiveness

The researcher strongly recommended that the Hartebeeskop Clinic takes immediate and comprehensive action to rectify the identified issues related to responsiveness, particularly in communication between healthcare providers and patients. The study highlights a substantial deficiency in this critical aspect, resulting in negative perceptions among patients and underscoring the urgency of addressing this concern.

To tackle the observed poor communication, the clinic should prioritise the implementation of targeted initiatives. First and foremost, investing in robust training programs for staff is essential to enhance their communication skills. This can include strategies for effective patient engagement, active listening, and clear and empathetic communication.

Fostering an environment that encourages open dialogue is equally crucial. Creating platforms for regular feedback and communication channels that empower patients to voice

their concerns can contribute significantly to improving the overall patient experience. Additionally, incorporating technological solutions for efficient communication, such as patient portals or messaging systems, can enhance responsiveness and streamline information exchange.

The clinic has a valuable opportunity to translate these findings into actionable improvements. By proactively addressing the communication gaps identified in the study, the Hartebeeskop Clinic can not only enhance patient perceptions but also elevate the overall quality of healthcare services. This proactive approach will undoubtedly lead to improved patient satisfaction and contribute to strengthening the clinic's reputation in the healthcare community.

6.4.4 Assurance

The healthcare providers should conduct qualitative research (interviews, focus groups) to understand the specific behaviours or practices influencing perceptions of nurse behaviour, provide training or communication to address any identified concerns and reinforce positive aspects. Consider implementing measures to enhance transparency and communication regarding staff professional skills. Review and communicate policies on confidentiality to address concerns and ensure a clear understanding among patients. This analysis provides a foundation for identifying areas of strength and improvement in the assurance dimension, allowing for targeted interventions to enhance the overall quality of service delivery in the clinic.

6.4.5 Empathy

The clinic should conduct qualitative research to gain deeper insights into the factors influencing perceptions of individual attention, competence, empathy, and caring; provide training programs focusing on improving individualised attention, communication about nursing competence, and empathy; implement regular feedback mechanisms to address patient concerns and continuously improve nursing care, and foster a culture of patient centred care through ongoing education and awareness initiatives. This analysis can serve as a foundation for identifying specific areas of improvement within the empathy dimension and guide targeted interventions to enhance the overall quality of nursing care in the clinic.

6.4.6 Patient-centred care and staff training development.

The study uncovered a discrepancy in patient feedback at Hartebeeskop Clinic. While patients express concerns in the suggestion box without receiving responses or witnessing improvements, healthcare providers claim to address issues. To enhance patient engagement, the clinic should establish a feedback mechanism. The manager, after implementing changes, should communicate outcomes to the clinic committee for dissemination during community meetings, fostering transparency. Public institutions, as outlined in the Republic of South Africa (1997), must openly communicate the expected service quality, enabling the public to gauge government service delivery and know what to anticipate, fostering accountability and transparency in healthcare provision.

Administrative challenges, including a lack of management support, inadequate recordkeeping, and poor data management, were identified as a significant challenge to service delivery at public clinics in South Africa. These challenges lead to delays in treatment and compromise the quality of care provided, administrative challenges, including a lack of management support, inadequate record-keeping, and poor data management, are also significant challenges to service delivery at public clinics in South Africa (Nxumalo & Goudge 2021). They lead further to delays in treatment and compromise the quality of care provided. Previous studies have also identified administrative challenges as significant barriers to service delivery in public clinics (Moshabela 2017; Maharaj 2018).

The findings of the study indicate that administrators at the Hartebeeskop Clinic face challenges with their current system, particularly in the duplication of file numbers, leading to delays and increased waiting times for patients. To address this issue, it is recommended that the clinic adopts electronic health records for more efficient record-keeping. Such a system would have the capability to identify duplicate or deceased patient files, reducing the time patients spend waiting to obtain their files before consulting with healthcare professionals. Additionally, implementing electronic health records would optimize storage space at the clinic, allowing for better utilisation of capacity. This is crucial as highlighted by the statement.

“We do not have sufficient space in the admin department.”

Numerous studies emphasize the significance of data quality and analytics in the advancement of healthcare quality. For instance, Khodadad *et al.* (2018) developed a data quality framework for quality management systems, ensuring the accuracy and completeness of data. Similarly, Ahire *et al.* (2018) proposed a data analytics framework for quality management, utilizing machine learning algorithms to identify quality issues and

predict future performance. These frameworks underscore the importance of leveraging technology and data analytics to enhance the quality of healthcare services, aligning with the proposed adoption of electronic health records at Hartebeeskop Clinic.

6.4.7 Supply chain for medication

The Hartebeeskop Clinic should optimise resource allocation and utilization by communicating changes to the regional/provincial health department. A detailed email or letter should be drafted, providing evidence of increased patient numbers and resource shortages, aiming to secure additional budgetary allocations. The clinic must consistently ensure the availability of essential medical supplies. The manager should improve forecasting and communication with suppliers through enhanced order placement. Additionally, regular meetings between the national health department and pharmaceutical representatives are recommended to discuss emerging trends impacting medication shortages.

Medication shortages in South African public clinics have profound consequences for patient care, costs, and operational efficiency. Addressing this issue requires strategies such as fortifying the pharmaceutical supply chain, regulatory reforms, incentivizing generic drug production, and international collaboration. The roots of the crisis lie in systemic problems like budget constraints, mismanagement, and an overburdened healthcare system, as highlighted by the South African Human Rights Commission (2018). Collaboration among governments, regulatory bodies, healthcare providers, and the pharmaceutical industry is crucial to ensuring universal access to essential medications.

Reviewing various articles underscores resource constraints as a prominent challenge in South African public healthcare clinics, encompassing inadequate medical equipment, infrastructure, and medication shortages. These limitations contribute to prolonged patient waiting times and potential rationing of healthcare services, compromising the quality of care delivered. Collective efforts are recommended as essential to overcome these challenges, ensuring that all individuals, regardless of socioeconomic status, have access to vital healthcare services.

6.4.8 Health care providers

Public clinics serve as vital healthcare access points for communities, yet a persistent challenge involves negative staff attitudes, significantly impacting care quality and patient experiences. Uncovering the roots of these attitudes is crucial. While the findings in Chapter Four on Hartebeeskop Clinic negate complaints about workload, the study unveils resource-related challenges, such as inadequate equipment, staffing, and funding, causing frustration and cynicism. Inadequate training and biased promotions contribute to staff feelings of inadequacy.

The study emphasizes that a clinic's overall culture shapes staff attitudes, recommending a focus on teamwork, respect, and well-being. Allocating specific tasks to each healthcare provider, conducting follow-ups, and implementing disciplinary measures for task noncompletion are proposed strategies, along with offering career advancement paths and incentives for skill development. Despite positive trends, challenges persist, including burnout, high workload, and limited resources.

Innovative solutions, like mindfulness programs and team-building activities, are suggested to address these challenges. Encouraging open-door policies and anonymous feedback mechanisms at Hartebeeskop Clinic is crucial. Reducing staff attitudes requires strategic efforts, focusing on resource allocation, communication, training, and organizational culture. Continuous monitoring and adaptation of these strategies are essential for sustained improvement in staff attitudes and, consequently, enhanced care quality for the community (Patel 2022).

6.4.9 Improving health care professionals' skills.

The study findings indicate dissatisfaction among Hartebeeskop Clinic patients regarding the skills and knowledge of the healthcare professionals. This sentiment is echoed by the healthcare professionals themselves, who express a lack of access to courses for skill improvement. To address this, the organization must stay abreast of technological advancements, ensuring staff proficiency. Management should conduct a comprehensive analysis to identify specific skill needs for improved service delivery. Encouraging employees to pursue further education is crucial for skill enhancement, ultimately ensuring quality service and healthcare provision. For a customer-oriented organization, all Hartebeeskop Clinic employees must be trained to handle public interactions, especially in healthcare-specific scenarios.

To bolster healthcare provider skills at the Hartebeeskop Clinic, the implementation of evidence-based practices (EBPs) and regular follow-up on quality improvement initiatives are recommended. Quality improvement programs, as reported by Smith (2019), have shown significant benefits in enhancing patient outcomes, reducing errors, and promoting adherence to evidence-based guidelines in public clinics. Additionally, weekly nursing drills, as suggested during interviews, can serve as a practical approach to ongoing education and skill reinforcement among the nursing staff, fostering a culture of continuous learning and improvement.

6.5 Future studies

This research exclusively centred on a single rural public health clinic, specifically examining the service delivery provided by the Hartebeeskop Clinic to its patients. The study concentrated on understanding the perceptions of both patients and healthcare professionals regarding the institution's service delivery. It did not delve into the utilisation of financial resources at Hartebeeskop. Moreover, the survey exclusively targeted healthcare professionals and patients within a public clinic setting. Subsequent research endeavours may benefit from expanding their scope to encompass both rural and developed clinics, providing a more comprehensive understanding of these distinct contexts. Future studies could also explore the efficient allocation of resources in both public rural and developed healthcare facilities, assessing the effectiveness of the strategies proposed by the authors for public clinics. It is essential to note that this research, by design, did not consider various aspects, as its primary focus was on evaluating the service quality offered by the Hartebeeskop Clinic.

6.7 Contribution of the study

The delivery of high-quality healthcare services is a critical concern for healthcare providers, patients and policymakers alike. Public clinics, in particular face unique challenges in providing quality care due to resources constraints, high patient volumes and limited infrastructure. QMS have been widely adopted in various industries to improve performance and quality. However, the adoption of QMS in public clinics remained limited, and its impact on service delivery is not well understood. The contribution of the study are as follows:

- (i) Developing a QMS for public clinics, addressing the unique challenges and needs of these healthcare settings.
- (ii) Identifying key factors influencing service delivery and patients satisfaction in public clinics, providing insights for quality improvement initiatives.
- (iii) Demonstrating the effectiveness of a QMS in improving service delivery, patient satisfaction and overall quality.
- (iv) Providing recommendations for policymakers, healthcare managers, and quality improvement professionals to enhance service delivery and quality of care in public clinics, ultimately contributing to better health outcomes and improved patient experiences.

This study demonstrated the effectiveness of a QMS in improving service delivery in a public setting. The findings highlighted the importance of a structured approach to quality improvement and the need for ongoing monitoring and evaluation. The study's

contributions to the development of QMS, identification of key factors influencing service delivery, and demonstration of QMS effectiveness provide valuable insights for healthcare managers, policymakers and quality improvement professionals. By adopting QMS, public clinics can enhance service delivery and overall quality of care, leading to better health outcomes and improved patients' experiences. The study's recommendations offer a foundation for future quality improvement initiatives in public clinics, advancing the pursuit of high-quality healthcare for all.

6.8 Conclusion

In this chapter, the study draws definitive conclusions based on its objectives and offers recommendations for practical implementation. The outlined conclusions aim to provide clear insights derived from the research findings. Additionally, a proposed framework, derived from the study's outcomes, is presented, offering a structured approach for potential application in relevant contexts. Acknowledging the inherent limitations of the study, the chapter provides a transparent account of the constraints faced during the research process. Furthermore, it lays the groundwork for future investigations by suggesting potential avenues for further exploration and refinement. This comprehensive approach not only solidifies the study's contributions but also underscores the commitment to continuous improvement and advancement within the field. The synthesis of objective conclusions, practical recommendations, a proposed framework, and the recognition of study limitations collectively enriches the academic discourse and sets the stage for ongoing scholarly engagement in the subject matter. As research is an iterative process, these elements collectively contribute to the broader knowledge base and offer valuable insights for both current and future researchers and practitioners in the field√.

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Appendix A: Ethics clearance

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S Shandu 3779
Extension 4
Mzinoni Township
Bethal
2310

Dear Ms Shandu

Improving service delivery at a public health care clinic through a Quality Management System: the case of Haterbeeskop Clinic in Elukwatini, Mpumalanga

Ethics Clearance Number: IREC 049/23

The DUT-Institutional Research Ethics Committee acknowledges receipt of your notification regarding the piloting of your data collection tool.

Kindly ensure that participants used for the pilot study are not part of the main study.

In addition, the DUT-IREC acknowledges receipt of your gatekeeper permission letter.

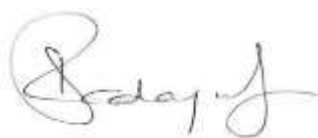
Please note that **FULL APPROVAL** is granted to your research proposal. You may proceed with data collection.

Any adverse events [serious or minor] which occur in connection with this study and/or which may alter its ethical consideration must be reported to the DUT-IREC according to the DUT-IREC SOP's. Please note that any deviations from the approved proposal require the approval of the DUT-IREC as outlined in the DUT-IREC SOP's.

It is compulsory for a student or researcher to apply for recertification on an annual basis. The failure to do so will result in withdrawal of ethics clearance. It is the responsibility of the researcher and the supervisor to apply for recertification.

Please note that you are required to submit a Notification of Completion of Study form together with an abstract to the DUT-IREC office on completion of your study.

Yours Sincerely



Dr K Padayachy
Deputy Chairperson: DUT-IREC



Appendix B: Letter of Information



LETTER OF INFORMATION

Title of the Research Study: Improving service delivery at a public health care clinic through a Quality Management System: the case study of, Haterbeeskop Clinic, Elukwatini, Mpumalanga.

Principal Investigator/s/researcher: Sibahle Shandu, (Post Graduate Diploma in Operations Management).

Co-Investigator/s/supervisor/s: Professor M. Ramchander, DCom.

Brief Introduction and Purpose of the Study: Asnawi *et. al* (2019: 911) states that the number of clinics owned by the government is rapidly increasing resulting competitive environment in the health care industry. This situation needs full cooperation and support from the clinic to focus on building the reputation of the clinic, meeting your expectations as a patient, providing satisfaction to you to ensure and secure your loyalty. To improve service quality, Hartebeeskop clinic has introduced several innovative measures such as extended hours. However, after all these efforts, it seems like patient's expectations are not matching up with clinic initiative. Patients are still complaining about waiting time, insufficient medication on monthly check up, and attitude of staff (Belveredeere 2022).

Aim:

The aim of the study is to ascertain the challenges and gaps in service delivery at the Hartebeeskop Clinic and the objectives that have been set for the study are:

- (i) To conduct a systematic literature review of the benchmarking of the provisioning and the challenges in improving the quality of health service at South African public health clinics.
- (ii) To assess the gaps in service delivery at the clinic, by conducting a survey amongst patients, using a questionnaire.
- (iii) To appraise the gaps in service delivery at the clinic, by conducting interviews with the health care providers.
- (iv) To critique the current quality document system alignment to QMS, by documentary analysis.

Contribution arising from the study will be to improve service quality at the clinic. The study will also contribute body of knowledge within quality management and towards the enhancement of SDGs.

Hello Madam/Sir

I am Sibahle Shandu, a master's degree student at Durban University of Technology, doing research for my master's degree in quality management. I would like to invite you to participate in the research. Research is the creation of new knowledge or advancing the existing knowledge. Research includes gathering existing knowledge, analysing and create new outcomes.

Outline of the Procedures: As a patient you are requested to participate in answering the questionnaires. Health care providers will be contacted telephonically, to make appointments to conduct schedule interviews. The study will take place at the Clinic and at the participant's convenience space and time. Your name as a participants will not be mentioned in the study, only data obtained from you will be used in the research. The maximum time to answer all questions will be approximately 20-30 minutes, the number of participants to be involved is 364 patients for quantitative study and 17 Health care providers for qualitative study.

Risks or Discomforts to the Participant: No risk to people, animal and environment is anticipated throughout the study.

Explain to the participant the reasons he/she may be withdraw from the Study: being part of the study is voluntary, so you have the right to withdraw and there will be no consequences.

Benefits: The study will improve service quality at the Clinic which will benefit you as a patient and health care providers.

Remuneration: As a participant you will not receive any monetary or other types of remuneration.

Costs of the Study: No costs will be received from or to you as patients/nurses/operation manager by being part of the study.

Confidentiality: The study is governed by Durban University of Technology's ethics policy and guidelines. Names of the participants (you as a patient) will remain anonymous throughout the study.

Results: If you are interested in the results of the study, you will be referred to the DUT repository, where the thesis can be assessed approximately 12 months after the study has been completed.

Research-related Injury: Injury during the research is highly unlikely to happen and no remuneration in that regard is expected.

Storage of all electronic and hard copies including tape recordings Data for this study will be stored for 5 years, this includes answers to questionnaires, participants will be allowed to know the results regarding the study after the report has been compiled.

Persons to contact in the Event of Any Problems or Queries: Please contact the

researcher, Sibahle 060 702 4143, my supervisor (Prof. M. Ramchander 074 400 4400) or the DUT-Institutional Research Ethics Administrator on 031 373 2375. Complaints can be reported to the Acting Director: Research and Postgraduate Support on researchdirector@dut.ac.za.

Appendix C: Consent Letter (For Patients and Health care providers)



Full Title of the Study: Improving service delivery at a public health care clinic through a Quality Management System: the case study of, Haterbeeskop Clinic, Elukwatini, Mpumalanga.

Names of Researcher/s: Sibahle Shandu

Statement of Agreement to Participate in the Research Study:

- ☐ I hereby confirm that I have been informed by the researcher, S. Shandu, about the nature, conduct, benefits and risks of this study - Research Ethics Clearance Number:
—,
- ☐ I have also received, read, and understood the above written information (Participant Letter of Information) regarding the study.
- ☐ I am aware that the results of the study, including personal details regarding my sex, age, date of birth, initials and diagnosis will be anonymously processed into a study report.
- ☐ In view of the requirements of research, I agree that the data collected during this study can be processed in a computerised system by the researcher.
- ☐ I may, at any stage, without prejudice, withdraw my consent and participation in the study.

- ☐ I have had sufficient opportunity to ask questions and (of my own free will) declare myself prepared to participate in the study.
- ☐ I understand that significant new findings developed during this research which may

relate to my participation will be made available to me.

_____	_____	_____	_____
Full Name of Participant	Date	Time	Signature / Right Thumbprint

I, S. Shandu, herewith confirm that the above participant has been fully informed about the nature, conduct and risks of the above study.

Full Name of Researcher

Date

Signature

Full Name of Witness (If applicable)

Date

Signature

Full Name of Legal Guardian (If applicable)

Date

Signature

Appendix D: Questionnaire (For Patients)

Introduction

Thank you for agreeing to be part of the study. This questionnaire asks about your perception and expectations of service quality at Haterbeeskop Clinic. Do not write your name in the questionnaires. Your response will be anonymous and will never be linked to you personally. If there are items, you do not feel comfortable answering please skip them. Thank you for your co-operation.

Questionnaire on Service Quality using SERVQUAL Model dimensions.

Disclaimer: The data gathered through these questionnaires would be used exclusively for the purpose of academic research only.

Department of Operations and Quality Management, Durban University of Technology.

Section A demographic information

1. What is your age?

18-29	30-39	40-49	50-59	60-69	70+

2. What is your gender?

Male	Female

3. ????

First time patient	Returning to the clinic

Section B: Patients perceptions of service quality within health environment.

1= Strongly disagree

2 = Disagree 3 = Neutral

4 = Agree 5 = Strongly agree

	1	2	3	4	5
To what extent are you satisfied with the service quality on the basis of the below parameters?	Strongly disagree	Disagree	Neutral	Agree	Strongly agree
1.1Tangibles					
1.1.1 The equipment (Machines, instruments, etc.) used by nurses appear to be advanced/modern					
1.1.2 The Clinic have comfortable Chairs at the waiting area.					
1.1.3. It is easy to find the clinic (there are signs/ arrows to assist navigating to the clinic).					
1.1.4 Medication (Pills and syrups) prescriptions are written in a way that I can easily understand.					
1.1.5 Operating hours are convenient for me.					
1.1.6. The facilities in the clinic clean					
1.1.7. The nursing staff are professionally dressed					

1.2 Reliability					
-----------------	--	--	--	--	--

1.2.1 I am satisfied with the knowledge the nurses have.					
1.2.2 Service is delivered at promised times.					
1.2.3 I can depend on the nurses.					
1.2.4 The nurses respond within timeframe.					
1.2.5 The nurses are always willing to help me with any health problem I have.					
1.2.6 My records at the clinic are free of any errors.					
1.2.7. Nurses are sincere in when attempting to solve patient's problems					
1.3 Responsiveness					
1.3.1 There is effective communication between the nurses and myself, resulting in me understanding their instructions.					
1.3.2 Staff (nurses) does not keep patients waiting unnecessarily.					

1.3.3 I get enough time to interact with the nurse?					
1.3.4 it is easy to obtain information when dealing with queries.					
1.3.5. Patients complaints a responded to within an acceptable timeframes					
1.4 Assurance					
1.4.1 The behaviour of the nurses at this clinic are trustworthy and instils confidence in me.					
1.4.2 I have confidence in staff's (nurses) professional skills					
1.4.3 Confidentiality is assured with the nurses.					
1.5 Empathy					
1.5.1 The nurse gives me individual attention.					
1.5.2 The nurse does know how to handle my health condition.					
1.5.2. The nurses see things from my perspective					
1.5.3. The nurses understand my feelings					
1.5.4. I think that the nurses care about me					

Section B

2. Waiting time

2.1 How long do you normally wait before the administrator attends you (give you a file)?

0-30 minutes	31-60 minutes	61-90 minutes	90-120 minutes	121-150+ minutes

2.2 How long do you normally wait before the nurses attends you?

0-30 minutes	31-60 minutes	61-90 minutes	91-120 minutes	121-150+ minutes

3. Supply chain

3.1 What are some of the challenges you experience when receiving your medication at the Clinic?

.....

.....

.....

.....

4. What are the challenges you came across when dealing with the nurse?

.....

.....

.....

.....

5. Selection of clinic.

When selecting your service provider, which one of the following had the most influence in your decision? (Select only one with a $\surd$.) a. Recommendation from a friend or associate ____

b. Location of the facility ____

c. Quality of the service ____

d. Affordability by the service ____

e. None of the above ____

6. Patient experience of service delivery

6.1 Please check all that apply regarding experience you had with the nurse.

☐ Gave me the wrong information

☐ Didn't understand the question ☐

Gave unclear answers ☐

Couldn't solve the problem ☐

Disorganized ☐ No improvement needed

7. Patient's expectations of service delivery 7.1 Do

the health care givers meet your expectations?

.....

If no, what can the institution do to better meet your expectations?

.....

.....

.....

.....

Thank you for valuable time

Appendix E: Schedule Interview Questionnaires (For Healthcare clinic providers)

Introduction

Thank you for agreeing to be part of the study. This schedule interview questions asks about Quality Management System at Haterbeeskop Clinic. Your response will be anonymous and will never be linked to you personally. You will be tape recorded and the tape will only be used for the purpose of the study. Thank you for your co-operation.

Interview schedule questions

Section A demographic information

1. What is your age?

18-30	31-43	44-56	57-69	70-82

2. What is your gender?

Male	Female

3. Years of experience you have in your field of work.

0-5 years	6-10 years	11-15 years	16-20 years	21+ years

4. What is your job title?

Administrator	Nurse	Operations Manager	Other
---------------	-------	-----------------------	-------

--	--	--	--

Section B

1. Are you provided with work instructions and how to impact it has it has for you to work effectively?
2. How would you define the quality in your organization?
3. Why do we need quality?
4. Is there a Quality Management System in your organization, what system do the organization use and how do you ensure that you meet the quality requirements?
5. What is the most important thing in the quality management?
6. What kind of quality tools or techniques do you use?
7. What are the objectives for quality improvement in your organization?
Relationship of the quality objectives and other objectives in the organization.
8. Could you name one practical example of good quality in your organization?
9. What is the role of management in achieving quality?
10. Is quality work/ improvement more like every employee's normal work or it is a separate development work?
11. What kind of evaluation there is in your organization as a part of the quality control?

12. How do you evaluate patient's satisfaction and utilize the information collected?

13. What can be done to improve quality system?

14. If you think about your organization from the quality management's point of view, what are the strengths and weaknesses that come from your organization and opportunities and threats that come from the operational environment?

15. If we were to apply quality management system used in developed organization to a public sector organization, do you think it will be bad or good? Why?

16. Are you allowed to have suggestions regarding improvements in the organization, which procedure you follow and did the management take it to considerations?

17. What is your comment about the work load you are allocated to finish per shift?

18. How do the organization ensure that you are provided with all equipment, supplies and resources necessary to perform your duties?

19. Would you recommend this health care facility to other workers as a good place to work, why?

.....

20. Did I ask all questions from the point of view of quality work, or is there something that I did not understand to ask and that is essential from your point of view?

Appendix F: Gate keeper permission



Indwe Building, Government Boulevard, Riverside Park, Ext. 2, Mbombela, 1200, Mpumalanga Province
Private Bag X11285, Mbombela, 1200, Mpumalanga Province
Tel I: +27 (13) 766 3429, Fax: +27 (13) 766 3458

Litiko Letemphilo

Departement van Gesondheid

UmNyango WezeMaphilo

Research Permission Letter MS

S SHANDU

PRINCIPAL INVESTIGATOR

306 HATERBEESKOP

ELUKWATINI, 1192

Dear Ms Shandu

STUDY TITLE: IMPROVING SERVICE DELIVERY AT A PUBLIC HEALTH CARE CLINIC THROUGH A QUALITY MANAGEMENT SYSTEM: THE CASE OF HATERBEESKOP CLINIC IN ELUKWATINI, MPUMALANGA

The Mpumalanga Provincial Health Research and Ethics Committee (MPHREC) has approved your research proposal in the latest format you sent, and hereby grant you permission to conduct your research as detailed below.

- Approval Reference Number: **MP_202305_010**
- Data Collection Period: **15/07/2023 to 20/11/2023**
- Approved Data Collection Facilities:

* HATERBEESKOP CLINIC

Kindly ensure that conditions mentioned below are adhered to, and that the study is conducted with minimal disruption and impact on our staff, and also ensure that you provide us with a soft or hard copy of the report once your research project has been completed. **Conditions:**

- Researchers not allowed to make copies, take pictures of medical records or administer medicine to patients at the facility.
- Kindly notify the facility manager a week **BEFORE** you start with data collection to ensure that conditions are conducive in the facility.
- The FINAL RESEARCH FINDINGS must be uploaded on the NHRD website

Kind regards

DR C NELSON

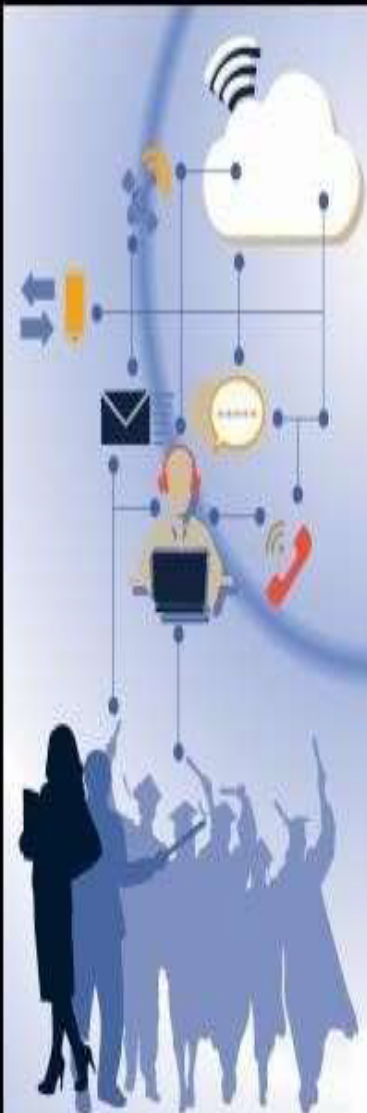
MPHREC CHAIRPERSON

DATE:_____



Appendix G





CERTIFICATE OF ATTENDANCE

presented to

S SHANDU

for participating in

Research Integrity Workshop

07 June 2022

Facilitated by: Dr K H Nevhutalu

Professor J K Adam
Chair:
Institutional Research Ethics Committee (DUT)

Professor K Motaung
Acting Director:
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Appendix H

Improving service delivery at a public health care clinic through a Quality Management System: The case of Hartebeeskop Clinic in Elukwatini, Mpumalanga

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This thesis, entitled **Improving service delivery at a public health care clinic through a Quality Management System: The case of Hartebeeskop Clinic in Elukwatini, Mpumalanga** by **Sibahle Shandu**, has been edited and reviewed to ensure technically accurate and contextually appropriate use of language for advanced research.

Yours sincerely

CM ISRAEL, BA Hons (UDW) MA (UND) MA (US) PhD (UNH) LANGUAGE
EDITOR AND WRITING CONSULTANT Connieisraelgo@gmail.com
Mobile 082 4988166

